



FLUID JUSTICE:

TRACING THE EXPERIENCES OF WOMEN NAVIGATING URBAN WATER
INSECURITY IN LUVEVE IN BULAWAYO, ZIMBABWE

by

Gugulethu Violet Dube

878156

Supervisor

Dr Christine Bischoff & Dr Katherine Joynt

Department of Sociology

A Master's Research Report

Submitted to The Faculty of Humanities, School of Social Sciences

University of the Witwatersrand

In Partial Fulfillment of the Requirements

for the Degree M.A Development Sociology

February 2024

23/02/24

Declaration

I, Gugulethu Violet Dube, student number 878156, earnestly declare that this research report is entirely my own work, and it has not been submitted for examination at any other academic institution. I'm fully aware of the ethical implications of plagiarism, as well as the significance of academic integrity. Therefore, all external sources used in this research have been cited and referenced in compliance with academic standards of the University of the Witwatersrand.



Signature

Date: 23 February, 2024

Acknowledgements

Reflecting on the path that has brought me to complete this dissertation, I am overcome with a deep sense of gratitude. This accomplishment would not have been possible without the unwavering encouragement and support of those indispensable to my academic and personal development.

To my late great-grandmother Violet, who ingrained in me, from an early age, the love for learning and whose sacrifices and steadfast belief in me have motivated me to pursue knowledge relentlessly.

To my friends and community, who have been reliable allies throughout my academic journey. I am grateful for the enriching conversations that tempered the load in challenging instances.

To the Mandela Rhodes Foundation, your generous support lessened the financial burden of my education, enabling me to focus on my research. Not only did the investment in my future enable me to complete this dissertation, but it has also motivated me to pursue excellence in all my academic pursuits.

To my supervisors, Dr Christine Bischoff and Dr Katherine Joynt, as well as my professors and mentors, thank you for your patience and for guiding me through the complexities of this dissertation. Your knowledge, wisdom, and eagerness to impart your expertise have contributed to my intellectual development, and I appreciate all the invaluable lessons I have acquired under your supervision.

To the insurmountable individuals whose previous studies and contributions facilitated the genesis of this report. The academic community's collective knowledge has greatly influenced my understanding of the subject matter.

To me, for showing up and staying determined even when the journey itself was sometimes deafening.

To the women of uMthwakazi, I am sincerely thankful for your ability to share your time, and experiences with grace despite it all. Your perspectives illuminated the path to understanding and knowledge, and your openness and warmth were critical to the fruition of this project. This dissertation is really dedicated to you because as long as there is such a widened gap in our capacities for socio-economic advancement, we are *Not Yet Uhuru* as African women.

Abstract

Water insecurity, exacerbated by population growth and climate change, poses significant global challenges. Especially in developing countries, where decreasing water supply, contaminated sources and inadequate infrastructure disproportionately affect vulnerable populations. Women, often primary caregivers, bear the brunt of these challenges as they are typically responsible for water collection, impacting their educational and economic opportunities. This report delves into the complex impact of water insecurity on women in an urban township in Luveve, Bulawayo, while also addressing the broader issue of global water insecurity and advocating for water access as a fundamental human right essential for poverty reduction. Employing a combination of semi-structured interviews, critical reading, and a feminist lens rooted in Social Reproduction Theory (S.R.T.) and Feminist Political Ecology (F.P.E.) alongside urban vulnerability theory, I explore the interplay between gender and water access. Our findings challenge the conventional narrative surrounding women's vulnerabilities to water insecurity, revealing diverse experiences shaped by factors like gender, socio-economic status, and household and community dynamics. Informed by these insights, the report identifies key challenges and proposes context-specific interventions to address women's needs in urban townships. By incorporating these interventions, development practitioners can advance more equitable and practical solutions, driving the empowerment and resilience of women grappling with water insecurity in developing country contexts. At the heart of this objective lies the concept of "fluid justice," which I define as the dynamic and context-specific pursuit of fairness and equity in water access, distribution, and management. This principle underscores the commitment to exploring nuanced and responsive approaches to tackling water insecurity, ensuring that interventions are sensitive to affected communities' diverse needs and experiences.

Keywords: Water insecurity, Gender, Women, Urban Vulnerability, Social Reproduction Theory, Feminist Political Ecology, Luveve, Bulawayo, Zimbabwe

Table of Contents

Declaration.....	2
Acknowledgements.....	3
Abstract.....	4
Table of Contents.....	5
List of Figures.....	7
List of Tables.....	8
List of Abbreviations.....	9
CHAPTER 1: INTRODUCTION.....	10
1.1 Background of the Study.....	10
1.2 Research Aim.....	13
1.3 Research Problem.....	14
1.4 Research Questions.....	14
1.5 Research Objectives.....	15
1.6 Outline of Subsequent Chapters.....	16
CHAPTER 2: LITERATURE REVIEW.....	17
2.1 Introduction.....	17
2.2 Urban Vulnerability.....	17
2.3 Social Reproduction Theory.....	21
2.4 Feminist Political Ecology.....	26
2.5 Limitations of S.R.T., F.P.E, & Intersectionality.....	29
2.6 Application of the theoretical framework to the study.....	32
2.7 Chapter Summary.....	32
CHAPTER 3: METHODOLOGY.....	34
3.1 Introduction to the methodology.....	34
3.2 Study Location.....	34
3.3 Research Methods.....	35
3.4 Validity and Self-reflection.....	38
3.5 Ethical Considerations of the Study.....	40
3.6 Chapter Summary.....	42
CHAPTER 4: THE LIVED EXPERIENCES OF WOMEN FACING WATER INSECURITY IN LUVEVE.....	44
4.1 Introduction.....	44
4.2 Chapter Summary of the lived experiences of women facing water insecurity in Luveve.....	56
CHAPTER 5: COPING STRATEGIES OF WOMEN FACING WATER INSECURITY IN LUVEVE.....	57
5.1 Introduction.....	57
5.2 Chapter Summary on the coping strategies of women facing water insecurity in Luveve.....	71
CHAPTER 6: CONCLUSION.....	73

6.1 Concluding Remarks.....	73
6.2 Implications Of The Study.....	76
6.3 Study Limitations.....	77
6.4 Recommendations for future studies.....	77
REFERENCE LIST.....	80
APPENDICES.....	98
7.1 Appendix A: Participant Interview Guide.....	98
7.2 Appendix B: Authorisation Of Consent For Participation.....	98
7.3 Appendix C: Ethical Clearance Certificate.....	98

List of Figures

Figure 1: [Media and Visual Representation of Women In Media](#)

Figure 2: [People fetching water in Bulawayo](#)

List of Tables

Table 1: Sociodemographic characteristics of the participants

Table 2: Income generation and Economic Mobility

Table 3: Womanhood and water woes

Table 4: Waterscapes - A glimpse of a broken system

Table 5: Water shortage coping strategies

Table 6: Forms of Assistance and Levels of Support

Table 7: The need for government intervention and support

List of Abbreviations

<i>BCC</i>	Bulawayo City Council
<i>FPE</i>	Feminist Political Ecology
<i>IPCC</i>	Intergovernmental Panel on Climate Change
<i>LDCs</i>	Least Developed Countries
<i>MHM</i>	Menstrual Hygiene Management
<i>MIHR</i>	Matabeleland Institute for Human Rights
<i>MP</i>	Member of Parliament
<i>NGO</i>	Non-Governmental Organisation
<i>SDG</i>	Sustainable Development Goals
<i>SRT</i>	Social Reproduction Theory
<i>VAW</i>	Violence Against Women
<i>WASH</i>	Water Sanitation and Hygiene
<i>WSP</i>	World Bank Water and Sanitation Program

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

When water goes, there is nothing we can do. Everything stops! (Respondent 10).

This statement is a verbatim recount of a middle-aged woman whose livelihood has been altered and filled with significant obstacles as she grapples with accessing and supplying water to her family. She narrates her predicament, brimming with persistent worry - a common sentiment among the women of Luveve in Bulawayo, Zimbabwe. People here rely on many unofficial, timeous and costly methods to access water and sanitary facilities daily. Water is seen as a fundamental human right, and everyone is entitled to adequate water for personal and household use that is available, accessible, safe and reasonably priced (United Nations et al., 2021 p.1). Nevertheless, overuse of groundwater and surface water pollution threaten most areas globally (Bennett et al., 2005). Across the world, roughly 2 billion people lack access to safely managed water, of which one-third reside in Least Developed Countries (L.D.C.s), which is connected to poverty and the infraction of humanity (United Nations Children's Fund & World Health Organization, 2019).

Water scarcity can be attributed to provisional conditions, such as drought and incidental situations and persistent conditions, such as increased demand, inadequate water storage infrastructure, and supply or water management limitations (Martín-Carrasco et al., 2012). The repercussions of these circumstances are immense, engendering illnesses, an ailing health system, and antagonism as people contend over limited resources. Several scholars distinguish between water scarcity and water insecurity, citing that the former is associated with power and local and global dynamics and concerns how water is unevenly disseminated within and across communities, whilst the latter deals with how inequity configures individual and household differences (Wutich et al., 2022).

Furthermore, rapid urbanisation burdens the supply of essential services such as safe water and sanitation. It is one of the primary reasons why there is an issue of supply and demand when it comes to water in urban areas (Mpande & Twanda, 1998). In Zimbabwe, water insecurity is heightening as a result of population increase, intensified urbanisation, deficient water management mechanisms, a crumbling infrastructure, constrained funds, rising demand for water for commercial purposes, as well as the exacerbated effects of climate change (Matabeleland Insitute for Human Rights, 2021). Accordingly, it is noted that cities in Zimbabwe have not developed fundamental utilities for environmental and hydrological services, such as systems for the disposal of solid waste and wastewater treatment, as well as the regulation of industrial contamination to match the accelerated urban growth (Tsiko, 2007).

Bulawayo, Zimbabwe's second-largest city, lies in the scorched and drought-stricken Matabeleland region and faces numerous water-related challenges. These problems can be

ascribed to low precipitation that permeates its drainage areas (Mkandla et al., 2005). Moreover, Bulawayo relies on five dams, which collectively have a capacity of 353m³ (ibid, 2005). Water insecurity in the city is dire and, at times, quite drastic, whereby it has been recorded that Bulawayo's demand for water is 150,000m³, yet the dams can only supply 130,000m³ (Mubvami & Toriro, 2012). The city's dams hardly ever fill up, and the water levels typically decline in the dry season, which makes satisfying the demand inadequate; in that regard, the municipality implemented water rationing strategies to restrict how residents access and utilise water (ibid.) Residents can go up to two weeks without accessing water (Tshili, 2023). Therefore, water insecurity has compelled residents to acquire water from unsafe sources, leading to acute diarrhoeal diseases such as cholera and dysentery (M.I.H.R., 2021). On the other hand, Musemwa (2006) asserts that the water challenges in Bulawayo are not only geographically placed but also calculated mismanagement and water misgovernance geared towards '*disciplining a dissident city*' that is fragrantly opposed to a persistent political regime.

Globally, the burgeoning body of literature on water and gender often relates to health-related challenges, livelihood and sustenance, agriculture, as well as gender roles and interrelations (Otufale & Coster, 2012; Huynh & Resurrection, 2014; Van Houweling, 2016). However, there is consensus among scholars that water insecurity inordinately affects women due to collective domestic and care work, societal gender roles and environmental rights and responsibilities (Ahlers & Zwartveen, 2009). Notably, Elmhirst (2011) highlights how gender roles habitually place women at the helm of water collection and provision in the family circle, making women endure a heavier load than men.

In Zimbabwe, in particular, the growing body of literature focuses on water insecurity from the perspective of Water, Sanitation and Hygiene (WASH), water resource management, rural livelihoods and policy (Remigios, 2011; Manase et al., 2003; Gambe, 2015). However, the literature is evidently concentrated on the effects of water scarcity within low-income rural societies heavily reliant on rain-dependent subsistence agriculture (Ishumael & Nhamo, 2015). When considering the struggles of the urban subaltern, the literature often does not reconcile the intersectionality of water insecurity with gender and urbanism (Brown et al., 2012, p.12). The circumstances of rural people within the agricultural sector in Zimbabwe are essential; however, current extant literature largely disregards intersectional challenges of the water insecurity, gender and urbanisation nexus. This gap ignores the fact that vulnerability within Zimbabwe varies widely, and this one-dimensional approach of primarily focusing on women from rural populations neglects the nuanced and interconnected challenges faced by various populations in Zimbabwe. Water insecurity discourse rarely touches on measures within urban areas and cities, and climate and gender are seldom on the same page (Khosla & Masaud, 2020). Therefore, research is needed centred on the water-related challenges Zimbabwean women face from low-income households living in urban areas. A convergent analysis grounded on feminist theory, intersectionality and urban vulnerability theory is crucial when constructing gender-specific, applicable, attainable and sustainable policies for water insecurity in urban areas.

Some scholars note that the asymmetrical disposition of susceptibility within urban societies is sculpted by individual and household attributes such as gender, income, well-being, socioeconomic assets and livelihood strategies (Brown et al., 2012, p.7). This uneven distribution calls for a granular comprehension of power dynamics and gender in urban communities instead of a gender and heterogeneity-impaired outlook (ibid, 2012). The country's developmental policies possess a firm rural bias, disregarding prevailing urbanisation movements and continually overstating the proportion of the Zimbabwean population residing in rural areas (ibid, 2012). The implications of rural bias, especially in Africa, perpetuate the assumption that economic growth and modernity occur in urban areas, making problem-driven interventions focus on impoverished rural people (Marcus & Asmorowati, 2006). Rural bias, in turn, obscures the significant socioeconomic disparities within the comprehensive urban and rural classifications and makes development policy favour rural areas (Zimbalist, 2017).

A report by the World Bank states that 32.2% of Zimbabwe's total population resides in urban areas, and the number could go as high as 50% when national assessments are factored in (World Bank, 2021). A continuous concentration of studies focusing on rural societies ignores the needs of the urban subaltern, who only receive a meagre portion of policy support; disregarding their needs generates challenges and omits development opportunities (Marcus & Asmorowati, 2006). Moreover, there is a need for water insecurity and urban studies to explore, intersect and reconcile the water insecurity-induced vulnerabilities of the urban poor women in Zimbabwe. Additionally, the discourse on women's vulnerability has to go beyond victimhood and see women through a lens of varied and intersecting identities, cultural norms and social roles where social and power relations arbitrate their agency and resource access (Rao et al., 2019).

Against this backdrop, the report strives to unpack the lived experiences of women living in an urban setting in Zimbabwe as they navigated water insecurity. Semi-structured interviews were conducted in Old Luveve, a high-density and low-income township in the western part of Bulawayo, roughly 20km from the central business district (Taigbenu & Ncube, 2005). The daily activities and sustenance of the residents are heavily dependent on water, and they use water for domestic chores and running water-reliant business activities. This community's primary water supply source is through household taps via municipal water supply. However, the township is one of the many areas in the city that face extreme water shortages (M.I.H.R., 2021). Residents are forced to search for alternative water points without a municipal water supply. Their options are boreholes (far from residents), inconsistent water bowser trucks, community-dug dams, or open streams (ibid, 2021).

Water collection is a feminised task, whereby women are typically responsible for the activities and practices that require water collection and use. Thus, they collect water and carry out water-related chores such as bathing the children, cooking, and doing laundry (Mukuhlani & Nyamupingidza, 2014). Additional duties that befall women influence their physical, emotional, and material welfare and how they navigate kinship (ibid, 2014; Sultana, 2011). These rigid and patriarchal systems have engendered feminine and masculine gender

roles and perceptible distribution of tasks (Laurie, 2010), and have led to a chain of circumstances whereby limited water supply affects small businesses and their income. As such, an income deficit impedes the residents from purchasing water for daily sustenance. It is important to note that Zimbabwe's situation regarding water collection is unique based on two considerations. Because of the high unemployment rates, when one is jobless and idle, they are left with no choice but to assist with water collection in the household. Hence, gender ceases to be the *only* mediating factor in water collection (Mukonavanhu et al., 2021). Secondly, some family structures consist of numerous single-parent households where women solely care for and provide for their children due to relationship disintegration or fathers being absent because of economic migration to neighbouring countries (Matsai & Raniga, 2021).

This report feeds into the global Sustainable Development Goals (S.D.G.s) to address developmental issues facing modern society, and it explicitly tackles Goals 5, 6, and 11. Goal 5 intends to terminate all types of discrimination against women and girls, with target 5.4 aiming to acknowledge unpaid domestic work and care and encourage collective responsibility within households (United Nations, 2023). Target 5a deals with affording women equal opportunity regarding economic means, access, ownership and control of natural resources, land and property, and 5c is concerned with reinforcing policies that contribute to gender equality and the empowerment of girls and women (ibid, 2023). Goal 6 seeks to attain universal access to safe and affordable drinking water for all, with target 6.2 highlighting the importance of bringing about sufficient and equitable sanitation and being attentive to the needs of women, girls and vulnerable people. At the same time, 6.4 aims to achieve a consistent supply of freshwater to tackle water insecurity and significantly lessen the impact of water insecurity on people (ibid, 2023). Goal 11 is strengthening comprehensive and sustainable urbanisation (ibid, 2023). The report hopes to raise awareness of developmental issues at the interactions of gender, water access and urbanism as the issues within this area remain prevalent and require greater focus.

1.2 Research Aim

The report seeks to investigate the gendered experiences of urban water insecurity in Luvuvu, in the Bulawayo province of Zimbabwe and unravel how this has impacted women's livelihoods. The research conducted also aims to understand how the municipal efforts and water policies in Bulawayo tackle women's vulnerability to these impacts concerning gender and socioeconomic dynamics. The study deploys a Social Reproduction Theory (S.R.T.), Feminist Political Ecology (F.P.E.) and urban vulnerability lens to examine the multilayered impacts of lived intra-and-outer household experiences. The study also contends that perspectives from the schools of thought mentioned above are crucial to understanding the interplay between gender and water access in the urban context.

Central to this investigation is the concept of "fluid justice," which refers to the equitable distribution and access to water resources, acknowledging water as a fundamental human right (Boelens et al., 2022). Fluid justice considers not only the availability of water but also the social, economic, and political dimensions that influence water access and control. By

examining how gendered norms and power dynamics shape women's experiences and challenges in securing water, the study advocates for policies and practices that ensure fair and just access to water for all, particularly marginalised groups such as women.

The report builds on multiple scholarships, such as political ecology, feminist and gender theory, geography and development studies, to depict how socioeconomic conditions and power relations affect women's water insecurity experiences and adaptation in Luveve (Truelove, 2011; Rocheleau et al., 1996). As one of the few studies examining the gendered impacts of water insecurity in the Luveve township of Bulawayo, in Zimbabwe, the study aims to contribute to knowledge production within the interdisciplinary studies of gender, water insecurity and urbanism in Bulawayo and Sub-Saharan Africa in the broader context. The study seeks to serve as a source of activism calling for transformative and sustainable urban development and adaptation policies incorporating gender and socioeconomic justice in Bulawayo.

1.3 Research Problem

In the urban low-income township of Luveve, in Bulawayo, Zimbabwe, women inordinately bear the brunt of water insecurity, encountering multidimensional challenges that expand beyond the meagre access to water resources. This study seeks to extensively analyse the complex dynamics of water insecurity and its ubiquitous impact on women's everyday lives in this community. The research problem includes the following key aspects:

1.4 Research Questions

Lived Experiences

1. What are the *intersectional experiences* of vulnerability regarding water insecurity for women living in the urban township of Luveve, Bulawayo?

Sub Questions:

Household & Communal Relations:

- 1.1 How has water insecurity impacted women's household behaviour and communal relations in Luveve?

Access and Availability:

- 1.2 How does the limited access to reliable and safe water sources in Luveve affect women's daily lives?

Health and Sanitation:

- 1.3 What are the health implications for women in Luveve due to inadequate access to clean water and sanitation facilities?

Socioeconomic Impacts:

2. How do *mediating socioeconomic and cultural factors and power structures* shape women's vulnerability and lived experiences to the impacts of water shortages within the Bulawayo province?

Sub Questions:

- 2.1 How does water insecurity intensify existing socioeconomic inequalities among women in Luveve?
- 2.2 To what degree do unreliable water supplies engender time poverty and hamper women's engagement in income-generating activities?

Coping Strategies And Resilience

3. What adaptation strategies have women in Luveve utilised to counteract water insecurity and urban vulnerability?

Sub Question:

- 3.1 How do cultural and social norms shape women's resilience in persistent water challenges?

Policy And Governance

4. From the women's perspective, how has the *local governance* in Bulawayo province tackled the principal issues of water insecurity and vulnerability of women in addition to their adaptation needs?

Sub Questions:

- 4.1 How do water management policies and practices in Bulawayo address the particular needs and challenges women in Luveve face?
- 4.2 How can policy interventions be customised to alleviate the gendered impacts of water insecurity in Luveve?

1.5 Research Objectives

The research objectives steering the study are:

1. Question one examines how inadequate access to dependable and safe water resources impacts women's daily activities in a low-income urban area, highlighting the practical challenges they encounter in attaining water for household and personal use. Furthermore, it investigates the health consequences of insufficient access to clean water and sanitation services, which aims to unveil the health challenges women in urban townships face in water insecurity. Referencing their experiences of gendered labour, social conventions, gendered environmental rights and responsibilities this will aid us in interrogating the essence and causation of perceived water shortages in Bulawayo.
2. Question two attempts to explore the broader socioeconomic and political consequences, the power dynamics and neoliberal factors that facilitate urban vulnerability and adaptation of women living in Luveve in relation to water insecurity in Bulawayo, Zimbabwe. The objective is to comprehend how undependable water

supply drives inequalities, affecting women's economic activities and social engagement. In addition, the aim is to examine how these social determinants lead to differentiated impacts and thus avoid viewing the respondents as homogenous.

3. The goal of question three is to map out and understand the adaptation strategies women in Luveve use to grapple with water insecurity. Comprehending the adaptive and resilience strategies will shed light on the adaptive capacity of women in urban townships amid water insecurity.
4. Question four intends to evaluate the efficacy of existing water management policies and municipal/government efforts in addressing the needs and grievances of women in the urban context. The aim is to put forward recommendations for future water policy interventions that can accommodate and reduce the gendered impacts of water insecurity.

The research questions each serve as a valuable reference to actualise the goal of examining the multiplicity of lived experiences and differentiated impacts. While question one seeks to describe, question two analyses, backed by the theoretical framework, question three corroborates the findings, and question four aims to resolve based on the findings.

1.6 Outline of Subsequent Chapters

The report starts by laying out the theoretical underpinnings of urban vulnerability theory and conceptualisation of water insecurity, followed by the theoretical framework incorporating S.R.T., F.P.E. and intersectionality. Subsequently, the research methods deployed in the study are outlined in the methodology section, and the study location and scope of Bulawayo are delineated. The following section encompasses the findings from the data collected, giving an account of the lived experiences of women in Luveve based on the role and responsibilities, social conventions and physician and emotional stressors associated with the access, administration and distribution of water. After that, the study shall analyse and discuss the findings based on perspectives of S.R.T., F.P.E. and intersectionality. The report will then end with imperative reflections and conclusions.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This section explores the multidimensional connection between rapid urbanisation and water insecurity, highlighting the interconnected dynamics shaping water availability, accessibility, and quality in urban settings. I then outline the fundamental theories and frameworks used to examine urban vulnerability, underscoring their strengths, restraints, and probable applications. By delving into these frameworks, the section aims to provide a nuanced understanding of urban vulnerabilities, showing the current schools of thought. I then underscore inherent urban vulnerability as the grounding paradigm, accentuating its strengths and limitations. I then conceptualise water insecurity, showcase its variation from water scarcity, and explore the different factors contributing to it, mapping out the global trends and concentrating on developing nations. I also consider obscured factors of water insecurity, such as manufactured water scarcity, which compels us to view water insecurity from a new perspective and recognise the power dynamics and narratives that dominate the discourse on water insecurity. I then reconcile the relationship between water insecurity and urban vulnerability and how these bisect with gender through the S.R.T. optic.

2.2 Urban Vulnerability

2.2.1 Rapid Urbanisation

According to the World Cities Report, 56.2% of the world's population now resides in cities (United Nations Human Settlements Programme, 2022). Urbanisation is characterised by the expansion of affluent suburban areas in juxtaposition with the growth of tenement areas, apartment buildings, informal settlements, and slums (Chirisa & Mabeza, 2019, p.1). Consequently, this rapid urban growth brings forth uncontrolled urban development, socio-spatial difficulties, and insufficient basic infrastructure (Khosla & Masaud, 2010, p.78). Urbanisation remains a persistent challenge for developing countries; issues such as water shortages, flooding, strong winds, and climate-instigated risks emerge (Khosla & Masaud, 2010, p.78). Unsystematic and accelerated growth increases the vulnerability of millions of poor urban women, children, and men (Chirisa & Mabeza, 2019, p.2). However, scholars note that the asymmetrical disposition of susceptibility within urban societies is sculpted by individual and household attributes such as gender, income, well-being, socioeconomic assets, and livelihood strategies (Brown et al., 2012, p.12). This uneven distribution calls for a granular comprehension of power dynamics, gender and intersectionality in urban communities instead of gender and heterogeneity-impaired outlook. In Luveve, similar dynamics of rapid urbanization are observed, which significantly impact water insecurity for women. The rapid growth in this area has led to inadequate infrastructure and uneven water distribution, exacerbating the challenges faced by women in accessing clean water. This subsection sets the stage for understanding how urbanization in Luveve contributes to water insecurity.

2.2.2 Urban Vulnerability Theory and Frameworks

Urban vulnerability as impact vs inherent urban vulnerability

In consonance with Kyprianou et al. (2022), vulnerability is a multifarious term that can be conceptualised based on consolidating factors. When experienced in the urban context, it is implausible to be understood through a singular lens; its meaning, for that reason, changes based on context (ibid, 2022). By and large, there are two kinds of studies within this derivation. The first school of thought - urban vulnerability as impact - approach tackles challenges such as urban exposure to hazards, exploring the characteristics of hazards and asking pertinent policy questions, probing preventable or unpreventable effects of hazards on urban residents, their activities and the infrastructure (Lankao & Qin, 2011). Lankao & Qin (2011, pp. 142–146) have condemned this approach for omitting pertinent inquiry. They claim that this approach does not ask critical questions, such as probing how and why particular cities and populations are contrastingly affected and how local stakeholders and populations are responsive to adaptation alternatives and driven to make the required changes. Moreover, the approach does not ask whether or not the various stakeholders hold the requisite skills, resources and knowledge to adapt and how their possible adaptation actions are restrained by the socioeconomic, environmental and political conditions in which they reside and work (ibid, 2011).

On the other hand, various approaches to inherent urban vulnerability investigate why and how people and urban centres are more susceptible or able to adapt than others (Lankao & Qin, 2011). Inherent urban vulnerability deviates from the urban vulnerability as an outcome in the sense that it does not perceive urban vulnerability as a one-dimensional activity; instead, it views vulnerability as a fluctuating process entrenched in the diminishing capacity of a city and its residents to withstand a combination of socio-environmental harms and pressures. The diminishing capacity is fuelled by concealed political and socioeconomic factors (Lankao & Qin, 2011).

Contemporary studies also concentrate on urban settings within developing countries, which are perceived to be more susceptible to environmental hazards due to the duality of state failure and underdevelopment (Lankao & Qin, 2011). Lankao and Qin (2011) state that multidimensional determinants can construct urban vulnerability. These are the interplay between socioeconomic and political factors along with natural disasters which influence urban vulnerability; historical trends of marginalisation; the level of control that urban residents can wield over alternatives, choices and the divergent access of urban households to livelihood resources such as water, sanitation, income and healthcare. These determinants aid us in exploring the regular and varied trends in direct and fundamental socioeconomic and structural drivers of urban vulnerability. Therefore, going forward, this report focuses on inherent urban vulnerability and stresses that socioeconomic elements are as crucial as biophysical elements when deliberating on urban vulnerability.

However, there are constraints of inherent urban vulnerability that need to be taken into account, and one of them is its incapacity to consider how the exposure to and effects of dynamic risks gradually develop over time. Although they show a glimpse of how fundamental and direct socioeconomic and structural components of vulnerability develop over time and, at times, layout accounts of unequal resource access and distribution, they

refrain from depicting the entire chronology of how these dynamic inequities connect to distinctive effects and vulnerability over time (Lankao & Qin, 2011; Morello-Frosch et al., 2002; Eakin & Luers, 2006). This report adopts the inherent urban vulnerability framework to explore how socio-economic and political factors contribute to water insecurity for women in Luveve. This approach allows for a deeper understanding of the specific vulnerabilities that arise from the local context and the intersecting challenges faced by women in accessing water. The report also recognises the temporal aspect of vulnerability. It acknowledges that the impact of environmental hazards sometimes unravels over time, as seen in the study area. Furthermore, future studies could showcase how exposure and risk have evolved over time in Bulawayo, impacting individuals and local communities in a cumulative manner driven by factors such as unemployment, gender dimensions, and rural-to-urban migration. In addition, preceding studies could go beyond the immediate effects of water insecurity in Bulawayo and trace the long-term effects of water insecurity.

2.2.3 Conceptualising Water Insecurity

Water scarcity can be conceptualised as a situation where there is a lack of access to adequate quantities of water for human and environmental uses (White, 2014, p. 161). Water scarcity comes in physical and economic forms (Caretta *et al.*, 2022, p.560). Physical water scarcity appertains to when there is insufficient water to meet all the demands, as well as water required for ecosystems to operate, and it is observable in arid regions such as North Africa and West and Central Asia (Rijsberman, 2006). Conversely, economic water scarcity is a consequence of the inadequate institutional and financing infrastructure to draw water from rivers and alternative water sources, as well as the inadequate human capacity to accommodate the water demand (Caretta *et al.*, 2022, p.560; Molden, 2007, p.11). Similarly, economic water scarcity occurs when infrastructure is there, yet unequal water distribution exists (Jaeger et al., 2017). Economic water insecurity is substantially evident in Sub-Saharan African countries (Molden, 2007, p.11).

It is worth noting that *water scarcity* and *water insecurity* are interconnected concepts, yet different, as each term has varying interpretations, generating an overlap. While water scarcity broadly refers to a discrepancy between the demand and supply of fresh water, quantified in physical terms, water insecurity goes beyond conceptions of water scarcity to incorporate access to water amenities, protection from poor water quality and flooding, and suitable water governance that ascertains access to clean water (Sadoff *et al.*, 2020). Therefore, going forward, this report will be based on the premise of *water insecurity* mentioned above while considering components of economic water scarcity as an extensive concept of water insecurity. Understanding the distinction between water scarcity and water insecurity is crucial for this study, which focuses on the multifaceted experiences of women in Luveve. By examining both physical and economic aspects of water scarcity, the research highlights how these factors contribute to the broader concept of water insecurity and its impact on women's daily lives.

The decline of accessible water for everyday use can also be attributed to decreased freshwater and groundwater sources and surging contamination, impacting human

subsistence and well-being (Emile *et al.*, 2022; Gude, 2018; Xu & Usher, 2006). These circumstances are worsened by dynamic precipitation trends, supplemented by global climate change, the fugitive nature of water and the inept use of water (Emile *et al.*, 2022; Rijsberman, 2006; Swatuk, 2017). As claimed by a UNICEF report, one in three Africans is afflicted by water insecurity, 411 million people residing in the African continent do not have access to drinking water, 839 million have access constraints to hygiene and 779 million experience the shortage of essential sanitation, amenities (UNICEF & WHO, 2022).

In times of water insecurity, populations often do not have access to quality and safe water for consumption; thus, consuming contaminated water, which causes water-transmittable diseases such as diarrhoea and typhoid, and waterborne diseases are responsible for an estimated 3.5 million fatalities yearly (Dubay, 2021). Studies also show that 90% of wastewater is emitted into contaminated water in low to middle-income countries. When wastewater is not treated, it has grievous consequences as the water which could have been repurposed will either be unobtainable or unusable (Boretti & Rosa, 2019; Emile *et al.*, 2022). Reports suggest that 40% of urban residents lack access to sanitation services (WHO, 2021). For instance, the study area (Luveve) has been hit with persistent, severe and sporadic cholera outbreaks for over a decade, with the latest cholera outbreak recorded in June 2023 as a result of waterborne diseases (Ncube, 2021; Ndlovu, 2023). Likewise, the privatisation and manipulation of water resources contribute to water insecurity in low-income countries. Privatisation of water systems occurs when the government is incapable of providing hydro refining and delivery systems and outsources the services to private enterprises; this gives rise to corruption, the absence of accountability and agency, and debilitated water quality standards (LeSieur *et al.*, 2018; Emile *et al.*, 2022).

2.2.4 The concealed side of water insecurity

Swatuk (2017, pp. 2-3) urges us to be wary of predominant narratives of 'water alarmism' and 'manufactured water scarcity'. These are schematic depictions of available water resources worldwide through the freshwater lens. According to Swatuk (2017, p.3), typifying freshwater resources as inadequate has social insignificance, as it disregards the fact that the micro percentage of the total of the earth's water is still practically a large amount and that the micro percentage is renewable; and technological advancements keep making freshwater obtainable. This hyperbolic depiction of freshwater availability is what nudges those entitled and disposed to capture the resource to secure their futures, which is evident through land grabbing in African states (Swatuk, 2017, p. 3).

Tapela (2012 p.112) argues that what is at hand is 'social water scarcity' - whereby many people do not have adequate water supply to meet their needs due to the apathy of authorities and well-watered social actors. Another critical facet of manufactured water scarcity is the orchestration of population growth conceptions that juxtapose the rising population with increasing world water use, proposing that exponential population growth causes global freshwater reduction (Swatuk, 2017, p. 3). Although this is true to a certain extent (see Kumar & Katagami, 2016), it is delusive and controversial because water is found in everything, and most of the world's resources are consumed in the Global North; precisely,

world consumption trends steer world water use. Therefore, spotlighting population growth instead of consumption, or prospective consumption instead of actual consumption, transfers the attention of the world water crisis from the Global North to the South, specifically India and China, by such means exonerating those who are the principal drivers of water overconsumption in America (Swatuk, 2017, p. 3).

2.2.5 Swatuk's political economy of water: *A war against the Poor*

Swatuk (2017, p.18) conclusively shows that the actual water war is one against the poor, whereby the wealthy have an abundance of water, in voluminous quantities than they need, what we are accosted with is a political economy of water. In other words, water insecurity is a familiar plot of poverty and inequality vs. wealth and access, where people without immediate access to fresh water and appropriate sanitation face hardship, yet those with access to both water and sanitation descend to their economic and political ascendancy. Shiva (2002 p.111) puts on record that the water struggles are a calculated and audacious capture of water and land resources for profit-oriented motives by the contamination and extraction of groundwater by transnational corporations via the privatisation of urban water utilities that strengthen access by the affluent while disregarding people experiencing poverty. Moreover, this perspective corresponds with Mehta's antithesis on dominant narratives of water scarcity, which they term 'socially constructed water scarcity' which sees the nation-state collaborating with the economic sector in being hostile to its citizens (Swatuk, 2017; Mehta, 2001; Mehta, 2007).

In Luveve, the water crisis epitomises a broader socio-economic struggle. Swatuk's insights are resonant, and reveal how water insecurity is not just a matter of scarcity but a consequence of systemic inequalities. Within Luveve, marginalised groups (particularly women) endure the brunt of this disparity, facing restricted access to clean water amidst a country where the affluent wield disproportionate control over resources. This echoes the sentiments of Shiva (2002) and Mehta (2001; 2007), highlighting the exploitative practices of those who have control over resources and the complicity of state actors in perpetuating these injustices.

2.2.6 A water scarcity and urban vulnerability conundrum

The antecedent issues raised do not imply that urban growth and vast concentrations of the human population in the Global South do not contribute to water insecurity. It calls us to view water insecurity issues and challenges with a fresh lens and disband simplified notions of water insecurity (Swatuk, 2017, p. 3). As Swatuk puts it:

Where people lack access to potable water and waterborne sanitation, this is not a scarcity issue; it is a political issue (Swatuk, 2017, p.16).

We then see that manufactured water insecurity and urban vulnerability share an intricate and interwoven relationship, heightened by human activities and institutional deficiencies. The calculated and inadvertent exploitation, over-extraction, and contamination of water resources aid in manufacturing artificial water insecurity in urban settings. Sequentially, this intensifies

the vulnerability of urban residents by jeopardising their access to clean and adequate water. Socioeconomic disparities magnify the impact, as disenfranchised groups such as women and children are disproportionately impacted.

Luveve offers a poignant case study of the relationship between water insecurity and urban vulnerability. Swatuk's perspective urges us to view water insecurity not merely as a resource issue but as a symptom of deeper political and economic dynamics. In Luveve, this manifests in stark terms, where access to clean water becomes a political battleground (which is elaborated further in the findings section). The calculated exploitation and mismanagement of water resources exacerbate vulnerability, particularly among marginalised groups like women, who bear the disproportionate burden of these systemic failures.

2.3 Social Reproduction Theory

In this section, we utilise S.R.T. to investigate how urban vulnerability and water access are influenced by extant and multifaceted social systems, economic variances, gender roles and uneven power relations, and how these structures reproduce inequalities. S.R.T. is deeply embedded in Marxist heritage and postulates that inequalities, social structures, and reproduction of labour power do not just occur in the workplace but within the family and broader social context (Laslett & Brenner, 1989). Developed and championed by scholars such as Silvia Federici, S.R.T. speaks about the frequently concealed contribution that women make to a capitalist market through traditional roles within the household as caregivers and emphasises their extended role of providing free labour that is vital in constructing and sustaining present and future workers (Federici, & Jones, 2020). Essentially, S.R.T. has materialised as an analytical framework to comprehend how social structures and economic systems are preserved and replicated over time through everyday practices and activities.

2.3.1 Gendered Division of Labour

Within informal water-related economies, customary gender roles often persevere and, at times, are aggravated. S.R.T. sanctions for examining how women are often directed towards particular water-related tasks, such as water vending, while men control roles in water management or infrastructure. A report by the World Bank titled *'The Rising Tide'* highlights the underrepresentation of women in water management establishments, showcasing how they possess a vital role in informal systems but still need a formal role (Das, 2017). Moreover, a study in Ethiopia depicted how women are compelled to do light work. In contrast, men do the heavy lifting, make the rules, and handle conflicts in the administration of water points (Ebato & Van Koppen, 2005). This gendered division of labour underpins collective expectations and advances the reproduction of gender hierarchies.

2.3.2 Informal Water Economies and Livelihoods

In the urban areas experiencing water insecurity, informal economies related to water-related activities often emerge, and they have pronounced implications for gender roles, economic differences, and social reproduction dynamics. Without formal structures, infrastructure, and services, women carry the burden of acquiring water for their households when dependable formal systems still need to be included (Das, 2017). S.R.T. aids us in examining how these

informal labour markets mirror and procreate gendered divisions of labour, further establishing gender-based economic disparities.

S.R.T. accentuates the economic aspects of social reproduction, and the informal water economy furnishes a critical ground for examining economic disparities along gender lines. In times of water insecurity, women with informal micro-businesses who depend enormously on water are compelled to travel long distances to fetch water and queue in public water stalls (Das, 2017). In most conditions, water insecurity drives some to close their businesses (ibid, 2017). Moreover, women partaking in informal water-related activities are accosted by precarious working conditions without social protection and a lower income, which reproduces gendered economic disparities (ibid, 2017). S.R.T. showcases how lack of institutional assistance fosters vulnerability, buttressing social hierarchies and restricting women's upward economic mobility.

2.3.3 Commercialisation of water

As water becomes commercialised and water resources and rights are handled as commodities, economic systems give rise to water access dependent on financial positioning. With S.R.T., one can examine how commercialisation supports socioeconomic inequalities, restricting how communities with limited economic resources access water, specifically affecting women (Young & Hoppe, 2003). Similarly, market-oriented water distribution sometimes encompasses the enactment of pricing systems that create uneven access to water resources. (Young & Hoppe, 2003). S.R.T. enables an examination of how such pricing mechanisms can asymmetrically affect disenfranchised communities, where women often take on the burden of handling water-related duties.

2.3.4 Spatial Segregation

One must mention the role of gentrification, defined as 'the transformation of space for more affluent users' (Hackworth, 2002, p.815), to talk about water insecurity in urban settings. Gentrification - a consequence of urban planning strategies often entails economic alterations, causing changes in the obtainability and affordability of services, including water resources for lower-income individuals (O'Manique & Petrsek, 2023). S.R.T. helps us see how economic shifts connect to gendered roles, impacting how women obtain water for their households, which gives rise to the reproduction of differences regarding water access (Cairns, 2022).

Along the same lines, a study conducted in Johannesburg and Harare depicts how urban renewal initiatives in Southern African metropolitan cities have reproduced geographical segregation that isolates underprivileged communities and ostracises women (Mahlatsi, 2022). Likewise, women in local communities rely on oral messaging and collective communal cues to discern places with water availability in times of water insecurity. However, gentrification might fragment communities and social networks. S.R.T. assists in the exploration of how, when these social networks are broken down, it affects women's collective capacity to handle water insecurity jointly. As Luke and Kaika (2019, p.5) put it,

gentrification creates 'economic restructuring practices which uproot the stuff of everyday life'. Therefore, fragmentation might underpin gendered divisions in water-related duties.

Moreover, gentrification might reconfigure informal water markets, determining where and how water is purchased and traded beyond 'formal' markets. Informal markets enable women to have negotiating power within the informal economy and, at times, enable sellers and buyers to set up deferred payment plans on their own terms. S.R.T. enables us to see how a switch and formalisation in water markets impact women's active involvement and role as they adjust to the changing water access dynamics. In parallel to spatial injustices, the urban zoning policies of a place may influence the geographical organisation of various uses of water resources. In an attempt to showcase how colonial zoning policies in the study area created different access to water in townships vs. suburbs, Musemwa (2014 p.26) argued that:

One of the legacies of colonial development in Bulawayo was the establishment of a modern and relatively efficient reticulation system for white suburbia coupled with the entrenchment of an efficient system of inequitable access to water for domestic consumption for domestic use for Africans living in Makokoba.

Donahue and Johnston (1980), as cited in Musemwa (2014 p.47), extend Musemwa's argument by insisting that 'often the majority of those experiencing water shortages live in the world's cities where water is often supplied to the rich by municipal systems, while the urban poor, often living on the city's perimeter, have limited access to water which is also expensive for them to buy.' S.R.T. then helps us traverse how zoning decisions contribute to social fragmentation, influencing how people access water differently in various communities and underpinning gendered division in water-related duties.

2.3.5 Gendered Time Poverty and Productive Labour

The inordinate burden on women regarding water-related activities engenders 'time poverty', constraining their ability to partake in productive labour beyond the household (Roy & Crow, 2004). The burden sustains economic differences and inhibits women's empowerment opportunities, agency, and economic freedoms. Correspondingly, structuring transportation infrastructure in urban settings impacts how women access water resources (Aguilar et al., 2011). S.R.T. helps us analyse how transportation hurdles bring about gendered water access issues as women face mobility limitations and spend additional time travelling to water points. Furthermore, as water insecurity conditions worsen, people move between communities in search of better water resources (Miletto et al., 2017). S.R.T. helps us comprehend how gendered experiences of mobility and migration reproduce social hierarchies as women now have a role of navigating and adapting to new environments in the face of having the primary responsibility of water collection.

2.3.6 Health Injustices and Reproductive Labour

The subject of health injustices and reproductive labour regarding gender and water insecurity within urban settings is crucial in understanding the implications of S.R.T. By investigating how water insecurity impacts health outcomes, one can unveil the complex

manner in which social systems are reproduced and sustained. The time burden alluded to earlier is directly correlated to health inequity. S.R.T. ushers in a lens to analyse how the time burden linked to reproductive labour gives rise to health issues by constraining women's access to healthcare and chances for personal well-being. Women suffer from health complications such as protracted fatigue, headaches and chest pains as a consequence of carrying water (Asaba et al., 2013). Water insecurity sometimes contributes to threatened hygiene practices, affecting women's reproductive health. S.R.T. informs us how water insecurity bisects women's ability to maintain good hygiene during their menstrual cycle or pregnancy, thus impacting reproductive health outcomes (Choudhary et al., 2023).

Moreover, economic differences have a direct correlation with access to reproductive health services, as women in economically disadvantaged circumstances might face amplified challenges in accessing both water resources and reproductive health services. Water insecurity and the associated related reproductive tasks can take a mental toll on women and constitute a crucial aspect of the more significant social reproduction. S.R.T. offers a framework for analysing how deficient water access and the pressures of reproductive labour accord mental health injustices, thus underpinning social stratification.

For instance, a study conducted in an urban community in India illuminates how the unreliability and pressure linked to water insecurity contribute to intensified anxiety and stress among women in charge of catering to water needs within a household (Choudhary et al., 2023). S.R.T. clarifies how these stressors become entrenched into everyday life, thus maintaining a vicious cycle of emotional anguish and impacting their mental health. Closely related, the inordinate expectation placed on women for water-related duties can catalyse mental fatigue and burnout (Choudhary et al., 2023). S.R.T. helps us see how the care burden related to reproductive work engenders mental health issues as women manoeuvre the dual demands of water access and household caregiving.

2.3.7 Cultural and Symbolic Reproduction

The cultural, societal, and emblematic aspects of water insecurity are critical elements of the social reproduction phenomena. Studies around language and symbolic presentation show us how linguistic symbols and expressions shape gendered roles and identities related to water. For example, specific terms and figures of speech strengthen stereotypical views of women in water access and management. A study conducted in South Africa depicts how traditional Zulu proverbs are used as linguistic instruments to infuse and sustain sociocultural and moral values and how some of these proverbs deeply reflect patriarchal norms and gender inequality (Mathonsi & Mpungose, 2015). S.R.T., helps us see how traditional narratives and symbols centred on water are gendered and shape perceptions of how water is accessed and used, thus reinforcing the reproduction of gender roles.

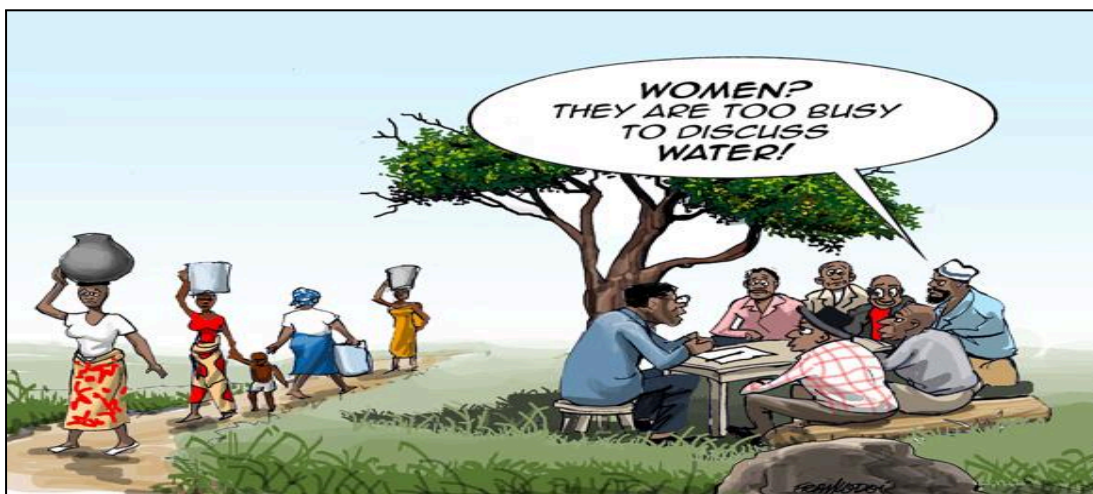
2.3.8 Media and Visual Representations

Media also has a crucial role in moulding cultural narratives, whereby media representations such as advertisements, movies, and broadcast media advance the symbolic reproduction of gender roles regarding water and broader environmental issues. Prototypical representations

reinforce the dominant standards and expectations in water access and management. A study conducted by Ali (2014) examining gender representation in the broadcasting of floods in Pakistan found that the visual depiction of gender fortified the gender stereotypes and societal conventions of Pakistani society, impounding the depiction of women to gender and gender-specific roles.

Similarly, visual symbols and diagrammatic images related to water might convey gendered connotations and interpretations, emphasising who should be in charge of water-related duties and who should manage them. A relevant visual calendar published by the World Bank Water and Sanitation Program (W.S.P.) spotlighted WASH issues from a gender lens, underscoring some of the social norms brought about by and fortifying poor service quality, highlighting how poor water service delivery affected women and girls (World Bank Water and Sanitation Program, 2012). The intentional use of evocative visual media was utilised to show that media not only perpetuates and reproduces stereotypes but can also be used to raise awareness of these social norms and stereotypes. Therefore, S.R.T. offers a lens to see how visual representations reinforce the symbolic reproduction of curtailing norms.

Figure 1: Media and Visual Representation of Women In Media (World Bank Sanitation Programme, 2012).



2.3.9 Education and Socialisation

Education is a crucial contributing factor in social reproduction. Through the S.R.T. lens, we can see how pedagogy and curricula can enforce gender expectations and enable gendered roles and norms inclusive of water-related duties. Kambarami (2006) discusses how patriarchy is propagated through the socialisation process, which starts within the family and permeates into other areas such as education, the economy, politics and religion. S.R.T. allows us to critically analyse how individuals, specifically children, are conditioned into particular gender roles concerning water via household dynamics, peer engagements and other traditional influences. These elementary experiences normalise and perpetuate societal norms and roles.

Conclusion

The literature review on S.R.T. exemplified the conclusive gravity of relating Social Reproduction Theory to the analysis of gender and water insecurity in urban settings through the review of themes such as gendered division of labour and water management, market-economy ascendancy, spatial segregation, gendered time poverty and productive labour, health outcomes, cultural and symbolic reproduction, media representation and educational socialisation. Understanding how social systems are reproduced through everyday societal activity can aid policymakers and researchers in formulating meticulous and functional strategies for tackling the uneven access, distribution, and management of water resources. Acknowledging the intersectionality of gender with broader power structures is critical for formulating impactful solutions to disintegrate the pattern of social reproduction and encourage unprejudiced access to water in urban settings.

2.4 Feminist Political Ecology

2.4.1 Historical Development & Evolution of FPE

F.P.E. is a subset of Political Ecology dedicated to understanding the intricacies of gender concerning the environment and natural resources-based livelihoods; accentuating gendered power relations and how the power of patriarchy, poverty and inequality impact how women access natural resources (Elmhirst, 2015, p. 519). F.P.E. also illuminates gendered activities within the bounds of the politics of environmental deterioration and preservation, the neo-liberalisation of the environment and systematic series of amassment, enclosure and dispossession (Elmhirst, 2015, p. 519; Cole, 2016, p.33). F.P.E. literature seeks to entangle spheres of presumed common interest like household and community and investigate the relationship between the environment, gendered subject construction and body politics (Rocheleau, 2008; Truelove, 2011). F.P.E. considers various environmental rights and responsibilities, such as access to water resources and how the marginalised are affected by environmental deterioration (Elmhirst, 2011, p.129; Buechler & Hanson, 2015).

F.P.E. has evolved empirically following the influence of dynamic and progressively neoliberal policy conditions, where a majority of the rural inhabitants are now itinerant and are more urbanised, as rural to urban transnational linkages make resource-based livelihood practices more complex (Elmhirst 2015, p.520). Environmental deterioration processes, such as climate change, water insecurity and urbanisation, have also fostered present-day issues that have formulated current and repeatedly amplified shocks and aggravations to livelihoods, frequently gendered (Elmhirst, 2015, p.520). In this regard, the potential rendered by F.P.E. to tackle the challenges posed by environmental degradation and the neoliberal, free-market response needs to be actualised (Elmhirst & Resurrección, 2008, pp. 3-22).

2.4.2 Resource Access and Control

F.P.E. also investigates the notion of resource access and control, querying how politics manifests itself in households and communities (Elmhirst, 2015, p.521). Research within this arena explores the role of family authority and land ownership in determining the gender division of labour and resource access (Carney, 2014, p.316). An overarching trope is that women and men bear gender-differentiated interests in nature through their idiosyncratic knowledge, skills, roles and responsibilities in the household divisions of labour.

Studies have shown how gender in household power structures and spousal relationships shapes resource access and control, which is most notable in contexts where benefiting from resources depends on communal relationships, which either permit or restrict such benefits (Ribot & Peluso, 2003). Case in point, research in India illustrates how hierarchical social conventions and processes related to spousal relationships position women in circumstances of reliance on the male kindred, which then functions as the dominant avenue for access to resources (capital, labour, land). As a result, this produces gender-distinct vulnerabilities, particularly for those encountering marital dissolution or spousal loss (Elmhirst, 2015, p.522; Agarwal, 2003, p.193; Rao, 2006, p.181). F.P.E. entrusts us with the theoretical devices to comprehend intra-familial power dynamics.

One cannot speak about resource access and control as it pertains to F.P.E. without assessing the repercussions of capitalism and the market on the gendered access to resources (Razavi, 2003). As Elmhirst (2015) states, neoliberalism alters and produces nature; as these activities converge with gender hierarchies at various levels, sequences of enclosure and marketisation are deemed to possess significant gender impacts.

In most low-income countries, productive access to water is intrinsically connected to access to land; the two are inextricably intertwined, yet a relatively limited number of women possess land (Wahaj & Hartl, 2007). By the same token, international discourse often addresses land and water problems independently (Cleveringa et al., 2004). Women can still access land through familial or conjugal relations, an undertaking that renders them vulnerable in a shift in family dynamics. For instance, in specific Sub-Saharan African communities, a woman accesses land rights eternally, yet this birthright is passed on to a male family member after she passes on (Wahaj & Hartl, 2007). On other occasions, a woman could be disposed of after the passing of the father or husband. In the absence of dependable land tenure, women are not in a position to access membership in Water User Associations (W.U.A.) or access credit (ibid, 2007). Reliable access to land for women gives rise to secure water rights and access to extended resources such as financial services, ultimately leading to enhanced livelihoods. Customary land rights demonstrate the significance of grappling for meaning over labour and resources.

2.4.3 Gendered Subjectivities

Gendered subjectivity is a concept whereby gender is established in various circumstances as an element of numerous and intricate subjectivities, whereby the production of femininities and masculinities create and recreate the gendered subject through people's everyday lived experiences (Elmhirst, 2015, p.523). F.P.E. theories such as 'fluidity' and 'becoming' challenge essentialist and gender binarism perspectives of relationships between women and men, which overstates differences and can essentialise specific patterns of gendered deprivation (Elmhirst, 2015, p.523). Such a viewpoint also enables many notable gender relations apart from conjugal relationships like social status and senior ranking (Elmhirst, 2015, p.523).

Emphasis is placed on how ecology and dynamic environmental conditions engender social variability and gender (Elmhirst, 2015 p.523). Gender per se is recontextualised through policies, practices, and reactions connected to dynamic environments and changing approaches to resource governance. Through envisaging gender as an undertaking where subjectivities are manufactured and altered through time, one can see how gender forms distinctive limitations and opportunities for both men and women regarding resources and bureaucratic processes (Nightingale, 2006).

2.4.4 The Feminist Political Ecology and Intersectionality Nexus

Studies within this genre of F.P.E. are intricately interwoven with the theory of intersectionality – a gender approach devised by Crenshaw (1989), which examines the interconnected forms of subjugation and the interactions between different aspects of social relations and subject construction. Intersectionality functions as a place for feminist postulations concerning identity construction and balances of power (ibid, 1989). Intersectionality examines how subjectivities produced (gender, class, ethnicity, ability, race, age, sexual orientation, disability) are mutually constructed, cut across each other and surface in relation to each other, sculpting hierarchies of power, thus engendering intricate social disparities that differ over temporalities and space (bell hooks, 1989; Nightingale, 2011; Lykke, 2010). Comparatively to F.P.E., intersectionality is heavily grounded on the postcolonial theory, which considers how neoliberalism, patriarchy and ethnicity shape women's subservience (Collins, 2015, p. 3).

Theories of intersectionality and embodiment have been applied to F.P.E., specifically in water provision and governance (Sultana, 2011; O'Reilly et al., 2009). F.P.E. depicts how diverse social differences are reproduced daily through embodied water processes. For instance, water insecurity in Delhi steered women and girls to experience the shrinking of their spatial mobility, impacting their chances for success (Truelove, 2011). An F.P.E. approach that is fabricated on everyday lived experiences shows how specific bodies suffer through state water governance policies, while daily practices circling water procreate numerous hierarchies of social variances (Truelove, 2011, p.144; Elmhirst, 2015, p.524). In the same breath, several studies assert that including bodily and emotional connections in waterscapes challenges neoliberal formulations of water and can realign the assessment of water resources by postulating the daily lived experiences of marginalised groups and how their relationships are tied to water access and how they are kept out from water management (Budds & Hinojosa, 2012; Caretta et al., 2020; Harris, 2006; Sultana, 2011; Lund, 2012).

Sultana (2011) documents how women's agony as a result of arsenic poisoning and uneven access to water in Bangladesh is not just a 'material' challenge but rather stretches across emotional and embodied-material spheres with capricious effects. Women loaded with the emotional labour and tension of acquiring clean water may be inclined to turn to polluted sources, thus engendering more suffering. Suffering traverses the personal via conflict-charged, socio-physical waterscapes to impact responses to environmental change. This suffering generates 'complex webs of power' affecting 'how water is owned, accessed, used, and controlled, affecting everyday life' (Sultana, 2011, p.171). Stress, anxiety, agony

and embarrassment become a supplementary burden to women's bodily and monetary strains of accessing water resources. Heng (1996) suggests that emotions are critical for awareness and comprehension among subdued women. Therefore, the fervent emotions articulated by women participants in the study will provide a comprehension of the emotive consequence of water insecurity on women in Bulawayo.

Emerging material feminist approaches to F.P.E. attempt to provide a framework to re-examine the link between humanity and nature by escaping the solitary lens of the gender-fixed effects of environmental change (Elmhirst, 2015, p.525). This view strives to move away from preceding studies on gender and climate change, such as ecofeminism that viewed women and men from a binary lens, representing women as vulnerable, disparaged casualties, without acknowledging the flexibility of subjectivities in the context of the material features of environmental change and adaptation (Elmhirst, 2015; Arora-Jonsson, 2011; Kaijser & Kronsell, 2013). As Arora-Jonsson (2011) posits, gendered consequences mirror preceding patterns of discrimination that emanate from a convergence of various identity classifications such as ethnicity, race and socio-economic status.

2.5 Limitations of S.R.T., F.P.E, & Intersectionality

Although S.R.T., F.P.E. and intersectionality are valuable frameworks that give us tools to understand societal gender issues, they have limitations. Being cognizant of these limitations and addressing these concerns is critical and can aid in developing a comprehensive, nuanced framework appropriate to different conditions and issues.

2.5.1 Economic Determinism

Although S.R.T. offers critical insights into the different elements of social life, it does not come without limitations, particularly on the intersection of water insecurity and gender. S.R.T. has been criticised for its economic determinism and foregrounding capitalism in sculpting social relations, and in the case of gender and water insecurity, ascribing these challenges to economic systems may simplify the intricate interaction of socio-cultural and political features (Jackson, 1999). Although S.R.T. emphasises the role of the capitalistic system in perpetuating and sustaining gender oppression, it is essential to note that S.R.T. goes beyond this and recognises the linkages between gender exploitation and capitalism in different contexts.

Inherently, S.R.T. offers us a foundation for comprehending these differences by considering how economic systems, cultural conventions, the political context of a place, and multiple axes of oppression interact differently (Arruzza, 2016). Instead of thrusting a custom-built perspective, S.R.T. ushers in a context-specific examination that bolsters a grip on global deviations. Correspondingly, critics such as (Fox & Vogel, 1985, as cited in Arruzza, 2016 p.11) have pointed out the limitations of some elements of S.R.T., stating that it is a

Basis for a unitary theory about gender oppression and its relationship to capitalism, capable of avoiding the fall into dualisms, which do nothing but

postpone the problem of having an explanatory understanding of gender inequalities instead of solving it.

However, Arruzza (2016) argues that S.R.T., as a unitary framework, is crucial in comprehending the current predicament in economic terms and as a widespread dilemma of the reproduction of capitalist society revised from all of its features. Furthermore, they emphasise the importance of grasping why neoliberal globalisation expedites the privatisation and manipulation of social reproduction, where capital infiltrates spaces that were not historically and directly compromised by the market (ibid, 2016).

S.R.T. has also been condemned for concentrating on structures and systemic drivers, at times leaving unnoticed individual and collective agency, and how this impediment can disregard how women ardently resist or negotiate their roles (Bieler, 2019). In gender and water insecurity, S.R.T. acknowledges that broader social, economic, and political systems influence women's choices and actions. In accessing, distributing, and sharing resources, women exercise reproductive agency in the familial and community context. The study acknowledges the reality of different forms of agency and how they function within structural limitations. Correspondingly, F.P.E. has been critiqued for its attempt to portray women simply as victims, overlooking women's agency and resilience as change agents against their circumstances (Resurrección, 2017). Nevertheless, this report balances out this paradoxical perspective and recognises women's vulnerability and agency in water insecurity. It was crucial to showcase women's resistance and adaptability, pushing for a more empowering narrative and confronting stereotypical traditions.

2.5.2 Mass Identities

On intersectionality, Downing (2018) contends that intersectionality concentrates heavily on mass identities and disregards people's individuality, not simply seeing them as a limb of a category. This has been noted to accentuate internal differences over hegemonic structures (Jibrin & Salem, 2015). On the contrary, intersectionality stresses the diversity within mass identities, acknowledging that individuals can belong to multiple groups concurrently, thus encouraging a nuanced awareness of individual experiences considering their gender, class, ethnicity, and other driving factors (Salem, 2018). Furthermore, focusing on mass identities does not negate individual experiences. It shows us the multidimensional essence of individual experiences and identities, fostering an extensive promotion of more comprehensive social justice activism.

2.5.3 Essentialism

F.P.E. has been criticised for risking essentialising the circumstances of women and their kinship with the environment and universalising women's experiences (Sundberg, 2016). This is said to oversimplify how class, ethnicity, race and other driving forces contribute to a person's experience with the environment. In the case of this report, I was weary of not generalising women's experiences and laying bare the complexity of their diverse experiences through incorporating intersectionality, S.R.T. and urban vulnerability in its analytical lens and acknowledging the correlation of different social categories. This aided in offering a

comprehensive understanding of how power dynamics shape a first-hand experience regarding gender, water insecurity and urbanism.

2.5.4 Global North-Centric Views

F.P.E. has received criticism for centring the views and experiences of women residing in the Global North, while women from the Global South receive less visibility (Harris, 2014). This Western-centred view runs the risk of contorting the intricate relationship between gender, the environment and politics from diverse cultures and settings. This report is fabricated on a context-specific analysis, centring and amplifying the wide range of voices and experiences of women living in Bulawayo, Zimbabwe, a region in the Global South. This was done to ascertain that Western experiences do not solely sculpt the theories and results and ultimately ensure the appropriateness and applicability of F.P.E. to a worldwide audience.

2.5.5 Qualitative Richness vs Issues in Quantification

Lastly, the qualitative essence of theoretical frameworks such as S.R.T., F.P.E., and intersectionality has been denounced for being complex in accurately measuring and quantifying the gendered effects of environmental challenges (Rocheleau et al., 1996). This has been noted to impede the ability to formulate concise criteria and indices for measuring progress in addressing gender and water insecurity issues. The qualitative nature of F.P.E. research has been purported to be quite challenging in quantifying and measuring the gendered impacts of environmental issues accurately, consequently limiting the ability to develop clear metrics and indicators for assessing progress in addressing gender and environmental concerns.

Nightingale (2003) showcased the innovativeness of F.P.E. by incorporating methodologies that triangulated data obtained from quantitative, visual and interpretative methods. The study in Nepal concerned community forestry, which merged aerial photo interpretation with environmental narrative history to examine the success and feasibility of community forest management. The study was grounded in a unique epistemological heritage and, thus, engendering unique, situated knowledge. F.P.E.'s qualitative nature can create new insights into a place and place locals as legitimate creators of environmental knowledge (Sundberg, 2016).

The qualitative affluence of F.P.E. permits a comprehensive exploration of the entangled relationship between gender and water insecurity. Although quantification is crucial in specific contexts, the richness of qualitative research engenders a profound comprehension of women's lived experiences, contributing views that could be unnoticed in solely quantitative analyses. It is worth noting that F.P.E.'s lack of mainstream approval and diminished paradigm within conventional development and environmental discourse can constrain its impact and thwart the acceptance of its propositions for decision-making processes and policy. This also speaks to the epistemic privilege that exists within academia.

2.6 Application of the theoretical framework to the study

The in-depth comprehension of urban vulnerability, S.R.T., F.P.E. and intersectionality on the gendered dimensions of water insecurity offers a basis for developing more constructive, practical, context-specific and equitable strategies and policies. Through unpacking how gender norms and power imbalances shape ecological issues, the theoretical framework provides valuable knowledge that will prime the development of policies at the intersection of environmental and social matters.

2.7 Chapter Summary

This literature review examined urban vulnerability, focusing on rapid urbanisation's socio-spatial challenges and inadequate infrastructure. It explored two perspectives on urban vulnerability—impact-driven and inherent—and highlighted the multifaceted nature of water insecurity, challenging predominant narratives of water insecurity. The discussion underscored the interconnectedness of water insecurity, urban growth, and vulnerability, advocating for a political lens to address access disparities in urban water resources.

The chapter applied S.R.T. to analyse the connection between urban vulnerability, water access, and gender dynamics. Rooted in Marxism, S.R.T. extended inequalities to family and societal contexts, exploring gendered divisions in informal water economies, the impact of commercialisation, spatial segregation, and gendered time poverty. S.R.T. shed light on health injustices, cultural reproduction, and the role of education in reinforcing gender norms. F.P.E. focused on gender dynamics in relation to environmental issues, highlighting the influence of patriarchy, wealth inequality, and poverty on women's resource access, evolving in response to neoliberal policies. It challenged essentialist views, foregrounding fluid gender relations, and explored social disparities through intersectionality—material feminist approaches aimed to reshape humanity's connection with nature, moving beyond binary gender perspectives.

The chapter also critically examined the limitations of S.R.T., F.P.E., and intersectionality for understanding gender issues. S.R.T. was critiqued for economic determinism but commended for context-specific insights. F.P.E. faced concerns about victim portrayal and oversimplification, emphasising the need to balance vulnerability and agency. Intersectionality was faulted for honing in on mass identities, and F.P.E. was criticised for essentialism, global North-centric views, and challenges in quantification. Despite these criticisms, F.P.E.'s qualitative richness allows nuanced exploration of gender and water insecurity, revealing insights often missed in quantitative analyses. The literature review stressed the need for comprehensive, context-specific frameworks considering diverse perspectives and experiences, illuminating gendered water insecurity and informing equitable policies at the intersection of environmental and social challenges.

CHAPTER 3: METHODOLOGY

3.1 Introduction to the methodology

The report sets forth the methodological framework for examining water insecurity within Luveve township, Bulawayo. Grounded in feminist epistemology and feminist ethnographic methods, this research adopts a qualitative design, leveraging one-on-one interviews, critical reading and participant observation to capture the nuanced experiences of women in Luveve. Ethical considerations form the bedrock of this inquiry, recognising the significance of cultural nuances, power imbalances, and the COVID-19 pandemic. This chapter highlights the methodological understanding, ethical frameworks, and the researcher's commitment to fostering equitable and culturally sensitive interactions. Within this framework, the study unfolds, bringing together social consciousness, ethical rigour, and a desire for positive social change.

3.2 Study Location

Bulawayo, Zimbabwe's second-largest city, is located in a semi-arid area with an average annual rainfall of 460mm, intensified by seasonal annual drought (Mkandla et al., 2005). The 2018-2019 rain season was documented as the driest across Southern Africa since at least 1981 when rainfall in various parts of Zimbabwe was 50% below average (Moyo, 2020). As a result, local dams dropped tremendously. In June 2018, municipal officials rendered three out of six dams that supply the city inactive, and roughly 24% to 40% of the three remaining dams were full in October 2019 (ibid, 2020). On account of the low rainfall, the water supply issues are further intensified by evaporation from its five reservoir dams in the Umzingwane basin, as well as the geographical location of the Bulawayo on the catchment area (Ncube & Taigbenu, 2006). This is exacerbated by the fact that water systems were premeditated to serve a population of 400,000, yet Bulawayo's estimated population is 1.8 million, which continues to grow exponentially (Chimhete, 2006). The contrast between supply and demand is symptomatic of the gravity of water insecurity and depicts how the water demand has to be bridged with supplementary supply, considering the current oversaturation of water supplies (Ncube & Taigbenu, 2006; Dube, 2020). Consequently, Bulawayo has been experiencing a perennial water crisis, and the Bulawayo City Council has permanently implemented water rationing since 1984 (Bulawayo City Council, 2023).

3.2.1 Study Scope

Water rationing¹ is underway where particular residential areas do not have water access for up to five months, and this prolonged lack of water has fed into a rise in diarrhoea cases (Ndlovu, 2020). The targeted research area, the Luveve township in Bulawayo, is one of the affected areas where the residents have been facing severe water insecurity and water contamination, forcing residents to rely on communal boreholes or walk several kilometres to

¹ Water rationing is a temporary and at times prolonged suspension of municipal water supply (Climate Adapt, 2023).

access safe and clean water (Chingono, 2020). Water rationing is expected to persist unless pragmatic, wide-ranging, and sustainable solutions are implemented (Dzirutwe, 2020).

On the other hand, Musemwa (2014) notes that water shortages in Bulawayo are highly politicised and outline the dynamics of water provision in the area, which is influenced by historical tribal factions. Drawing on the accounts of the results obtained from the experiences of women in Luveve and Musemwa's detailed account, the study chronicles how the water shortages in Bulawayo are influenced by the interplay between the city's surging population and urbanisation, political frictions, geographical positioning, impacts of environmental change and water governance, which are all predicted as underlying factors contributing to water insecurity, and how these variables grossly impact the livelihoods and coping strategies of women.

3.3 Research Methods

3.3.1 Research Design

This research utilised a qualitative research design grounded on feminist epistemology. Qualitative research has a proclivity to elaborate on an ontological stance, which can be characterised as constructivist; that is to say, the researcher "constructs their new understandings through the interaction of what they already know and believe and the ideas, events, and activities with which they come in contact" (Mogashoa, 2014, p.52). This is the premise of the study, as it aims to comprehend how gender roles and power dynamics over resource access and control are constructed and bargained over time through socioeconomic and environmental variability. Moreso, a qualitative methodology was suitable for Luveve as it provided the flexibility needed to explore these complexities, ensuring a nuanced understanding of their challenges and coping strategies.

To link theory and methodology in the report, an interpretative methodological approach was applied in the form of abduction. Abduction is geared towards grasping the social materiality and unearthing the driving agents behind the community being studied (Becker et al., 2012). Abduction suggests that the empiricist employs extant theories to secure a profound apprehension of social systems and sequences within a context. To understand their social reality, this study applied extant F.P.E. and intersectional theories, perspectives, and conceptual frameworks of urban vulnerability to women living in Luveve, Bulawayo. Feminist epistemology grounded on poststructuralist concepts and knowledge, such as narrative assessments, profoundly informed this research and methods. Narrative assessments aid in generating knowledge about socio-environmental change embodied in a setting, creating culturally sound and gendered knowledge from regions experiencing ecological change (Buechler & Hanson, 2015).

3.3.2 Field Research

I began my fieldwork on the 8th of March, and concluded on the 15th of March 2023, encompassing a duration of approximately 1 week. Field Research facilitated a significant interaction between the researcher and the participants. Fieldwork ensured that multiple perspectives are heeded and that the experiences of the most susceptible were brought to the

forefront (Emerson, 1981). Lembke et al. (2020) highlights that academic research and social activism are deeply connected; they argue about the intricacy of inevitable subjectivity and objectivity. They contend whether

Ethnographers can enter a research field marked by historical injustices and highly asymmetric power struggles without losing the standpoint of value-free outsiders. We argue that scholars in the field are not disconnected from local cultural and institutional settings; they cannot expect to conduct fieldwork without a substantial degree of subjectivity (ibid. p. 14).

This study employed an ethnographic approach to deeply understand the lived experiences of women in Luveve concerning water insecurity. Ethnography, as defined by Hammersley and Atkinson (1998), involves the researcher immersing themselves in the community to observe and participate in their daily activities, gaining an insider's perspective. Ethnography allowed me to fully immerse myself within the community and physically grasp the interconnected issues shaping the daily lives of women in Luveve. Particularly, feminist ethnography was utilised in this report, which is defined as an integrative, trans-disciplinary approach to knowledge which grounds theory contextually in the concrete realm of women's everyday lives (Stacey, 1988). Furthermore, consistent evidence suggests that ethnographers are not entirely viewed as 'mere spectators' but rather as people who inhabit binary positions — that of a *scholar and activist* (Lembke et al., 2020, pp. 14–15). Lembke puts forward the view that

An activist stance is sometimes necessary, though stressing that the primary position must always be that of the scholar—particularly in those highly conflictive fields which often characterise the societal periphery of the Global South (Lembke et al., 2020, p. 18).

Against this backdrop, this report also carries an academic objective. Instead, it aims to illuminate the first-hand experiences of the women in Luveve, which is accomplished through the research academic process and the endeavour for societal action (Lembke et al., 2020, p. 18). Notwithstanding, the awareness that women are more affected by a substantial load of water shortages than men, backed by prior assumptions and approaches, inescapably shaped the study's design. However, compassion for female participants was nuanced by triangulating data sources and reviewing secondary data sources that back up the interpretations to legitimise the findings.

3.3.3 Critical Reading

Critical reading can be understood as a process of re-examining various concepts with a wider perspective (Akin et al., 2015). Critical reading involves being in communion with the text, and active evaluation of the text, and aids us in gauging whether numerous texts were considered (ibid, 2015). Therefore, critical reading in this report involved constant assessment and deliberation on the secondary sources, and intentionally picking authors who substantiated their claims with case studies from the Global South. Likewise, critical reading helped us analyse how gender and water interact in different contexts, and the findings were

juxtaposed with preceding studies in Zimbabwe and other Sub-Saharan African countries. Although the scrutiny of secondary sources might have informed the researcher's assumptions and positioning before entering the study area, critical reading brought an informed understanding of the field as preceding studies were analysed concerning the research findings to neutralise various viewpoints.

3.3.4 Sampling Techniques

The participants were located through a combination of sampling methods, such as the gatekeeper's rapport with the community, the primary researcher's local knowledge and snowball and convenient sampling. Utilising an esteemed gatekeeper who has lived his entire life in the study area was fundamental for the research because they acted as a mediator to access the specific study settings and people. Andoh-Arthur (2019) suggests that gatekeepers are critical as they can permit or deny access to individuals or spaces in the field. The gatekeeper was invaluable for gaining access to a number of the study participants due to their knowledge, relationships, and membership in Luvuvu.

Some respondents were chosen through snowball sampling methods, whereby respondents were selected because of how convenient and accessible they were. Accordingly, the interviewees proposed new prospective interviewees with similar experiences in order to recommend more participants (Parker et al., 2019). The snowball sampling technique was particularly effective as it was time-saving, cost-effective, and enabled one to access women of different ages; it was also easier to communicate with the secondary and tertiary sample as they were acquaintances of the initial sample (Naderifar et al., 2017, p.2). The respondents were Black Zimbabwean women residing in Luvuvu, Bulawayo, aged 23-70. Nineteen interviews were conducted in the participant's homes, places of work, and at the central local community growth point. All nineteen respondents represented the experiences and effects of water shortages in Luvuvu for the context of this study.

3.3.5 Semi-structured interviews

The data was collected in March 2023, deploying different feminist ethnographic methods, such as semi-structured interviews and study participant observation, one of the typical research methods in qualitative research (Martyn, 2009). The study commenced with observations of the study area; thereafter, the interview objectives were explained to the participants beforehand, and synchronously, semi-structured interviews took place. The semi-structured approach was critical as it allowed one to 'examine uncharted territory with unknown but potential momentous issues, giving the interviewer maximum latitude to spot useful leads and pursue them' (Adams, 2015, p.494). In other words, the interview allowed the researcher to gain familiarity with the research, setting and participants and make iterative adjustments. Broad interview questions were stated in advance, providing a foundation for subsequent interviews.

The questions were open-ended, linking F.P.E. perspectives and water shortages, which permitted flexibility and the ability to probe and ask follow-up questions that respondents might not be candid about if sitting with peers in a focus group (Adams, 2015 pp. 494-495).

Semi-structured interviews provided a pathway for participants to freely give an account of their first-hand experiences and perceptions on the intersection of gender, water and urbanism in order to ensure a multiplicity of age, socioeconomic standing, and relative power, which offered significant utility for investigating relations, social norms conducts and dynamics (Willis, 2006). Intersectionality was used as a crucial interview lens to unpack the interviewee's diversity in their lived experiences. Interviews were conducted in both isiNdebele² and English. The responses were hand-written in response sheets, and where necessary, the responses were recorded after the participants gave informed consent.

3.3.6 Observations

The study was supported by empirical observations, which were pivotal for the researcher and enabled them to gather details on trends, behaviours, and activities of the area. As the research was underway, all the townships and suburbs in Bulawayo were experiencing substantial water insecurity, and this informed preconceived perceptions of the water circumstances upon setting foot into the study site. Contrasting these preconceived perceptions with empirical observations expanded the likelihood of presenting an honest view of the conditions.

3.4 Validity and Self-reflection

3.4.1 Validity and Reliability

Reliability is defined as the consistency of findings, while validity is described as the legitimacy of the findings (Altheide & Johnson, 1994). Creswell (2005) describes content validity as the degree to which the questions on the research instrument fully represent what they aim to measure. To align with content validity, the chosen respondents constituted a sample related to the experiences of water shortages in Luveve. The report comprised narratives from women across various ages and social experiences to comprehend multilayered gendered experiences. Validity and reliability were also encompassed by incorporating social listening and taking heed of the views of people who were knowledgeable about the water insecurity conditions in Luveve and Bulawayo.

To steer clear of unreliable data, the study took into account agency and power dynamics to facilitate respondents' liberty to speak on their own accord without the dynamic force of a group setting (Frankfort-Nachmias et al., 2015, p. 123). In-depth interviews generated trust and familiarity, which gave the participants the ability to share their experiences that may have been uncomfortable. Reliability was considered by including an acceptable size of respondents to avert data saturation and errors (Frankfort-Nachmias et al., 2015, p. 123). Sandelowski (2001) suggests utilising a sample size that is substantial enough to provide an in-depth data analysis of the situation but compact enough not to omit crucial information about the phenomena under inquiry. Furthermore, it is argued that the more functional the data collected is, the fewer participants are required (Morse, 2015). Lastly, it was pivotal for the researcher to recognise their own biases, thus practising thorough reflection and delineating the questions to avoid compromising the answers.

² IsiNdebele is an official language spoken in Zimbabwe and is widely spoken in the study area.

3.4.2 Self-reflection

Previous studies have show how a participant's brief interruption during an interview can cause irregularities (Frankfort-Nachmias et al., 2015). Certain parts of the research took place at the local community growth point, coinciding with national election voter registration, which may have impacted some of the respondent's attentiveness and vitality. In addition, some respondents were informal traders who had to briefly pause the research to attend to customers, thus affecting their concentration. However, these minor obstructions were an inconspicuous benefit as they allowed the researcher to make meaningful observations of the respondents' routine as traders while navigating water insecurity. For instance, the researcher observed how a female entrepreneur who runs a fast-food stall negotiated water inaccessibility, mainly when her business is based on having access to water (washing potatoes, cooking, regularly washing hands, etc.).

As a researcher, I was deeply aware of my visceral connection to the study area as a place where I spent the first 15 years of my life and how that could inevitably influence subjectivity. It is critical to acknowledge that emotions significantly influence the research process, shaping how a researcher interprets a situation; concomitantly, the researcher is also shaped by the research process (Widdowfield, 2000, p. 200). However, Spencer (1992, p.9) recognises the utility and validity of embracing the 'emotional dimension' and stresses that 'fieldwork can never be an emotionless experience'. Moreover, espousing emotions in academic research solidifies the balanced dualism of the scholar-activist roles discussed earlier in the fieldwork section. This means that documenting emotions is increasingly crucial in qualitative research because the continuous researcher-research subject interaction *humanises* the figures and the statistics. It is easier to ricochet from academic to activist when the 'numbers of people living in poverty become names, and those names *are real* people' (Widdowfield, 2000, p. 201). Widdowfield extends this logic by pointing out that

Discussing emotions may fulfil a cathartic role. By expressing and communicating feelings to others either verbally or in writing, dealing with distressing situations is no longer an isolated experience and, as such, may be easier to cope with. Secondly, drawing attention to the emotional difficulties experienced during research may provide wider support. Reassuring other researchers that what they may be going through is probably not unique but part and parcel of the research process. (ibid. p 201).

Some writers have also suggested that although acknowledging emotions in the research practice as a means to remain objective has been influential, there is still an inherent inclination towards being viewed as a 'masculinist' way of knowing (Widdowfield, 2000, p.200). This perspective questions epistemic and masculine privilege in academic research as dissecting one's emotions is perceived as illicit to academic discourse, much so in the male-oriented academy (ibid. p. 200). McDowell implies that

Feminist scholars have revealed how the mind/body, public/private, culture/nature, reason/emotion, concrete/abstract dichotomies are mapped onto gender differences so that the inferior of the two attributes are, in each case, assumed to be feminine and as such 'natural' and so excluded from the theoretical investigation.
(McDowell, 1992, p. 409)

It is worth noting that acknowledging emotions is not intrinsically a feminist approach (Widdowfield, 2000, p. 201). However, this oxymoronic view provides a nuanced perspective of dominant episteme in academic research and helps us understand how the powers that prevail influence qualitative research methods. In consonance with the decolonial feminist stance and F.P.E.'s ethos of acknowledging power dynamics, recognition of emotions was crucial in the research process and contributed to the ability to remain objective. In addition, supplementary practices to remain objective were considered and discussed in the field research and ethical considerations sections.

3.5 Ethical Considerations of the Study

3.5.1 Ethical Clearance

The study was ratified by the School of Social Sciences Ethics Committee under the University Human Research Ethics Committee (Non-medical), bearing the Protocol Number SOCL-2022-01. The study was classified under the low-risk level, and the ethics clearance certificate is attached in the Appendices section.

3.5.2 Considerations of the researcher

Based on the nature of the research, specific ethical considerations were considered. Capron (1989) and Orb, Eisenhauer, and Wynaden (2001) state that any type of research should be steered by the ethos of respect for participant's rights, beneficence, and justice - including the right to be informed about the study, the right to freely decide whether to participate in a study and the right to withdraw at any time without penalty. Therefore, the study incorporated informed verbal consent acquired before conducting the interviews, relaying the purpose of the research and the risks involved. Beneficence was taken into account, whereby participants were afforded complete anonymity and were guaranteed the confidentiality of the data they contributed.

In addition to the aforementioned ethical components and those outlined in the methodological approach and theoretical framework, specific ethical considerations prioritising a comprehension of the cultural, social, linguistic, historical and economic consciousness were crucial for the study (Brydon, 2006, p. 27). A critical component of ethical considerations was being cognizant of the power imbalances between the participants and the researcher. The primary researcher is a 29-year-old, educated Black African woman. Once introduced as pursuing a Master's degree in a South African university, the presumed status was enhanced; therefore, reflexivity was embraced (Patnaik, 2013). The researcher situated the study as intending to assist a community where they spent the fifteen formative years of their life relayed wanting to find solutions to the persistent water insecurity problems. The researcher clarified that they did not represent any government department,

and neither did they have any political affiliations. However, commensurate with transparency, the researcher shared their informed, forthright opinion on how the study could be helpful when asked questions by the respondents.

By espousing decolonial feminist approaches, the researcher also sought to reduce any conduct that could inflate feelings of inadequacy and polarity between the respondents and the researcher (Aparentiik & Parpart, 2006, p. 35). Complying with communal practices was a way of gaining trust and approval. This consisted of greeting participants in the local language, isiNdebele, speaking fluently throughout the interview process, and inscribing the appropriate titles to the participants based on seniority. Moreover, the researcher partook in certain activities that participants were engaged in (i.e. assisting in peeling potatoes in one household where the participant ran a fast-food stall). Likewise, the researcher minimised the power disparity by interviewing senior respondents while sitting on the ground.

3.5.3 Ethical Considerations for Conducting Research Activities during COVID-19

As a researcher, observing COVID-19 safety principles set out by the World Health Organization and Zimbabwe's specific government and travel regulations was critical. When conducting one-on-one interviews, the researcher ensured that the research activities occurred outdoors or within a well-ventilated indoor space. Since it was not a requirement for Zimbabwean citizens to wear face masks in the period that the study took place, the researcher was not obligated to wear a facemask; however, they took precautionary measures and carried a mask at all times, and sought to wear one at the participant's request.

Similarly, the researcher clarified to the participants that they could wear a face mask if needed. Correspondingly, the researcher ascertained that a limited number of people were present during the in-depth interviews, and there was always more than 1,5m social distance between the study participant and the researcher. The researcher also ensured they were fully vaccinated before undertaking the study and carried the vaccination certificate to all the one-on-one interviews if requested. A consent form and information sheet were provided to the research participant before conducting the interview, indicating the associated COVID-19 risks and measures put in place to protect both the participant and the researcher.

As a researcher, these are some of the measures that they did not undertake:

- Require, coerce, or pressure research participants to answer any questions about their health status, including COVID-19 vaccination status.
- Coerce or pressure research participants to make a specific choice regarding vaccination.
- Require research participants to provide proof of vaccination as a condition of participating.
- Exclude research participants from participating in the study based on their vaccination status.

3.5.4 Data Analysis Strategy

The data analysis strategy served as the foundation for an in-depth exploration of women's lived experiences on water insecurity in Luveve in the following chapter. The first step in data analysis was sorting, whereby the data collected, such as interview transcripts, field notes, photos and audio recordings, were organised for ease of access, followed up with data immersion, which involved repeatedly assessing the data collected to acquire a more profound understanding of the qualitative material, while simultaneously underscoring recurring themes and patterns, key points and nuances.

The researcher followed up with data coding, which comprised generating preliminary concepts that encapsulated the different elements of the data. The data codes were descriptive, thus illustrating divergent themes. I then moved on to axial coding, which involved arranging familiar codes into broader themes, and this aided in ordering the data and establishing a relationship between the various ideas. The next step in data coding was selective coding, which required further refinement along the coding process by choosing the most applicable codes (themes). The purpose of selective coding was to focus on the central themes that epitomise the research objectives. Subsequently, I embarked on theme development, through which the researcher organised the hand-picked codes and groupings into systematic and logical themes, and each theme represented a specific element of the research questions. I then picked out sub-themes within the broader themes to develop supplementary insights and nuance to the analysis. This hierarchical sequence assisted in sorting out and presenting the research findings.

Thereupon, I set about with cross-analysis, through which I contrasted themes over different participants, and this helped in spotlighting correlations and dissimilarities, enhancing the apprehension of the phenomena. Correspondingly, I were attentive to data contradictory to the emerging themes, and these pessimistic emergences engendered important insights and warded off oversimplification.

The next phase was validating the data against multitudinous data sources, such as past research papers, through triangulation to substantiate the findings. Triangulation was supplemented by peer-briefing and deliberating on the findings with the academic supervisor to obtain an alternative outlook and ascertain that the analysis is corroborated. I synthesised the findings and expounded on the themes and trends based on the research questions and objectives, breaking down the substance of each theme and its implications on the discipline of sociology. Likewise, I correlated the findings to the applicable theoretical frameworks, highlighting how the study advances predominant knowledge.

3.6 Chapter Summary

The study focuses on the Luveve township in Bulawayo, Zimbabwe, grappling with severe water insecurity due to climate, drought, and inadequate infrastructure. Water rationing has been ongoing since 1984, particularly affecting Luveve, leading to health-related issues. The research employed a qualitative design grounded in feminist epistemology. It investigated the causes of water insecurity, emphasising factors such as population growth, hydropolitics, and environmental issues, specifically their impact on women. Methodologically, the study

utilised abduction to apply feminist epistemology, intersectionality, and urban vulnerability theories. Field research involved participant observation, sampling techniques including a gatekeeper and snowballing, and semi-structured interviews were conducted in isiNdebele and English. Observations and critical reading shaped the research process, ensuring validity and reliability. Ethical considerations were addressed, obtaining low-risk approval from the ethics committee and emphasising informed consent, respect for participants' rights, and beneficence through anonymity and data confidentiality. Moreover, the study, led by a 29-year-old Black African woman, integrated cultural sensitivity and power equity. The researcher transparently aimed to address water insecurity in her childhood community, employing decolonial feminist approaches and emphasising local practices. The researcher adhered to COVID-19 safety guidelines during the study, following WHO and Zimbabwean government regulations, including outdoor interviews, mask availability, and vaccination. Notably, the researcher respected participants' health choices, avoiding pressure or exclusion based on vaccination status.

CHAPTER 4: THE LIVED EXPERIENCES OF WOMEN FACING WATER INSECURITY IN LUVEVE

4.1 Introduction

This section presents women participants' experiences, narratives, and viewpoints. The findings illustrate that gender does in fact shape how women in Luveve experience water insecurity. Six themes emerged from the study. These represent how water insecurity has affected the women's livelihood and sources of income, the unique challenges faced by women as they navigate daily life without water, coping strategies that women resorted to, the forms and levels of support that they received, a spotlight of the compromised systems in the water access and distribution pipeline within the community; and the people-centred solutions women suggested to address water shortages. This section will chronicle the six themes that emerged from the study.

4.1.1 Sociodemographic Characteristics of the Participants

This table presents the key socioeconomic characteristics of the study participants involved in the study. These include age, education level, occupation, number of years living in Luveve, and whether they received government aid or not.

Table 1

Sociodemographic characteristics of the participants

Sample Characteristics	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Education				
Secondary	16	84		
Tertiary	3	16		
Age				
18-29	5	27		
30-39	1	5		
40-49	7	37		
50-59	1	5		
60-69	4	21		
Above 70	1	5		
Occupation				
Unemployed	5	27		
Vendor	7	37		
Vendor; Counselling	1	5		
Vendor; MP	1	5		
Odd Jobs	2	11		
Studying	1	5		

Teacher	1	5		
Retired	1	5		
Number of years living in Luveve			16.8	12.85
Average income p/m				
\$0	5	26		
\$1 - \$50	2	10		
\$60 - \$100	3	16		
\$110 - \$200	6	32		
Prefer not to say	3	16		
Government Aid				
No Assistance	19	100		

Note: n = 19

The data collected for each variable provides insights into the diverse socioeconomic backgrounds of the study participants. This information is vital for understanding the impact of these demographic characteristics on the various themes explored in the study. Below is a descriptor of the sociodemographic characteristics of the participants:

Variable: Age **Description:** The age of participants at the time of the study **Measurement Unit:** Years

Variable: Education **Description:** The highest level of education attained by participants **Measurement Unit:** Categorical (e.g. Primary School, High School, Tertiary)

Variable: Occupation **Description:** The current employment status/job category of participants **Measurement Unit:** Categorical (e.g., Employed, Unemployed)

Variable: Years Living in Luveve **Description:** The number of years participants have resided in the study area **Measurement Unit:** Years

Variable: Income per Month **Description:** Monthly income of participants **Measurement Unit:** Currency (USD)

Variable: Government Aid Receipt **Description:** Whether participants receive government aid or not **Measurement Unit:** Binary (Yes/No)

Important Note *Some participants had alternative sources of income, e.g an individual could be an MP but also a vendor, or unemployed but receives money from tenants.

4.1.2 Income Generation and Economic Mobility

Theme one: Sentiments on how water shortages have affected women's income sources and livelihoods: 'I have to wake up and go and fetch water, and it takes up so much of my time.'

Table 2: Income Generation and Economic Mobility

	Themes	Sub-themes
Theme One	"I have to wake up and go and fetch water, and it takes up so much of my time."	- Livelihoods - Income generation - Survival and economic mobility

This theme is related to livelihood creation, income generation amidst water shortages, survival, and economic mobility. Most female respondents recounted how water shortages brought about substantial economic effects as one of their pressing problems. Water shortages influence how women partake in remunerative pursuits. Aside from the principal duty of domestic work within the household, most of the respondents were engaged in small businesses to expand their sources of income. However, water shortages affected their business activities. Most of their small businesses were centred on selling fast food and fruits and vegetables, heavily reliant on water. As a result of water shortages, women were compelled to purchase water from informal sources so that their businesses could thrive.

I need water so we can wash the potatoes, and one needs clean water. I am forced to purchase gallons of water for my business to continue. Also, if your job is not flexible, you cannot fill in water for storage on time for the short periods that water is available in the taps. (Respondent 1).

The average price per 20 litres of water was 1 USD ³, which most women could not afford, despite water being an essential aspect of their business, which had a ripple effect on their earnings. Two middle-aged women expressed that:

I sell fruits and vegetables; you must wash them before consumption. You find that a customer will not buy from a stall that doesn't have water for them to wash their fruits. Therefore, it is unhygienic to sell veggies and fruits without water. (Respondent 8).

I use water to wash fruits, and people do not buy when you do not have water for them to wash the fruits. So I am forced to buy water at an additional cost. (Respondent 9).

Because water is such an essential source of livelihood for all humankind, it was unsurprising that most respondents pointed out that water shortages affected their sources of income, survival mechanisms, and day-to-day mobility and cadence. One young woman, who takes up odd jobs as a domestic worker, primarily handwashing clothes, spoke about how complex it had been for her to render her services and for people to hire her when there is no water, as her services could not be fulfilled.

Since I am a domestic worker, no one can hire me when there is no water. I cannot do laundry when there is no water...and laundry is the number one task that most people would hire me for. (Respondent 5).

It was also evident that water shortages required women to have an inadvertent budget to purchase gallons of water in order for them to proceed with their daily activities and, in some cases, for their trading activities to continue.

³ 1USD was equivalent to ZAR18.58 at the time of writing the dissertation.

If there is no water, I cannot cook or wash dishes, and I am forced to shut down the food stall and lose money. (Respondent 14).

Water insecurity also limited women's ability to actualise their desire to fully partake in more business activities, as one participant pointed out that she used to run a fast food stall and had to close down her business because of the persistent water cuts.

I used to run a business of cooking potato chips, and the nature of my business required me to have water to wash the potatoes. Because of the frequent water cuts, I had to close down the business because I did not have the capacity and time to fetch or buy water. (Respondent 4).

Participants highlighted that water shortages were an inconvenience that cost some women economic opportunities through the sub-theme of survival and economic mobility.

I was called for an interview, but there was no water, which affected my employment prospects. (Respondent 15).

4.1.3 Womanhood and water woes

Theme two: Womanhood and water woes: ‘Water shortages affect us as women; when you are menstruating, you have to stay sanitised and clean. It is not all of us who use pads. A lot of people use pieces of cloth.’

Table 3: Womanhood and water woes

	Themes	Sub-themes
Theme Two	“Water shortages affect us as women. When you are menstruating, you have to stay sanitised and clean. It is not all of us who use pads. A lot of people use pieces of cloth.”	<ul style="list-style-type: none"> - Water and gender - The human right to water and sanitation - Human dignity in the case of sanitation - Water Contamination and Public Health - Water, Sanitation & Hygiene (WASH) - The burden of collecting water for women - Gender Time Poverty

This theme pertains to navigating everyday life as a woman whilst encountering water shortages. It highlights idiosyncratic issues women face, such as experiencing menstruation without a water supply and the human dignity (or lack thereof) one experiences as a result. It also encapsulates how water insecurity feeds into more extensive global development and public health issues and themes. This theme also touches on the hazards and burdens women encounter in the quest for water, such as water pollution and gender time poverty. Respondent

11 spoke agonisingly and vulnerably about how less fortunate women are stripped of their dignity when they are undergoing their menstrual cycle and experiencing water shortages.

It affects us as women. When you are menstruating, you have to stay sanitised and clean. It is not only us who use pads; many people use pieces of cloth. You have to wash the piece of cloth, iron it and store it away, but people end up discarding the cloth in an unhygienic manner, which spreads diseases. We are also forced to see these pieces of cloth randomly discarded in the community. The water we get from boreholes is unclean by the time it reaches our community. Not all of us receive clean water, so people prefer to discard the pieces of cloth instead of keeping them. (Respondent 11).

The sole burden of water collection had physical stressors on women, such as body aches from travelling long distances. One woman highlighted that they did not have a borehole and had to travel long distances to other communities and ask for water. In close relation, some women described the weariness they felt as a consequence of walking long distances and promptly having to commence other household duties. Participants also corroborated the sub-theme of Water Contamination and Public Health and WASH, highlighting how water shortages contributed to far-reaching global development challenges and public health issues such as cholera, diarrhoea, waterborne diseases, and contamination. Moreover, households with many inhabitants made it difficult to maintain hygiene and made it easier for diseases to spread.

Not having water to flush the toilet is challenging because many stay in our household. There was also a time when many people died in the area as a result of unclean/contaminated water, and some of the pipes that transport water have rusted over time. These rust pipes lead to diseases and diarrhoea. (Respondent 19)

Additionally, many women expressed that when water rationing was briefly halted, water typically came out of dirty, unfiltered and contaminated taps, leading to diarrhoea and tummy aches experienced by several household members. One participant definitively narrated how she constantly and solely had to take her children to the hospital numerous times, which required money, yet she was unemployed. Participants also mentioned that there was a cholera outbreak in the community, which led to several deaths and hospitalisations as a result of water contamination.

Emotional stressors

The sole responsibility of water collection was a basis for dire emotional tension for female respondents. Being concerned with where and how to collect water was a unifying thread, whereby sentiments of despair, indignation, and shame came to light as one middle-aged woman expressed:

We have to go out and search for water in the nearest borehole where there are

always long queues, which affects my job because I cannot go and queue, yet I am coming from work and then fighting with the community. I am teaching them, queuing with them, and fighting with them. It is really embarrassing. (Respondent 2).

Most women expressed that their households relied on them for water collection, which added to their emotional tension and the inability to fulfil everyday chores. Respondent 17, a young mother, expressed that she had to bathe her children and fetch water before she commenced the task of job hunting. Women are typically the primary caregivers in a household, compelled to take care of the household inhabitants and daily activities dually. This sole duty becomes double jeopardy in the face of water shortages, as one respondent lamented the complexity of taking care of the household duties and searching for water whilst looking after a child living with disabilities.

Water shortages affect cleaning, washing, and bathing. I also have a child living with disabilities, and I cannot go and look for water and leave him behind. (Respondent 19).

As a previous study conducted in Malawi illustrates, being female, residing in an urban area, disability, and having limited education and wealth increased the intensity of barriers to accessing WASH services (White et al., 2016). Another respondent emotively expressed her distress for her community's well-being as she mentioned how a child fell inside a well when they were fetching water. Looking for water is not only a laborious activity for women but an emotionally distressing one, which is consonant with Sultana (2011), who pointed out that resource struggles and conflicts are emotionally charged challenges which are negotiated through bodies, geographies and emotions.

Although female respondents conveyed related encounters, there were variances among the participants. One respondent narrated how she saw her predicament as much more adverse than other women because of her age. An older woman conveyed her experience and mentioned how her old age and limited mobility restricted her from being able to search for water, leaving her with the option of relying on her grandchildren to take up the task. On the other hand, it was interesting to note how the youngest respondent, 19 years old, was apathetic to the impacts of insecurity and mentioned that the water shortages did not affect her much. When there is a water supply cut, people are forced to search for alternative water sources, which is time-consuming. In most cases, women spend hours searching for water and, as a result, put their work on pause.

I must wake up and fetch water, which takes up so much of my time. (Respondent 7).

As a mother with school children, water shortages affect me because I have to wake up early and get the children ready for school, and if there is no water, I have to buy water, which is a challenge because I am currently unemployed.

(Respondent 15).

One interviewee expressed that there is social tension when they have to ask for water from neighbouring communities, which is met with objection. The neighbouring communities complained and refused to give them water, conveying that they also had to bear the brunt of paying the water bills.

4.1.4 Waterscapes - A glimpse of a broken system

Theme three: Waterscapes - A glimpse of a broken system: ‘They solicit sexual favours from young girls, court them or pressure them to be their girlfriends in exchange for water, which is abuse.’

Table 4: Waterscapes - A glimpse of a broken system

	Themes	Sub-themes
Theme Three	“They solicit sexual favours from young girls, court them or pressure them to be their girlfriends in exchange for water, which is abuse.”	- Sex For Water -Violence Against Women (VAW), - Harassment and Coercion - Corruption - Nepotism

This theme explores the multidimensional issues faced by women in pursuit of water, shedding light on challenges such as harassment, coercion, violence, corruption, and nepotism.

Social stressors

One middle-aged woman brought up her observation of various forms of harassment that women of different ages were subjected to while queuing at water collection points. She revealed how adolescent girls and young women were coerced into transactional relationships by Njengu boys⁴:

The problem is that when you go and fetch water in the local boreholes, there are Njengu boys who will intimidate you and do whatever they want until they are done. It is then that they would allow you to get water. They need favours from you so that you can get water. They solicit sexual favours from young girls or court them, or pressure them to be their girlfriends in water exchange, which is abuse.
(Respondent 2).

In the same breath, the same participant went on to deplore the discrimination and ageism she faced from the Njengu boys who gave preferential treatment to younger women:

⁴ Njengu boys is a colloquial term utilised by respondents to describe delinquent young men who put themselves in charge of regulating water access at water collection points.

We see the young girls getting water, but not the older and aged women; we are left aside. They persecute us and ask us why we are at the borehole. They remind us that older women are witches in rural areas. Moreover, if you do not want to engage in conflict, you will plead, and then they will give you the water. (Respondent 2).

Bowser trucks are controversial because our daughters have to give in to the advances of water bowser truck drivers so that they get water. (Respondent 11).

Similarly, one older woman mentioned that the boys who put themselves in charge at water collection points solicited bribes from people if they wanted to access water. Gatekeeping was a common leitmotif when it came to water access, with one respondent mentioning that, at times, you could only receive water if you were affiliated with a particular church, a supporter of a specific political party or a committee member of the community school. Furthermore, one woman mentioned the nepotism at play when the city council periodically provided JoJo⁵ tanks to the community, highlighting how nepotism and familiarity played a role in water access and distribution.

4.1.5 Water shortage coping strategies

Theme four: Water shortage coping strategies: ‘We buy drinking water, and we fetch water to bathe from burst pipes.’

Table 5: Water shortage coping strategies

	Themes	Sub-themes
Theme Four	“We buy drinking water, and we fetch water to bathe from burst pipes.”	- Coping Mechanisms - Persistence

This theme relates to women's various strategies to deal with water shortages. In the face of increasing water insecurity, women in Luveve developed coping mechanisms that accentuated their resilience, adaptability and tenacity in ascertaining the welfare of their households and communities. The respondents refashioned their lives and trading activities in various ways. As mentioned previously, purchasing water was a recurring coping strategy for most participants as water is pivotal for running small businesses that some women ran and the general maintenance of the household, and these costs are implicitly the responsibility of women.

To mitigate the threats associated with water collection, the communities collectively

⁵ A JoJo tank is a large and robust tank for storing water for household, commercial or agricultural use and enables individuals and communities to collect and store rainwater during water restrictions/shortages (JoJo, 2023).

collaborated and established coping strategies such as digging up a well where they could fetch water. In addition, several women mentioned that they fetched water from burst pipes and open streams. Although the water was not clean, the women used the water sourced from the well, burst pipes and open streams to flush the toilet and water their gardens. Moreover, they also sourced the water from the community borehole, which they had to walk long distances to access. At times, the women acquired water from the water bowser truck dispersed by the municipality, which did not come regularly. The water from the bowser truck was cited several times as unclean.

We get water from boreholes, and then we use water from a dug-up well to flush the toilet. We then have to buy water to use within the household, sometimes we use water from the bowser. (Respondent 13).

This theme highlights how women in Luveve showcased persistence amid water insecurity, indicating their willpower and resilience. Despite the circumstances, they continually adapted and stayed on the path to sustainable water management.

4.1.6 Forms of Assistance and Levels of Support

Theme five: Forms of assistance and levels of support: ‘No one assists me. I am a single mother, and I also do not have a partner.’

Table 6: Forms of Assistance and Levels of Support

	Themes	Sub-themes
Theme Five	"No one assists me. I am a single mother, and I also do not have a partner."	- Intervention

Despite the critical role that the government can play in most of the water shortages, their support was visibly scarce. This theme probes the challenges women face in Luveve, the government's meagre response, and the support levels they have received. No female respondent implied or explicitly mentioned that their partner assisted them with purchasing water. One respondent revealed that her husband expected water to be available when he returned from work and does not care about where the water is sourced from or the complexity of sourcing water. Another young woman expressed how she did everything on her own. In contrast, another woman expressed that she had the sole responsibility as a single mother and did not have a partner to assist her with water collection.

When asked about the levels of support the women received from the Bulawayo City Council, most of them snickered and expressed that they received minimal to no support from the municipality. It is understood that the municipality irregularly sent water bowser trucks to

the community, which would only accommodate some community members.

No one assists us at all. Back in the day, they would disperse water bowser trucks, but now there is nothing. (Respondent 2).

There is hearsay that the city council supplies a water bowser truck to distribute water in the community. However, I have not seen the water bowser truck; it is all hearsay. People say that the bowser truck does not carry clean water, so I have never gone to fetch water from the water bowser truck. (Respondent 11).

Unless you call the municipality and inquire about the water bowser trucks, the trucks take a long time to reach the community. They usually come when you state that a funeral is taking place; otherwise, they do not come if the pressing issue is a water cut. (Respondent 11).

Apart from the city council, one woman mentioned that she received support from N.G.O.s during the height of the COVID-19 pandemic, which assisted them with buckets, soaps, and sanitary towels. Another respondent mentioned that when there were water contamination-related deaths, there was an N.G.O. that Planned International & World Vision distributed soap, water containers for fetching water and a 20-litre bucket for water storage. Although most women cited that they belonged to a Stokvel⁶, they did not receive support directly linked to water shortages. Only one respondent stated receiving sanitary towels and soap from the stokvel. This observation underscores the need for further exploration into the potential role of similar community groups in addressing water insecurity issues, which could be a valuable avenue for future research. One interviewee mentioned that she was part of the health committee within the community. However, no financial support was received from the committee. At the same time, another respondent reported that she was part of a political party, but the party did not address challenges related to water shortages. One respondent felt frustrated that women's groups required membership fees, which she could not afford as she was unemployed.

In response to the question of whether community laws enable women to own property or land and borrow money to start a business, all the women stated that they did not receive such support. One interviewee stated that there had been such offers from the government; however, the government defaulted on their promises. Interestingly, the Member of Parliament stated receiving financial support from her children residing in the diaspora - a depiction of the stark contrast between the privileges relished by government personnel and the elite compared to the realities faced by the impoverished.

4.1.7 The need for government intervention and support

⁶ A Stokvel is “an association formed upon a core of participants who agree to make regular contributions to a fund which is given, in whole or in part, to each contributor in rotation” (Ardener, 1964 as cited in Naong, 2009)

Theme Six: The need for government intervention and support: ‘Disperse more water bowser trucks and also communicate with the community the water cut schedule/timetable with communities.’

Table 7: The need for government intervention and support

	Themes	Sub-themes
Theme Six	"Disperse more water bowser trucks and also communicate with the community the water cut schedule/timetable communities."	-Community-centred solutions -Government intervention

Water insecurity threatens the overall well-being of communities, particularly that of marginalised people, demanding comprehensive strategies that merge government intervention with community-centred approaches. This theme explores various interventions suggested by women in Luveve that augment their voices in decision-making processes. All the participants strongly suggested several government interventions that could aid them in coping with water shortages. A common denominator was urging the municipality to disseminate water bowser trucks in areas affected by water shortages, supplemented by a planned water supply schedule released ahead of time.

Disperse more water bowser trucks and communicate with the community the water cut schedule/timetable with communities. You find that, at times, people who do not live within our community and come from another area would get access to water. If nearby communities are served well, they will not come to our area to scourge for limited water." (Respondent 4)

Bring in more bowser water trucks in the community, which match the number of people living within the community. (Respondent 5).

Several women suggested that the municipality drill more boreholes or dig more wells to accommodate the amount of people living in the community.

Drill as many boreholes as possible that are closer to community members to accommodate many people who reside in this area so that there is no frenzy and congestion. As mentioned, it would also be helpful if there is a water cut schedule so that people can plan their day. (Respondent 1).

A considerable number of women said they would like to see a reduction in the number of days that water rationing occurs. Contrastingly, several women intensely lamented that they would appreciate it if the water was not rationed at all because of its value and how

insufferable water cuts have made their lives. These comments were made because their water bills were still high despite intermittently not having access to water.

Reduce the number of days that the water cuts occur. (Respondent 3).

We just need water. The municipality water bill is still the same, and even higher for some people. (Respondent 13).

Water should not be rationed in the first place; it is valuable. (Respondent 15).

A handful of respondents proposed that the government should ensure that the water is not contaminated or dirty when it reaches their household, as untreated water has dire health consequences for people. One young respondent recommended that community members receive water purification tablets to treat the water.

Remove all the sand from the dams. The water is dirty, so we would like to receive water that is not contaminated. (Respondent 12).

As encapsulated by these remarks, women's experiences illustrate that their vulnerability to water shortages is more pronounced due to their solitary duty of water collection, fortified by emotional turmoil, monetary limitations, increased workload, and intensified health threats. One respondent expressed concern about not having a communal council to account for water-related challenges, insinuating the critical need for community-centred leadership to report and solve water-related issues.

You cannot go and complain to anyone. There is no council to report your grievances concerning water. (Respondent 13).

The tactile and imperceptible effects of water insecurity illustrate that although women were all experiencing water shortages, their experiences were quite diverse. The significance that each woman put on the different factors was varied, in the same manner that the respondents associated with these factors. This highlights the crucial fact that each respondent had a similar but somewhat unique experience, expanding the affluence of the findings. In conclusion, the findings of this research highlight the abysmal and multifaceted effects of water insecurity on women residing in the urban townships of Luveve. The results presented bring to the surface that water insecurity aggravates existing gender inequities, setting an unequal load on women who are, in many instances, the principal caregivers in their families. Water insecurity restricts women's ability to perform domestic duties and constrains their access to economic opportunities and general well-being. Additionally, the findings stress the interconnectedness of water insecurity with broader issues such as WASH, VAW, and environmental sustainability. Alleviating the effects of water insecurity on women needs integrated strategies, and the next section will rigorously analyse the findings and correlate them to the various schools of thought.

4.2 Chapter Summary of the lived experiences of women facing water insecurity in Luveve

In this chapter, the researcher conducted a comprehensive data analysis utilising coding techniques and hierarchical organisation to identify key themes. Cross-analysis and attention to contradictory data were deployed, and validation was achieved through triangulation and peer-briefing. The synthesised findings were connected to sociological and theoretical frameworks, underscoring the study's contribution to existing knowledge. Theme 1: 'Income generation and economic mobility' explored the effects of water shortages on women's income and economic mobility. It revealed how reliance on small businesses, especially those vulnerable to water insecurity, affected job opportunities and business sustainability. It also forced some businesses to close, highlighting broader implications for women's livelihoods. Theme 2: 'Womanhood and water woes' explored women's unique challenges during water shortages, including managing menstruation, emotional stress, and health issues. Variances in age-related challenges and social tensions from seeking water in neighbouring communities were highlighted. Theme 3: Waterscapes - A glimpse of a broken system unveiled challenges in water access, such as harassment, violence, corruption, and nepotism, revealing a broken system that adversely affects women's access to water. Theme 4: 'Water shortage coping strategies' explores how women in Luveve cope with water shortages, showcasing their resilience and adaptability for sustainable water management by purchasing water and digging wells. Theme 5: 'Forms of assistance and levels of support' addressed the limited support from the government and the women's spouses, illuminating the disparity between the struggles of women local women and the privileges of government personnel. The lack of provisions for women's property ownership and business initiatives was highlighted. Finally, Theme 6: 'The need for government intervention and support', punctuated the urgent need for government intervention to address water insecurity in Luveve, with women suggesting actions like distributing water bowser trucks and drilling more boreholes. The varied experiences highlight the importance of community-centered leadership in addressing water-related challenges. Moreover, The findings from this study are enriched with detailed ethnographic descriptions and narratives derived from participant observation. Observing women's daily struggles at water collection points revealed not only the physical challenges but also the social dynamics, such as instances of gatekeeping and discrimination.

CHAPTER 5: COPING STRATEGIES OF WOMEN FACING WATER INSECURITY IN LUVEVE

5.1 Introduction

The study results have given us perspectives into the multifaceted lived experiences of women in Luveve as they navigate everyday life amid water insecurity. The various themes presented in chapter four highlight how gender impacts the degree to which female respondents uniquely encounter water shortages. Even though the water shortage in Luveve had dire consequences for the whole population, women experienced more hardships due to assumed gender roles and subsequent consequences such as distribution of work, rights and responsibilities, and power imbalances. This section shall reflect on the research findings through a chronological and synergetic thematic analysis that interchangeably integrates urban vulnerability theory, S.R.T. and F.P.E. while highlighting the relationship between various themes.

5.1.1 Income Generation and Economic Mobility

The findings of the second theme were primarily focused on livelihoods, income generation, survival, and economic mobility, exploring the complex relationship between water access and the socio-economic well-being of the respondents.

Impact on Livelihoods

The findings of this research showcase the abject impact of water insecurity on women's livelihoods in Luveve. The restricted access to reliable and clean water directly influences income-earning activities, as a significant proportion of women spent the bulk of their time fetching water. The time-consuming nature of water collection impeded their capacity to partake in income-generating activities, thus maintaining a sequence of economic deprivation. Furthermore, the variability in water accessibility affected women engaged in micro-businesses dependent on water, such as street food vending and selling fruits and vegetables. Inconsistent water supply fragmented their trading schedules, causing financial deficits and declining economic durability for women micro-entrepreneurs. The data suggests that the intersectionality of water insecurity with economic participation and gender facilitates existing inequalities, producing further hurdles for women attempting to set up and maintain their livelihoods.

The results reveal the complex relationships between water insecurity and urban vulnerability experienced by women in Luveve, highlighting a profound connection between water insecurity and the vulnerability of women's livelihoods in an urban township. Access to water appeared as a crucial element driving the kinds of economic activities women in Luveve could partake in, meaning that inconsistent and unreliable water supply interfered with their financial capacity to sustain their micro businesses. The recurrent nature of this connection challenged their livelihoods, further entrenching vulnerability to water insecurity and producing a cycle that maintained economic precarity. Previous studies demonstrate that structural issues and systemic injustices enhance the vulnerability of poor people living in

urban areas, with women and children having differential experiences (Grasham et al., 2019). Similarly, this discovery also corresponds with S.R.T. in accentuating the role of social structures in maintaining economic inequalities, in the sense that the time that women spend on water-related activators hinders them from partaking in income-earning activities or educational pursuits. This evident inequality engenders the reproduction of gender distinctions, as noted by some scholars (Young & Hoppe, 2003).

Applying the F.P.E. theoretical framework to the findings places water as a centre point where gender and socio-economic inequities are constructed and reconstructed. F.P.E. enables us to probe power structures, examining how water resource administration and ecological policies influence women's agency, adaptability, and economic possibilities. The results show an unwavering link between the disintegration of women's livelihoods and water insecurity. Studies show that restricted water access hinders the motivation for income-earning activity, specifically those connected to informality and micro-businesses (Buechler & Hanson, 2015). Women partaking in small businesses such as selling fruit and vegetables and fast food stalls faced increased challenges in maintaining their business activities.

Income Generation and Survival

The study results indicate a correspondence between water insecurity and earnings, making clear the multifarious issues women in Luveve deal with in the urban context. The economic pressure from inconsistent water access goes beyond the impact on livelihoods and threatens the endurance of women and their families. This is evident when the respondents reported channelling limited finances to purchase water from informal traders at extortionate prices while trying to meet necessities such as food and healthcare. This was worse for participants from women-headed households, who had no spousal or familial support. They expressed accelerated challenges when they had to singlehandedly search for water, which amplified their vulnerability to economic insecurity, as it restricted their ability to invest in profit-making activities and strengthen economic possibilities in the long run.

The findings show us that there is a direct association between earnings and survival strategies of women in Luveve. Noting the respondent who stopped rendering laundry services and missed out on an income because of water insecurity, we can see how she had to deliberate on alternative informal employment opportunities that were less water-intensive. As a result, this discovery depicts how women in an urban township have to arbitrate their survival and find innovative ways to earn an income in the face of constrained water resources. This view aligns with a study conducted on the patterns of vulnerability among women in low-income households in Lagos, Nigeria, which concluded that women endured losses in paltry trade, specifically if they did not have a husband (Ajibade et al., 2013). S.R.T. enlightens us on how the cyclical essence of this dynamic maintains the poverty cycle, preventing women from escaping the economic hurdles brought by water insecurity (Young & Hoppe, 2003). The weight of water collection is primarily borne by the woman sidetracking their time and driving away from income-generating activities. This inhibits their economic potential and sustains traditional gender roles, underpinning societal expectations that diminish women's self-determination and economic agency (Rocheleau et al., 1996, p.

13). Through the F.P.E. lens, water insecurity worsens existing gender inequalities in earnings and survival mechanisms.

Survival and Economic Mobility

Water insecurity impacts income generation and influences women's capacity to access activities critical for economic empowerment. For instance, one respondent mentioned missing out on a job interview because they had to fetch water instead. What can be deduced is the opportunity cost of water insecurity, where women in Luveve are burdened with finding alternative water sources and, as a result, relinquish prospective income-earning opportunities, thus enhancing the maintenance of poverty cycles. Furthermore, water insecurity hampered existing economic activities and demoralised the institution of new entrepreneurial activities. This is evident from the respondent who mentioned that they had to shut down their fast food business because of water insecurity and did not have the impetus to start any other venture after that. The data suggests that water insecurity has long-term impacts on women's economic mobility and self-actualisation.

An interesting observation was made regarding the theme of economic mobility. The findings highlight a layered connection with water insecurity, functioning as a restraint and a stimulant for economic expansion. Water insecurity limited women's access to economic opportunities from one angle, limiting their capacity to diversify their income streams and climb the economic ladder (Das, 2017). However, from another angle, enterprising reactions to water insecurity led to some people starting water vending businesses, notwithstanding the limitations inflicted by the current predicaments (Ayalew et al., 2014). This binary role of water insecurity extends our comprehension of urban vulnerability, stressing the animated interplay between different elements of vulnerability.

S.R.T. gives us a layered understanding of how water insecurity reproduces social hierarchies and restrains economic mobility in Luveve. The intergenerational transference of economic disadvantage is aggravated as women, loaded by the repercussions of water insecurity, found it challenging to channel limited financial resources toward their children's well-being and education. Consequently, upward economic mobility is restrained, further embedding existing socio-economic inequalities (Young & Hoppe, 2003, p.11). The results also show a direct association between water insecurity and restraint of economic mobility for women living in an urban township. Restricted access to clean and reliable water sources restricts their capacity to explore other economic opportunities. Most viable business opportunities require reliable water access, thus keeping them in a vivacious poverty cycle (Young & Hoppe, 2003; Nagar et al., 2002). Furthermore, the intersectionality of elements, such as access to education and class structure, compounded these challenges as most respondents had only attained secondary school education. This amplified the barriers to upward economic mobility.

From a material feminist angle, this theme spotlights how water insecurity within urban townships preserves the commoditisation of water and compounds socio-economic differences. Water access becomes a commodity commonly monetised, asymmetrically

impacting women from lower socio-economic levels (Shiva, 2002). Privatising water sources promotes the profiteering off of women, as they are pushed to manoeuvre intricate water markets and, at times, turn to informal and unfeasible sources. Likewise, the contamination and exhaustion of water sources imperil the health of women, their families, and communities. Material feminism weaves the feminist endeavour with broader environmental concerns, and utilising the material feminist view within F.P.E. emphasises the critical need to resolve the material verities of water insecurity and contest the systemic configurations that preserve gendered differences in resource access (Elmhirst, 2011).

War against the poor

The findings revive an earlier argument that discusses the notion of water insecurity as an incarnation of wider structural inequalities. Access and distribution of resources, along with poor urban policies, enhance the pervasive deprivation of women in townships, mirroring social combat against the economically disadvantaged. As Swatuk (2017, p.3) put it earlier, '*A War Against the Poor*' - is used in this context emblematically to underscore the somatic and structural nature of water insecurity. By situating the study's results within the '*War Against the Poor*' lexicon, the study clamours for a seismic shift in urban water management policy. We call for integrating social justice in water resource distribution to halt the cycle of vulnerability women in Luveve face.

5.1.2 Womanhood and Water Woes

Human Dignity in the Context of Water Insecurity

The results enlighten us on the abject decay of human dignity among women in Luveve as they dealt with water insecurity. Many respondents cited feelings of shame and unease affiliated with unreliable water access and sanitation services. The incapacity to sustain hygiene due to water insecurity affected their physical well-being, self-confidence, and societal standing. One respondent mentioned that some women could not afford sanitary towels because of their financial position and were compelled to use pieces of cloth during menstruation. In times of water insecurity, their use and disposal were compromised.

The urban vulnerability framework enables us to critically examine how systemic vulnerabilities, such as restricted access to economic resources and selective societal structures, compound the corrosion of human dignity when experiencing water insecurity. This view is supported by a study conducted by U.N. Women in developing countries, acceding that the absence of safe sanitation and adequate Menstrual Hygiene Management (M.H.M.) disproportionately affects women and girls, stripping them of their human dignity (Burt et al., 2016). Proposed interventions tackling water insecurity should set precedence by reinstating and conserving the dignity of women as a foundational facet of sustainable development endeavours.

F.P.E. gives us a perspective of how water insecurity infringes upon women's fundamental constitutional right to decent living in urban townships. Lack of access to water compromised both the physical and mental well-being of the women, who were solely responsible for water collection. This constant grapple for water undermines their sense of agency and self-worth,

accentuating the link between gender and human dignity in the face of water insecurity. Truelove (2011 p.148) contends through the F.P.E. critical lens, "women must discipline their bodies around a lack of accessible and private sanitation, or face public shame, humiliation and embarrassment." Essentially, F.P.E. provides a critical lens to understand how water insecurity perpetuates the sustenance of human in(dignity).

WASH Challenges

The results indicate a correlation between water insecurity and broader WASH issues women face in Luveve. Unreliable water access advanced unsanitary circumstances, with the women mentioning that they turned to dubious water sources such as open water streams and sewage water, giving rise to enhanced risk of waterborne diseases such as cholera and dysentery, which have been prevalent in the study location. As mentioned previously, deficient sanitation facilities inflame the vulnerability of women, particularly during menstruation. The ceaseless dangers of diseases and deficient sanitation facilities not only inflamed the vulnerability of women, particularly during menstruation but also fatigued the already burdened healthcare resources within the township. As indicated by the respondents, the crippling impact of water insecurity on health further compromises the faculty for economic mobility by raising medical costs and diminishing labour productivity.

Through the urban vulnerability lens, we can discern that the imbalances are not secluded issues but integrated with broader urban vulnerabilities such as housing, level of education, and employment (Grasham et al., 2019). Managing water insecurity demands interconnected interventions that account for the fullness and well-being of a woman living in an urban township. By employing an F.P.E. critical view, it is evident that women in urban townships succumb to the uneven load of navigating water-related challenges, such as dire sanitation facilities and hygiene concerns. The findings of the study are consistent with Truelove's (2011 p.148) assertion, which claims that the hazards, risks and shame involved in entering dangerous spaces for both sanitation and water activities also take on embodied consequences that serve to re-produce the experience and meaning of overlapping gender and class subjectivities in the city. These challenges are worsened by pre-existing and inherent patriarchal systems that subjugate women further. The findings depict the urgent requirement for gender-conscious WASH policies that are aware of women's unique challenges and address them accordingly, ensuring that women are fully active in the decision-making processes pertaining to water resource management.

Emotional and Psychological Turmoil

Beyond the palpable effects, the interview responses exposed the emotional and psychological stressors on women in Luveve. The persistent anxiety and worry over securing water for daily sustenance impacted their cognitive well-being. Furthermore, the feeling of insecurity about the future of their community and country as far as dilapidating infrastructure and government intervention are concerned drove this ubiquitous feeling of vulnerability, self-deprecation and existential crisis among women in the urban township of Luveve. Epochal contributions have been made by Sultana (2011 p.163), who claims that:

Resource access, use, control, ownership and conflict are not only mediated through social relations of power but also through emotional geographies where gendered subjectivities and embodied emotions constitute how nature–society relations are lived and experienced on a daily basis.

Sultana's (2019) argument testifies that water resource contentions are not simply material but emotional, negotiated through bodies, spaces and emotions.

Strained Communal Relations

Analogously, an interesting finding from the results is the strained communal relationships due to water insecurity. Scanty resources sometimes led to fights at water collection points or when community members travelled to other communities to ask for water. Respondents narrated how long queues and the stress of not leaving with water caused tensions among community members. Since water collection fell on women, women were particularly the ones with strained social ties within the community. For instance, the respondent cited shame over the dual conflict of fighting with community members at water collection points and also occupying the role of being a teacher. This particular distress is supported by a study conducted in Ethiopia, which exhibited how the duty of water collection created clashes among women and their neighbours (Stevenson et al., 2012).

The Burden of Water Collection and Gendered Time Poverty

Unsurprisingly, gendered dimensions emerged as women in Luveve disproportionately carried the weight of water collection for their households. The traditional gender roles assigned to women as primary caregivers and water managers contribute significantly to this burden. The study illuminates the daily struggles faced by women who spend considerable time and energy collecting water, often at the expense of other essential activities. This not only perpetuates gender inequalities but also reinforces the structural vulnerabilities that women face in the context of water insecurity. Studies show that this challenge is also a culmination of broader urban vulnerabilities, including dilapidated urban infrastructure (Grasham et al., 2019). The urban vulnerability framework stresses the need for urban planning that lessens the load of water collection by positioning accessible water collection points and improving urban infrastructure.

Gender time poverty also highlighted the uneven distribution of time and labour. It has been conclusively shown through the F.P.E. lens that the amount of time women spend on alternative water sources, in addition to societal expectations, sustains traditional gender roles and restricts women from community engagement. For instance, women in South Africa approximately and collectively travel the equivalent of going to the moon and back 16 times daily in a quest for freshwater (Roberts, 2008). In this regard, the findings correspond with previous studies, which bring to the fore that gender time poverty becomes a perpetual and systemic cycle that emphasises gender disparities within Luveve.

Cultural and Social Stigmas

From an S.R.T. perspective, the findings captivatingly revealed cultural and symbolic

reproduction and the existence of implicit social-cultural stigmas linked to water insecurity. By their gender, women in Luveve were compelled to take up the responsibility of finding water for their families despite the opportunity cost of water collection. A woman incapable of bearing the traditional brunt of caretaking and taking up the responsibility for water-related tasks would face harsh societal judgment. For instance, in Ndebele linguistics, the colloquial expression '*ungumfazi onjani?*' directly translates to "What kind of woman are you?". This rhetorical phrase is used to berate women who do not embody and perform maternalism. Such socio-cultural judgments compel women to undertake water-related tasks as they dread public opinion, which in turn advances gender-based stereotypes. Ncube & Moyo (2011) attest to the view that Ndebele proverbs and idioms reflect a culture and custom that instills the principle of obedience, tenacity and domestication in women, and they express the traditionally scripted roles of women. They go on to articulate how language extends the disenfranchisement of women and consigns them to functional objects. Cultural reproduction maintains existing power structures and hampers attempts to confront gender norms within an urban setting.

Spatial Segregation

Spatial segregation plays a significant part in enhancing gender insecurity. The unequal dispensation of water resources among women in Luveve and urban townships, in general, creates spatial differences, leaving specific locations with limited access to reliable and safe water. Unquestionably, women living in these areas as primary water collectors faced elevated challenges as they were compelled to traverse through unsafe conditions to secure water for their households. In his book titled '*Water, History, and Politics in Zimbabwe: Bulawayo's Struggles with the Environment, 1894-2008*', Musemwa (2014 p.26) discusses the geographical positioning of townships like Luveve and dissects how Zimbabwe's history and political patterns of development have abetted water access and quality across the city of Bulawayo. This can also be attributed to Zimbabwe's colonial legacy, economic inequality, and urban design. He claims that water issues in Bulawayo are also human-induced shortages - a consequence of grapples over resource access and control:

Dissident activities in Matabeleland, the popularity of PF-ZAPU in the province and its perceived threat as a political challenger to ZANU-PF all became part of the post-independence state construction of Matabeleland (including Bulawayo) as a 'dissident region'. To rein in the 'politically errant' province, the central state used water - a resource already constantly in short supply in Matabeleland due to the region's aridity - as a weapon of control by refusing to allocate water development resources to the Bulawayo City Council. By doing so, the state perpetuated an earlier colonial trend of creating conditions that exacerbated water scarcity caused by the continuous cycle of droughts. (p.xxi).

Luveve, like most urban townships in Bulawayo, is a recipient of the historical and political designs of spatial segregation. Women inhabiting these marginalised spaces encounter water access and distribution issues due to inefficient infrastructure. The spatial aspect of water insecurity is connected with S.R.T., as the absence of sufficient water infrastructure restricts

upward economic mobility and sustains the reproduction of geographically determined poverty. Principally, spatial segregation magnifies the gendered impacts of water insecurity, impinging women into an impasse of disadvantage.

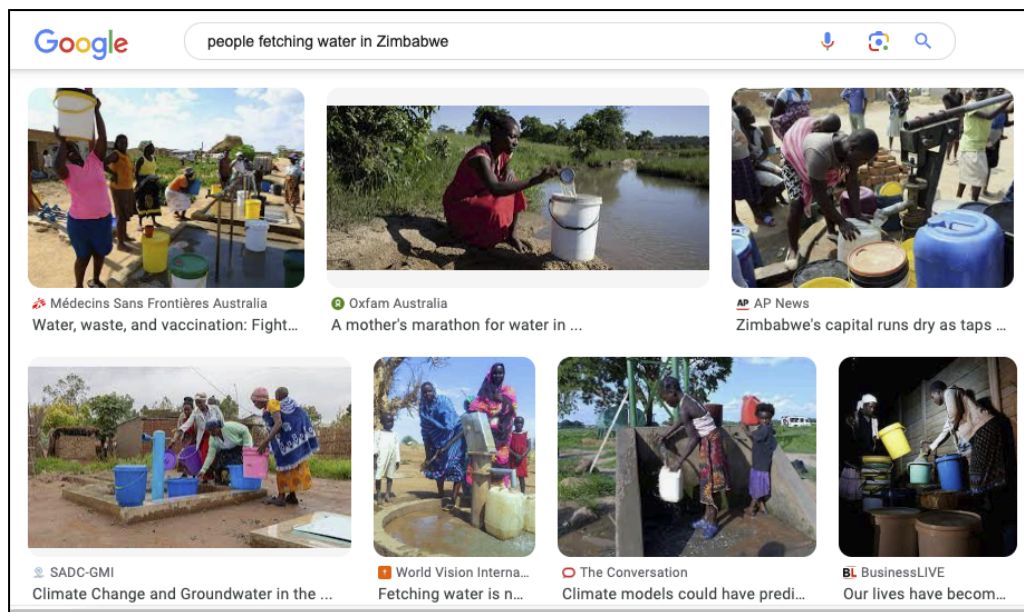
Gendered Norms and Stereotypes in Water Access

Media and Visual Representations

The findings sparked the curiosity to investigate how visual representation and media narratives of women in the study area promoted or contested gendered perspectives on water access. How women are visually represented can either fortify stereotypes or act as a stimulus for social change. A study reviewing the depiction of men and women in Zimbabwean advertisements concluded that gender disparities were present, and there was indeed gender stereotyping in Zimbabwean media (Furnham et al., 2001). Additionally, a cursory Google search for 'people fetching water in Zimbabwe' predominantly yielded images of women at water collection points, reflecting a deliberate narrative choice by reporters to depict women as the face of Zimbabwe's water challenges.

This analysis of media representations reveals that women are often depicted as the primary actors in water collection, reinforcing traditional gender roles and perpetuating the notion that water-related responsibilities primarily fall on women. This portrayal not only reinforces existing gender stereotypes but also contributes to the normalization of unequal distribution of water-related burdens within households and communities. This not only obscures the structural inequalities that underlie water insecurity but also perpetuates the marginalization of women in discussions and decision-making processes related to water management and access in the study area. Through the analysis of media portrayals and their implications, I aim to provide an understanding of the role of media in shaping gendered perspectives on water insecurity. By unpacking the underlying messages and stereotypes embedded in visual media representations, I can highlight the need for more gender-inclusive narratives that recognize the diverse experiences and contributions of both men and women in addressing water challenges. This understanding is crucial for developing more effective and equitable approaches to water management and access in Luveve and beyond.

Figure 2: Google Search Results of People Fetching Water in Zimbabwe (Google, 2023)



Education and Socialisation

Education, closely linked to media representations, serves as both a potential mitigator and perpetuator of gendered impacts on water insecurity. While access to quality education empowers women to confront hydro-related challenges, our study revealed that current educational systems may inadvertently uphold gendered standards and roles (Kambarami, 2006). To address this, a comprehensive strategy for socialisation and education in Zimbabwe is essential to dismantle gender norms perpetuating water insecurity and promote gender egalitarianism.

Educational institutions can inadvertently reinforce gender norms and roles through curriculum content, teaching practices, and institutional policies that reflect and perpetuate existing gender stereotypes. For example, gender-biased textbooks and teaching materials may reinforce traditional gender roles, portraying men as providers and decision-makers while depicting women as caregivers and homemakers. Similarly, gendered divisions of labour within educational settings, such as assigning domestic chores to female students, can perpetuate the idea that women's primary role is in the home, further marginalising their participation in academic and extracurricular activities. However, education also holds the potential to empower women with the skills and knowledge needed to address water-related challenges. By providing women with access to quality education, including training in water management, sanitation, and hygiene practices, educational institutions can equip them with the tools to become active agents of change in their communities. Moreover, education can challenge existing gender norms by promoting gender equality and challenging traditional notions of gender roles and responsibilities.

To address the inadvertent reinforcement of gender norms within educational institutions, a comprehensive strategy for socialization and education in Zimbabwe is essential. This strategy should include efforts to revise curriculum content to promote gender equality, train teachers on gender-sensitive pedagogy, and implement policies that promote gender equity

and inclusivity within educational settings. By dismantling gender norms perpetuating water insecurity and promoting gender egalitarianism, education can play a crucial role in fostering more equitable and sustainable approaches to water management and access in Luveve and beyond. This strategy is expanded upon in the recommendations section.

5.1.3. Waterscapes - A Glimpse of a Broken System

This section looks into the composite interactions between thematic findings of harassment and coercion, violence against women, corruption, and nepotism, disentangling how they fit into the context of water-related issues. This theme moves beyond the orthodox environmental lens and botanises the socio-economic and political systems that sustain and procreate gendered inequalities through the S.R.T. and F.P.E. analytical tools.

Sex for Water, Harassment and Coercion

The outcome of the interviews unearthed a harrowing aspect of water insecurity where vulnerable young women were coerced into unsolicited relationships and engagements to obtain access to water resources in Luveve. Water insecurity has produced asymmetric power relations, taking advantage of the vulnerability of women as the primary water collectors in water collection points. Similarly, women often dealt with pestering and harassment at water collection points, not only from unofficial male gatekeepers, colloquially termed the Njengu boys, but also aggression from other community members as residents quarrelled in long queues. Queues, coupled with restricted resources, produced conditions whereby women were exposed to physical and verbal ill-treatment. This calls attention to the rapid need for solutions that not only address the primary cause of water insecurity but also gender-based vulnerabilities that put women's safety first. There is also an urgent need for civic engagement, awareness-raising campaigns, and infrastructure developments that construct safer water collection points for women.

The S.R.T. framework helps us comprehend how societal compositions perpetuate violence to affirm dominance and authority. Water insecurity acts as an impetus for antagonism, with women often at the centre of psychological and physical repercussions. The vocalised fear of harassment and acts of violence adds to the already existing turmoil connected to water insecurity, thus sustaining a cycle of vulnerability. Marcatelli and Büscher (2019, p. 761) meddle with the concept of liquid violence, which materialises in the realm of social reproduction, which the neoliberal commodification of water has heavily impacted. They mention that although water commodification is a multinational procedure, its impact is felt at the micro-level. For instance, if people cannot pay exorbitant prices for state water, this impacts " internal gendered power relations, as women are most likely to look for alternative water sources." S.R.T. highlights how power differences within communities trickle down to micro-level engagements, sculpting women's water insecurity experiences.

From the standpoint of F.P.E., the results display a prevalent chain of violence against women and young girls, which showcases the crucial importance of viewing water as a gendered resource. This was effectively established by a study conducted in India unpacking the politics of water where women faced harassment and financial demands from informal water

gatekeepers (Bapat & Agarwal, 2003). F.P.E. is valuable in explaining how systemic inequities prolong such acts in society, as economic marginalisation engages with gender-based power imbalances. As Trulove (2011, p. 143) explains it:

An F.P.E. framework helps illuminate water inequalities forged on the body and within particular urban spaces, such as households, communities, streets, open spaces and places of work.

What I deduced from this is the intersectionality of gender-based violence with water insecurity in urban contexts.

Corruption and Nepotism

The study uncovered cases of nepotism whereby favouritism drove the diversion of resources meant to alleviate the burdens of water insecurity within Luveve. This created an unequal distribution of already limited resources. Women, as a disenfranchised group, were impacted explicitly by such corrupt activities. Respondent 11 narrated occasions where unscrupulous actions impacted the administration of water insecurity coping resources and welfare parcels, thus disenfranchising those without any political or religious affiliations. The findings underscore a need for inclusive and crystal-clear water management mechanisms that break down corrupt structures and ascertain equal access for all residents in Luveve. F.P.E. enables us to unpack how power structures allow people to utilise resources for personal gain, leaving disenfranchised folk, specifically women, dispossessed. An empirical study conducted to investigate the intersection of corruption, human rights and gender in Ghana concurs with this unearthing, revealing how residents had to pay bribes to be linked to the public water grid; if not, they had to resort to consuming water from unsanitary sources (Alolo, 2007, p.24). Distressingly, women were the most affected because of their gender role as the primary water collectors, and women from poor households who did not have the finances to bribe water officials were compromised and compelled to utilise contaminated water (ibid, 2007). The gendered implications of corruption are felt most strongly by women in Ghana, and there is an evident need to shed light on corrupt practices and promote transparent governance to ascertain equitable access to water resources.

5.1.4 Water shortage coping strategies

In this section, I unpack the coping mechanisms embraced by women in Luveve in response to water insecurity, with a particular emphasis on comprehending how F.P.E. and social reproduction processes fashion and refashion these strategies. By centering women's agency and experiences on the water insecurity discourse, this segment enables us to collectively examine both their pragmatic strategies and the inherent power structures that drive and restrain their choices.

Agency and Communal Resilience

Our findings show that women in Luveve face significant issues, as restricted access to water displaces the traditional roles allotted to women within the household in the case of water collection, which is conventionally viewed as a feminine responsibility (Sultana, 2011). As

water insecurity escalated in Luveve, women were forced to take on coping mechanisms that alleviated immediate water challenges. Despite the issues associated with water insecurity, women in Luveve showed incredible strength and resourcefulness. The results show us the emergence of different coping mechanisms and adaptive strategies, such as mobilising community members to dig up a community well and purchasing water from water vendors, water-sharing strategies within the community, and developing unofficial support networks. Furthermore, they strengthened communal relationships by relying on each other to communicate water availability in taps so that they could fill in storage buckets at home. This cultivated a sense of solidarity and mutual assistance and enabled women to navigate harrowing experiences collectively. When residents gathered to dig up community wells and other coping strategies, their collective action showcased resilience to water-related issues. Women could utilise water derived from communal wells for household needs such as flushing the toilet, which meant that they could restrict the time spent fetching water on other meaningful activities.

These findings indicate that community-driven initiatives have a significant role in alleviating the effects of unreliable water access on gendered time poverty. In addition, one young respondent explored an alternative way of earning an income that needed no water input, such as ordering clothes on Shein⁷ and selling them to other young people within the community. These coping mechanisms mitigated the immediate effects of water insecurity. The findings are the bedrock of F.P.E. and demonstrate how women ardently resist and contest environmental challenges (Rousseau, 2011). F.P.E. stresses the cruciality of community strength and unity, and these actions exemplify how women actively resist and challenge the implications of water insecurity in their communities, displaying the capacity for women-driven grassroots movements to confront power structures.

Conversely, applying the urban vulnerability lens, one can note that the diversification of water sources and dependence on makeshift solutions as a coping mechanism is a direct consequence of the inefficiency of the community's legitimate water infrastructure, putting the load on women to find and secure alternative sources (Wakhungu et al., 2021). Although this collective method was adaptive and commendable, it speaks volumes about the systemic crevices that push people to such grassroots approaches. Although women in Luveve could adapt to the health implications of water insecurity, they still turned to unsafe water sources such as open streams and burst sewer pipes to fulfil household water needs.

Adaptability as Resistance

Although the health impacts of water insecurity were a recurring theme, with women reporting increased vulnerability to water-borne diseases and physical and emotional turmoil, the findings illuminated the resilience of the women in Luveve. They carried on with handling their household tasks and continued to advance the well-being of their community. It was intriguing to see the positive attitude and proactive mindset that the women embraced,

⁷ Shein is a Chinese-based e-commerce relatailer that sells clothing items for men, women and children (Liu, 2022).

considering water insecurity as a constantly recurring situation that needed continuous adaptation. This is not to say that women in Luveve were gratified with their predicament and the threat to their health and that of their families, but they did not have a choice but to adapt to the status quo.

There is well-documented evidence of how urban residents in Zimbabwe have challenged the government's shortcomings regarding public service provision, yet the state has timeously failed the citizens (Gukurume, 2022). With time, adaptability became their form of immunity and resistance. Adaptability as resistance is also found in a study conducted in Camden, New Jersey, to investigate water provisioning in a racialised community where women's overall health was compromised and were denied validity for their claims (Cairns, 2021). For that reason, mothers settled on purchasing water to regain control of their reproductive health and 'frame this strategy as a necessary response to the state's failure to secure the conditions of social reproduction' (p. 1425, 2021). This correlates with the S.R.T. canon, which establishes that the compromise on women's health and well-being sustains a cycle of vulnerability that further reinforces existing social hierarchies.

Age and Eldership

The results also show that age and eldership negatively impacted how women were able to cope with water insecurity. For instance, the older woman lamented how she could not walk long distances to access water and had to rely on her grandchildren to fetch water for her. The results show us that age, coupled with (im)mobility as an identity marker, drives the everyday experiences of women (Bukachi et al., 2021).

Political (In)correctness

The findings place affluence and access to financial resources as inconsequential constituents of how women coped with water insecurity since most respondents had comparable socio-economic backgrounds. However, the respondent who unequivocally displayed greater accessibility to more resources was the MP, who suggested, along with previous studies, that social standing, affluence, and bureaucratic positions reduce water insecurity challenges (Ashraf et al., 2017). Parenthetically, the M.P. mentioned actively addressing water insecurity in Luveve by ensuring water bowser trucks were dispersed on ceremonious occasions such as funerals and weddings. These sentiments may have been a diplomatic facade by the politician to give the impression that the political party was positively responsive to water demands. Nevertheless, some respondents ratified these expressions, validating that water bowser trucks were indeed brought in to serve community members in the case of a funeral. However, it was pretty worrying to apprehend that water demands and alternative water sources were seriously considered under distressing circumstances. Yet, women and other community members were left to fend for themselves daily without municipal support. This comportment echoes Maselli et al.'s (2023, p.3) views, who see water as a multifaceted power. They note that:

Who gets how much water, of which quality, when, where, for what? Who is managing water?...is the result of political processes and decisions based on

vested interests. Water inequalities often mirror income inequalities. Powerful actors or groups that gain from existing formal and informal arrangements are not interested in change.

5.1.5 Forms of Assistance and Levels of Support

As illustrated by the findings thus far, the overarching burden of water insecurity is heavily felt by women in Luveve, who are the primary caretakers of household water needs, as well as crucial associates in the well-being of their communities. As they tussle with many challenges, a perceptible absence of government support and inadequate spousal backing heightens their difficulties. Policy structures often fail to handle the needs and susceptibility of women in the case of water insecurity, which sustains an inequitable sequence of disenfranchisement. Simultaneously, spousal support, crucial in relieving the load, is often inconspicuous or non-existent, making women independently manoeuvre complex water-related issues. This section not only focuses on unravelling the thematic findings of the level of government and spousal support amidst water insecurity in Luveve but also embarks into the domain of potential interventions, with some solutions suggested by the respondents.

Governmental Indifference

Water is available, as is the technology to access it and deliver it. That many are relegated to drawing water from public fountains is not a scarcity issue, but one of misguided political priorities on the part of leadership. (Swatuk, 2019, as cited in Maselli et al., 2023)

The results undeniably point to the government's indifference to alleviating the challenges of water insecurity in Luveve. The failure of the local municipality and government entities to put in place sustainable water management strategies, allocate sufficient resources and attempt to address systemic issues sustains the vulnerability of women in Luveve. As most respondents recounted, the government failed to consistently provide safe and reliable alternative sources such as water bowser trucks and JoJo tanks and dig up more boreholes to serve the extensive population in Luveve. Most of the sentiments regarding the BCC's intervention in water insecurity were shrouded with frustration and pessimism because of the municipality's inconsistency and unreliability in times of need. The specific needs of women as primary caretakers were often unheeded, and the infrastructure needed to accommodate their unique challenges, as well as the lack of adjacent, secure and well-lit water collection points. Government inadvertence sustains gender inequalities and subverts the possibility of sustainable and holistic solutions to water insecurity in Luveve. The urban vulnerability theory stresses the function of governance in driving urban vulnerabilities, showing how the absence of a proactive course of action amplifies the challenges faced by women (Lewis & Mioch, 2005).

Restricted Access to Secure Water Facilities

Another conspicuous demonstration of government inertia in Luveve, as mentioned by the respondents, is the unsatisfactory provision of secure and convenient water facilities. For that

reason, they had to walk long distances to fetch water from undependable and unsafe sources, exposing them to health risks. Similarly, the participants narrated willful abandonment by the government regarding the supply of suitable sanitation facilities, which in turn impacted their health and security, particularly in a township where congested living dominated. Deficient government intervention worsens the everyday challenges that women in Luveve face, materialising in amplified stress, lack of time, and compromised welfare. S.R.T. allows us to critically analyse how the lack of an all-inclusive government plan magnifies their load and thwarts more comprehensive community development, thus increasing the circular nature of water-related issues (Luke & Kaika, 2018). F.P.E. enables us to anatomise this matter through the balances of power rooted in gender structures, uncovering how government and municipal neglect unevenly impact women. The lack of dependable water sources drives women into tedious and laborious tasks, augmenting existing gender inequalities.

Micro Business Relief and Support Services

The shortage of sound support services for small businesses and social grants symbolises substantial barriers for women in Luveve. When the respondents were asked if there were any community laws/rules that enable them to own land or property/borrow money to start a business, or if any woman had ever received any form of social and micro-business grants from the government, none of the women cited receiving that type of support. Consequently, small women-owned businesses suffered from a lack of financial resources, training, and holistic institutional support, thus disparaging their capacity to partake in economic activities. Furthermore, the lack of social grants left women in Luveve without a safety net in a water crisis. The effects of limited support were severely felt, inhibiting the possibilities for sustainable economic development. Solving the cracks in support structures is crucial for promoting equitable growth and empowering women to escape the manacles of economic vulnerability. Transitions linked to privatisation and the free market have a hand in marginalising women from natural resources when community-centred land ownership structures are commoditised, and decreases women's access to water and land (Elmhirst, 2015p.522; Tsikata, 2016; Ahlers & Zwarteveen, 2009).

Nevertheless, one respondent recalled receiving support from an N.G.O. that came into the community during the cholera outbreak and dispersed water collection buckets and soap. The respondent and a few others expressed their frustration with N.G.O.s that come into communities to assist once-off and then vanish as if to fulfil a mandate and treat them like a checklist. Respondents' mistrust and scepticism of N.G.O.s and 'outsider aid' is warranted and understandable. It is consistent with feminist ideological criticism that unravels the seemingly charitable facade of some of these organisations and exposes the paradoxical essence of their attempts. Yudelman's research on N.G.O.s integrating women into development depicted how the concerns of women at the ground level were often subordinated (Yudelman, 1987, as cited in Wright, 2012). He used an example of how an N.G.O. operating on the African continent mapped out women's customary role in food processing, harvesting, and promoting, only to discount it entirely for a pottery-making venture, bringing to light the undue transfer of accountability from the recipient (Wright, 2012). From an F.P.E. lens, this illuminates the predominance of tokenism, where women are simply integrated for figurative intentions

without decision-making ability and sincere empowerment (Slippens, 2022). This disingenuous approach to inclusiveness fortifies asymmetric power, while the core of these agencies is unscathed by feminist standards.

Policy Challenges

While the government of Zimbabwe has implemented water policies that address the recurrent water challenges across the country, the difference between policy development and efficient implementation is significant and visible. As Musemwa (2014) has pointed out, governmental lethargy, hydro-politics, red tape, bureaucracy, and the absence of resources impede the conversion of policies into concrete developments in water attainability. This disengagement between declamation and action preserves the challenges confronted by women in Luveve, exposing them to a cycle of vulnerability and poverty.

Spousal and Family Support

A fascinating insight that emerged from the interviews is the inadequate spousal support for water collection. No woman mentioned receiving support from their partner regarding water procurement. This omission affirmed that traditional gender roles are indeed ingrained within the township, with the responsibility automatically falling on women, with no care of how physically, emotionally and financially taxing this burden placed on them (Elmhirst, 2011). This points towards the importance of confronting traditional gender roles and ensuring that responsibilities are shared amongst family members to reduce the unequal burden on women. The only other familial support that a few respondents alluded to was the assistance from their children, regardless of gender.

Previous studies have underscored how water collection affects children's education and sometimes leads to school dropouts (Nauges, 2017). This specific study cannot confirm or deny that notion, as the interview questions did not focus on children's role in water collection. However, the fact that women spent a significant amount of time on water collection, at times aided by their children, indicates that children were channelling a significant portion of their time on water collection. Water sources were located far from their homes, and children could have been focusing on their homework, educational activities - and simply being children. The time not channelled into educational and child-like activities has a compounding and long-term effect on their performance at school (Nauges, 2017). One respondent mentioned that all her children were responsible for water collection regardless of gender.

5.2 Chapter Summary on the coping strategies of women facing water insecurity in Luveve

In the analysis of Theme 1, the F.P.E framework revealed power structures and policy implications, emphasising the necessity for social justice in urban water management to alleviate women's vulnerability in Luveve. Material feminist perspectives highlighted water commoditisation and environmental concerns, advocating for a policy shift to address structural inequalities and counter the "War Against the Poor" impacting economically disadvantaged women. The findings confirmed social reproduction in Luveve, where

women's time spent on water-related tasks reinforced gender roles, perpetuated economic inequalities, and hindered educational opportunities, creating a cycle of disadvantage. The analysis of Theme 2 and Theme three exposed issues such as emotional distress, strained community relations, and the coercion women face while collecting water. Furthermore, I highlighted how problems such as corruption and nepotism exacerbate water insecurity, disproportionately affecting women in Luveve. F.P.E and S.R.T. frameworks were employed to analyse power structures, societal norms, and systemic injustices. The analysis stressed the urgency of gender-conscious water policies, civic engagement, and infrastructure development to address the complex interplay of water insecurity and gender dynamics in Luveve.

The analysis of theme 4 revealed that women in Luveve resiliently coped through community initiatives and adaptability, highlighting grassroots movements against environmental challenges. F.P.E. highlighted their strength, albeit systemic deficiencies in water infrastructure persisted. Despite health challenges, women demonstrated adaptability as resistance. Age-affected coping abilities and political affiliations influenced access to water resources, revealing the role of power dynamics. Theme 5 exposed government indifference, insufficient secure water facilities, and limited support for women-owned businesses. N.G.O.s offered some relief, but scepticism about their long-term impact persisted. Policy challenges and entrenched gender roles worsened women's vulnerability, compounded by the lack of spousal and family support. Women shouldered the burden of water collection, potentially affecting children's education. Theme 6 stressed the necessity for comprehensive interventions to tackle these systemic issues and foster gender equity.

CHAPTER 6: CONCLUSION

6.1 Concluding Remarks

Fluid Justice examined the challenges women face in the sphere of urban water insecurity, emphasising the interdependence of feminine self-realisation with the foundational necessity of secure access to water. Women in Luveve were situated within the lens of F.P.E. scholars like Sultana and Truelove through an exploration of the gendered dimensions of resource struggles and the embodied consequences of water-related challenges. The analysis drew on S.R.T. insights from theorists such as Marcatelli and Büscher, highlighting how societal structures perpetuate violence and power imbalances in the context of water insecurity. As applied in the study, the urban vulnerability lens resonated with Grasham et al., emphasising the interconnectedness of water insecurity with broader urban vulnerabilities affecting women in Luveve. Collectively, these frameworks provided a comprehensive understanding of women's experiences in Luveve within the broader context of global and regional discourses on gender, water, and development.

In this concluding chapter, I will distil and synthesise the key findings exhibited throughout exploring thematic dimensions. By orienting these findings with the initial research questions, I will reaffirm the arguments set forth in the preceding sections, weaving a cohesive narrative that clarifies the intersectional experiences of women grappling with urban water insecurity in Luveve. Furthermore, I will highlight the broader significance of the research, foregrounding its vital contribution to the discourse on gender justice within the context of urban water insecurity. Simultaneously, I will engage in a candid discussion addressing the study's limitations, acknowledging their potential impact on the generalizability of findings. Finally, culminating with a forward-looking perspective, the concluding chapter will provide key recommendations to guide further research endeavours at the intersection of gender, urban vulnerability, and water insecurity, fostering an ongoing dialogue in pursuit of sustainable and equitable urban water management.

The central research question guiding this study is: What are the intersectional experiences of vulnerability regarding water insecurity for women living in the urban township of Luveve, Bulawayo? This overarching inquiry is complemented by subquestions that delve into specific aspects of the women's experiences. One prominent thematic finding, identified as Womanhood and water woes, encapsulates the intricate challenges women in Luveve face due to water insecurity, particularly emphasising the challenges associated with womanhood. The narrative unfolds with poignant stories from respondents, emphasising the physical and emotional stressors of being the primary water supplier, the difficulties in maintaining hygiene, and the health risks associated with contaminated and limited water. The outlined WASH challenges are evidence of the repercussions of limited access to reliable water sources, which directly addresses the research questions by establishing a clear link between water insecurity and the broader health and well-being concerns faced by women in Luveve. Emotional stressors, as highlighted in this theme, delve into the profound impact of water insecurity on the mental well-being of women in Luveve. The findings provide insights into

the unifying thread of despair, indignation, and shame experienced by women as they navigate the challenges of securing water for their households, affecting household dynamics and communal relations. This theme, therefore, directly addresses the research question by uncovering the emotional aspects of women's experiences and the toll water insecurity takes on their daily lives and relationships.

Moreover, the Waterscapes theme directly addresses the research question by exploring the interplay of socioeconomic and cultural factors and power structures in shaping women's vulnerability to water insecurity. It delves into social stressors women encounter in pursuing water, such as discrimination, ageism, and gatekeeping at water collection points, coupled with multidimensional challenges such as harassment, coercion, violence, corruption, and nepotism. These themes, therefore, weave a comprehensive narrative connecting the research questions to the lived realities of women grappling with water insecurity in Luveve, Bulawayo.

In answering how water insecurity intensifies existing socioeconomic inequalities among women in Luveve, the study argued that water insecurity significantly amplifies socioeconomic disparities among women in Luveve, primarily through its impact on income generation and economic mobility. The study revealed that the economic effects of water shortages pose substantial challenges to women engaged in small businesses, further deepening existing inequalities. The inability to afford water prices and the necessity to purchase water from informal sources create additional financial burdens, contributing to a widening gap in economic opportunities among women in the Luveve. The analysis of the findings through the lenses of F.P.E., S.R.T., and an urban vulnerability perspective addressed the research question on socioeconomic challenges. F.P.E. exposes the power structures and ecological policies that intersect with water access, illustrating how inconsistent and unreliable water supply hinders women's agency, adaptability, and economic possibilities. S.R.T. delves into the cyclical nature of this dynamic, revealing how the burden of water collection, coupled with emotional stressors, hinders women from engaging in income-earning activities. The material feminist perspective accentuates how the commoditisation of water exacerbates existing gendered differences in resource access, contributing to the intensification of socioeconomic inequalities. The concept of a "War Against the Poor" encapsulates the structural nature of water insecurity, underlining the urgent need for a paradigm shift in urban water management policies to address and rectify the deepening inequalities experienced by women in Luveve.

Closely related, the theme also addressed issues such as gender time poverty, which is evidence that shows how water insecurity directly impacts women's daily lives. One sub-question queried the degree to which unreliable water supplies engender time poverty and hamper women's engagement in income-generating activities. The theme of womanhood and water woe revealed that the traditional gender role, casting women as primary caregivers and water managers, contributes significantly to the time and energy spent collecting water. F.P.E. unravelled the connection between the time spent on alternative water sources and the sustenance of traditional gender roles, limiting women's community engagement. The urban

vulnerability lens further contextualises these challenges within broader urban vulnerabilities, such as dilapidated infrastructure, emphasising the urgent need for urban planning to alleviate the water collection burden. The notion of gender time poverty becomes a pervasive and systemic cycle, echoing findings from previous studies and underlining the deep-seated gender disparities within Luveve.

Water shortage coping strategies as a theme explored the coping mechanisms developed by women in Luveve, underscoring their resourcefulness and determination. The respondents, recognising water's essential role in their small businesses and household maintenance, employed diverse strategies. Notably, purchasing water emerged as a recurring coping strategy, illustrating the implicit responsibility placed on women for such costs. Additionally, collective community efforts were evident, as residents collaborated to dig wells for water collection, utilised water from burst pipes and open streams (albeit unclean) for various purposes, and walked long distances to access community boreholes. The thematic finding emphasises the persistence of women in Luveve amidst water insecurity, showcasing their unwavering willpower and adaptability. In answering this, the research report argued that these coping strategies immediately respond to water challenges and signify a sustained commitment to sustainable water management practices in the community.

The thematic analysis under the overarching theme of Water Shortage Coping Strategies and via the F.P.E. theoretical framework aids in comprehending the power structures that influence women's choices, revealing how women actively resist and contest environmental challenges. The emergence of coping mechanisms, such as community-driven initiatives like digging wells and purchasing water, illustrates women's agency amidst water insecurity. S.R.T. sheds light on the systemic issues that drive women toward grassroots approaches, emphasising the role of communal resilience in alleviating gendered time poverty. This adaptability serves not only as a pragmatic response but as a form of resistance against societal constraints. By linking these analyses to the research questions, the study highlights the significance of understanding both the specific coping strategies and the broader cultural and social norms shaping women's resilience in the persistent water challenges faced by the community in Luveve.

The theme titled Forms of Assistance and Levels of Support links directly to the research question of how women are impacted by water insecurity and how they adapt. The findings reveal a need for more government and spousal support, and the reliance on N.G.O.s during critical times exposes gaps in assistance, highlighting the community's reliance on external aid. The experiences shared by women highlight the tangible and intangible support systems, contributing to a comprehensive picture of their adaptation needs. Moving to the theme "The Need for Government Intervention and Support," the thematic findings respond to the inquiry about the efficacy of local governance in addressing water insecurity and supporting women. Women in Luveve express a need for comprehensive strategies merging specific government interventions with community-centred approaches such as disseminating water bowser trucks, drilling more boreholes, and addressing water rationing issues, indicating a desire for proactive measures to alleviate water shortages. This theme directly addresses the research

question by providing insights into the community's expectations from local governance and the concrete steps they believe would enhance their adaptive capacities.

In summary, the thematic findings serve as interconnected threads that weave a comprehensive narrative, addressing each research subquestion. Theme 5 sheds light on the challenges faced and the support structures in place, linking to the impact of water insecurity on women's daily lives. Meanwhile, Theme 6 navigates the realm of government intervention, directly answering how local governance addresses the multifaceted challenges posed by water insecurity. Together, these thematic findings provide a robust foundation for understanding the gendered dimensions of water insecurity in Luveve and underscore the imperative for integrated strategies and effective government interventions.

Implications of the study

6.2 Implications Of The Study

While the research study indeed highlights the socio-economic impacts of water insecurity within the urban context through the lens of S.R.T., F.P.E. and urban vulnerability theory, I contend that the study constitutes supplementary elements, and the implications of the study vary and spread across multiple stakeholders comprising community leaders, legislative bodies, urban developers and non-governmental organisations. Economic, social, and policy factors characterised the study and the implications:

6.2.1 Social Implications

Gender Equity & Health and Well-being

The results emphasise the inordinate effects of water insecurity on women in Luveve, stressing the need for awareness of gender-specific vulnerabilities and gender-conscious solutions when developing water access and distribution mechanisms. The findings also showcased how insufficient access to water and sanitation has consequences on the health and overall well-being of women in Luveve, along with their families, elucidating how enhanced infrastructure can positively influence health outcomes, lessening the incidence of water-related illnesses and improving community well-being.

6.2.2 Economic Implications

Resource Allocation and Infrastructure Development

The study outcomes insinuated the reallocation of resources to enhance water infrastructure in urban townships in Bulawayo. Urban planning, financing water sources, and improved sanitation facilities collectively improve the lives and well-being of women and establish a suitable atmosphere for women to partake in income-earning activities, thus breaking out the vicious cycle of economic vulnerability.

6.2.3 Policy & Academic Implications

The study outcomes stressed the need for inclusive policies that consider the needs and susceptibility of disenfranchised women, ascertaining that the policies that seek to empower them are not unconsciously intensifying current existing disparities. Closely related, the findings underscored the link between gender, water insecurity, livelihoods and economic

mobility, demonstrating the need for consolidated development strategies that reckon with water access adjacent to economic opportunities. The study also has academic implications, opening pathways for future studies to investigate in-depth dimensions of water insecurity that must be explored to absolute capacity, such as the cultural aspects of water insecurity. This can provide a refined comprehension of the complexities surrounding water insecurity. Furthermore, there is an opportunity for a longitudinal assessment to examine the long-term impacts of the suggested solutions, which includes tracing trends in women's well-being and economic development over a long period.

6.3 Study Limitations

6.3.1 Generalisation

In light of the study's implications, the findings also come with limitations. One of the study's limitations is that the results are context-based, with a laser focus on urban and a specific urban township. This could overlook other townships within Bulawayo which have unique socio-economic challenges impacting women differently. Although the study referenced case studies of women's experiences in the Global South, the focus on rural contexts and other townships was beyond the scope of this study. Future studies could take the angle of conducting comparative research across various urban settings and circumstances, including the rural contexts and limiting the generalizability of the findings.

6.3.2 Limited Stakeholder Involvement

The reliability of the research may have been influenced by not actively engaging local stakeholders, such as representatives from the local municipality, advocacy groups and different local community leaders. This could ultimately affect the effectiveness of the suggested recommendations. This was beyond the study's limits as water insecurity is a political issue in the study area, and the study sought to use the findings as a form of advocacy for the struggles of women within the area. However, future research with more capacity could engage stakeholders from the onset, taking them through the research design and ascertaining that the study meets the 'hierarchy of needs' of women in Luveve. Furthermore, the study may have been constrained by solely focusing on women's experiences and acknowledging their vulnerabilities in water insecurity. However, the sole gender focus could negate the vulnerabilities and experiences of men within Luveve. Therefore, other research could investigate men's experiences within the same circumstances.

6.4 Recommendations for future studies

With that established, this section shall delve into solutions that could aid in alleviating water-related challenges in Luveve that confront deep-seated gender norms and preserve inequality. The findings put forward the need for solutions that jointly address administrative and societal functions. The study calls to attention the significance of integrating feminist viewpoints into the water administration policy. Over and above mere infrastructural enhancements, solutions have to tackle the inherent gender inequalities preserved by water insecurity.

Social Solutions

The findings suggest that there is currently no committee within the Luveve community dedicated to addressing the various water-related challenges faced by the community and, more specifically, tackling the unique water-related issues women face. For this reason, it is crucial to embark on a women-centred problem identification assignment, which includes acknowledging and understanding from women's perspective the systemic barricades that have restricted their access to water resources and economic opportunities. After that, a local water committee has to be established in Luveve, with a dedicated women's portfolio, which will be curated to improve women's agency and encourage an environment where women actively participate in making decisions related to water access and management and economic development.

This women's portfolio should also concentrate on contesting gender norms by developing communal sensitisation campaigns that encourage an equal allocation of household domestic responsibilities and promote supportive spousal relationships. This will aid in dislocating extant power dynamics and reduce water insecurity's differentiated effects on women. It is crucial to go further than habitual community meetings and acknowledge the cruciality of collective and community-led solutions, which surfaced as a feasible conduit. This would involve engaging the Luveve community to design context-specific interventions and improving existing coping strategies to enhance resilience. Solutions could resemble community gardens, along with adequate water management practices, which will tackle immediate water issues and create a sense of unity and solidarity among women, affirming the prominence of joint efforts.

There is also a need for joint efforts between local entrepreneurs, the government, and N.G.O.s to establish distribution centres where subsidised or free menstrual hygiene products are accessible to women in Luveve. In the same breath, develop training programmes for girls and women on sustainable menstrual hygiene practices. Moreover, measures should be put in place to safeguard women from any forms of violence, which means that security and protection measures should be put in place at water collection points. Increasing the number of water collection points will shorten queues and alleviate conflicts at water collection points.

Economic Solutions

The government and policymakers should concentrate on assisting women in Luveve in diversifying their income. This includes access to financial services for small business owners and establishing economic opportunities that are not heavily reliant on water. Supporting micro-businesses and acknowledging enterprising solutions are ways to encourage much-needed innovation in Luveve, which contributes to economic development and elasticity. As noted in the findings, most respondents only attained high school education, and constrained access to skills education and further training worsens women's difficulties. Therefore, financial services must be supplemented with educational programmes that will give women in Luveve the knowledge and expertise to boost their economic opportunities and facilitate transformation at the grassroots level. The programmes have to be developed in a way that caters to their unique needs and challenges. Financial services and educational

programmes should work in unison, and one should only be offered with the other. Women do not need any more training programs that are not backed by financial aid; they need the funds to kick start or bolster their ventures. Improved water access and targeted propositions can break the vulnerability cycle and lift women in Luveve and their households out of economic precarity and poverty. There should be an investment in and construction of more water collection points such as boreholes and community taps. Furthermore, scheduled water rationing will ascertain that there is an equitable distribution and less competition for water resources.

Policy Solutions

The findings imply the need to advocate for policy reform within municipal water policies in Bulawayo, where women are fully engaged in water management committees and at the centre of water management decisions. Additionally, developmental organisations and the government of Zimbabwe should consider espousing gender-specific budgeting. This will comprise channelling finances to account for women's particular challenges and needs, which can lead to more equal outcomes. Equally, urban strategists must incorporate water resource management mechanisms into their urban development plans, such as water infrastructure, infrastructure resilience and WASH as central elements of their urban development projects.

Finally, the urban vulnerability framework stresses the need for holistic approaches that combine different stakeholders to address water insecurity issues and to actualise the recommendations of this study. I also suggest collaborative efforts of different stakeholders, such as government entities, scholars, community organisations and the private sector, with women from Luveve at the forefront. Likewise, since the research is situated within the nucleus of F.P.E., S.R.T. and intersectionality, all the relevant stakeholders need to be conscious of the narratives and the comprehensive knowledge of the study to materialise the objective of achieving gender equity and sustainable access to water for all in Bulawayo, and disorder the cycle of inequality.

In summary, fluid justice emerged as a key concept, advocating for integrated approaches prioritising women's access to clean water and sanitation, addressing socio-economic disparities, and driving resilience in urban communities. The study underscored the significance of community-driven initiatives, government interventions, and sustainable water management practices in addressing these challenges. I advocate for solutions that are grounded in feminist understanding and embedded in a holistic comprehension of urban vulnerability, social reproduction dynamics and feminist political ecology, ascertaining that solutions are not only practical but also socially equitable. By centering women's voices and experiences, the study contributes to a deeper understanding of the gendered dimensions of water insecurity. It advocates for transformative policies and practices that promote equity, justice, and sustainable development, aligning with the broader goals of fluid justice. Going forward, I am optimistic that the recommendations will steer the formulation of policy and community-centred approaches, promoting resilience and sustainability amidst water-related challenges in urban areas.

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APPENDICES

- 7.1 Appendix A: [Participant Interview Guide](#)
- 7.2 Appendix B: [Authorisation Of Consent For Participation](#)
- 7.3 Appendix C: [Ethical Clearance Certificate](#)
- 7.4 Appendix D: [Women Participant Data in Luveve: March 15, 2024](#)