

Assessing the Role of Community Participation in Achieving Universal Health Coverage: A Case study in Clara Town, Montserrado County, Liberia

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LIST OF ACRONYMS

- UHC: Universal health coverage
- WHO: World Health Organization
- GCHV: General community health volunteers
- CHSS: Community health services supervision
- NPHIL: National Public Health Institute of Liberia
- PCC: Paynesville City Clinic
- CSOs: Civil society organizations
- BCC: Behaviour Change Communication
- BI: Bamako Initiative
- ComHA: Community Health Association
- ComHC: Community Health Center
- ComHW: Community Health Worker
- ECC: Essential Care in the Community
- HCDC: Health Center Development Committee
- HV: Home Visit
- MDHS: Mali Demographic and Health Survey
- MPA: Minimum Package of Activity

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DEDICATION

This dissertation is dedicated with heartfelt gratitude to my beloved brother, Mr. Sekou Amara. Kanneh and his wife, Mrs. Massa V. Kanneh, whose unwavering support, encouragement, and sacrifices have made this academic journey possible. From the very beginning, you both believed in my dreams, even when the road seemed long and uncertain. Your constant words of motivation, financial assistance, and emotional strength have been the foundation upon which I have built this milestone.

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ABSTRACT

This study investigated the role of community participation in achieving universal health coverage (UHC) in Clara Town, Montserrado County, Liberia, an urban community located in a slum characterized by overcrowding, poor sanitation, and limited health infrastructure. Despite Liberia's political commitment to universal health coverage, local participation and service delivery remain fragmented and under-resourced. The objectives of this study are (1) to assess the impact of community participation on environmental health and sanitation, (2) to evaluate the contribution of community participation to health and sanitation efforts, and (3) to identify barriers to achieving universal health coverage in the City of Clara.

A cross-sectional mixed-methods design combining quantitative and qualitative interviews with structured questionnaires was used with a sample of 380 respondents selected by simple random sampling. Quantitative data were analyzed using SPSS for descriptive and inferential statistics, and qualitative data were analyzed thematically. Secondary data were collected from WHO, NPHIL, the Liberian Ministry of Health, and other public sources to support the results. The results showed that 81.8% of residents actively participated in hygiene activities, which led to improvements in environmental conditions. Regarding health and hygiene initiatives, 73% participated in awareness campaigns, cleaning drives, and the creation of health committees, and 68% acknowledged improved hygiene practices and awareness of maternal and child health. However, 59% cited lack of funding and coordination as threats to sustainability. Barriers to universal health coverage included poverty and weak political support (63%), poor drainage and overcrowding (65%), and high copayments and labor shortages (71%). These findings are consistent with secondary evidence that institutional barriers undermine universal health coverage despite strong community participation.

The study concludes that while community participation improves hygiene and health awareness, it alone cannot achieve universal health coverage without structural support. The report recommends increasing government funding, improving infrastructure, strengthening human resources, and formally incorporating community voices into health planning.

CHAPTER ONE BACKGROUND

➤ Introduction

More than half of the world's population still lacks access to essential health services, and only one-third of countries have advanced health coverage and financial protection. The Universal Health Coverage Global Monitoring Report 2023 further highlights the seriousness of the situation. This uneven progress shows that although UHC is a common global goal, progress is fragmented and highly dependent on local and national contexts. High-income countries (HICs) benefit from resilient health systems, strong economies, and well-established social protection programs. In contrast, low- and middle-income countries (LMICs) face significant obstacles such as weak health infrastructure, labor shortages, limited fiscal space, and governance challenges that impede the equitable delivery of health services. According to WHO (2010), more than 1 billion people (almost 16%) of the world's population lack access to clean and safe drinking water. Approximately 120 million Europeans also do not have this access. Developing countries, especially rural areas, are the hardest hit. Thirty-seven out of 49 countries in the Asia-Pacific region face water insecurity, and nearly three-quarters face a water crisis at any given time. L'eau du robinet n'est pas disponible pour environ 60% de la population (Syaharuddin et al., 2024). Regional differences in progress towards universal health coverage are particularly striking. Sub-Saharan Africa and South Asia remain the regions with the lowest coverage. Despite progress in some regions, South Asia still faces challenges such as overcrowded health facilities, uneven distribution of services between rural and urban areas, and high costs that often push families into poverty. In contrast, regions such as Europe, North America, and East Asia have near-universal coverage, reflecting decades of strong policy frameworks, sustainable financing, and investments in health and social protection systems. These comparisons show that economic stability, political will, and institutional capacity are key drivers of progress toward universal health coverage. Several structural obstacles continue to slow progress toward universal health coverage. First, economic protection remains inadequate in many parts of the world. Rising health costs and a lack of public funding in low- and middle-income countries are forcing millions of people to rely on out-of-pocket payments, putting them at risk of catastrophic costs and poverty. Second, weak health systems lack the resilience to withstand crises such as pandemics, natural disasters, and armed conflicts. The COVID-19 pandemic has become a global stress test, testing even the best health systems and reversing years of progress toward universal health coverage, particularly in low- and middle-income countries. Third, inequalities persist within the country, rooted in socio-economic status, gender, geography, and minority identity. Rural populations often face severe shortages of infrastructure and health personnel, and marginalized groups face systemic discrimination and barriers to accessing health care. A key indicator of progress is the Universal Health Coverage Index (HCI), which tracks 14 services covering reproductive, maternal, neonatal, pediatric, communicable and non-communicable diseases. West African countries tend to perform below the global average, demonstrating that service gaps and inequality persist. The WHO guidance note emphasizes the credibility of SCI as a high-level policy tool. The 2021 data confirms that sub-Saharan Africa, including West Africa, continues to have low SCI values, highlighting systemic weaknesses. Protecting yourself from financial risks is your most pressing challenge. Direct payments remain high, especially in regions where the informal economy is dominant and advance payment and pooling mechanisms are limited. The 2024 WHO regional report warns that more than 150 million Africans are pushed into poverty or worse by health costs. This highlights the urgent need to expand the pool and reduce point-of-care costs. Health financing remains a major hurdle. Despite the Abuja Declaration's commitment to allocate 15% of national budgets to health, most African governments have failed to do so. According to a Human Rights Watch report, average health spending in Africa in 2021 was only 7.4% of national budgets, far below the norm. This lack of funding is undermining primary health care, health worker capacity, and the supply of essential goods. In particular, spending in ECOWAS countries remains well below levels associated with strong performance in primary health care, limiting progress towards universal health coverage. Still, there are political gains. Nigeria's National Health Insurance Authority (NHIA) Act of 2022 aims to make health insurance compulsory, extend coverage beyond the public sector and unite disparate systems under stricter regulation. Although implementation challenges remain, this is an important step for integration and equity. Ghana's National Health Insurance System (NHIS) also stands out, with 68.6% of people enrolled in it in 2021. However, reforms are needed to improve service coverage, service quality, and timely payments to service providers. On the other hand, there are chronic funding shortfalls, unpredictable dependence on donor aid, weak supply chains, and a shortage of qualified health professionals. These systemic deficiencies lead to significant inequalities in access. UNEP (2010) reports that Africa is the second driest continent and water access is essential for survival. Most of the residents live in rural areas and make a living from rain-fed agriculture. In sub-Saharan Africa, only 40% of the population has access to clean and safe water (Syaaruddin et al., 2024).

Despite these challenges, there are still opportunities to accelerate global progress. Strengthening primary health care (PHC) is a particularly promising approach. Primary health care is cost-effective and has the ability to provide comprehensive community services that promote equity and sustainability. This can reduce reliance on costly tertiary care and strengthen prevention and health care promotion efforts. Improving financial protection mechanisms is also essential. This requires both domestic resource mobilization and strategic international support to reduce reliance on direct payments. A transparent and effective health financing system is essential to ensure efficient and fair use of resources. Innovation also plays an important role. Digital health technologies such as telemedicine, mobile health platforms, and electronic health records can bridge access

gaps, especially in rural and remote areas. Digital tools combined with community health solutions can empower communities and expand coverage to underserved populations. Additionally, strengthening governance and accountability in health systems helps ensure that policies and resources meet people's needs, maintains the effectiveness and equity of health interventions, and ultimately improves health and living standards around the world. Thomas (2013) argues that participatory development emerged to address the shortcomings of top-down development. In top-down development, projects are planned, designed, and implemented by elites without involving or consulting those who are often too ignorant or perceived as too knowledgeable to participate. However, this is usually not the case, so it's a topic worth discussing. Furthermore, Mbui and Wanjohi (2018) support participatory development and stress that allowing local people to participate in development projects promotes a sense of ownership and increases project sustainability. Despite these definitions, the absence of public participation from water-related projects remains common in developing countries, and it is this issue that this study addresses. WHO and UNICEF (2014) note that water is a social good. Therefore, community participation in water management is essential to maximize social benefits to communities. The community cannot be passive because it understands its needs, the local dynamics of the project, and the expected benefits better than external donors. Their scarcity requires careful conservation, extraction, distribution, and management, all of which depends on the understanding and cooperation of the populations who are also their beneficiaries (Higgins et al., 2023). In Liberia, where marginalized people face systemic barriers, community engagement allows for a bottom-up understanding of issues such as distance, discrimination, and accessibility, thereby promoting equity. Despite global, regional and national efforts towards universal health coverage (UHC), significant gaps remain in translating policy into concrete action, especially in low- and middle-income countries like Liberia. In the health sector, community participation is essential for universal health coverage (UHC). Building on the 1978 WHO Alma-Ata Declaration, it emphasizes that community participation in decision-making is essential for an equitable and effective health system. Community involvement takes many forms, including health committees, research collaborations, and organizational partnerships. This strengthens accountability, transparency, and democratic governance in the healthcare sector (Lavers & Hickey, 2016). Additionally, integrating local knowledge results in culturally appropriate and context-specific solutions, increasing acceptability and effectiveness (Marston et al., 2016). Community engagement ensures that health interventions are adapted to cultural, social and economic realities, thereby increasing trust and utilization of services (George et al., 2015). Ultimately, participation improves UHC by tailoring services to community needs, ensuring inclusivity, and promoting the development of sustainable health systems. This is not only complementary but also fundamental to achieving health equity, building resilience and ensuring universal access to quality healthcare (Higgins et al., 2023).

Community participation is widely recognized as a cornerstone of achieving universal health coverage (UHC), especially in marginalized settings such as urban slums such as Clara Town, one of the oldest urban slums in Montserrado County, Liberia, characterized by high population density, poor sanitation, overcrowded housing, and limited access to formal health services. In this context, achieving universal health coverage requires not only government and institutional intervention, but also the active participation of populations in environmental health promotion and service provision. Community involvement in Clara Town takes many forms, including volunteer hygiene activities, neighborhood health committees, and local awareness campaigns led by youth and women's groups. These initiatives promote environmental health by reducing open dumping, increasing waste recycling, and improving hygiene practices. Empowering communities to participate in health decisions and interventions improves service delivery and promotes shared ownership of health outcomes. For example, the involvement of community organizations during the Ebola outbreak demonstrated the importance of trust and participation in providing timely health interventions. In the context of CSU, community engagement with Clara contributes to three key goals: accessibility, equity, and sustainability. First, by mobilizing residents to identify local health issues such as unsafe water sources, inadequate sanitation, and limited maternal and child health services, communities can advocate for targeted interventions that improve access to essential health care. Second, participation ensures equality, as marginalized voices, such as women, youth, and informal workers, are included in decision-making processes. Finally, community participation promotes sustainability as local ownership reduces dependence on external support and increases the resilience of health systems (Higgins et al., 2023).

Despite these strengths, challenges remain. Poverty, limited education, and weak infrastructure often prevent consistent participation. Many residents rely on informal employment and have little time and resources to participate in voluntary health initiatives. Furthermore, political neglect and poor integration of community structures into national health planning limit the maximum potential for local participation. Without systemic support, community efforts risk becoming fragmented and unsustainable. Liberia, like many countries in sub-Saharan Africa, continues to face systemic barriers such as weak health infrastructure, financial insecurity, and inequitable service provision that disproportionately impact vulnerable populations (WHO, 2023). Although UHC emphasizes access, equity, and financial protection, the integration of community participation in health planning and management remains limited and understudied. However, there remains a lack of empirical research examining the specific role of community participation in promoting universal health coverage. Existing literature broadly focuses on systemic issues such as lack of funding, management deficiencies, and labor shortages rather than local strategies based on participatory approaches (George, Branchinini, & Portela, 2015). The case of Clara Town, an urban slum in Montserrado County, highlights this research gap. Community initiatives such as hygiene activities, youth awareness campaigns, and district health committees play an important role in addressing health issues, but their impact on UHC outcomes has not been systematically evaluated. Moreover, barriers to meaningful participation, such as poverty, low literacy

rates, and limited policy acceptance, remain poorly documented. This gap highlights the need for empirical research to assess how community participation contributes to achieving universal health coverage in marginalized urban settings. Such evidence is essential to inform policies that institutionalize public participation and ensure health reform is inclusive, equitable, and sustainable (Lavers & Hickey, 2016). Improving universal health coverage in Clara requires stronger partnerships between community groups, local authorities and health authorities. Capacity-building programs, health education, and financial support for grassroots organizations can increase participation. Importantly, policies must formally recognize the role of communities in health governance to ensure that their contributions are institutionalized (Shetunyenga, 2024).

➤ *Statement of the Problem*

Achieving universal health coverage (UHC) is a cornerstone of the Sustainable Development Goals (SDG 3.8), emphasizing that all individuals should have access to quality essential health services without incurring financial hardship. Despite widespread international commitment, progress toward UHC has remained uneven, with over half of the global population still lacking access to fundamental health services and approximately two billion people exposed to catastrophic health expenditures annually (WHO 2023). Among the multifaceted challenges to achieving UHC, environmental health and sanitation emerge as critical determinants of health, particularly in marginalized communities. Unsafe water, inadequate waste management, and limited access to hygiene facilities contribute significantly to the persistence of communicable and preventable diseases, such as diarrhea, cholera, malaria, and other waterborne illnesses, undermining broader health system goals.(Shetunyenga, 2024).

Community participation has increasingly been recognized as a pivotal strategy to bridge these gaps, as it empowers local populations to actively engage in the design, implementation, and monitoring of health interventions. By involving communities, interventions are more likely to be contextually relevant, culturally acceptable, and sustainable, thereby improving both health outcomes and social cohesion. Participatory approaches also facilitate resource mobilization at the local level, build accountability mechanisms, and foster a sense of ownership among community members, which is critical for maintaining long-term health and sanitation initiatives (Shetunyenga, 2024).

In Africa, these challenges are magnified due to fragile health systems, limited financial resources, and rapid urbanization, which have led to the proliferation of informal settlements and urban slums. These environments are often characterized by overcrowding, insufficient access to clean water and sanitation facilities, poor waste disposal, and limited healthcare infrastructure. Sub-Saharan Africa, in particular, bears a disproportionate burden of preventable diseases that are closely linked to environmental health deficiencies (United Nations Economic Commission for Africa (UNECA, 2022). While community engagement strategies have shown promise in addressing such issues in certain contexts, their potential remains largely underutilized, and the mechanisms for meaningful participation are often weak or inconsistently applied (Agyemang et al., 2021).

During the Liberian Civil War, deliberate devastation of lives and properties was carried out. This resulted in an endless decline in the quality of urban infrastructure. By 2003, access to suitable sanitation infrastructure had deteriorated to 7% at the national level (AfDB,2012). Acknowledging the necessity for enhanced environmental health and its intensification towards meeting the sustainable development goal (SDG), the government of Liberia and the development partners have been joining forces to improve the awful sanitation status, principally in Monrovia, that inhabited by more than 37% of the country's population. The city also serves as the residence for about 70% of the urban population who live in slums and informal communities. The obtainable sewage treatment facility in Monrovia has been reportedly out of operation for several years (AfDB, 2012). Currently, there exist poor and inadequate environmental sanitation conditions in the urban slum communities. Public toilets are in very deplorable conditions, poorly managed, or redundant. Occupants of these communities cannot meet the expenses of the cost of consistent de-sludging or maintenance of their septic tanks. Usually, the septic tanks are manually emptied, and sewage discharges cause grave environmental contamination and public health menaces. Pollution has been an important challenge in Monrovia (Edwin, 2014). The World Bank made payments to sanitation companies to collect waste, but waste collections were carried out irregularly (Edwin, 2014). The problem of uncollected garbage in the Paynesville area of Monrovia became so severe that trader sand residents burnt the huge garbage piles that we real most cutting off the main road from Monrovia to Kakata (Edwin, 2014). Flooding causes further environmental harm to residents. In 2018, not more than one-third of Monrovia's 1.5 million people had access to hygienic toilets. Those without toilet sex cretein narrow passage ways between their houses, or on the beach, or inside plastic bags and dump into nearby piles of rubbish or into the sea (IRIN News, 2010). Congested housing with no toilets and a lack of urban planning have collectively created harmful sanitation conditions in the Liberian capital (IRIN News, 2018).

Liberia exemplifies these challenges, with Clara Town in Montserrado County representing a microcosm of urban slum dynamics in the country. As one of the largest densely populated communities in Monrovia, Clara Town faces chronic environmental health and sanitation deficits, including poorly managed waste disposal systems, limited drainage, and inadequate public toilets. Such conditions exacerbate vulnerability to infectious diseases and place immense pressure on local healthcare facilities, many of which are already under-resourced and constrained by personnel shortages and logistical challenges. Residents' exposure to health risks is compounded by structural barriers such as pervasive poverty, social inequities, and gaps in

governance, which limit the reach and effectiveness of public health interventions.

Although community participation exists in Clara Town, it is often fragmented, informal, and dependent on external donor support. Local initiatives, such as neighborhood clean-up campaigns, health education workshops, and sanitation committees, demonstrate the potential for grassroots engagement to improve environmental health outcomes. However, the absence of sustained support, coordination, and resources limits the scalability and long-term impact of these efforts (Ministry of Health Liberia, 2023). Understanding how participatory approaches can be systematically strengthened in Clara Town is crucial to identifying pathways through which communities can actively contribute to UHC, particularly in urban slum contexts where conventional top-down interventions have had limited success (Higgins et al., 2023).

Assessing the role of community participation in Clara Town is therefore not only essential for addressing immediate environmental health and sanitation challenges but also for informing broader strategies aimed at achieving UHC in Liberia. By highlighting the facilitators and barriers to effective community engagement, policymakers, public health practitioners, and local stakeholders can develop context-specific approaches that leverage local knowledge, foster accountability, and enhance the sustainability of health interventions. Ultimately, empowering communities to participate meaningfully in health and sanitation initiatives represents a critical avenue for reducing health disparities, improving public health outcomes, and advancing Liberia's progress toward UHC (Higgins et al., 2023).

➤ *Research Questions*

- How does community participation improve Environmental health and Sanitation?
- How has community engagement influenced the success of sanitation programs in Clara Town?
- What systemic challenges hinder sustainable UHC implementation in the urban slum context?

➤ *Aim and Objectives of the Study*

• *Aim of the Study*

This study aims to assess the role of community participation in achieving Universal Health Coverage (UHC), in Clara Town urban slum in Montserrado County, Liberia.

• *General Objective of the Study*

The general objective of this study is to assess the role of community participation in achieving Universal Health Coverage (UHC), with a specific focus on health and sanitation initiatives in Clara Town, Montserrado County, Liberia.

• *Specific Objectives of the Study*

- ✓ To assess the impact of community participation on Environmental health and Sanitation.
- ✓ To evaluate the impact of community engagement on health and sanitation initiatives in Clara Town.
- ✓ To identify barriers to achieving UHC in the urban slum community.

➤ *Significance of the Study*

This study is essential in understanding the critical relationship between community participation and health outcomes in Clara Town, Montserrado County, Liberia. In the context of universal health coverage (UHC), the active involvement of communities is widely acknowledged as a cornerstone for achieving equitable, accessible, and sustainable health services. However, the realities on the ground in many low-income urban settings, such as Clara Town, often differ sharply from policy intentions. By exploring how local health and sanitation initiatives are developed, implemented, and sustained with community involvement, this research will provide valuable insights into the effectiveness of grassroots engagement in advancing UHC.

Clara Town presents a relevant case study, as it faces multiple health challenges stemming from poverty, overcrowding, inadequate sanitation, and limited access to quality healthcare services.

Despite these difficulties, local efforts have emerged to address health issues, often driven by community members themselves. Analyzing these efforts will help identify best practices, barriers, and enablers of successful community-led health interventions. These findings can guide future strategies not only in Clara Town but also in similar under-resourced urban communities across Liberia and other low-income countries.

Furthermore, the study will fill a critical gap between policy and practice. While Liberia has committed to achieving UHC, gaps in implementation, especially at the community level, undermine this goal. Documenting these implementation challenges and community responses will provide empirical evidence to inform national and local policymakers, health planners, and international partners. The research aligns with the World Health Organization's emphasis

on people-centered and equitable service delivery. It will support efforts to design more inclusive, participatory, and context-appropriate health systems that genuinely reflect the needs and contributions of local communities. Ultimately, this study contributes to the broader global dialogue on achieving UHC in marginalized and underserved settings through community empowerment.

➤ *Scope and Delimitation*

This study focuses on assessing the role of community participation in achieving Universal Health Coverage (UHC), using the Clara Town Community in Montserrado County, Liberia as a case study. Clara Town is a densely populated urban settlement facing significant health and sanitation challenges, making it an appropriate setting to explore the impact of grassroots involvement in improving health outcomes. The scope of the study is limited to community-driven health and sanitation initiatives that are planned, implemented, or supported by community members or local organizations. It will examine how local participation influences the accessibility, affordability, and utilization of health services, as well as its contribution to achieving the broader goals of UHC within the community.

The study does not intend to provide a comprehensive analysis of all health and sanitation programs in Liberia. Instead, it deliberately narrows its focus to Clara Town to allow for a more in-depth and context-specific examination. Government-led or international donor-driven programs outside the influence of community participation will not be extensively analyzed, unless they directly involve local stakeholders. The study period will cover the last five years to ensure recent and relevant data, and it will utilize qualitative methods such as interviews and focus group discussions with community leaders, health workers, and residents.

This delimitation ensures that the findings are both manageable in scope and meaningful for local policy and planning. However, it also implies that the conclusions may not be generalizable to all communities in Liberia, but they can offer valuable insights for similar urban settings.

➤ *Definition of Key Terms*

- **Health:** Health, according to the WHO and the UN Declaration on Human Rights, is broader than the absence of disease. It is about well-being, mental, physical, and social, including access to the basics of life such as food, shelter, security, and medical care.
- **Community:** Community is defined for this discussion as “a group of people living together in a catchment area and geographic location within a larger region or country.”
- **Universal health coverage** is a healthcare system that ensures all individuals have access to necessary health services without suffering financial hardship.
- **Environmental health:** a field of study that focuses on how environmental factors affect human health and well-being.
- **Community participation:** Community participation refers to the active involvement of individuals and groups in decision-making processes that affect their lives and environments.
- **Sanitation** refers to the measures and practices that ensure the cleanliness and hygiene of environments, particularly in public health.
- **Community engagement:** Community engagement refers to the process of involving individuals and groups in decision-making and activities that affect their lives and communities.
- **WHO:** World Health Organization.
- **UHC:** Universal health coverage.
- **Strengthening:** Strengthening generally refers to the process of making something more robust.

This can apply to various contexts, such as physical strength, emotional resilience, or structural integrity.

- **Community Sanitation:** Is the collective efforts and practices aimed at maintaining cleanliness and hygiene within a community.
- **Community Leadership:** The process of guiding and influencing a group of individuals within a community to achieve common goals and improve the overall well-being of that community.
- **Residents:** Refers to individuals who live in a particular place, such as a city, town, or community.
- **Environment:** refers to the surrounding conditions and influences that affect living organisms and ecosystems.
- **Focus group:** A focus group is a qualitative research method used to gather insights and opinions from a selected group of individuals about a specific topic, product, or service.
- **Low resources:** typically refers to situations or environments where essential resources are scarce, such as financial support, human capital, technology, or infrastructure.
- **Underserved:** Refers to situations or environments where essential resources are scarce, such as financial support, human capital, technology, or infrastructure.
- **Population:** Population refers to the total number of individuals of a particular species living in a specific area at a given time.

It can pertain to humans, animals, plants, or any other organisms. In the context of human populations, it often involves studying demographic factors such as birth rates, death rates, migration patterns, and age distribution.

- **Sustainability:** Sustainability refers to the ability to maintain or preserve resources and the environment for future generations.

➤ *Organization of Study*

This research is organized into five chapters to provide a logical and systematic flow:

➤ *Chapter One: Introduction*

This chapter presents the background of the study, statement of the problem, research objectives, research questions, significance of the study, scope and limitations, and operational definitions of key terms.

➤ *Chapter Two: Literature Review*

This chapter reviews relevant literature on universal health coverage, the role of community participation in health systems, and similar studies conducted in Liberia and other countries. It also highlights the conceptual framework and theoretical foundation guiding the study.

➤ *Chapter Three: Methodology*

This chapter outlines the research design, study area (Clara Town, Montserrado County), population and sample, sampling techniques, instruments of data collection, data collection procedures, validity and reliability of instruments, ethical considerations, and methods of data analysis.

➤ *Chapter Four: Presentation, Analysis, and Discussion of Findings*

This chapter presents the analyzed data from respondents, focusing on barriers to UHC, the role of community participation in environmental health and sanitation, and the extent of community involvement in healthcare decision-making. The findings are compared with related studies and interpreted in line with the research objectives.

➤ *Chapter Five: Summary, Conclusion, and Recommendations*

This chapter provides a summary of the key findings, draws conclusions based on the objectives of the study, and makes recommendations for policy, practice, and future research on strengthening community participation to achieve UHC in Liberia.

CHAPTER TWO

LITERATURE REVIEW

A. Introduction

Universal health coverage (UHC) refers to a healthcare system that ensures all individuals have access to necessary health services without experiencing financial hardship. The concept emphasizes that everyone should receive essential health services, including prevention, treatment, rehabilitation, and palliative care. UHC aims to provide equitable access to healthcare, regardless of an individual's socioeconomic status, geographic location, or health condition. The introduction of UHC often involves policy reforms and investments in healthcare infrastructure to enhance service delivery. It also requires a focus on financing mechanisms to make healthcare costs manageable for individuals and families. By promoting UHC, countries can improve overall health outcomes, reduce inequalities, and enhance the efficiency of their healthcare systems. Implementing UHC can lead to healthier populations, increased productivity, and economic growth, as healthier individuals are better able to contribute to society. However, achieving UHC poses a complex challenge that necessitates collaboration among governments, healthcare providers, and communities (Higgins et al., 2023).

Universal health coverage (UHC) operates by establishing a framework that allows all individuals to access essential health services without encountering financial barriers. This is accomplished through a combination of government policies, funding mechanisms, and healthcare infrastructure improvements that prioritize equitable access. Financing models, such as taxation or insurance schemes, are designed to distribute healthcare costs across the population, ensuring that no one is excluded due to an inability to pay. Successfully implementing UHC also requires collaboration among various stakeholders, including policymakers, healthcare providers, and community organizations, to meet the diverse needs of the population and ensure effective service delivery. UHC promotes social equity by providing healthcare access irrespective of socioeconomic status, which can help diminish health disparities among different population groups. The financial protection offered by UHC can alleviate the burden of medical expenses on families, preventing them from falling into poverty due to health-related costs. Additionally, UHC can stimulate economic growth by fostering a healthier workforce, which is crucial for sustainable development. However, implementing UHC necessitates careful planning and collaboration among various stakeholders, including governments, healthcare providers, and communities, to navigate the involved complexities. Overall, UHC represents a vital step toward achieving health equity and enhancing the quality of life for all individuals. Universal health coverage (UHC) is a crucial concept in healthcare that aims to ensure that everyone has access to essential health services without facing financial difficulties. This means that no matter who you are or where you live, you should be able to receive the necessary medical care, which encompasses preventive services, treatments for illnesses, rehabilitation, and palliative care for those who are terminally ill. The goal of UHC is to create an equitable healthcare system so that factors like income level, location, or health status do not inhibit access to care. To implement UHC, countries often need to undertake significant policy reforms and invest in healthcare infrastructure, such as constructing hospitals, training healthcare workers, and enhancing service delivery. A crucial aspect of UHC is developing financing mechanisms that allow individuals and families to afford healthcare without incurring overwhelming costs. This may involve government funding, insurance schemes, or other financial support systems that assist in covering medical expenses. By advancing UHC, nations can enhance public health outcomes, reduce disparities in healthcare access, and improve the overall efficiency of their healthcare systems. Healthier populations tend to be more productive and can contribute more effectively to economic growth. However, achieving UHC is not straightforward; it involves collaboration among various stakeholders, including government entities, healthcare providers, and the communities they serve, to address the complex challenges involved. Universal health coverage (UHC) has significant implications for society and the economy. By ensuring that all individuals have access to necessary health services, UHC can lead to improved public health outcomes, reducing the prevalence of preventable diseases and enhancing overall population health. This, in turn, can result in increased productivity, as healthier individuals are better equipped to participate effectively in the workforce. UHC promotes social equity by providing healthcare access regardless of socioeconomic status, which can help minimize health disparities among different population groups. The financial protection offered by UHC can ease the burden of medical expenses on families, preventing them from falling into poverty due to health-related costs. On the other hand, UHC can spur economic growth by fostering a healthier workforce, essential for sustainable development. However, implementing UHC entails careful planning and collaboration among various stakeholders, including governments, healthcare providers, and communities, to address the involved complexities. Overall, UHC represents a crucial step toward achieving health equity and enhancing the quality of life for all individuals (Omaswa et al., n.d.).

B. Conceptual Framework

The concept of assessing community participation in universal healthcare has its roots in the broader movements for public health and social justice that emerged in the 20th century. The World Health Organization (WHO) emphasized the importance of community involvement in health initiatives, particularly following the Alma-Ata Declaration in 1978, which advocated for primary healthcare as a means to achieve health for all. This declaration highlighted that community participation is essential for the success of health programs, as it empowers individuals and fosters ownership of health initiatives.

In the 1990s and 2000s, the focus on participatory approaches in healthcare gained momentum, influenced by the rise of community-based health programs and the recognition of social determinants of health. Researchers and policymakers began to understand that effective healthcare systems must engage communities to address their specific needs and preferences. This led to the development of various frameworks and tools for assessing community participation, emphasizing the importance of local knowledge and collaboration.

Today, assessing community participation is seen as a critical component of universal healthcare, ensuring that health services are equitable, accessible, and responsive to the populations they serve.

This approach not only improves health outcomes but also strengthens the overall healthcare system by fostering trust and cooperation between communities and health providers.

The assessment of community participation in universal healthcare is a vital aspect of public health that has evolved significantly over the decades. Its origins can be traced back to the 20th century, particularly with the emergence of movements advocating for public health and social justice. The Alma-Ata Declaration of 1978 by the World Health Organization (WHO) was a pivotal moment, as it called for primary healthcare as a fundamental right and emphasized the necessity of community involvement in health initiatives. This declaration underscored that when communities are actively engaged, they are more likely to take ownership of health programs, leading to better health outcomes.

In the 1990s and 2000s, the emphasis on participatory approaches in healthcare intensified. This shift was driven by the recognition of social determinants of health, which highlighted that health outcomes are influenced by various factors beyond medical care, including socioeconomic status, education, and environment. As a result, researchers and policymakers began to prioritize community engagement, realizing that healthcare systems must be tailored to meet the unique needs and preferences of local populations.

Various frameworks and tools have since been developed to assess community participation effectively. These tools often focus on gathering local knowledge and fostering collaboration between health providers and community members. Today, assessing community participation is recognized as essential for achieving universal healthcare, as it ensures that health services are not only equitable and accessible but also responsive to the specific needs of the communities they serve. This participatory approach not only enhances health outcomes but also builds trust and cooperation between communities and healthcare providers, ultimately strengthening the healthcare system as a whole.

Assessing community participation in universal healthcare is like evaluating the ingredients in a recipe to ensure a delicious meal. Just as each ingredient contributes to the overall flavor and success of the dish, community participation plays a crucial role in the effectiveness and acceptance of healthcare initiatives. If certain ingredients are missing or not well-integrated, the meal may fall flat, similar to how inadequate community involvement can lead to gaps in healthcare delivery. Furthermore, just as a chef must consider the preferences and dietary needs of diners, healthcare planners must understand the unique needs and perspectives of the community. Ultimately, both processes require careful attention, collaboration, and adaptation to create a satisfying outcome. In the same way, when people want to make sure everyone can go to the doctor and stay healthy, they ask the community, which is like your group of friends, how they want to help and what they need. This is called community participation. So, when we talk about "assessing community participation in universal healthcare," it means we are checking to see how well everyone is helping and sharing ideas to make sure all people can get the healthcare they need, just like sharing toys with friends.

Assessing community participation in universal healthcare offers several advantages. Firstly, it enhances the relevance of healthcare services by ensuring they are tailored to the specific needs and preferences of the community. This participatory approach fosters a sense of ownership among community members, leading to increased engagement and commitment to health initiatives.

Additionally, involving the community can improve health literacy, as individuals become more informed about available services and health practices. It also encourages collaboration between healthcare providers and community members, which can lead to innovative solutions and improved health outcomes.

Furthermore, community participation can help identify barriers to access and utilization of healthcare services, allowing for targeted interventions. It can also strengthen social cohesion, as individuals work together towards common health goals. Lastly, assessing participation can provide valuable feedback for policymakers, ensuring that health programs are effective and sustainable.

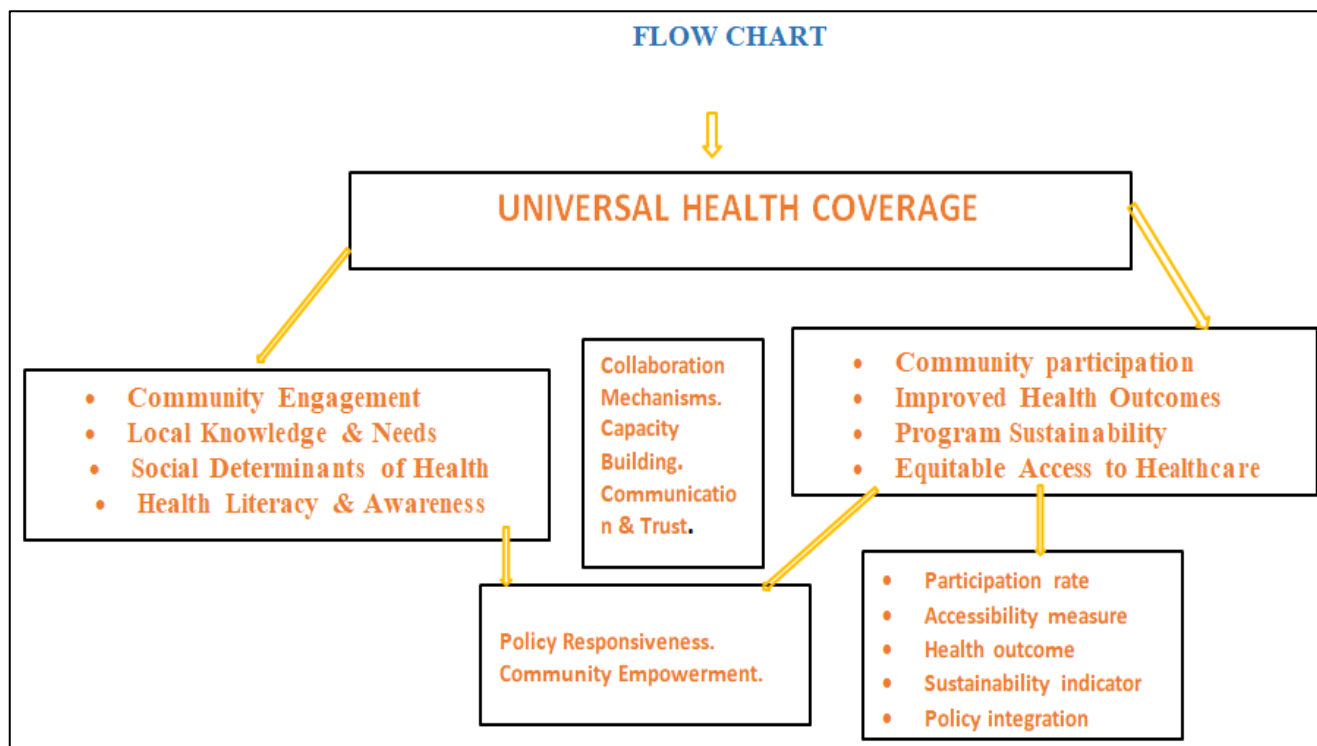


Fig 1 Flowchart

C. Assessing the Impact of Community Participation on Environmental Health and Sanitation

➤ Assessing the Impact of Community Participation on Environmental Health

Research over the past decade has increasingly treated *community participation* as both an object of study and a tool for improving environmental health outcomes from water and sanitation to pollution exposure, waste management, and climate-related risks. Recent evidence shows participatory approaches such as community-based participatory research (CBPR), citizen science, and community engagement programs can improve local environmental monitoring, increase uptake of protective behaviours, strengthen advocacy for policy change, and at times produce measurable health gains, though effects vary by context, design, and power dynamics (Martin et al., 2022).

➤ Theoretical Definition of Community Participation on Environmental Health

In contemporary public and environmental health literature, community participation refers to processes that involve community members in identifying problems, collecting or interpreting data, designing or implementing interventions, and influencing decisions that affect their environment and health (Principles of Community Engagement, 2025; Martin et al., 2022). Modern work frames participation not simply as attendance or consultation but along axes of influence, control, and sustainability. Contemporary reinterpretations of classical “ladder” metaphors stress that genuine participation requires shifting power and resources toward communities rather than token consultation. Newer syntheses reframe ladders into branched or networked models that better capture co-production and iterative governance (Hurlbert, 2024; Stover et al., 2024).

The literature identifies three proximate theoretical pathways: (1) knowledge and awareness (local data + education → better protective behaviors), (2) social capital and collective efficacy (networks, trust, and norms that support collective action), and (3) institutional change and accountability (communities leveraging evidence to influence policy or services). These mechanisms frequently interact; for example, citizen science increases local knowledge and creates evidence that fuels advocacy (Ehsan et al., 2019; Martin et al., 2022).

➤ Theoretical Perspectives of Community Participation on Environmental Health

Studies using CBPR foreground empowerment: participation builds capacity, voice, and ownership, which can sustain environmental improvements and embed local priorities in interventions. Reviews find that CBPR often strengthens the relevance and acceptability of environmental health work, especially in marginalized populations (Jeanjean et al., 2023; Stover et al., 2024).

• Social Capital and Collective Action Frameworks

A strong strand of work treats social capital (networks, trust, norms) as both an antecedent and an outcome of participation.

Higher social capital supports collective activities like neighborhood clean-ups or communal water management, while participatory projects can in turn build trust and civic ties — a virtuous cycle associated with pro-environmental behaviors and some health gains (Ehsan et al., 2019; Haldane et al., 2019).

- *Socio-Ecological and Systems Perspectives*

Recent reviews emphasize multi-level systems thinking: community participation operates within wider political, economic, and environmental systems. Interventions that ignore institutional constraints or resource flows often have limited impact; conversely, integrated approaches (community + local government + researchers) are more likely to scale and persist (Stover et al., 2024; Haldane et al., 2019).

- *Citizen Science and Data-Driven Participation*

Citizen science has emerged as a practical bridge between local observation and formal science: community data collection can reveal exposure patterns, inform local advisories, and galvanize regulatory attention. Evidence shows long-term, high-participation projects sometimes translate into structural change (remediation, policy shifts), though rigorous attribution to health outcomes remains challenging (Jeanjean et al., 2023).

- *Methodological and Evaluative Perspectives*

The literature highlights consistent methodological challenges: heterogeneity of “participation” definitions, variable fidelity to participatory principles, and limited use of longitudinal or controlled designs to measure health outcomes. Many evaluations emphasize intermediate outcomes (knowledge, behaviour change, policy actions) rather than distal health endpoints because attribution is difficult and requires long follow-up. Mixed-methods designs and realist evaluations are commonly recommended to unpack how and why participation works in specific contexts (Stover et al., 2024; Haldane et al., 2023).

Over the past decade, the evidence base has strengthened: community participation is convincingly associated with improved environmental awareness, increased local advocacy, and changes in behavior and service delivery. However, clear demonstrations of direct, population-level health improvements remain less frequent due to challenges in measurement and attribution. For thorough evaluation, researchers recommend theory-based, mixed-methods approaches that assess intermediate mechanisms (such as knowledge, social capital, and policy change) alongside long-term health outcomes, and that explicitly consider power dynamics and equity results. When adequately funded, genuinely participatory methods present a promising path to more responsive and equitable environmental health solutions, but their success depends on contextual relevance, ongoing support, and meaningful sharing of power and data (Haldane et al., 2019; Jeanjean et al., 2023; Stover et al., 2024).

➤ *Empirical Evidence on Community Participation in Environmental Health*

Across contexts, the literature converges on several enabling conditions for positive environmental-health impacts: authentic power-sharing (not tokenism); investment in local capacity and resources; integration with formal institutions; attention to equity (ensuring marginalized voices shape priorities); and long-term commitment rather than one-off consultations. Projects that combined community knowledge with scientific methods and clear pathways to policy influence reported the most sustained changes (Principles of Community Engagement, 2025; Jeanjean et al., 2023).

In the last decade, the evidence base has matured: community participation is linked convincingly to improved environmental awareness, strengthened local advocacy, and changes in behavior and service delivery. However, demonstrations of direct, population-level health improvements remain less common due to measurement and attribution challenges. For rigorous assessment, scholars recommend theory-driven, mixed-methods designs that measure intermediate mechanisms (knowledge, social capital, policy change) alongside long-term health indicators, and that explicitly evaluate power relations and equity outcomes. When well-resourced, genuinely participatory approaches offer a promising route to more responsive, equitable environmental health solutions but their success depends on contextual fit, sustained support, and meaningful sharing of power and data (Haldane et al., 2019; Jeanjean et al., 2023; Stover et al., 2024).

Studies demonstrate that increased social cohesion mediates the uptake and maintenance of community-led infrastructure and behavior change, although the magnitude and durability vary by context. Citizen science projects have produced credible environmental monitoring data (water quality, biodiversity, air pollution proxies) that have been used to document degradation, prioritize remediation, or compel agency responses (Earthwatch/volunteer river testing, WildFish SmartRivers, and other programs documented in 2023–2024 reporting). These monitoring successes demonstrate that community-collected data can fill institutional gaps and influence policy discussions, particularly when project methods are transparent and quality-assured (Fraisl et al., 2023; news reports on river monitoring, 2024).

Direct, population-level health effects attributable solely to participation are less frequently reported. A growing number of rigorous trials and quasi-experimental evaluations examine downstream effects: for example, community-led arsenic mitigation and some water/sanitation interventions have recorded reductions in exposure biomarkers or improvements

in access and hygiene behaviors, though attribution to participation versus the intervention package can be complex (Quattrochi et al., 2025). Systematic reviews underscore that many studies stop at intermediate endpoints or lack the follow-up length/power needed to detect health effects like reduced diarrheal disease or lower chemical exposure biomarkers (Stover et al., 2024; Jeanjean et al., 2023).

Meta-syntheses and reviews converge on enabling conditions for measurable impact: genuine power-sharing and co-design rather than token consultation; investment in training, quality assurance, and resources for community data collection; integration with formal institutions (local government, regulators) so evidence has a pathway to action; as well as multi-year engagement to support sustained behavior and systems change (Jeanjean et al., 2023). Projects meeting conditions are more likely to yield environmental improvements and policy uptake. Empirical studies face several recurring limitations: inconsistent definitions of “participation”; selection bias (engaged communities may be atypical); reliance on self-reported behaviours; short follow-up; and scarce randomized trials measuring health endpoints. Citizen science data frequently require validation and careful integration into regulatory frameworks. Evaluators therefore commonly recommend mixed-methods and realist approaches that measure mechanisms (knowledge, social capital, advocacy) as well as distal health outcomes. Over the last decade, the strongest and most consistent empirical evidence shows that community participation reliably improves environmental knowledge, builds social capital, produces reasonably robust monitoring data, and can catalyze local environmental improvements and policy attention when integrated with institutional pathways. Evidence of direct, population-level health outcomes exists but is less common largely because of attribution challenges and the need for long timelines and robust study designs (Stover et al., 2024). For assessment, researchers should adopt clear, theory-driven logic models that link participatory inputs → intermediate mechanisms → environmental and health outcomes, combine quantitative exposure/health measures with qualitative process evaluation, and prioritize long-term partnerships that ensure data quality and policy channels. When these design principles are applied, participatory approaches offer a credible, equity-oriented strategy to strengthen environmental health surveillance and local action and, with appropriate evaluation, to demonstrate measurable health benefits. (Jeanjean et al., 2023)

➤ *Assessing the Impact of Community Participation on Environmental Sanitation*

Sanitation covering safe excreta disposal, solid-waste management, drainage, and related hygiene behaviors remains a central determinant of population health and well-being in low- and middle-income settings (Igaki et al., 2021). Over the past decade, programme designers and researchers have increasingly foregrounded community participation as both a delivery mechanism and an outcome in sanitation programming. Participation approaches such as Community-Led Total Sanitation (CLTS), community-managed sanitation schemes, participatory behaviour-change campaigns, and community-based monitoring are promoted for improving uptake, sustainability, equity, and local accountability (Nelson et al., 2021).

Yet empirical results are mixed: while participation often yields gains in awareness, norms and some sanitation behaviours, effects on sustained infrastructure use and population health vary by context, implementation fidelity, and institutional linkages. This review outlines core theoretical definitions, surveys dominant theoretical perspectives used to interpret sanitation participation, and concludes implications for assessment and policy (Syaharuddin et al., 2024).

• *Theoretical Definitions of Environmental Sanitation*

Contemporary sanitation literature treats community participation as a spectrum of processes through which residents contribute to problem identification, decision-making, resource mobilization, implementation, and monitoring of sanitation initiatives ranging from information sharing to co-production and delegated control (Stover et al., 2024; Nelson et al., 2021).

CLTS is a behavior-change approach that seeks to trigger collective abandonment of open defecation through community mobilization rather than subsidies for latrine construction; it exemplifies a widespread participatory model in rural sanitation programming (Novotný et al., 2018). Modern definitions emphasize not only short-term behavior change but long-term maintenance, inclusivity (marginalized households, women, low-income groups), and links to public services dimensions that differentiate meaningful participation from token consultation (Stover et al., 2024).

• *Theoretical Perspectives of the Impact of Community Participation on Environmental Sanitation.*

A dominant framing views participation as a lever to shift social norms around defecation, latrine use, and hygiene: community meetings, public triggering, and collective declarations help reconfigure what is socially acceptable, accelerating normative adoption of sanitation behaviors (Abramovsky et al., 2023). This perspective explains many short-term gains in open-defecation reductions but also flags risks where norms revert without reinforcement or material support (Coulomb et al., 2015).

Under this lens, participation builds local capacity and ownership, strengthening collective problem-solving, local institutions (sanitation committees), and community advocacy for services.

Evidence shows participatory processes that invest in local leadership and technical training can improve maintenance and

uptake, particularly when they include women and vulnerable groups (Igaki et al., 2021). Several studies highlight social capital trust, reciprocity, and networks as both an antecedent and outcome of effective participation. Communities with stronger social cohesion are more likely to sustain collective sanitation assets (communal latrines, drain maintenance), and community mobilization can, in turn, strengthen social ties that support longer-term sanitation governance (Malolo et al., 2021).

Increasingly, scholarship situates participatory sanitation within multi-level systems: household behaviors interact with local governance, market access (for hardware), and national policy. From this vantage, participation alone is insufficient; its impact depends on supply chains, financing, regulatory oversight, and adaptive institutional arrangements (Stover et al., 2024).

Critical analyses emphasize that participation can reproduce inequalities if elite households dominate decision-making, or if programs prioritize cost-efficiency over the needs of the poorest.

Thus, theoretical work focuses on power dynamics, resource flows, and mechanisms to ensure equitable participation (Nelson et al., 2021). The last decade's theoretical work converges on two central lessons. First, community participation is multidimensional: its value for sanitation lies in changing norms and behaviors and in strengthening local governance, social capital, and accountability pathways (Stover et al. 2024). Second, the effectiveness and equity of participation depend on contextual enablers sustained facilitation, technical and financial support, inclusive governance structures, and integration with formal service providers (Nelson et al., 2021). For rigorous assessment, researchers should use theory-driven logic models that link participatory inputs → social and normative mechanisms → sanitation behaviors → service sustainability and equity outcomes. Mixed-methods, longer follow-up, and attention to power dynamics are essential to distinguish transient behavior change from durable, equitable sanitation improvements. In policy terms, participation should be designed as part of integrated sanitation systems, neither a quick fix nor a substitute for adequate financing and technical services if it is to yield sustainable environmental sanitation gains (Igaki et al., 2021).

- *Empirical on Assessing the Impact of Community Participation on Environmental Sanitation*

Environmental sanitation, including safe fecal sludge management, household latrine use, solid-waste disposal, drainage, and hygiene behaviors, remains a central determinant of health and dignity in low- and middle-income settings. Over the past decade, international programs and researchers have prioritized community participation (e.g., Community-Led Total Sanitation (CLTS), community-managed sanitation, participatory monitoring, behavior-change mobilization) as a route to accelerate latrine adoption, reduce open defecation, improve waste management, and increase local accountability for services (Nelson et al., 2021). Yet empirical findings are heterogeneous: many studies document strong short-term improvements in knowledge, norms, and some behaviors, while evidence for durable infrastructure maintenance and population-level health gains is mixed and highly context-dependent (Igaki et al., 2021).

A large body of empirical work finds that participatory sanitation interventions reliably increase awareness, self-reported latrine use, and reductions in open defecation in the short to medium term.

Mixed-methods reviews of CLTS and related community mobilisation report consistent shifts in social norms following triggering events and collective declarations, producing immediate reductions in open defecation prevalence in many settings (Venkataramanan et al., 2018; Novotný et al., 2018). Cluster and quasi-experimental evaluations show increased latrine ownership and reported use in intervention villages compared with controls, though effect sizes vary with facilitation quality and follow-up intensity. Empirical studies employing mixed methods identify social capital (trust, reciprocity), Local leadership, and collective efficacy as key mediators between participation and sanitation outcomes. Realist reviews indicate that where community mobilization strengthens local institutions (sanitation committees, women's groups) and fosters inclusive leadership, maintenance of communal assets and continued behavior change are more likely (Nelson et al., 2021). Conversely, where elites dominate or follow-up is weak, early gains often erode (Coulomb et al., 2015).

Community-based monitoring and participatory audits have produced credible local data used to prioritize repairs, site sanitation infrastructure, and press for municipal responses. Recent empirical examples and program reports document how participatory monitoring complements limited formal surveillance particularly for solid waste and drainage problems and can catalyzed targeted municipal action when channeled through formal governance pathways (Fraisl et al.2023). These data-driven community efforts often improve service responsiveness but require quality assurance and institutional pathways to scale (Overview & Zhou, n.d.).

Longer-term studies that evaluate sustained latrine functionality, fecal sludge management, and communal asset maintenance report mixed results. Some interventions that combined participatory planning with technical assistance and finance mechanisms achieved better maintenance and lower latrine collapse rates; others showed declining upkeep once external support ended (MDPI CLTS boosting study; Franken et al., 2024). This pattern highlights the importance of linking participation to supply chains, materials, and financing.

Direct evidence that participation alone produces measurable population-level health effects (e.g., reductions in diarrheal

disease, enteric infections, or child growth improvements) remains limited.

Many evaluations stop at behavioral or environmental proxies because detecting health impacts requires larger samples, longer follow-up, and careful attribution. Recent cluster-randomized and quasi-experimental studies and new trials underway are beginning to measure biomarkers and child health endpoints, but systematic reviews still call for more high-quality trials that isolate the role of participation within complex intervention packages (Igaki et al., 2021; Quattrochi et al., 2025). Synthesis work and meta-analyses point to recurring enabling conditions: genuine co-design and inclusive facilitation (not token consultation); investment in training and follow-up (boosting); linkages to supply chains, financing, and municipal services; and multi-year engagement to support behaviour retention (Stover et al., 2024). Interventions embodying several of these elements report the most sustained sanitation and service gains.

Empirical research faces familiar challenges: inconsistent definitions of “participation,” selection bias (engaged communities differ from non-engaged ones), reliance on self-reports for latrine use, short follow-up durations, and limited randomized evidence that isolates participatory processes from material inputs. Realist and mixed-methods designs are recommended to clarify mechanisms and contextual moderators. Evaluations should pair behavioral metrics with objective exposure or health measures where feasible. Over the last decade, the empirical record has shown a clear pattern of community participation reliably shifting knowledge, norms, and short-term sanitation behaviors, as well as monitoring data and local advocacy that improve service responsiveness (Nelson et al., 2021). However, sustained infrastructure maintenance and measurable population-level health improvements are conditional they depend on inclusive power dynamics, quality facilitation, material/financial supports, and institutional linkages that translate community voice into service delivery (Novotný et al., 2018). For rigorous assessment, researchers should adopt theory-driven logic models linking participatory inputs → social mechanisms (social capital, norms) → intermediate sanitation outcomes → long-term sustainability and health endpoints, use mixed methods to unpack “how” and “for whom” participation works, and prioritize longer follow-up and objective measures (Stover et al., 2024). When designed and resourced as part of integrated sanitation systems, participatory approaches are a promising, equity-oriented pathway to an improved environment.

D. Evaluating the Impact of Community Engagement on Health and Sanitation Initiatives

➤ *Evaluating the Impact of Community Engagement on Health*

Community engagement (CE) has increasingly become central to public health strategies, particularly in contexts where social, cultural, and systemic barriers hinder access to equitable care.

Over the last decade, CE has been conceptualized as more than participation it represents a process of collaboration, co-production, and empowerment that links communities with health systems to improve outcomes, trust, and accountability (George et al., 2016). Recent theoretical contributions emphasize that CE not only fosters ownership of interventions but also influences broader determinants of health, such as social cohesion, resource mobilization, and resilience in times of crisis (Gilson, 2021; Lunsford et al., 2023). Understanding CE through theoretical frameworks is therefore essential to evaluate its long-term impact on health systems and population well-being.

Theoretically, CE has been defined as a dynamic process that ranges from minimal involvement (consultation) to full partnership (shared leadership) in health decision-making (McCloskey et al., 2017). Social ecological theory frames CE as an intervention mechanism that operates at multiple levels individual, community, institutional, and policy thereby addressing structural barriers to health (Bronfenbrenner, 1994, as revisited in recent health equity work by Hill et al., 2020).

From the perspective of Arnstein’s ladder of participation, CE is situated along a continuum from tokenism to citizen control, highlighting the power dynamics embedded in health decision-making (Zakus & Lysack, 2020). Theories of empowerment and participatory development further define CE as a pathway to redistribute power, enabling marginalized communities to influence policies and interventions that shape their health (Campbell & Cornish, 2018). These definitions converge in positioning CE as both a means to improve health services and a goal of equitable health governance.

➤ *Theoretical Perspectives on Community Engagement and Health*

• *Social Capital Perspective*

CE enhances trust, networks, and collective efficacy social assets that promote health behaviors and community resilience (Story et al., 2020). The theory of social capital suggests that communities with stronger engagement structures achieve better health outcomes by facilitating information sharing, mutual support, and collective problem-solving (Gilson, 2021).

• *Health Systems Strengthening Perspective*

From a systems lens, CE contributes to accountability and responsiveness, aligning with the World Health Organization’s framework for people-centered health systems. By integrating local voices into planning and implementation, CE bridges gaps between service providers and users, ultimately improving service delivery and equity (George et al., 2016; Lunsford et

al., 2023).

- *Critical and Equity-Focused Perspectives*

Critical theories argue that CE must go beyond consultation to confront systemic inequities. Power, representation, and inclusivity are essential for meaningful engagement, especially in contexts of historical marginalization (Campbell & Cornish, 2018; Rifkin, 2019). This perspective situates CE within broader struggles for social justice, positioning it as a transformative practice rather than a technical add-on.

- *Behavioral Change Perspective*

Theories of planned behavior and diffusion of innovations have also been applied to CE, showing how community-driven dialogue fosters adoption of preventive health behaviors, such as immunization uptake or sanitation practices (Zakus & Lysack, 2020). Here, CE operates as a mediator of health literacy and behavioral adoption. Theoretically, community engagement is widely recognized as both an instrument and an outcome of equitable health systems. Definitions converge on the idea that CE embodies power-sharing, trust-building, and participatory governance. Perspectives such as social capital theory, empowerment theory, and systems thinking provide complementary insights into how CE can reshape health outcomes by influencing both proximate behaviors and distal structural determinants (George et al., 2016; Story et al., 2020; Lunsford et al., 2022).

- *Empirical Evidence on Evaluating the Impact of Community Engagement on Health*

Community engagement (CE) is widely promoted across public-health practice as a way to improve health outcomes, increase equity, and strengthen health systems by bringing community knowledge, priorities, and resources into decision-making (World Health Organization, 2020). Over the last decade, CE has been conceptualized from one-off consultation toward continuous, power-sharing partnerships that can reshape service delivery and upstream social determinants of health (National Academy of Medicine, 2022). At the same time, empirical researchers have sought to quantify whether and how CE changes health behaviors, service use, exposure, and population health outcomes, producing a literature that ranges from randomized trials and quasi-experimental studies to systematic reviews and realist syntheses. (WHO, 2020).

Several systematic reviews and meta-analyses find that CE interventions produce positive effects on a range of health outcomes, especially behavioral and service outcomes (e.g., uptake of preventive services, screening, health promotion behaviors), though effect sizes and certainty vary by outcome and study quality. The landmark meta-analysis by O'Mara-Eves et al. (2015) concluded that community engagement interventions had a positive impact on a variety of health outcomes, particularly among disadvantaged groups; more recent reviews (2019–2024) have reached similar conclusions while emphasizing heterogeneity in effects and methods (O'Mara-Eves et al., 2015; Haldane et al., 2019; Stover et al., 2024). Empirical studies most consistently document CE impacts on intermediate outcomes, increased knowledge, improved health behaviors (e.g., handwashing, vaccination uptake), and greater use of services (e.g., antenatal care, screening). These outcomes are more readily measurable within typical project timeframes and appear robust across settings where community actors participate in design and delivery (O'Mara-Eves et al., 2015; Cyril et al., 2015; recent vaccination CE reviews 2024). In addition, mixed-methods and process evaluations highlight three empirically supported mechanisms linking CE to improved health. Knowledge and local health literacy community processes increase awareness and understanding; social capital and collective efficacy strengthen networks and trust, enabling collective action; and accountability and service responsiveness, along with community voice, can lead to changes in service provision or policy when linked to formal institutions. Empirical syntheses and program evaluations consistently show these mechanisms operating, though their relative importance varies by context. (Haldane et al., 2019).

Fewer studies demonstrate clear, sustained reductions in population-level morbidity or mortality attributable solely to CE. Detecting distal health effects usually requires large sample sizes, long follow-up, and strong counterfactual designs; many CE studies therefore stop at intermediate outcomes or use composite intervention packages (community engagement + material inputs), making attribution difficult. Still, newer cluster trials and quasi-experimental evaluations are beginning to measure biological or epidemiological endpoints (e.g., reduced disease incidence, exposure biomarkers), and early results are promising in some contexts where CE is combined with structural supports (Quattrochi et al., 2025).

Reviews indicate CE can increase reach among disadvantaged groups when engagement strategies are designed to reduce barriers and share power; however, poorly designed participation can reproduce local power imbalances (elite capture), reducing benefits for the most marginalized. Empirical work stresses inclusive facilitation, culturally appropriate methods, and co-design as conditions associated with more equitable outcomes (Haldane et al., 2019; NAM, 2022). Across studies, the presence of certain enabling conditions correlates with larger or more durable effects: genuine co-design and decision-making power; investment in capacity building and follow-up; integration with health system actors and financing; and multi-year engagement (Stover et al., 2024; O'Mara-Eves et al., 2015). Where those conditions are absent, observed effects are smaller or short-lived.

Empirical studies of CE face recurring challenges that limit causal inference: heterogeneous definitions and interventions, frequent reliance on self-reported behavior, selection bias (communities that volunteer to engage differ

systematically), short follow-up windows, and the bundling of CE with other inputs. Recent methodological work therefore recommends (a) clearer definitions and logic models, (b) mixed-methods and realist evaluations to unpack mechanisms and context, and (c) objective health or exposure measures plus longer follow-up where feasible (Stover et al., 2024; NAM, 2022; O'Mara-Eves et al., 2015). The empirical record (2015–2025) supports three core conclusions. First, community engagement reliably improves intermediate health outcomes, knowledge, preventive behavior, and service uptake, particularly when engagement is meaningful, sustained, and inclusive (O'Mara-Eves et al., 2015; Haldane et al., 2019). Second, mechanisms such as social capital, empowerment, and accountability are empirically observable and mediate many CE impacts, but they interact with broader system factors (Bagale et al., 2022). Third, evidence for distal population health benefits is promising but limited, often because studies lack the sample size, follow-up duration, or counterfactuals necessary to isolate CE's unique contribution (Stover et al., 2024; Quattrochi et al., 2025). For robust evaluation, researchers should use theory-driven logic models, combine quantitative health/exposure measures with qualitative process tracing, prioritize equity metrics, and plan for multi-year partnerships that link community voice to institutional action (WHO, 2020).

- *Evaluating the Impact of Community Engagement on Sanitation Initiatives*

Sanitation initiatives covering fecal sludge and sewage management, household latrines, solid-waste systems, drainage, and hygiene promotion remain foundational to public health and environmental quality in low- and middle-income countries (LMICs) and disadvantaged communities worldwide. Over the past decade, practitioners and researchers have prioritized community engagement (CE) as a core strategy to increase uptake, sustainability, equity, and local accountability of sanitation interventions (e.g., CLTS, community-managed sanitation, participatory monitoring, and behavior-change mobilization). Empirical and programmatic reviews show CE commonly improves awareness, social norms, and short-term behavior (e.g., reductions in open defecation), yet its effects on long-term infrastructure maintenance and population-level health are conditional on implementation quality, resourcing, and institutional linkages (Novotný et al., 2018). Community engagement (CE: In sanitation literature, CE denotes a spectrum of processes through which residents contribute to problem identification, planning, decision-making, implementation, financing, and monitoring of sanitation services ranging from information sharing and consultation to co-production and delegated control. Meaningful CE explicitly attends to power sharing, inclusion (women, the poor, marginalized castes/groups), and mechanisms for community voice to influence formal providers. (Stover et al., 2024; Nelson et al., 2021).

Community-Led Total Sanitation (CLTS). CLTS exemplifies a widely deployed CE approach focused on triggering collective behavioral change to eliminate open defecation, emphasizing community shame/triggering rather than subsidies for hardware; it is a key empirical and theoretical touchstone in sanitation CE debates. (Novotný et al., 2018). Impact pathways. Theoretical frameworks in the sector typically link CE inputs → proximate mechanisms (knowledge, social norms, social capital, local capacity) → intermediate outcomes (latrine adoption, waste management practices, service responsiveness) → distal outcomes (sustainability, equity, population health). Evaluations are encouraged to specify such logic models to guide measurement and attribution (Nelson et al., 2021).

- *Theoretical Perspectives on Community Engagement on Sanitation Initiatives*

- ✓ *Behavior-Change and Social Norms Perspective*

This dominant perspective treats CE as a catalyst for normative shifts that alter sanitation behavior (e.g., latrine use, stopping open defecation). CLTS and mobilization events aim to create community-level norm cascades through public triggering, declarations, and peer enforcement. Empirical syntheses show consistent short-term reductions in open defecation following such normative interventions, while cautioning that without follow-up and enabling resources, norms can revert. (Venkataramanan et al., 2018).

- ✓ *Empowerment and Capacity-Building Perspective (CBPR-Informed)*

From this angle, CE builds local capacity, leadership, and ownership, strengthening community institutions (sanitation committees, women's groups) that oversee maintenance, financing, and local enforcement. When CE includes technical training, supplies access, and inclusive leadership, the likelihood of sustained infrastructure function and service governance increases. (Wasonga et al., 2023).

- ✓ *Social Capital and the Collective Action Perspective*

CE is theorized to create or leverage social capital (trust, norms of reciprocity, networks), which enables collective action for shared sanitation goods (e.g., communal latrines, drainage cleaning).

Empirical work links higher social cohesion with better maintenance and cooperation around sanitation tasks; conversely, low social capital predicts poorer collective upkeep. (Nelson et al., 2021).

- ✓ *Systems and Political-Economy Perspective*

A systems lens situates CE within broader supply chains, financing arrangements, and governance structures. Here, CE is necessary but not sufficient: impacts depend on material availability (hardware markets), municipal responsiveness, and

policy frameworks. Political-economy analyses highlight risks of elite capture and the need for deliberate inclusion mechanisms to ensure equity. (Novotný et al., 2018; Stover et al., 2024). Participatory monitoring (community audits, citizen reporting, and mobile feedback) produces locally actionable data that can guide repairs, prioritize hotspots, and pressure authorities. When quality assurance and formal pathways exist, such data have driven tangible municipal responses; without those linkages, data may raise awareness but fail to change service delivery. (Fraisl et al., 2023)

Theoretical work over the last decade converges on two main points. First, community engagement theoretically operates through multiple, interacting mechanisms: social norms, social capital, empowerment, and accountability that plausibly lead to improved sanitation behaviors and, where linked to systems, to better service delivery and sustainability (Nelson et al., 2021). Secondly, the realized impact of CE is highly conditional, with Empirical and programmatic reviews repeatedly showing strong short-term gains in awareness and reductions in open defecation. Durable infrastructure maintenance and measurable population health improvements require: Inclusive, non-tokenistic engagement that addresses power imbalances; technical and financial supports (materials, supply chains, sanitation markets); robust follow-up and capacity building; and formal institutional pathways to translate community data and voice into service action (Stover et al., 2024). For evaluators and policymakers, the implication is clear: CE should be embedded in integrated sanitation strategies (behavior change + market access + municipal partnerships), and evaluations must be theory-driven (explicit logic models), use mixed methods to capture process and outcomes, include equity metrics to detect elite capture, and plan for multi-year follow-up to observe sustainability and health impacts. (Nelson et al., 2021).

- *Empirical Literature Review on “Evaluating the Impact of Community Engagement on Sanitation Initiatives.”*

Community engagement (CE), including Community-Led Total Sanitation (CLTS), community-managed sanitation, participatory monitoring, and behavior-change mobilization, has been promoted over the past decade as a key strategy for improving sanitation coverage, reducing open defecation, and strengthening local accountability for sanitation services (Novotný et al., 2018).

Practitioners argue CE increases local ownership and shifts social norms, while program evaluators have asked whether those process gains translate into durable infrastructure, service maintenance, and population health benefits. The empirical literature. A large and relatively consistent finding is that CE interventions produce short-to-medium-term improvements in knowledge, sanitation attitudes, and self-reported latrine use or reductions in open defecation. Mixed-methods systematic reviews and multiple cluster/quasi-experimental studies show that triggering, community meetings, and public pledges often produce rapid normative change and immediate reductions in visible open defecation, particularly when facilitation quality is high (Novotný et al., 2018). Nonetheless, effect sizes vary across contexts and follow-up durations (Syaharuddin et al., 2024).

Longer-term evidence on the durability of sanitation infrastructure (latrine functionality, fecal-sludge management, communal asset upkeep) is mixed. Some studies that paired CE with technical assistance, finance mechanisms, or market access reported better maintenance and lower collapse rates, while settings that relied primarily on mobilization without material supports often saw declines in use and function over time (Wasonga et al., 2023). This suggests CE improves demand and norms but needs linkage to supply chains, finance, and technical follow-through to secure long-term hardware outcomes. Participatory monitoring and municipal responsiveness (citizen science/community audits) (Syaharuddin et al., 2024).

Participatory monitoring and community audits generate locally actionable data (on drainage blockages, waste hotspots, latrine coverage) that have been used to prioritize repairs and press municipal actors into action where institutional channels exist. Recent reviews highlight citizen science’s potential to fill local surveillance gaps and catalyse service responses but stress that data quality measures and formal pathways to authorities are crucial for sustained impact (Stover et al., 2024).

Demonstrating direct, population-level health benefits (reduced diarrheal disease, lower enteric infection prevalence, improved child growth) attributable solely to CE remains uncommon. Many CE evaluations measure intermediate behavioral and environmental outcomes rather than clinical endpoints because detecting health gains requires larger samples, longer follow-up, and stronger attribution strategies. A growing set of quasi-experimental and cluster trials, however, are beginning to incorporate biomarkers and disease incidence measures, yielding some promising but context-specific results when CE is combined with material and systems supports (Igaki et al., 2021).

Empirical work repeatedly shows that CE can either reduce or reproduce inequities. Projects that intentionally include women, the poor, and marginalized groups (through inclusive facilitation, targeted outreach, or quotas for representation) tend to produce more equitable sanitation outcomes. Conversely, where local elites dominate, benefits concentrate among better-off households. Realist and qualitative studies emphasize the design of participation modalities as a key determinant of distributional outcomes (Nelson et al., 2021). Systematic reviews and mixed-methods syntheses identify consistent moderators associated with stronger and more durable CE impacts. Genuine co-design and power sharing rather than token consultation; follow-up or “boosting” after initial mobilization; linkage to hardware supply and financing; capacity

building for local institutions (sanitation committees); and formal pathways to municipal or regional authorities to act on community data and demands (Stover et al., 2024).

Empirical studies face recurring limitations that shape interpretation: heterogeneous definitions of “community engagement,” reliance on self-reported behaviours, selection bias (communities opting into CE may differ systematically), short follow-up windows, and frequent bundling of CE with other inputs (making attribution to the participatory element difficult). Authors therefore recommend explicit theory-driven logic models, mixed-methods process evaluation, objective outcome measures (where feasible), and multi-year follow-up to assess sustainability and health impacts (Igaki et al., 2021)

The empirical record (past ~10 years) yields a nuanced but actionable picture. First, community engagement reliably moves the needle on knowledge, social norms, and short-term sanitation behaviors (reducing visible open defecation and increasing self-reported latrine use), particularly when mobilization is well-facilitated (Novotný et al., 2018). Sustained infrastructure function and demonstrable population-level health gains are conditional; they require CE to be embedded within integrated strategies that include finance, supply chains, technical assistance, institutional linkages, and explicit equity safeguards (Igaki et al., 2021; Wasonga et al., 2023). In addition, participatory monitoring and citizen science offer important pathways for communities to generate evidence and demand accountability, but these require quality assurance and formal channels to produce service change (Stover et al., 2024). When CE is designed and resourced as part of integrated sanitation strategies, it is a powerful, equity-oriented approach, but not a standalone replacement for technical, financial, and governance investments needed for sustainable impact (Higgins et al., 2023).

E. Identified Barriers to Achieving UHC in the Urban Slum Communities.

Urban slums (informal settlements) concentrate poverty, crowding, insecure housing, and weak infrastructure, and they host a growing share of the world’s urban population. These structural conditions produce multi-dimensional barriers to achieving Universal Health Coverage (UHC): limited geographic access to quality services, high out-of-pocket (OOP) costs, weak health system responsiveness to slum realities, exclusionary policies, and intersecting social determinants (poverty, insecure tenure, poor WASH) that increase need while reducing access (Hasan et al., 2024). Empirical syntheses and programmatic reviews from the last decade emphasize that barriers in slums are not only technical or financial but are rooted in governance, social exclusion, and neighborhood effects that require multispectral responses if UHC targets are to be met (Omaswa et al., n.d.).

F. Theoretical Definitions on Evaluating Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities

UHC means that all people receive the quality health services they need without suffering financial hardship; it is typically operationalized using service coverage (SDG 3.8.1) and financial protection (SDG 3.8.2) indicators (WHO, 2020). Slums are defined by insecure tenure, inadequate housing, overcrowding, and lack of basic services (water, sanitation, waste collection) features that shape health needs and access barriers (Anjorin et al., 2024). In the UHC literature, barriers are commonly classified into supply-side (service availability, quality, workforce, governance), demand-side (costs, knowledge, social norms), and systemic/political (policy exclusion, weak financing, intersectoral gaps). Applying this tripartite framing to slums helps organize evidence on why UHC progress stalls in these settings (Higgins et al., 2023).

G. Theoretical Perspectives on Identifying Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities

➤ *Health Systems/Access Framework (Supply and Quality)*

This perspective examines physical availability, readiness, and quality of services in and around slums. Studies show that slum residents often face longer travel times, fewer public facilities, and a heterogeneous mix of low-quality private providers and informal providers producing fragmented care and variable quality that undermines effective coverage (Friesen et al., 2025). From this vantage, UHC barriers are solved by expanding service availability, improving primary care readiness, and regulating non-formal providers (Higgins et al., 2023).

➤ *Financial Protection and Health Economics Perspective*

High OOP payments, informal fees, and lack of social health insurance enrollment disproportionately affect slum dwellers, pushing households into catastrophic spending or deterring care seeking. Economic barriers interact with precarious labor and irregular income common in slums to magnify financial vulnerability (World Bank/WHO analyses; local studies). Policy remedies examined include pro-poor insurance design, subsidies, and cash transfers targeted to informal workers (Higgins et al., 2023).

➤ *Social Determinants/Neighborhood Effects Perspective*

Neighborhood-level determinants overcrowding, poor WASH, air pollution, and insecurity, both increase health needs and restrict access (e.g., caregivers unable to travel because of safety or time constraints). The “neighborhood effect” literature situates UHC barriers within these environmental and social contexts and argues for integrated interventions (health + housing + WASH). Empirical work in slums demonstrates how cumulative disadvantage reduces the returns to standard health investments unless structural conditions are addressed. (Governance, rights, and political economy perspective. This

perspective highlights how legal exclusion (lack of recognition of settlements), weak municipal governance, and political marginalization produce systematic neglect. When slums lack legal recognition, governments may underinvest in basic services and formal health coverage mechanisms may not reach residents. Political-economy analyses highlight the role of stewardship, inter-sectoral coordination failures, and limited community voice as key barriers to UHC realization (Higgins et al., 2023).

- *Health Behavior and Information Perspective*

Demand-side factors such as low health literacy, mistrust of formal providers, cultural norms, and prior negative experiences also shape utilization. Studies show that misinformation, stigma, and poor provider–patient interactions lower uptake of preventive services even when services. Theoretical and empirical literatures (2015–2025) converge on a clear message: achieving UHC in urban slum communities requires addressing layered and interacting barriers, supply constraints, and poor quality, financial exclusion, adverse neighborhood determinants, governance deficits, and sociocultural barriers (health literacy and trust). Single-axis solutions (e.g., health insurance alone or one-off clinic construction) are unlikely to produce equitable UHC without integrated, multisectoral strategies that (a) make slum populations visible in planning and financing frameworks, (b) strengthen primary care capacity and regulation of mixed provider markets, (c) expand financial protection schemes tailored to informal workers, (d) invest in WASH, housing and safety to reduce baseline disease burdens, and (e) embed meaningful community engagement so services are trusted and used (WHO, 2020; Bakibinga et al., 2022; Nelson et al., 2021).

Evaluations should therefore be theory-driven, measure structural as well as service-level outcomes, disaggregate by neighborhood and socioeconomic status, and prioritize longitudinal designs that can detect whether integrated reforms translate into sustained UHC gains for the urban poor (Syaharuddin et al., 2024).

H. Empirical Review on Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities

Urban slums, characterized by overcrowding, inadequate housing, and limited access to essential services, present unique challenges to achieving Universal Health Coverage (UHC). These communities often grapple with systemic barriers that hinder equitable access to quality healthcare. Understanding these barriers is crucial for formulating effective policies aimed at inclusive health coverage. Anjorin et al. (2024). Limited healthcare infrastructure in slums leads to inadequate service provision. Residents often face long distances to the nearest health facilities, and those available may suffer from poor service quality due to resource constraints. High out-of-pocket expenses deter slum dwellers from seeking necessary care. The inability to afford healthcare services exacerbates health inequities, making financial protection a critical component of UHC. Factors such as poor sanitation, inadequate water supply, and overcrowded living conditions contribute to the prevalence of communicable diseases in slums. These environmental determinants significantly impact health outcomes and access to care. Inadequate policy frameworks and a lack of political will often result in the marginalization of slum populations in health planning. This exclusion perpetuates disparities in healthcare access and quality. Achieving UHC in urban slums necessitates a multifaceted approach addressing both healthcare system deficiencies and broader social determinants. Empirical evidence underscores the importance of enhancing service availability, ensuring financial protection, improving living conditions, and implementing inclusive policies. By addressing these barriers, it is possible to move towards equitable health coverage for all urban residents (Syaharuddin et al., 2024).

I. Summary:

Chapter Two examined the theoretical and empirical literature on community engagement (CE), sanitation initiatives, environmental health, and barriers to achieving Universal Health Coverage (UHC) in urban slum communities. The chapter highlighted how CE, when effectively designed and implemented, can improve sanitation behaviors, promote normative change, and strengthen local capacity for maintaining health infrastructure. CE operates through behavior change and social norms, empowerment and capacity building, social capital and collective action, systems and political economy, and neighborhood effects and social determinants. These frameworks explain why participation can improve sanitation outcomes and enhance health service utilization, while also emphasizing the importance of structural and systemic support. CE interventions such as Community-Led Total Sanitation (CLTS) have consistently improved knowledge, attitudes, and sanitation behaviors in slum populations. Participatory monitoring and citizen audits improve municipal responsiveness but require formal integration and institutional support. Long-term sustainability of sanitation infrastructure and health outcomes depends on linking CE with technical assistance, financial support, governance mechanisms, and inclusive policies. Barriers to UHC in urban slums are multi-dimensional, including limited service availability, high out-of-pocket costs, poor environmental and social conditions, governance gaps, and cultural or behavioral factors that reduce healthcare utilization (Overview & Zhou, n.d.).

In conclusion, CE is a necessary but not sufficient condition for sustainable sanitation and health improvements. Addressing barriers to UHC requires integrated, multi-sectoral strategies that combine participatory approaches with systemic, financial, environmental, and governance interventions. Equity and inclusion are central: targeting marginalized populations and strengthening community voice enhances the durability and fairness of interventions. Future research and practice should adopt theory-driven, mixed-methods approaches with longitudinal follow-up to capture both process and

outcome measures, including equity and sustainability metrics. Overall, it establishes that while CE has demonstrable benefits, achieving lasting improvements in sanitation, environmental health, and UHC in slum contexts requires holistic, well-resourced, and inclusive strategies that address both immediate behavioral needs and broader structural determinants (Syaharuddin et al., 2024).

CHAPTER THREE

RESEARCH METHODOLOGY

➤ *Introduction*

Chapter Three presents the research methodology employed to investigate the impact of community participation on environmental health and sanitation, the impact of community engagement of engagement on health and sanitation initiatives, as well as to identify barriers to achieving Universal Health Coverage (UHC) in urban slum communities.

The chapter outlines the research design, study setting, target population, sampling strategies, data collection methods, and data analysis procedures. It also addresses ethical considerations, validity, reliability, and limitations relevant to the study. The purpose of this chapter is to provide a transparent and systematic explanation of how the study was conducted, ensuring that the research is rigorous, replicable, and scientifically credible. Given the complex interplay of social, environmental, and health system factors in urban slums, the methodology integrates both quantitative and qualitative approaches to capture both measurable outcomes and contextual insights.

It also justifies the selection of methods in relation to the research objectives, highlighting how the chosen approaches allow for a comprehensive understanding of the barriers to UHC and the effectiveness of community participation and engagement in sanitation initiatives. By clearly defining the methodological framework, the study aims to produce reliable evidence that can inform policy, practice, and future research in the field of community health, urban sanitation, and universal health coverage (Syaharuddin et al., 2024).

➤ *Research Design*

For this study, the researcher adopted a mixed-methods cross-sectional design to explore and analyze the role of community involvement in achieving Universal Health Coverage (UHC) in Clara Town. Both qualitative and quantitative data were collected to ensure a comprehensive understanding of the topic. It discusses the importance of community involvement, including the involvement of communities, local leaders, and Civil Society Organizations (CSOs) as prerequisites for the successful implementation of Universal Health Coverage (UHC). It highlights the need for equitable resource allocation, the use of innovation, and the promotion of active and representative involvement to achieve the goal of Universal Health Coverage. This design helps to provide a clear description of a real situation based on data collected through questionnaires and interviews.

➤ *Description of the Study Area*

The study was conducted in Clara Town, one of the densely populated urban slum communities located in Montserrado County, Liberia. Clara Town is a coastal settlement within the greater Monrovia metropolitan area and is characterized by a high population density, limited infrastructure, and inadequate access to essential services such as safe drinking water, sanitation, and healthcare facilities (Bakibinga et al., 2022; WHO, 2020).

Clara Town has experienced rapid urbanization due to rural-to-urban migration, post-conflict population movements, and economic opportunities in Monrovia. This growth has led to informal settlements with poorly planned housing, congested streets, and limited drainage systems, which exacerbate environmental health risks such as flooding, waterborne diseases, and poor sanitation outcomes (Hasan et al., 2024; Anjorin et al., 2024).

The community has a diverse socio-economic composition, with residents engaging in informal employment such as petty trading, small-scale fishing, casual labor, and street vending. Most households live in single-room structures or overcrowded compounds, which pose significant challenges for hygiene, waste management, and disease prevention. Social amenities, including schools, health clinics, and recreational facilities, are limited, and existing health services are often overstretched and under-resourced.

Clara Town faces unique public health challenges, such as high rates of waterborne diseases (cholera, diarrheal infections), malaria, and other sanitation-related illnesses. These conditions make it a suitable study site for examining community engagement in sanitation efforts and identifying barriers to achieving Universal Health Coverage (UHC). The socio-environmental context of Clara Town reflects the broader realities of urban slums in Liberia, offering valuable insights into how structural, environmental, and social factors interact to influence health behaviors and access to healthcare.



Fig 2 Map Showing the Geographical Location of Clara Town,
Source: en.wikipedia.org

➤ Study Population

The study population for this research comprised all residents and key stakeholders involved in health and sanitation initiatives in Clara Town, Montserrado County, Liberia. According to the Liberia Institute of Statistics and Geo-Information Services (LISGIS), Clara Town has an estimated population of 7,800 residents (LISGIS, 2022).

From this total population, the study focused on three main groups: Peti-traders: members (men and women), who directly benefit from health and sanitation services. Informal, such as chiefs, elders, community health assistants, environmental health technicians, and religious leaders who play roles in mobilization and decision-making, as well as representatives of Students from all levels of education residing in the community and involved in health and sanitation initiatives.

The study population was therefore 7,800 residents, from which a representative sample was drawn using appropriate sampling techniques to ensure accurate representation of the community.

➤ Research and Sampling Procedure

• Sampling Size Determination

To determine the sample size for community residents, Yamane's formula (1963) was applied:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- n = sample size
- N = total population (7,800)
- e , margin of error (0.05 for 95% confidence level)

$$n = \frac{7,800}{1 + 7,800(0.05)^2}$$

$$n = \frac{7,800}{1 + 7,800 \times 0.0025^2}$$

$$N = 7,800 \div 20.5$$

$$N = 380$$

- *Sampling Procedure*

The sampling procedure outlines how respondents were selected from the study population to participate in the study. Simple random sampling was employed to ensure that respondents from Clara Town, Montserrado County, Liberia, were fairly and equally represented.

The study targeted three main groups: Petty-traders: members (men and women), who directly benefit from health and sanitation services. Informal, such as chiefs, elders, community health assistants, environmental health technicians, and religious leaders who play roles in mobilization and decision-making, as well as representatives of Students from all levels of education residing in the community and involved in health and sanitation initiatives.

- *Data Sources*

This study utilized both primary and secondary data sources to ensure a comprehensive understanding of community participation and its relationship with universal health coverage (UHC) in Clara Town, Montserrado County, Liberia.

- *Primary Data*

Primary data were obtained directly from respondents through interviews and structured questionnaires. The respondents included: Petti-Traders, Representative students, and informal.

Primary data were critical for capturing first-hand accounts of barriers, challenges, and opportunities for achieving UHC in an urban slum context

- *Secondary Data*

Secondary data were obtained from existing records and documented sources. These included: document and report from the division of environmental and occupational health of the National Public Health Institute of Liberia, Ministry of Health, WHO, relevant to UHC and community participation data were systematically organized and summarized to support the analysis of primary data.

Together, these data provided institutional perspectives on policies, strategies, and resource allocation that shape community participation and access to health services. It also provided insights into the barriers to achieving universal health coverage in urban slum communities such as Clara town.

- *Inclusion criteria*

Participants were eligible to take part in the study if they met the following conditions:

- ✓ Residence: Must be permanent residents of the Clara Town community for at least six (6) months.
- ✓ Age: Adults aged 18 years and above.
- ✓ Participation: Individuals who have knowledge or have participated in health and sanitation initiatives within the community.
- ✓ Consent: Those who voluntarily agreed to participate and provided informed consent. Ø Language: Ability to understand and communicate in English or local languages commonly spoken in Clara Town.

- *Exclusion criteria*

- ✓ Non-residents: Individuals who are visitors, temporary residents, or not primarily living in Clara Town.
- ✓ Age restriction: Persons below 18 years of age.
- ✓ Health condition: Individuals with serious illness, mental health conditions, or disabilities that limited their ability to respond reliably to the questionnaire/interview.
- ✓ Non-consent: Persons who refused or withdrew consent to participate in the study.
- ✓ Indirect knowledge: Community members with no direct knowledge, involvement, or experience with health and sanitation initiatives.

➤ *Data Collection Procedure*

Data collection for this study was carried out in a systematic and organized manner to ensure accuracy, reliability, and validity of the information gathered from respondents in Clara Town, Montserrado County. Both primary and secondary data were collected using structured procedures as described below.

- Primary data were collected through structured questionnaires and one-on-one interviews with selected respondents such as petty traders, representatives of students, and informal. The procedure followed these steps: The researcher developed and pre-tested a structured questionnaire to ensure clarity, relevance, and appropriateness

of questions.

Permission was sought from local authorities and community leaders to conduct the study, explaining the purpose, scope, and significance of the research.

petti- traders, representatives of students residing in the community, and key informal were selected using simple random sampling to provide a fair representation of households on sanitation initiatives. Questionnaires were administered to respondents who were literate, allowing them to self-complete under guidance. For illiterate respondents, the researcher assisted by reading and recording answers. The researcher ensured that respondents fully understood each question and encouraged honest and accurate responses.

- **Secondary data:** Collected from existing sources to supplement and triangulate the primary data. The procedure included the Identification of Relevant Sources from Government reports, academic journals, published dissertations, and reports from NGOs and international organizations such as WHO, UNICEF, and the World Bank were identified.

Relevant information, statistics, and findings related to community participation, health, sanitation, and UHC were extracted systematically. The researcher ensured that all data were current (within the last 5–10 years) and credible.

Moreover, extracted data were organized in summaries to facilitate comparison and integration with primary data. Secondary data were used to provide background, context, and support for the interpretation of primary data findings.

- **Validation**

Data validation refers to the process of checking collected information for completeness, accuracy, and consistency before analysis. The researcher ensured that responses from community members, health workers, and leaders were correctly recorded and free from errors such as Community residents, Healthcare providers, local authorities, and organizational representatives were selected using simple random sampling to provide a fair representation of households.

- **Validity**

Data validity concerns the extent to which the research instrument truly measures what it is intended to measure. In this context, the researcher used questionnaires and interviews designed to capture dimensions of community participation in achieving Universal health coverage, health decision-making, and access to services. Validity was enhanced through review of the instruments, alignment with existing literature on universal health coverage, and pre-testing within a small sample of the target population to ensure clarity and relevance.

- **Reliability of the Research Instrument**

Reliability refers to the consistency and stability of the instrument over time. A reliable questionnaire will yield similar responses when repeated under comparable conditions. To ensure reliability, standardized questions, clear wording, and pilot testing were employed, minimizing biases and improving the trustworthiness of the findings (Taherdoost, 2019).

➤ **Data Analysis**

Quantitative Data collected through structured questionnaires were coded and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics such as frequencies, percentages, means, and standard deviations were employed to summarize socio-demographic variables and key research indicators. Inferential statistics example chi-square tests, correlations, or regressions, on the study objectives were used to examine relationships among variables, providing measurable evidence of patterns and associations. In addition to the quantitative strand, qualitative data were gathered from open-ended questions included in the questionnaire. Responses were transcribed, organized, and analyzed thematically. Coding was applied to identify recurring patterns and categories, which were then grouped into broader themes that captured participants' perceptions, experiences, and explanations. This process allowed for a deeper understanding of issues that could not be fully explained through numerical data alone. Quantitative findings were cross-checked with qualitative insights to strengthen the validity of the results. While quantitative analysis highlighted the scale and prevalence of issues, qualitative responses provided context and meaning, offering explanations for statistical patterns. Points where the two strands agreed reinforced the reliability of the results, while areas of difference highlighted complex realities requiring further exploration. Findings were presented together in a narrative format, linking numerical evidence from the questionnaires with participants' direct perspectives from open-ended responses, thus ensuring a holistic analysis of the research problem.

➤ **Limitations of the Study**

Every research study has inherent limitations, and this study is no exception. While it seeks to assess the impact of community engagement on sanitation initiatives and identify barriers to achieving Universal Health Coverage (UHC) in Clara Town, Montserrado County, Liberia, several constraints have affected the findings. The study is limited to Clara Town, an urban slum in Monrovia. Therefore, the findings were not fully generalizable to other urban or rural communities in Liberia or elsewhere, due to variations in social, economic, and environmental conditions. The high population density, mobility of residents, and occasional distrust of researchers limit access to some participants, potentially resulting in

selection bias. Information on sanitation practices, health-seeking behavior, and community participation is largely self-reported. This introduces recall bias or social desirability bias, where respondents provide answers they perceive as acceptable rather than fully accurate. The study's timeframe and available resources limited the possibility of conducting longitudinal observations. Consequently, it did not fully capture long-term changes in behavior or sustained impacts of community engagement initiatives. External factors, such as seasonal flooding, local public health crises, or political events, have influenced both participation in sanitation initiatives and access to health services during the study period. Despite these limitations, the study employs rigorous research methods, including the use of mixed qualitative and quantitative approaches, to enhance reliability and ensure that the findings provide meaningful insights into UHC barriers and community engagement in sanitation in Clara Town.

➤ *Ethical Consideration*

The ethical framework of this study centered on protecting the rights, dignity, and well-being of participants while ensuring that the research process aligned with both academic and community standards. To ensure the integrity of the research process and protect the rights of participants, the following ethical considerations were observed:

- **Ethical Approval:** Approval for the study was obtained from Njala University through the office of the coordinator before commencing data collection.
- **Informed Consent:** All respondents were provided with information about the purpose, objectives, and procedures of the study. Participation was voluntary, and respondents were required to provide verbal or written consent before data collection.
- **Confidentiality:** Respondents' identities and personal information were kept strictly confidential. Codes were used in place of names to ensure anonymity in data analysis and reporting.
- **Privacy:** Interviews and questionnaires were conducted in safe and private settings to allow respondents to express themselves freely.
- **Right to Withdraw:** Participants were informed of their right to withdraw from the study at any point without penalty or consequence.
- **Minimization of Harm:** Care was taken to ensure that no psychological, emotional, or social harm resulted from participation. Sensitive questions were asked respectfully and only when relevant to the study objectives.
- **Data Protection:** Collected data were securely stored in password-protected files and locked storage facilities accessible only to the researcher. Data will be retained for academic purposes only and destroyed after the completion of the research.
- **Acknowledgement of Sources:** All secondary data sources used in the study were properly cited and referenced to maintain academic honesty and integrity.

In sum, the ethical considerations integrated informed consent, voluntary participation, confidentiality, respect for persons, risk minimization, beneficence, justice, institutional oversight, and cultural sensitivity. These measures ensured that the study upheld international research ethics while addressing the unique realities of Clara Town.

CHAPTER FOUR DATA ANALYSIS AND INTERPRETATION

➤ Introduction:

This chapter presents the results of the study based on data collected through structured questionnaires. Quantitative data were analyzed using SPSS, employing descriptive statistics such as frequencies, percentages, and means, while inferential statistics were applied where necessary. Qualitative responses from open-ended questions were analyzed thematically to capture participants' views and experiences. Findings are presented in charts and narratives, integrating both numerical and textual data to provide a comprehensive understanding of the research objectives.

The analysis and results were based on the main objectives of the study as highlighted below:

- To assess the impact of community participation on Environmental health and sanitation
- To evaluate the impact of community engagement on health and sanitation initiatives in Clara Town.
- To identify barriers to achieving UHC in the urban slum community.

➤ Understanding the Profile of the Bio Data of Respondents

Figure 3: According to Figure 3 below, Showing Demographic Characteristics of Respondents, it is Found that the Majority of the Respondents were Female (51%) Compared to Their Male Counterparts (49.1%).

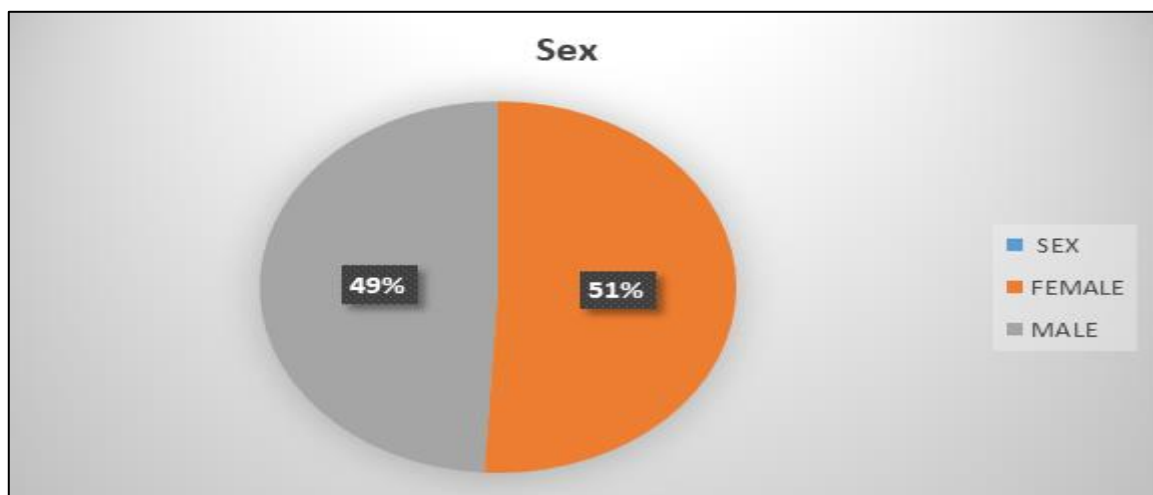


Fig 3 Demographic Characteristics of Respondents
Source: Author's Survey Data, 2025

Figure 4: Regarding the Age ranges of respondents, it is revealed that respondents are mostly between the ages of 35 and 44 years old (39.5%), followed by those aged 45-54 years (23.7%) and 25-34 years (20%). Respondents aged 18-24 years (11.3%) and over 55 years (5.5%) are fewer.

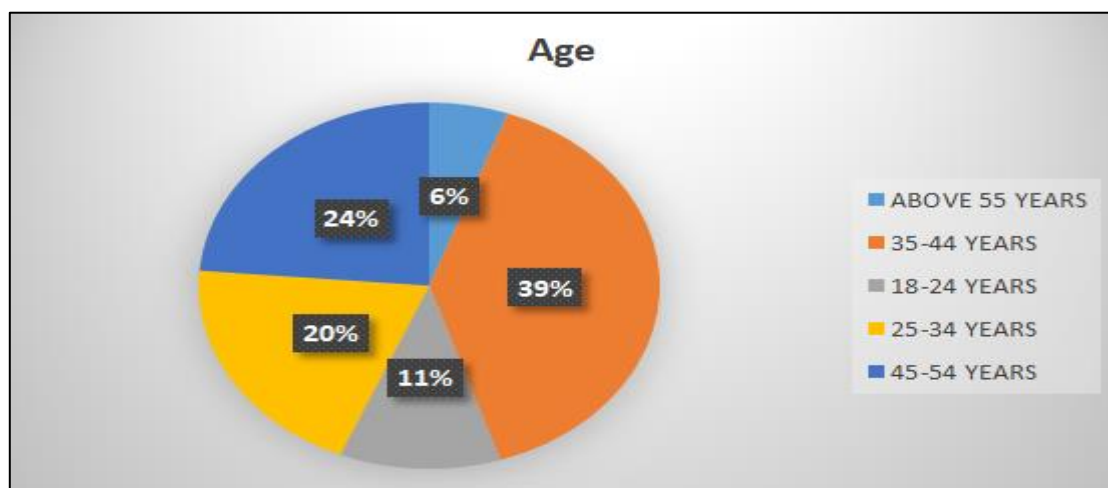


Fig 4 Age Ranges of Respondents

Source: Author's Survey Data, 2025

Figure 5: In terms of the occupational status of respondents, it is indicated from Figure 5 below that Traders (37.9%) constitutes the highest, followed by Community Health Assistants (33.2%) are the largest occupational groups. Unemployed individuals (17.1%) also represent a significant portion. Health workers (8.9%) and students (2.9%) are smaller groups.

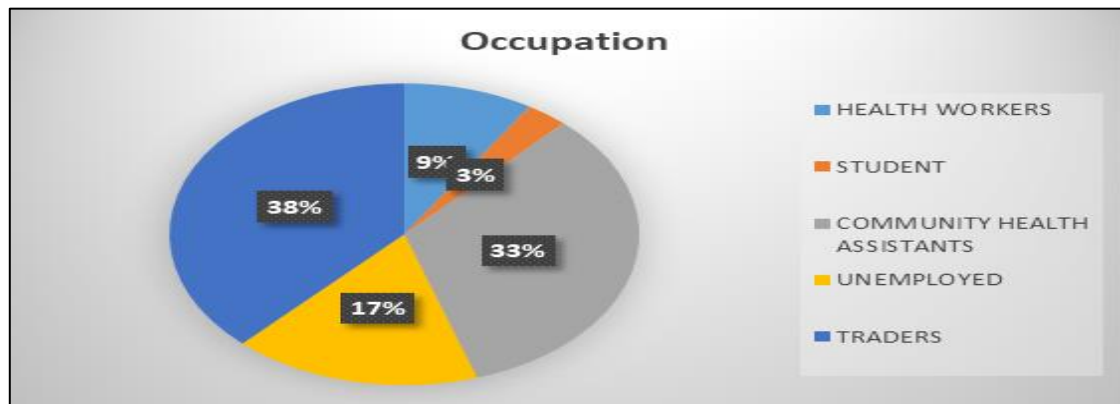


Fig 5 Occupational Status of Respondents

Source: Author's Survey Data, 2025

Figure 6: In relation to the educational levels of respondents, it shows that the majority of the respondents had attained tertiary education (23.7%), followed by formal education (22.9%). Vocational skills (21.8%) and a no figure percentage have Secondary education (20.5%). Primary education (11.1%) is a smaller but important group.

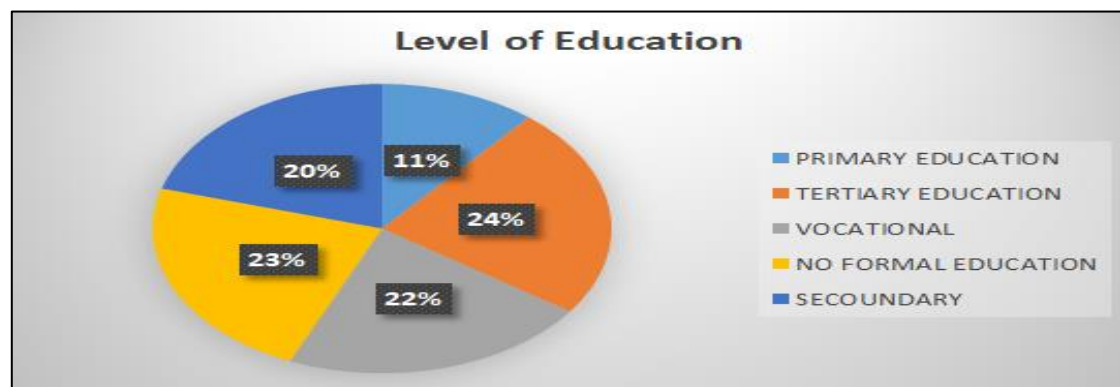


Fig 6 Educational Levels of Respondents

Source: Author's Survey Data, 2025

Figure 7: In relation to the length of stay, most respondents have lived in Clara Town for 6–10 years (38.9%), followed by 1–5 years (34.7%). Fewer have stayed more than 10 years (11.1%), with 19.2% being the least, having been there for less than 1 year.

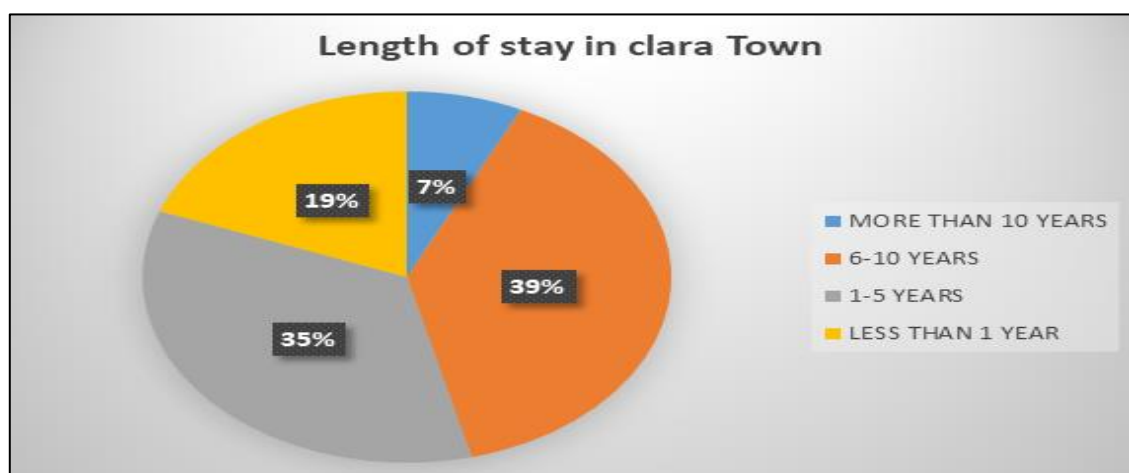


Fig 7 Length of Stay in Clara Town

Source: Author's Survey Data, 2025

- *Objective #1: To Assess the Impact of Community Participation on Environmental Health and Sanitation in Clara Town, Mountsorrado County-Liberia*

Figure 8 A large majority of respondents (81.8%) reported participating in sanitation activities either very often or sometimes, while 15.8% of the respondents indicated rare participation. On the other hand, a very small portion of 9 respondents (2.4%) never participate.

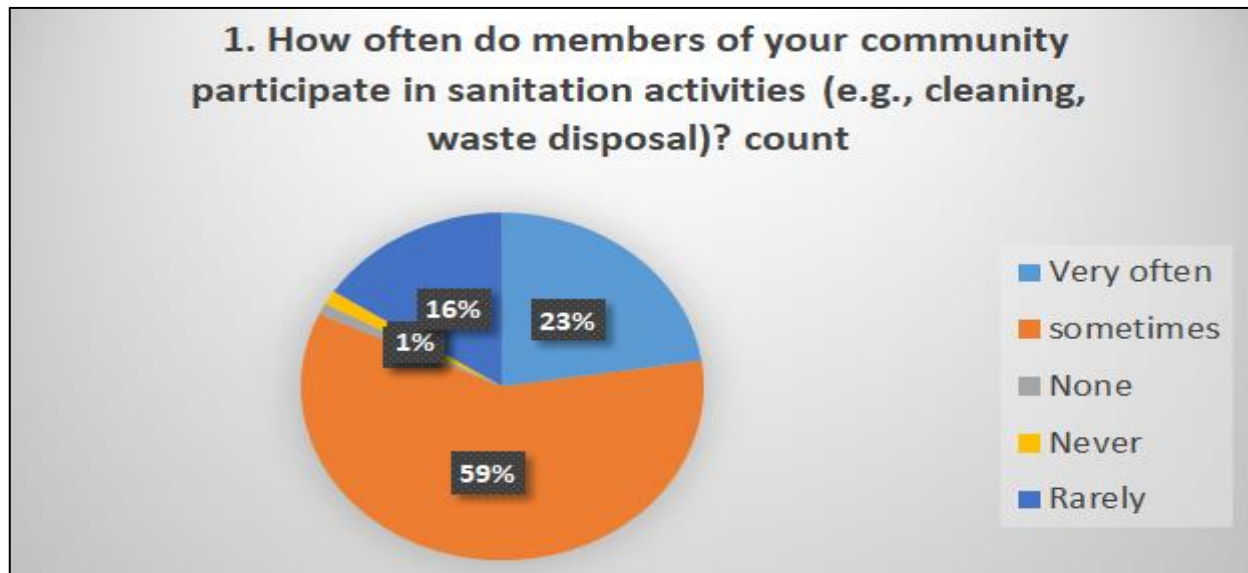


Fig 8 How Often Do Members of Your Community Participate in Sanitation Activities (e.g., Cleaning, Waste Disposal)? Count
Source: Author's survey data, 2025

Figure 9 As shown in Figure 9, seen below, the largest group of respondents, 204 (56%), feel positive about Community leadership as the strongest motivator. This is followed by Fear of disease with 90 respondents (25%) as compare to Health awareness 61 respondents (17%), and never participants 4 respondents (1%) being the least.



Fig 9 What Motivates You or Others in the Community to Participate in Environmental Sanitation Activities?

Figure 10: About the question “What motivates you or others in the community to participate in environmental sanitation activities” highlighted in figures 10, most community members 159 (54%) actively engage in gutter cleaning, Waste collection, and disposal, second with 110 respondents (31%), and the lowest respondents (7%) engaging in all of the above activities.

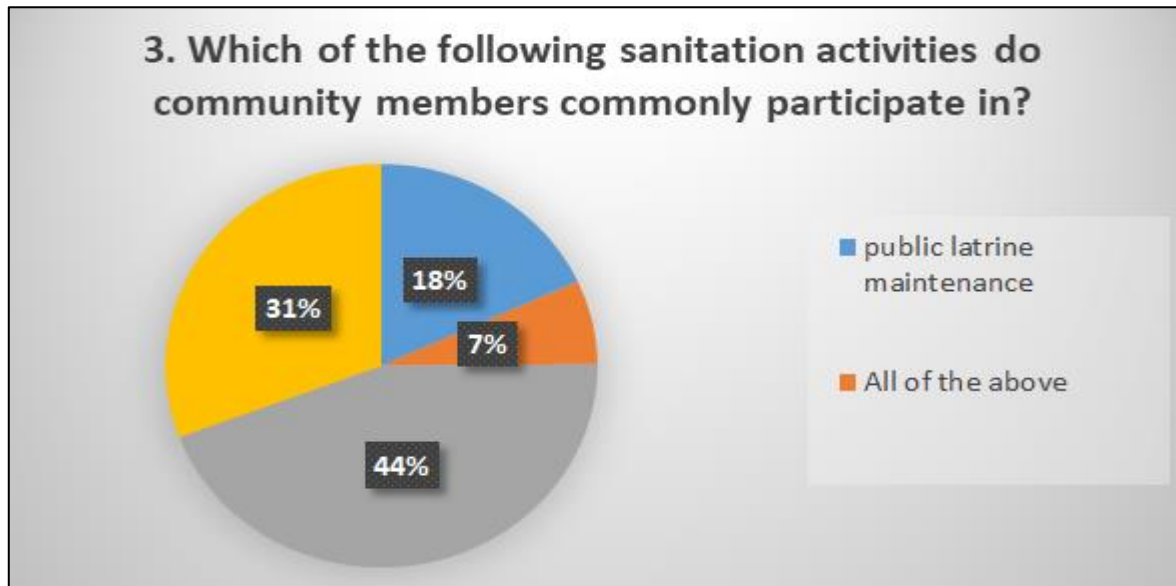


Fig 10 Which of the Following Sanitation Activities Do Community Members Commonly Participate in?
Source: Author's Survey Data, 2025

Figure 11: The findings in Figure 11 show that the majority of respondents 244 (66%) rated participation as “moderate. A smaller but significant portion 67 respondents (18%) rated participation as “high, 57 respondents (15%) rated it as low, 8 respondents (2%) as “very low,” and 4 respondents (1%) as “none

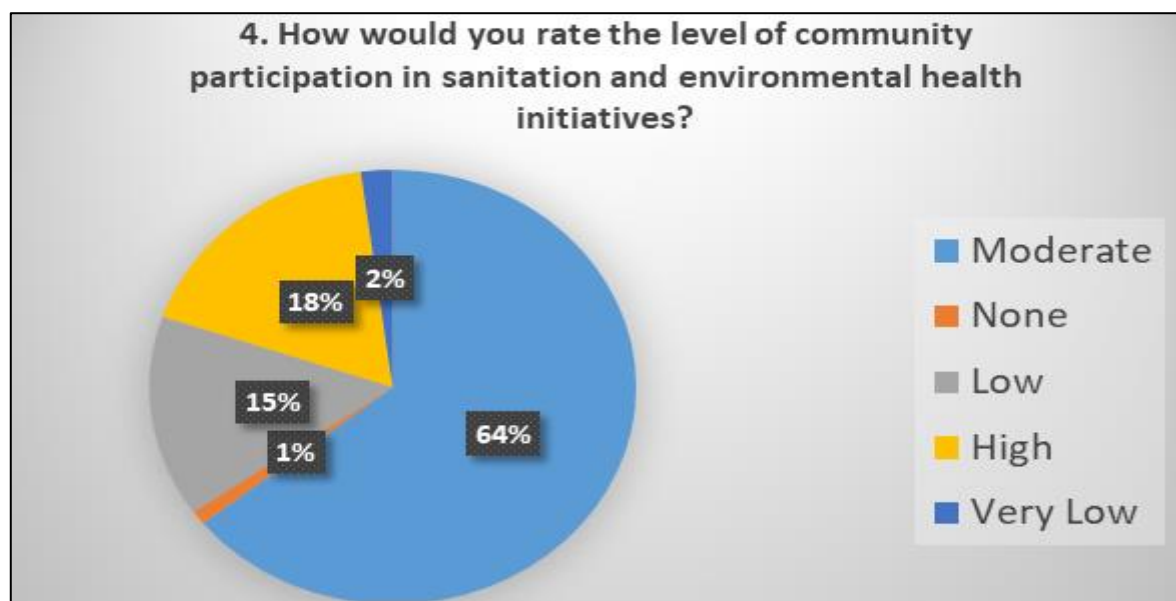


Fig 11 How would You Rate the Level of Community Participation in Sanitation and Environmental Health Initiatives?
Source: Author's survey data, 202

Figure 12: In view of the question “How would you rate the level of community participation in sanitation and environmental health initiatives,” Figure 12 shows majority of respondents, 232 (61%), believe that community participation has improved environmental sanitation to some extent, followed by 88 respondents (23%) feeling that participation has improved sanitation significantly. Moreover, 49 respondents (13%) and 7 respondents (2%) expressed uncertainty, as compared to 4 respondents who indicated none.

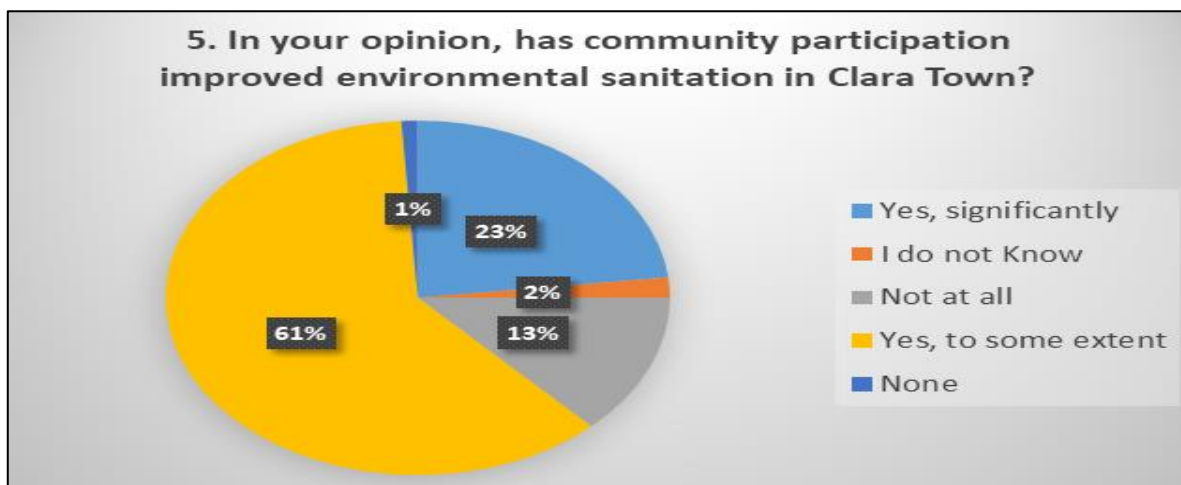


Fig 12 In Your Opinion, has Community Participation Improved Environmental Sanitation in Clara Town?
Source: Author's survey data, 2025

Figure 13: In Figure 13, most respondents cited lack of awareness/tools 172 (45%) and lack of involvement in decision-making 129 (34%), followed by poor coordination 54 respondents (14%), with the least group of 4 respondents (1%) highlighting none of the above.

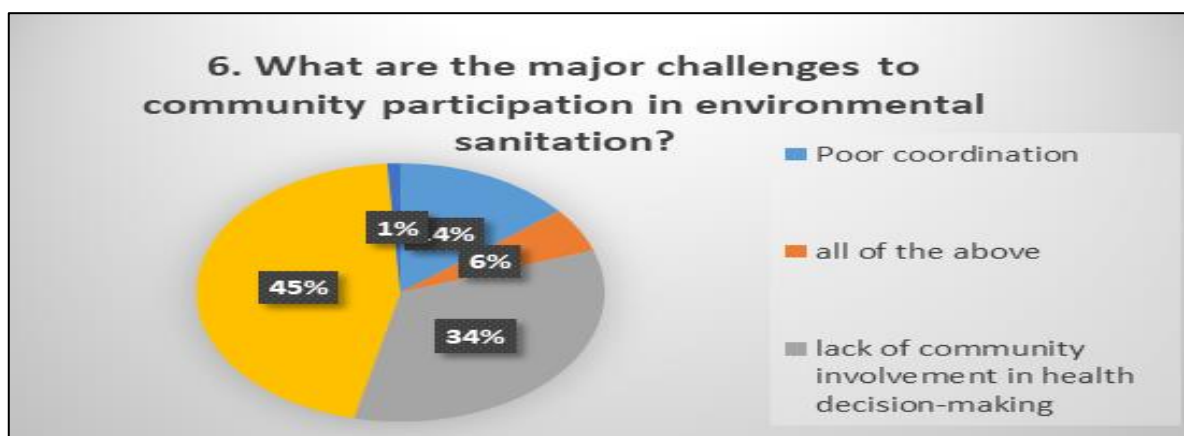


Fig 13 What are the Major Challenges to Community Participation in Environmental Sanitation?
Source: Author's survey data, 2025

Figure 14: Regarding the question “Who organizes or leads most of the sanitation efforts in your community,” as indicated in Figure 14, the government/Municipality plays the dominant role with 205 respondents (54%), Community-based organizations, 92 respondents (24%), and religion/youth groups, 65 respondents (17%). Individual efforts, 14 respondents (4%), and “None 4 respondents (1%) were the least

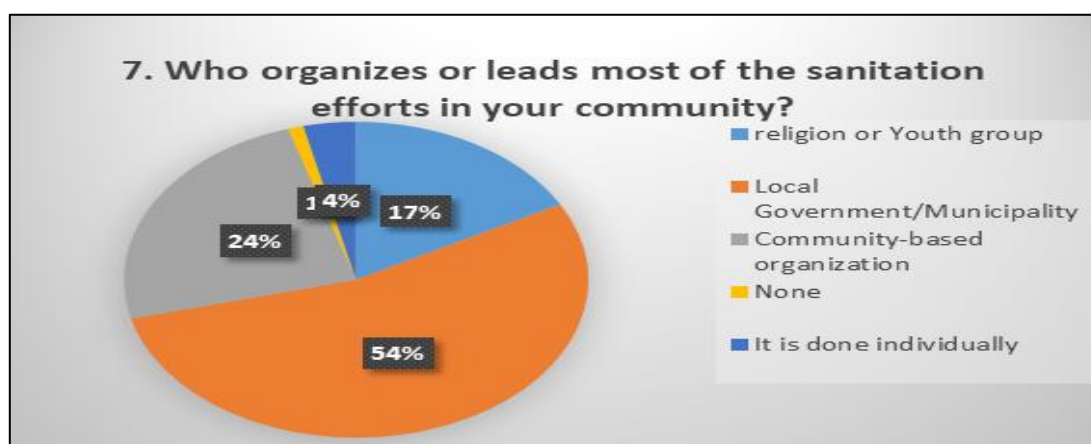


Fig 14 Who Organizes or Leads Most of the Sanitation Efforts in Your Community?

Data Source: Author's survey 2025

Figure 15: It is indicated in Figure 15 that community meeting/ awareness is High but irregular, with 316 respondents (74%) expressing it *occasionally*, followed by small, rare meetings, 55 respondents (15%), as compared to “never or none” 9 respondents (2%) as the least.

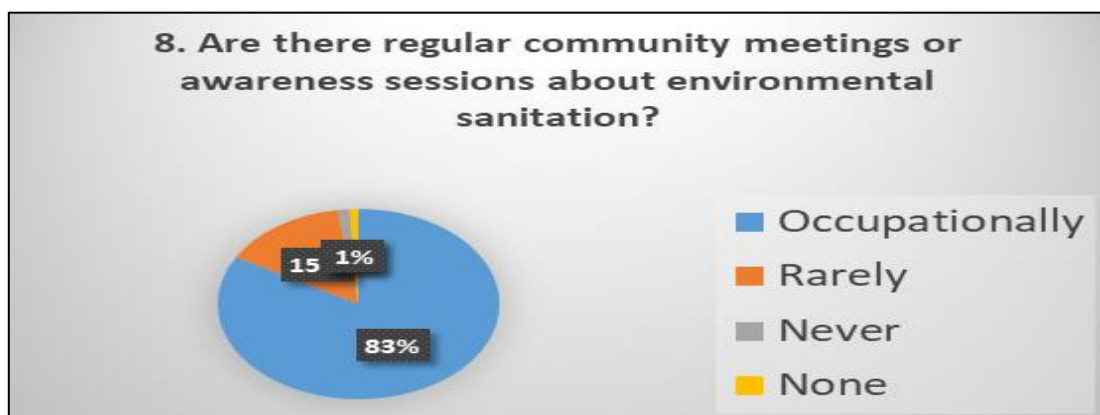


Fig 15 Are There Regular Community meetings or Awareness Sessions About Environmental Sanitation?

Source: Author's survey data, 2025

Figure 16: In response to the question “What impact do you think community participation has on reducing environmental-related diseases (e.g., malaria, diarrhea)?” Figure 16, it was indicated that 210 respondents (55%) believe community participation has only a low impact on reducing diseases, followed by 89 respondents (24%) who acknowledged a high impact. None and No impact being the least, with 2% and 3% respectively.

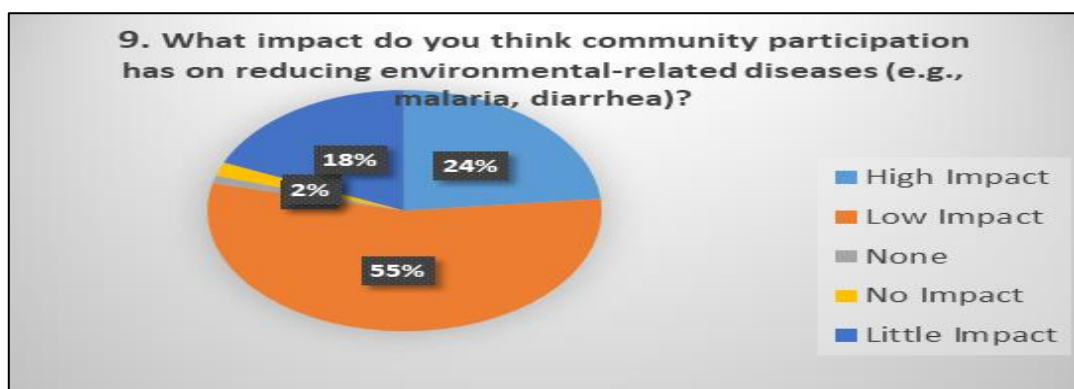


Fig 16 What Impact Do You Think Community Participation has on Reducing Environmental-Related Diseases (e.g., Malaria, Diarrhea)?

Source: Author's survey data, 2025

In Figure 17. Yes, made up of 249 respondents (66%), Maybe 68 respondents (18%), No 37 respondents (10%), and Not Sure 22 respondents (6%). No 37 respondents (10%). None was the least group with 4 respondents (1%)



Fig 17 Would You be willing to Participate More If There were Incentives (e.g., Recognition, Support)?

Source: Author's survey data, 2025

- *Objective #2: To Evaluate the Impact of Community Engagement on Health and Sanitation Initiatives in Clara Town, Mountsorrado, County, Liberia*

Figure 18 About the data on “community involvement in planning health programs in Clara Town,” 220 respondents (57.9%) agreed that they are regularly involved in planning health programs, while 33 respondents (8.7%) strongly agreed. Moreover, 66.6% perceive themselves as active participants in health planning processes; while 92 respondents (24.2%) disagreed, and 10 respondents (2.6%) strongly disagreed, leaving only 25 respondents (6.6%) who remained neutral.

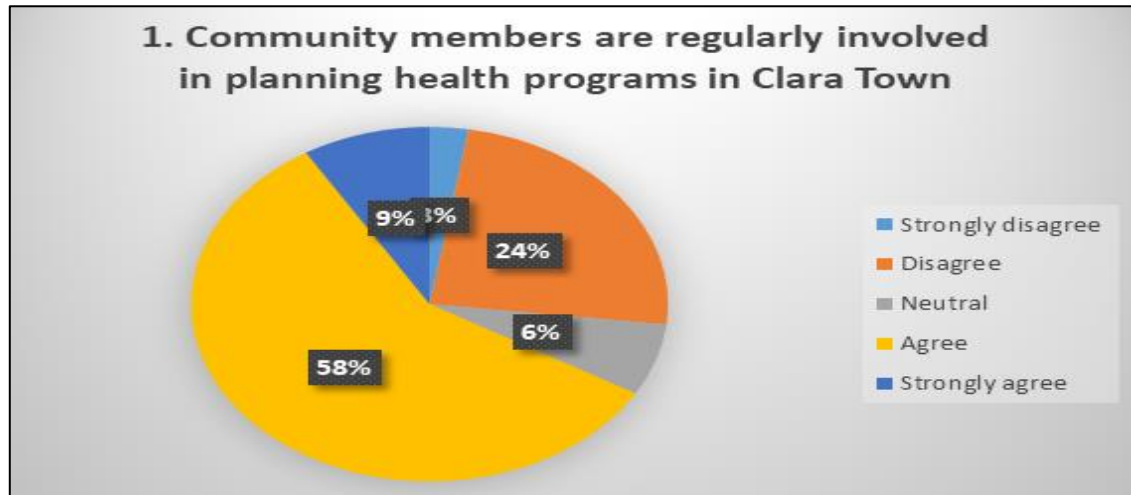


Fig 18 Community Members are Regularly Involved in Planning Health Programs in Clara Town

Source: Author's survey data, 2025

According to Figure 19, which presents responses to the statement “The success of sanitation projects is due to the active engagement of residents”, the majority of respondents, 288 (75.8%), agreed with the statement. This was followed by 63 (16.5%) who strongly agreed, reinforcing the perception that resident involvement plays a pivotal role in sanitation project outcomes. In contrast, only a small proportion of respondents expressed opposing views, with 5 (1.3%) strongly disagreeing and 12 (3.2%) disagreeing. Additionally, 12 respondents (3.2%) remained neutral, representing the minority group.

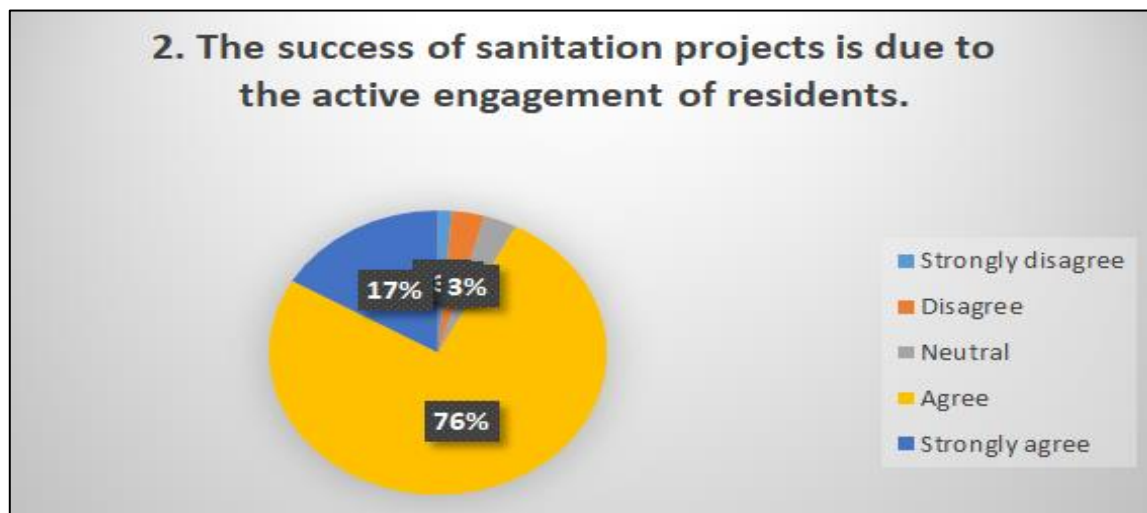


Fig 19 The Success of Sanitation Projects in Due to the Active Engagement of Residents.

Source: Author's survey data, 2025

Figure 20: The analysis of the data on the role of “community meetings and discussions in improving sanitation outcomes in Clara Town.” The strongly disagree 2 respondents (0.5%) strongly disagreed, 8 respondents (2.1%) disagreed, while the neutral was also 13 respondents (3.4%). Agree with 272 respondents (71.6%) as the largest group, followed by strongly agree 85 respondents (22.4%).

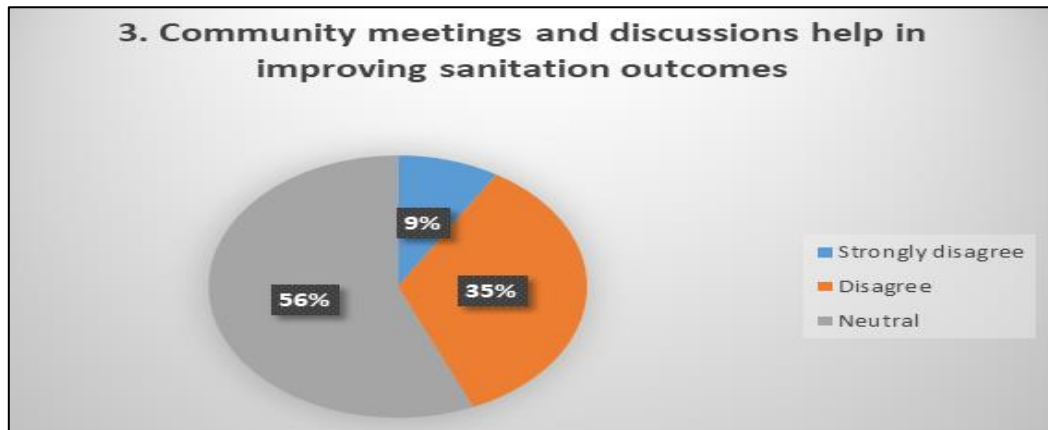


Fig 20 Community Meetings and Discussions Help in Improving Sanitation Outcomes
Source: Author's survey data, 2025

Figure 21: Based on the data presented in Figure 21 shown below, strongly disagree only 1 respondent (0.3%), and disagree 4 respondents (25%). The frequency distribution highlighted 258 representing 67.9% who strongly agree, while 100 respondents (26.3%) agree. Collectively, this means that 94.2% of respondents acknowledged a positive impact, leaving only a small fraction (3.2% for neutral and 2.9% for disagree).

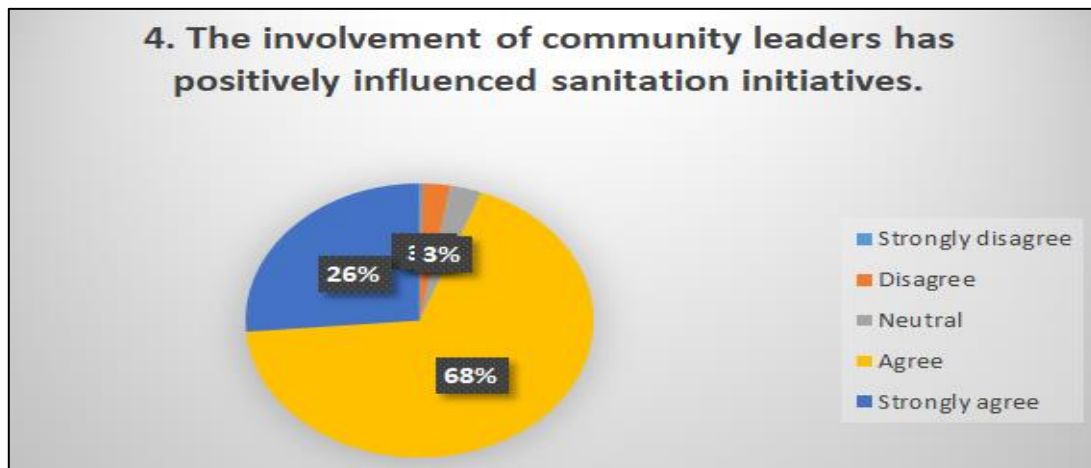


Fig 21 The Involvement of Community Leaders has positively Influenced Sanitation Initiatives.
Source: Author's survey data, 2025

Figure 22: In response to the question “Households in Clara Town are motivated to maintain cleanliness due to community engagement,” data presented in Figure 22 highlights that 216 respondents (56.8%) agreed and 97 respondents (25.5%) strongly agreed, together accounting for over 82% of all respondents. Only 1.8% strongly disagreed, and a small proportion (4.3%) disagreed. Neutral responses accounted for just 11.6%

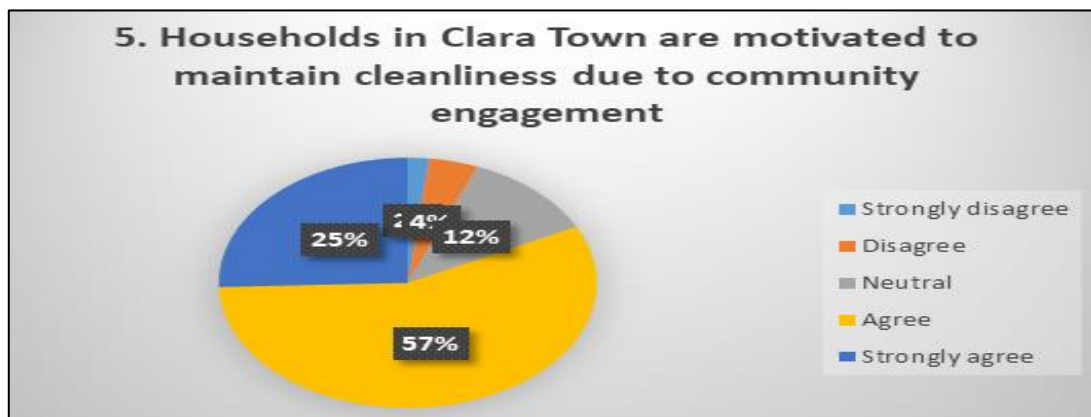


Fig 22 Households in Clara Town are Motivated to Maintain Cleanliness Due to Community Engagement

Figure 23: The data from Figure 23 provides strong evidence with a majority of respondents, 290 (76.3%), strongly agreeing, while an additional 73 respondents (19.2%) agreed, which in combination amounts to 95.5% of respondents. By contrast, disagreement was minimal. Only 1 respondent (0.3%) strongly disagreed, and 9 respondents (2.4%) disagreed, leaving a small fraction of 7 respondents (1.8%), neutral

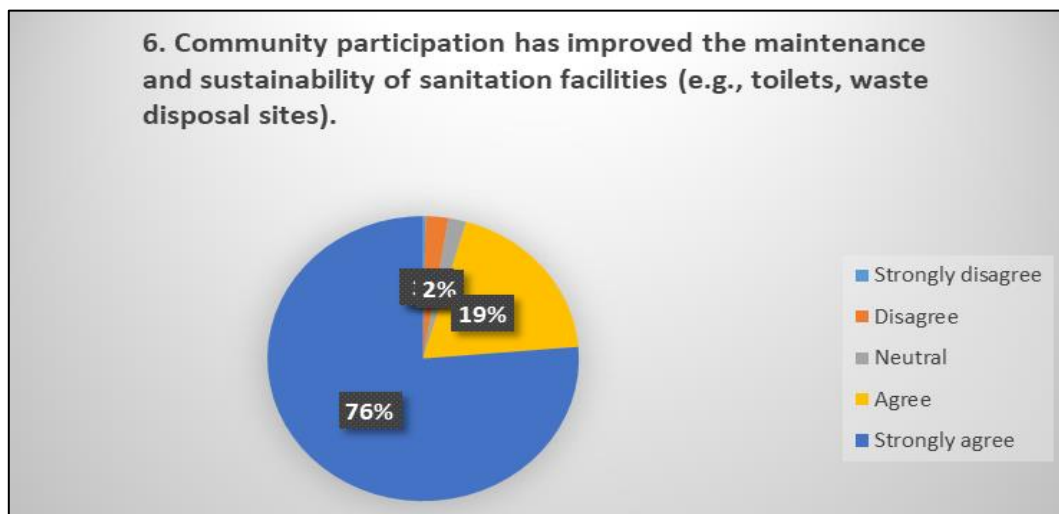


Fig 23 Community Participation has Improved the Maintenance and Sustainability of Sanitation Facilities (e.g., Toilets, Waste Disposal Sites).

Source: Author's survey data, 2025

Figure 24: Data indicated below show 2 respondents (0.5%) strongly disagree, Neutral 4 respondents (1.8%), disagree 10 respondents (2.6%), and the largest proportion of respondents, 283 individuals (74.5%) “Agree” while an additional 78 respondents (20.5%) selected “Strongly Agree.” Taken together, over 95% of the respondents either agreed or strongly agreed with the statement.

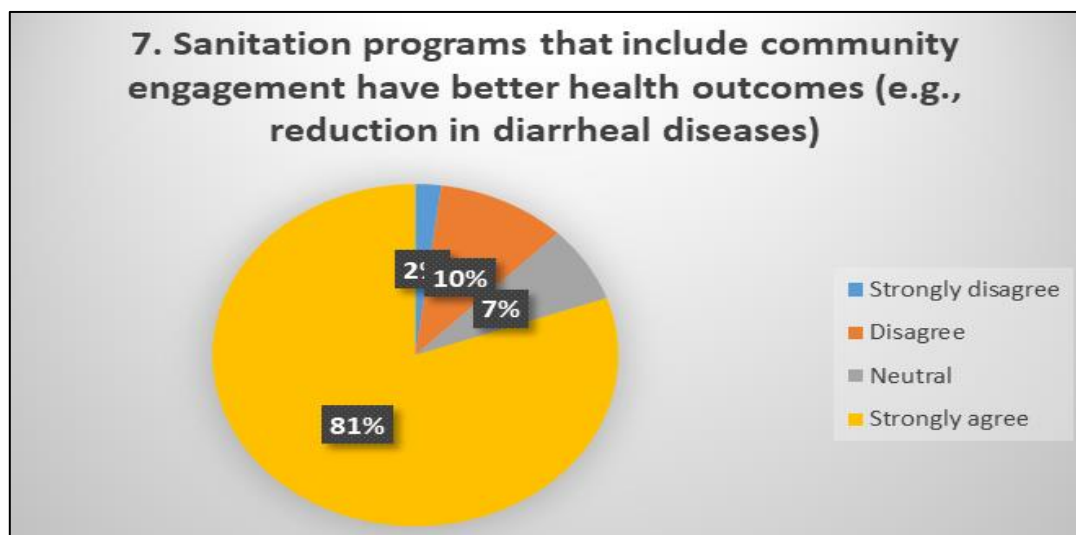


Fig 24 Sanitation Programs that Include Community Engagement have Better health Outcomes (e.g., Reduction in Diarrheal Diseases)

Source: Author's survey data, 2025

Figure 25 The data presented in Figure 25 highlight respondents' perceptions of the role of community participation in the success or failure of sanitation interventions in Clara Town. The results show that 263 individuals (65.8%) agreed, 97 respondents (28.2%) strongly agreed, 4 respondents (1.3%) strongly disagreed, and 10 respondents (2.6%) disagreed, while neutrality amounted to 6 respondents (2.1%).

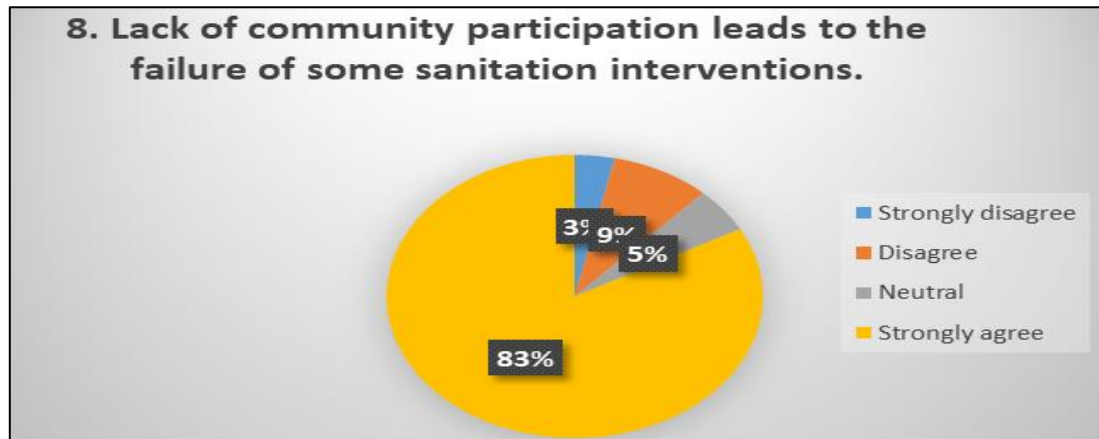


Fig 25 Lack of Community Participation Leads to the Failure of Some Sanitation Interventions.
Source: Author's survey data, 2025

Figure 26 indicates 4 respondents (1.1%) strongly disagree, 10 respondents (2.6%) disagree, 6 respondents (1.6%) neutral, 263 respondents (69.2%) agree, and 97 respondents (25.5%) strongly agree. This means that 94.7% of respondents Agree + Strongly Agree.

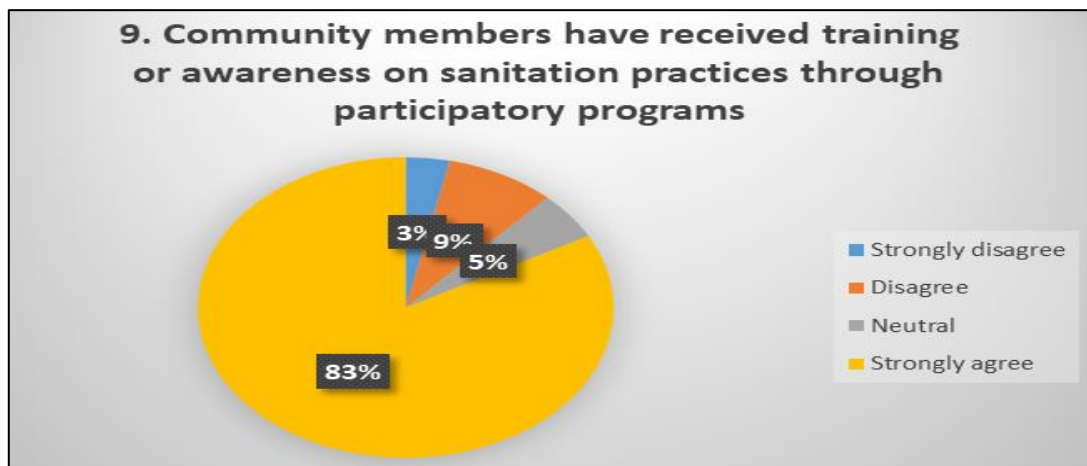


Fig 26 Community Members have Received Training or Awareness on Sanitation Practices Through Participatory Programs
Source: Author's survey data, 2025

Figure 27: From the data shown in Figure 27 below: Strongly Disagree 2 respondents (0.5%), Disagree 8 respondents (2.1%), Neutral 11 respondents (2.9%), Agree 229 respondents (60.3%), Strongly Agree 130 respondents (34.2%). A combined 94.5% of respondents (229 + 130) either agreed or strongly agreed.

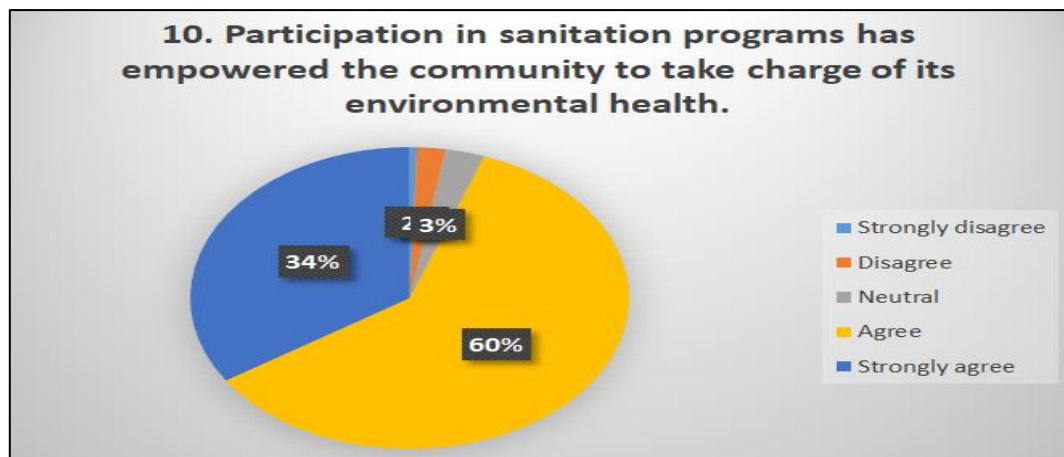


Fig 27 Participation in Sanitation Programs has Empowered the Community to Take Charge of Its Environmental Health.
Source: Author's survey data, 2025

• *Objective # 4.5. Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities.*

Figure 28 Shown below indicates that financial barrier is the most frequently cited, with 71% followed by Infrastructure 20%, Resource & Quality Issues 15%, Financial Barriers: 11%, Weak Government Policies: (7%), Discrimination/Neglect: (2%)

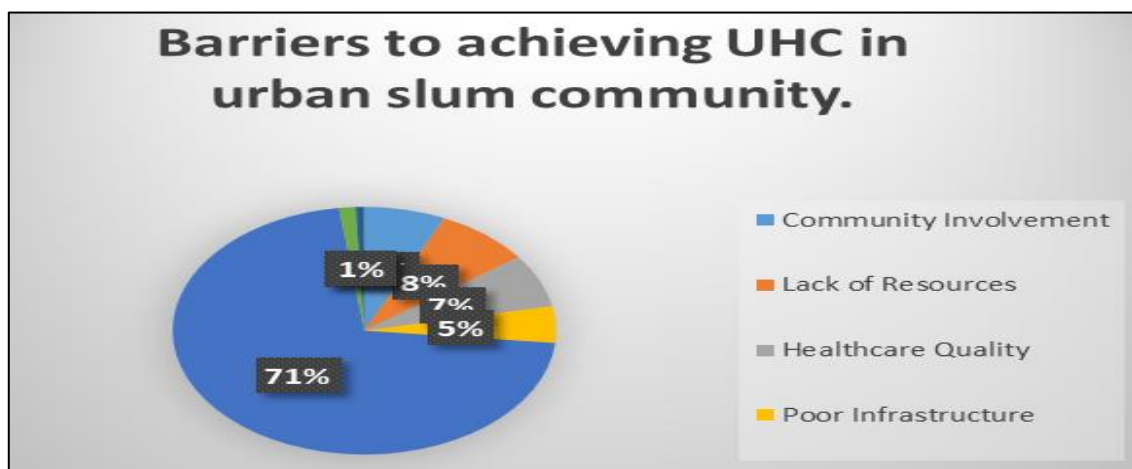


Fig 28 Barriers to Achieving UHC in Urban Slum Community.

Source: Author's survey data, 2025

✓ Qualitative Data

✓ Secondary Data

• *Objective #1: To Assess the Impact of Community Participation on Environmental Health and Sanitation in Clara Town. Mountsorrado County-Liberia*

Research Question: What are the gaps in achieving UHC and community participation To answer the question, the researcher reviews existing records and documents from the perspective of the Environmental and Occupational Health from the National Public Institute of Liberia, the Ministry of Health, and the WHO.

✓ *Review of Existing Records and Documents on the Gaps in Achieving UHC and Community Participation, Environmental and Occupational Health Perspective in Liberia*

The National Public Health Institute of Liberia (NPHIL), through its Division of Environmental and Occupational Health (EOH), plays a crucial role in advancing universal health coverage (UHC) by ensuring that environmental and workplace-related health determinants are addressed. However, several critical gaps hinder progress toward equitable health coverage and meaningful community participation.

First, institutional fragmentation and overlapping mandates weaken coordinated delivery of environmental health services. The Division of EOH operates alongside multiple agencies such as the Ministry of Health and the Environmental Protection Agency (EPA), with unclear role boundaries that often result in delays and inefficiencies in community-level service delivery (NPHIL, 2025a; WHO, 2023). Without streamlined governance, environmental health functions remain underutilized in the broader UHC framework.

Second, weak surveillance and data systems limit the ability to identify and respond to environmental and occupational health threats in real time. Although NPHIL has prioritized data systems in its Data Request Guide and National Public Health and Medical Research Agenda 2021–2025, community-level reporting on environmental hazards such as water quality, waste management, and workplace exposures remains underdeveloped (NPHIL, 2021; NPHIL, 2025b). These gaps reduce the accuracy of health planning and mask inequities in service coverage across counties.

Third, service readiness in environmental health and waste management remains uneven. The National Healthcare Waste Management Guidelines (2020) provide a policy framework, yet implementation is inconsistent across facilities. Inadequate waste segregation, disposal, and occupational safety practices increase risks to both health workers and communities, undermining the preventive dimension of UHC (NPHIL & Ministry of Health, 2020).

Fourth, human resource and capacity limitations constrain the reach of environmental and occupational health services. Liberia faces shortages of specialized personnel in occupational health, environmental monitoring, and county-level inspection services. The Joint External Evaluation (JEE) highlighted that while Liberia has improved outbreak

response, preventive environmental and occupational health services remain weak due to limited staff and supervision systems (WHO, 2023).

Fifth, community participation in environmental health remains episodic rather than institutionalized. Communities are often engaged during emergencies such as Lassa fever outbreaks or in ad hoc cleanup campaigns, but there are no consistent mechanisms for local participation in decision-making, monitoring, or evaluation of environmental health services (NPHIL, 2021). This limits accountability and weakens trust between communities and health institutions.

Finally, the sustainability of environmental and occupational health services is threatened by donor dependence. Many programs, particularly those related to workplace health and sanitation monitoring, rely heavily on external partners. Without adequate domestic financing, the continuity of essential preventive services that support UHC remains uncertain (NPHIL, 2025a; EPA & NPHIL, 2024). Despite important progress in policy development and program design, Liberia's efforts to achieve UHC are constrained by fragmented governance, weak data and surveillance systems, uneven service readiness, limited human resource capacity, insufficient community participation, and unsustainable financing. Addressing these gaps will require strengthening inter-agency coordination, embedding community engagement in environmental health governance, investing in data and human resources, and securing long-term domestic financing for preventive health services.

✓ *Review of Existing Records and Documents on the Gaps in Achieving UHC and Community Participation, Ministry of National Health Perspective*

The Ministry of Health (MoH) of Liberia serves as the lead institution in advancing universal health coverage (UHC). Despite policy progress, including the Investment Plan for Building a Resilient Health System (2015–2021) and the ongoing Essential Package of Health Services (EPHS, revised 2021), critical gaps remain that affect both equitable access to services and effective community participation.

First, financial barriers and inequitable access to services remain persistent. Although the EPHS is intended to provide standardized care across all counties, gaps in resource allocation and financing limit its full implementation. Many rural and peri-urban communities continue to rely on out-of-pocket expenditures, undermining the goal of financial protection under UHC (MoH, 2021; World Bank, 2022).

Second, infrastructure and logistics challenges hinder service readiness. The Ministry of Health has acknowledged that health facilities in hard-to-reach areas face shortages of essential medicines, poor road access, and weak referral systems, which compromise timely service delivery and community trust in the health system (MoH, 2022a).

Third, human resource constraints continue to undermine equitable coverage. Liberia faces a shortage of skilled health workers, particularly nurses, midwives, and community health assistants. While the MoH has invested in the Community Health Assistant (CHA) Program to bridge gaps, supervision and retention challenges limit its impact, especially in densely populated urban slums and remote rural communities (MoH, 2022b; WHO, 2023).

Fourth, limited integration of community participation into policy frameworks restricts accountability and sustainability. Although Liberia's National Community Health Policy (2021) emphasizes engagement, participation remains largely consultative rather than empowering. Communities are more often recipients of health campaigns than active decision-makers in health planning and governance, which weakens ownership of interventions (MoH, 2021).

Fifth, health information and monitoring systems are fragmented. The Health Management Information System (HMIS) has improved data reporting; however, disaggregated data on marginalized groups, including urban slum residents and informal workers, is insufficient. This creates blind spots in understanding inequities in service coverage and participation (MoH, 2022a; UNICEF, 2022).

Finally, donor dependence and sustainability gaps remain central challenges. Much of Liberia's health financing, including essential services under the EPHS, relies heavily on external partners. This dependence raises questions about sustainability and the long-term capacity of the government to independently finance UHC commitments (MoH, 2021; World Bank, 2022). The Ministry of Health of Liberia has made notable progress in policy design and health system recovery. However, achieving UHC with strong community participation continues to be constrained by financial inequities, weak infrastructure and logistics, health workforce shortages, limited community empowerment, gaps in health information, and donor dependence. Closing these gaps requires stronger government investment, decentralized decision-making, and sustained integration of community voices into Liberia's health governance structures.

✓ *Review of Existing Records and Documents on the Gaps in Achieving UHC and Community Participation, WHO -Liberia Perspective, gaps in Achieving UHC and Community Participation: World Health Organization*

The World Health Organization (WHO) supports Liberia's pursuit of Universal Health Coverage (UHC) through

technical cooperation, capacity building, and health-system strengthening activities outlined in the *Country Cooperation Strategy (CCS)* and annual WHO country reporting. WHO's recent assessments and cooperation documents identify progress in areas such as outbreak preparedness, immunization integration, and community outreach, but also highlight persistent gaps that impede full UHC realization and meaningful community participation.

First, insufficient service coverage and persistent inequities remain central challenges. WHO's CCS and UHC monitoring indicate that while routine services (for example, immunization) have improved through targeted outreach and integration, large segments of the population, especially people in remote, post-conflict, and informal urban settlements, continue to face limited access to a full package of essential services. The UHC service coverage indicators for Liberia show progress in some tracer areas but lag in others, underscoring uneven coverage across counties and population groups (WHO, 2024a; WHO, 2024b).

Second, weak health systems inputs (infrastructure, workforce, supply chains) impede quality and continuity of care. WHO's annual reporting and the Joint External Evaluation (JEE) emphasize gaps in facility readiness (WASH, waste management, electricity), shortages of skilled health personnel, and logistical constraints for reaching hard-to-reach communities. These structural constraints reduce the effective coverage of services under UHC and raise equity concerns (WHO, 2023; WHO, 2024b).

Third, surveillance and information systems at the community level need strengthening. WHO reports note that Liberia has improved disease detection and emergency response capacities, but community-level environmental and occupational health surveillance and routine health information disaggregation remain limited. This makes it harder to identify vulnerable subpopulations and to plan targeted interventions that would close UHC gaps (WHO, 2023; WHO, 2024a).

Fourth, community engagement and participation are inconsistent and often event-driven rather than institutionalized. WHO emphasizes the positive role of community engagement in outbreak responses and vaccination campaigns, yet identifies that participation mechanisms require formalization to support ongoing health planning, accountability, and demand generation for routine services. The Regional Strategy for Community Engagement highlights the need to transition from episodic mobilization to continuous, trusted community structures that participate in planning, monitoring, and evaluation (WHO, 2025).

Fifth, health security and emergency priorities sometimes divert limited resources from routine UHC objectives. JEE findings show improvements in emergency preparedness, but WHO notes that this can concentrate efforts on acute event management at the expense of long-term investments in preventive services and environmental/occupational health programs that underpin UHC (WHO, 2023).

Finally, financing and sustainability constraints persist. WHO's CCS and country reports indicate that WHO's support, including through the UHC Partnership and other initiatives, helps planning and policy design; however, Liberia still needs to mobilize stable domestic financing to scale up EPHS implementation and institutionalize community participation structures. Without predictable funding, gains remain vulnerable to donor cycles and emergency demands (WHO, 2024a; WHO, 2024b).

WHO identifies gaps in Liberia's UHC progress related to service coverage, systems inputs, community engagement, surveillance, and sustainability. The organization stresses the need to strengthen primary health care inputs workforce, facility readiness, supply chains; institutionalize community engagement; (3) improve disaggregated surveillance; and align emergency preparedness investments with long-term UHC objectives (WHO, 2024a; WHO, 2023).

- *Objective#3 Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities in Clara Town, Montserrado-Liberia*

- ✓ *Research Question: What are the Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities in Clara Town, Montserrado-Liberia*

- ✓ *Review on Existing Records and Documents on Environmental and Occupational Health Perspective in Liberia. What are the barriers to achieving universal health coverage (UHC) in urban slum communities in Clara Town, Montserrado-Liberia*

Clara Town, one of the oldest and most densely populated urban slum communities in Monrovia, illustrates the structural and social challenges that hinder Liberia's progress toward Universal Health Coverage (UHC). Secondary data from international development agencies and local institutions highlight several key barriers.

First, poor environmental and infrastructural conditions constrain service delivery. Clara Town faces inadequate sanitation, poor drainage, and limited access to clean water, which exacerbate the spread of communicable diseases such as cholera and diarrheal infections. Overcrowded housing and weak health facility infrastructure reduce the effectiveness of preventive health interventions (NPHIL & Ministry of Health, 2020; UNICEF, 2022).

Second, financial barriers remain significant for slum residents. Although primary care services are intended to be free under the Essential Package of Health Services, households continue to face high out-of-pocket expenditures. Costs of transportation, medicines, and informal health payments limit equitable access to care, especially for women and children in low-income households (World Bank, 2022; UNICEF, 2022).

Third, limited human resources and poor service quality further undermine UHC. Health facilities serving Clara Town often operate with insufficient staff relative to population density, resulting in long waiting times, poor provider–patient interactions, and reduced trust in formal health services. This has fueled reliance on informal drug sellers and traditional healers (World Bank, 2022).

Fourth, social and cultural factors act as barriers to service utilization. Gender dynamics, health-seeking behaviors shaped by poverty, and mistrust of the health system reduce effective coverage. Studies show that urban slum dwellers frequently delay or avoid care due to stigma, negative past experiences, or perceived discrimination within health facilities (UNICEF, 2022).

Fifth, weak community participation in governance undermines ownership and accountability. Engagement of Clara Town residents in health decision-making is usually limited to emergency campaigns or disease outbreaks, rather than systematic inclusion in health planning. This episodic involvement diminishes sustainability and prevents the incorporation of community priorities into UHC strategies (NPHIL & Ministry of Health, 2020; UNICEF, 2022).

Finally, sustainability and donor dependence remain critical concerns. Much of the support for urban health and sanitation initiatives in Monrovia slum communities is donor-funded. Without consistent domestic financing and long-term planning, essential health and sanitation programs risk interruption, limiting progress toward UHC (World Bank, 2022).

Barriers to UHC in Clara Town are multidimensional, spanning environmental, financial, human resource, cultural, and governance-related challenges. Addressing these gaps requires strengthened investment in urban health infrastructure, equitable financing mechanisms, and institutionalized community engagement for sustainable health system improvements.

✓ *Review of Existing Records and Documents on Barriers to Achieving UHC in Urban Slum Communities: Ministry of Health (MoH) of Liberia Perspective*

The Ministry of Health (MoH) of Liberia is mandated to lead the implementation of Universal Health Coverage (UHC) across the country. However, secondary evidence from MoH reports and related studies underscores persistent barriers to achieving UHC in urban slum communities such as Clara Town in Montserrado County.

First, financial barriers and inequitable access remain critical. Although the Essential Package of Health Services (EPHS) aims to provide standardized care at no cost to patients, MoH reports show that many households in urban slums continue to incur high out-of-pocket expenditures for medicines, diagnostics, and transportation. These costs create inequities in access, particularly for poor households dependent on informal employment (MoH, 2021; World Bank, 2022).

Second, health facility infrastructure and logistics challenges hinder equitable service delivery. Clara Town and similar slum communities are characterized by overburdened facilities, weak referral systems, and poor WASH conditions within health centers. Secondary data highlight that some clinics lack consistent electricity and adequate space, limiting their capacity to serve the large slum population (MoH, 2022; UNICEF, 2022).

Third, human resource shortages and uneven distribution of staff remain persistent barriers. Liberia continues to face deficits of doctors, nurses, and midwives, and this is compounded by poor deployment to high-density communities such as Clara Town. The Community Health Assistant (CHA) Program, while effective in rural settings, has limited coverage in urban slums, creating a gap in service delivery and supervision (MoH, 2022).

Fourth, quality of care and trust issues weaken utilization of formal health services. Reports highlight long waiting times, overcrowding, and drug stockouts in slum-based facilities, which discourage residents from seeking timely care. As a result, informal providers and drug sellers often become the first point of contact for slum dwellers (MoH, 2022; World Bank, 2022).

Fifth, community participation in health planning remains weak. Although the MoH developed the National Community Health Policy (2021) to promote community ownership, implementation in urban slums like Clara Town has been inconsistent. Engagement tends to be ad hoc, usually during health campaigns or emergencies, rather than structured participation in routine decision-making (MoH, 2021; UNICEF, 2022).

Finally, sustainability concerns tied to donor dependence continue to threaten UHC goals. Secondary reports show

that the EPHS and many community-based interventions in Monrovia slums depend heavily on external funding. Without increased domestic financing, the Ministry faces challenges in sustaining essential services for vulnerable urban populations (World Bank, 2022). Barriers to achieving UHC from the Ministry of Health perspective in Clara Town are shaped by financial inequities, infrastructural constraints, human resource shortages, service quality challenges, weak community participation, and heavy donor dependence. Addressing these barriers requires stronger domestic investment, improved urban health workforce planning, and sustained integration of community voices into UHC strategies.

✓ *Review Existing Records and Documents on Barriers to Achieving UHC in Clara Town, Montserrado County, Liberia: WHO Perspective*

Clara Town, a densely populated urban slum in Monrovia, faces multifaceted challenges in achieving Universal Health Coverage (UHC). Secondary data from various studies and reports highlight several key barriers: Environmental and Infrastructure Challenges Clara Town's inadequate sanitation and poor drainage systems contribute to the spread of communicable diseases. A study by Anjorin et al. (2024) emphasizes that environmental factors in slums, including poor water, sanitation, and hygiene, significantly affect access to essential health services.

▪ *Financial Barriers to Access*

Despite efforts to provide free primary healthcare, out-of-pocket expenses remain a significant barrier. A retrospective cross-sectional survey across four countries, including Liberia, found that individuals in slum communities face inequitable healthcare access and catastrophic health spending, primarily due to high indirect costs like transportation and informal payment.

▪ *Human Resource Shortages*

The World Bank's Institutional Foundations to Improve Services for Health Project (2021) identifies human resource shortages as a critical challenge in Liberia's health system. These shortages are particularly pronounced in urban slums, where health facilities often operate with insufficient staff, leading to overburdened services and reduced quality of care.

▪ *Limited Community Engagement*

A study by Alwan (2024) discusses the importance of community engagement in health service delivery. In Clara Town, community participation in health planning and decision-making is often limited, affecting the relevance and effectiveness of health interventions.

▪ *Sustainability and Donor Dependence*

The World Bank's report highlights that many health initiatives in Liberia, including those targeting urban slums, are heavily reliant on donor funding. This dependence poses risks to the sustainability of health services, especially in the absence of robust domestic financing mechanisms.

▪ *Social Determinants of Health*

The WHO's Equity and Social Determinants Assessment Report (2023) underscores that social determinants such as poverty, education, and housing significantly impact health outcomes. In Clara Town, these factors exacerbate health disparities and hinder progress toward.

➤ *Discussion and Findings*

• *Quantitative Data*

✓ *Demographic Profile*

The demographic profile of respondents offers valuable insights into their backgrounds and relevance to the study context. According to the findings, females (51%) slightly outnumber males (49.1%). This near balance indicates that both genders are sufficiently represented in the study, though the higher proportion of women may reflect their greater involvement in community health and sanitation issues, as they often hold primary roles in household and caregiving responsibilities. Most respondents are aged 35–44 years (39.5%), followed by those aged 45–54 years (23.7%) and 25–34 years (20%). Fewer respondents are in the younger 18–24 years age group (11.3%) and the older group above 55 years (5.5%). This distribution highlights that most participants are within the economically active and socially responsible age groups, which enhances the reliability of their responses since they are more engaged in community health and sanitation activities. Petti-Traders represent the largest occupational group (37.9%), followed by Community Health Assistants (33.2%). This reflects the economic landscape of Clara Town, where trading is a common livelihood, and the presence of many health assistants suggests active community health structures. The unemployed (17.1%) make up a notable portion, potentially influencing perspectives on health access and affordability. Smaller groups such as health workers (8.9%) and students (2.9%) add diversity to the respondent pool and enrich the overall findings. The results show that a significant portion of respondents have attained tertiary education (23.7%), with formal education (22.9%) and vocational training (21.8%) also well represented. Secondary education accounts for 20.5%, while primary education is the least at 11.1%. This relatively high level of

education among respondents is important, as it suggests many participants possess the literacy and knowledge needed to engage effectively in discussions about community health and sanitation initiatives. Most respondents have lived in the community for 6–10 years (38.9%), followed by 1–5 years (34.7%). A smaller proportion have been residents for more than 10 years (11.1%), while only 19.2% have stayed less than a year. This pattern indicates that most participants have long-term experience and familiarity with the community's health and sanitation conditions, making their perspectives highly relevant and reliable for the study. Overall, the demographic profile of respondents reflects a diverse yet representative cross-section of Clara Town residents. The balanced gender participation, dominance of economically active age groups, prominent presence of traders and community health assistants, relatively high educational attainment, and long-term residence of most participants enhance the credibility of the findings. These characteristics suggest that respondents are both knowledgeable and experienced in community health and sanitation matters, thus strengthening the overall validity of the study's results.

Similar patterns were reported by Tulu et al. 2023 in Addis Ababa, where women comprised 54% of respondents in a sanitation study, largely because they are more responsible for water collection, waste management, and child health. Senegal, in contrast, reported a community-based survey in Dakar's peri-urban settlements (Fall et al., 2022) found male respondents (52%) slightly outnumbered females (48%), as men were often decision-makers in household sanitation expenditures. This comparison suggests that while Liberia and Ethiopia show stronger female participation in sanitation issues, Senegal reflects a more male-dominated engagement in household-level decisions.

- *Objective #1: To Assess the Impact of Community Participation on Environmental Health and Sanitation in Clara Town, Mountsorrado County-Liberia*

✓ *How Often Do Members of Your Community Participate in Sanitation Activities (e.g., Cleaning, Waste Disposal)?*

The majority of respondents (81.8%) actively participate in sanitation activities, reflecting strong community engagement and awareness of hygiene practices. A smaller proportion (15.8%) participates rarely, while very few (2.4%) never participate. These results indicate generally positive involvement in sanitation efforts, though targeted strategies may be needed to encourage consistent participation among the less active members.

The findings (Bazaanah and Litabe 2023) align with a study in South Africa, which highlighted that community involvement in water and sanitation service delivery is essential for addressing disparities and improving service outcomes. Their research emphasized the need for inclusive decision-making processes to enhance trust and legitimacy in sanitation initiatives.

✓ *What motivates you or others in the community to participate in environmental sanitation activities?*

The findings show that community leadership is the strongest motivator for participation in sanitation activities (56%), followed by fear of disease (25%) and health awareness (17%). Only a very small proportion (1%) never participates. This indicates that strong leadership, combined with health education and awareness of disease risks, plays a crucial role in encouraging community engagement in sanitation initiatives. Programs aiming to improve sanitation should therefore leverage local leaders and health promotion strategies to sustain and enhance participation.

The findings (Crocker et al. 2016) are consistent with a study conducted in Ghana, which evaluated the impact of training leaders during a Community-Led Total Sanitation (CLTS) intervention. The results demonstrated that empowering local leaders significantly improved latrine use and quality, highlighting the importance of leadership in driving sanitation initiatives. Similarly, research by Scott (2007) emphasized that community leadership plays a pivotal role in motivating individuals to adopt hygiene practices, including handwashing with soap. Likewise, a study in China (Li et al. 2023), showing consistency with the findings, examined the motivations of rural residents participating in the Rural Toilet Revolution (RTR). The study found that community leadership was a key motivator, with local leaders effectively mobilizing residents and fostering a sense of collective responsibility for sanitation. This underscores the universal applicability of community leadership as a motivator across different cultural contexts.

✓ *Which of the following sanitation activities do community members commonly participate in?*

The findings show that most respondents (54%) engage in gutter cleaning, waste collection, and disposal, while 31% participate in other specific sanitation tasks, and only 7% are involved in all sanitation activities. This indicates that community members tend to focus on routine and visible sanitation efforts, with only a small group participating comprehensively. To improve overall environmental sanitation, programs should encourage broader participation and provide strategies that motivate residents to engage in a wider range of sanitation activities.

These findings (Omotayo et al., 2020) are in agreement with a study in Nigeria assessing community participation in the provision of environmental sanitation infrastructure in Akure. The research found that while community involvement was present, it was often limited to specific tasks, with residents relying heavily on government provision for most sanitation infrastructure. This aligns with the findings from Clara Town, where active participation is evident but may be concentrated in particular areas of sanitation.

✓ *How Would You Rate the Level of Community Participation in Sanitation and Environmental Health Initiatives?*

The majority of respondents (66%) reported moderate participation in sanitation activities, while 18% were highly active, and smaller proportions rated their involvement as low, very low, or none.

This indicates that community participation is generally present but varies in intensity. Strategies to increase engagement among less active members are essential for achieving sustainable sanitation improvements.

The finding (Togolese Red Cross 2025) is associated with a study conducted in Togo that evaluated the impact of community-led sanitation projects. The research found that while community engagement was present, it was often limited to specific tasks, with residents relying heavily on external support for most sanitation infrastructure. This aligns with the findings from Clara Town, where active participation is evident but may be concentrated in particular areas of sanitation. Similarly, in Indonesia, a study by Eng (1990) assessed the effects of community participation in water projects. The research found that while community involvement led to improvements in sanitation infrastructure, the level of participation varied, with some communities showing higher engagement than others. This variability in involvement is reflected in the Clara Town data, where respondents rate their participation differently. These studies underscore the need for comprehensive strategies that encourage broader and more consistent community participation in all aspects of sanitation. While specific activities may receive more attention, fostering a holistic approach to sanitation can lead to more sustainable and effective outcomes.

✓ *In Your Opinion, has Community Participation Improved Environmental Sanitation in Clara Town?*

The findings from Clara Town indicate that a significant majority of respondents (61%) believe that community participation has led to a moderate improvement in environmental sanitation.

Additionally, 23% perceive a significant improvement, while 13% are uncertain, and 2% feel there has been no improvement. These perceptions suggest that while many recognize the positive impact of community involvement, there is variability in the extent of perceived improvements.

The findings (Mamo et al., 2024) support the study in Ethiopia, which explored the role of community participation in rural water supply schemes in the Wolaita zone. The research found that active community engagement led to enhanced sustainability and functionality of water and sanitation facilities. However, the extent of improvement varied across different communities, influenced by factors such as local leadership, resources, and community cohesion.

Similarly, in India, the Swachh Bharat Mission (SBM) has been instrumental in promoting community-led sanitation efforts. A study by Crocker et al. (2021) assessed the cost-effectiveness of community-led total sanitation (CLTS) interventions in various Indian states, including Odisha.

The findings indicated that while CLTS led to increased latrine adoption, the majority of respondents in Clara Town perceive that community participation has led to moderate (61%) or significant (23%) improvements in environmental sanitation. This aligns with findings from Ethiopia and India, where community involvement has positively impacted sanitation outcomes, though the extent of improvement varies. These insights emphasize the importance of context-specific strategies and sustained community engagement to achieve sustainable sanitation improvements. Reduced open defecation, the level of success varied depending on community participation and local context. These studies underscore the importance of inclusive and sustained community involvement in sanitation initiatives. While the majority of respondents in Clara Town perceive moderate to significant improvements due to community participation, the variability in perceptions highlights the need for tailored strategies that address local challenges and leverage community strengths.

✓ *What are the Major Challenges to Community Participation in Environmental Sanitation?*

The findings indicate that almost half of the respondents (45%) cited lack of awareness/tools as the main barrier to sanitation participation, while 34% highlighted lack of involvement in decision-making. Poor coordination (14%) was a less common concern, and only 1% indicated no barriers at all. These results suggest that both informational and structural barriers limit community involvement, leading to inconsistent participation.

In Kenya, similar patterns have been observed in informal settlements. For example, (Tumwet et al. 2021) found that residents in Nyalenda B, Kisumu City, felt excluded from meaningful decision-making in water and sanitation projects, which reduced ownership and long-term sustainability. Additionally, (Tidwell et al. 2020) reported that shared sanitation facilities in low-income Kenyan settlements suffered from poor cleanliness due to a lack of cooperation, inadequate maintenance tools, and unclear roles for users. These findings resonate with Clara Town, where a lack of tools and exclusion from decision-making were also perceived as major barriers.

✓ *Who Organizes or Leads Most of the Sanitation Efforts in Your Community?*

The results indicate that the government/municipality is perceived as the primary organizer of sanitation efforts in Clara Town, with 54% of respondents citing its role. This reflects the centrality of government-led interventions in coordinating large-scale sanitation and waste management initiatives. However, (24%) of respondents recognized community-based organizations (CBOs) as playing a role, suggesting that local groups contribute meaningfully, especially where government capacity may be limited. Additionally, religious and youth groups (17%) were noted as important contributors, highlighting the potential of grassroots mobilization in sanitation. Only 4% pointed to individual efforts, while 1% reported “none,” suggesting that sanitation is largely viewed as a collective rather than individual responsibility. This distribution reflects a reliance on formal institutions, with supplementary roles played by CBOs and faith/youth networks. The relatively low recognition of individuals may imply that sanitation is not seen as a purely household-level responsibility but rather one requiring coordinated collective action.

The findings agree (Chunga et al. 2019) in Malawi, where government institutions remain central in organizing sanitation efforts but face challenges of limited resources and over-dependence on donor funding. For instance, (found that while government and city councils were seen as primary organizers of sanitation services, community-based organizations and local networks played an increasingly important role in supplementing municipal efforts, particularly in informal settlements where service delivery gaps were prominent. Furthermore, (Chidziwisano et al. 2023) reported that progress in sanitation in Malawi was heavily influenced by multi-actor collaboration, including community organizations and NGOs. However, weak coordination between the government and local actors often resulted in inefficiencies and reduced sustainability of sanitation interventions. These findings mirror Clara Town’s context, where, although the government dominates, the involvement of community-based and faith-based groups is critical for strengthening participation and ensuring sustainable outcomes.

✓ *Are There Regular Community Meetings or Awareness Sessions About Environmental Sanitation?*

The community meetings and awareness activities are generally high but irregular, with the majority of respondents (74%) reporting that such initiatives occur only occasionally. This suggests that while awareness creation is recognized as important, it lacks consistency, which may weaken its long-term impact on sanitation practices. About 15% of respondents indicated that meetings are **rare**, while a very small group (2%) noted that they never occur. The predominance of occasional meetings reflects a reactive rather than proactive approach to sanitation and health awareness. Such irregularity may stem from limited resources, competing community priorities, or a lack of structured systems for continuous engagement. The result is that while communities are sensitized periodically, sustained behavioral change may not be fully achieved due to the absence of continuous reinforcement.

The findings (Kamara et al. 2021) support with study in Sierra Leone, where community mobilization and meetings have been critical but often irregular. For instance, reported that during sanitation and hygiene interventions in Freetown, community meetings were effective in raising awareness but often lacked consistency due to weak coordination and dependence on project-driven initiatives. This limited the ability to embed sanitation practices as a routine community norm. Additionally, Bangura et al. 2019) found that in rural Sierra Leone, community engagement was strongest during externally funded sanitation programs but declined when donor support ended, highlighting the challenge of sustainability in community awareness activities. These studies reflect the Clara Town situation, where community awareness meetings exist, but their irregular nature reduces their potential to create a lasting impact.

✓ *What Impact Do You Think Community Participation has on Reducing Environmental-Related Diseases (e.g., Malaria, Diarrhea)?*

The findings reveal that a majority of respondents (55%) perceive community participation as having only a low impact on reducing environmental-related diseases such as malaria and diarrhea. Meanwhile, 24% of respondents reported that participation had a high impact, while a small portion indicated no impact (3%) or none (2%). This suggests that while communities recognize the importance of collective sanitation efforts, many remain skeptical about their effectiveness in translating into tangible health improvements. This perception may be influenced by ongoing challenges such as inadequate waste management systems, poor drainage, stagnant water, and weak health education. Even when communities participate, structural and environmental conditions beyond their control (e.g., limited government services, climate variability, and poverty) may undermine the health impact of their efforts.

The findings (Musoke et al. 2018) reveal that a study conducted in Uganda found that while community participation in sanitation programs in Kampala’s informal settlements improved awareness, its direct impact on reducing diarrheal diseases remained limited due to inadequate waste infrastructure and irregular municipal support. This resonates with the Clara Town findings, where participation exists but is not perceived as strongly effective in disease reduction. Moreover, Tumwebaze and Mosler 2014) observed that even when households in Uganda engaged in sanitation practices, the health benefits were not fully realized because of gaps in sustained behavioral change and structural support. These studies suggest that for participation to have a greater impact on disease reduction, it must be complemented by consistent government action, improved infrastructure, and stronger health promotion.

✓ *Would You be Willing to Participate More if There were Incentives (e.g., Recognition, Support)?*

The findings reveal that most respondents (66%) answered “Yes” when asked about their perception or involvement (depending on the specific item in the survey), indicating a generally positive stance toward community participation in sanitation and environmental health initiatives. A smaller group (18%) responded “Maybe,” suggesting some level of uncertainty, while 10% said “No.” Additionally, 6% were “Not sure,” and a very small fraction (1%) indicated “None.” This distribution highlights a predominantly favorable orientation toward participation, though the presence of respondents who were uncertain or negative shows that engagement is not universal. Possible reasons for these variations could include differences in awareness, access to resources, past experiences with sanitation programs, or trust in the effectiveness of collective action. Communities that feel supported by government or local organizations are more likely to respond positively, while those lacking tools, leadership, or visible outcomes may remain hesitant.

The findings (Moyo et al., 2019) align with studies from Zimbabwe, where community attitudes toward participation in sanitation initiatives also varied. It was observed that while most residents in Harare’s high-density suburbs expressed willingness to engage in sanitation and waste management activities, a noticeable minority remained indifferent or resistant, often due to a lack of trust in municipal authorities or poor past experiences with service delivery.

Similarly, (Nhamo and Nhamo 2016) found that while communities in rural Zimbabwe recognized the importance of sanitation programs, participation rates were uneven, influenced by socioeconomic status, education, and perceptions of government accountability. This suggests that, as in Clara Town, Liberia, enthusiasm for participation is high overall but can be undermined by uncertainty, limited resources, or skepticism about the effectiveness of such efforts.

- *Objective # 2: To evaluate the impact of community engagement on health and sanitation initiatives in Clara Town, Montserrado County, Liberia*

✓ *Community Members are Regularly Involved in Planning Health Programs in Clara Town*

The findings indicate that a large majority of respondents (66.6%) perceive themselves as active participants in health planning processes, with 57.9% agreeing and 8.7% strongly agreeing that they are regularly involved in planning health programs. However, a significant minority expressed dissent: 24.2% disagreed, 2.6% strongly disagreed, and 6.6% remained neutral. This demonstrates that while community involvement in health program planning is relatively strong, there remains a considerable portion of the population who either feel excluded or uncertain about their role. Such variation may stem from differences in access to planning forums, levels of health literacy, or perceptions of inclusivity in decision-making. Effective participation requires not just opportunities for involvement but also meaningful integration of community voices into program outcomes.

These findings are consistent with studies in Ghana. A study by Boafo and Tsekpo (2021) found that while many community members acknowledged being consulted in primary healthcare planning, there were concerns about the depth and quality of participation, as engagement was often more symbolic than substantive. Similarly, Asante et al. (2018) observed that community participation in health planning under Ghana’s Community-based Health Planning and Services (CHPS) initiative was widespread, but barriers such as inadequate feedback mechanisms and weak capacity at the local level limited genuine influence on decision-making.

Thus, both in Clara Town and Ghana, participation is relatively high, but challenges remain in ensuring inclusivity, empowerment, and meaningful involvement in shaping health programs.

✓ *The Success of Sanitation Projects is Due to the Active Engagement of Residents.*

The results show overwhelming support for the role of resident participation in sanitation and health programs. A combined 92.3% of respondents (75.8% agreed, 16.5% strongly agreed) recognized the importance of their involvement. Only a small fraction disagreed (4.5%), while 3.2% remained neutral.

This indicates that the community strongly perceives participation as essential for improving health and sanitation outcomes. Such widespread agreement suggests a shared belief in collective responsibility and the recognition that resident involvement enhances the effectiveness and sustainability of local health programs. However, the small group of dissenters and neutrals highlights that not everyone may feel equally empowered or capable of engaging, possibly due to barriers such as a lack of time, resources, or trust in leadership structures.

These findings resonate with research from Nigeria, where community participation has also been identified as central to improving health and sanitation initiatives. For example, (Adebayo et al. 2019) reported that community involvement in water, sanitation, and hygiene (WASH) programs in rural Nigeria was crucial for sustainability, but levels of engagement varied depending on socioeconomic conditions and access to information. Similarly, (Adekeye et al. 2021) found that urban

communities in Lagos expressed strong agreement on the importance of resident participation in health promotion activities, yet actual participation was sometimes hindered by weak coordination and limited government support. Thus, both in Clara Town and Nigerian contexts, communities strongly agree on the value of participation, but full realization depends on reducing structural barriers and ensuring that residents not only recognize their role but also have the resources and platforms to actively engage.

✓ *Community Meetings and Discussions Help in Improving Sanitation Outcomes*

The findings show that an overwhelming majority of respondents (94%) either agreed or strongly agreed that community meetings and discussions play an important role in improving sanitation outcomes in Clara Town. Specifically, 71.6% agreed and 22.4% strongly agreed, while only a very small fraction expressed disagreement (2.6%) or neutrality (3.4%). This indicates that community meetings are widely recognized as a critical platform for mobilizing residents, sharing knowledge, and coordinating collective action for sanitation improvement. Such a high level of agreement suggests that meetings not only raise awareness but also strengthen a sense of ownership and collective responsibility. The small percentage of disagreement or neutrality may reflect individuals who feel excluded from such meetings, lack time to participate, or believe the discussions do not always lead to action.

The findings (Nleya and Thompson 2018) are consistent with evidence from South Africa, where community dialogues and participatory forums have been found to play an important role in sanitation and health promotion. For example, reported that community meetings in Cape Town's informal settlements were central to sanitation governance, as they allowed residents to voice concerns, negotiate with local authorities, and coordinate collective cleaning activities. Similarly, (Mathee et al. 2019) found that community-based forums in Johannesburg were effective in mobilizing households to engage in solid waste management and environmental health improvements, though their effectiveness was sometimes limited by irregularity and poor follow-up by authorities. Thus, both in Clara Town and South Africa, community meetings serve as vital mechanisms for improving sanitation, although challenges remain in ensuring inclusivity, regularity, and translating discussions into sustained outcomes.

✓ *The Involvement of Community Leaders has Positively Influenced Sanitation Initiatives.*

The analysis of a very strong consensus among respondents regarding the positive impact of the factor being measured (community participation in sanitation and health outcomes). A significant 67.9% strongly agreed and 26.3% agreed, bringing the cumulative positive acknowledgment to 94.2%. Only a small minority expressed neutrality (3.2%), disagreement (2.9%), or strong disagreement (0.3%). This overwhelming agreement highlights that community members perceive their active participation as making a tangible difference in improving sanitation and health outcomes in Clara Town. The findings suggest that residents strongly value collective action and recognize the effectiveness of local involvement. The very small percentage of dissenters or neutrals may represent individuals who are less engaged in community activities, feel excluded from decision-making, or doubt the sustainability of initiatives.

The findings (Mathee et al. 2019) reported in South Africa, where community involvement has been shown to have a significant impact on sanitation and environmental health improvements.

According to Nleya and Thompson (2018), residents in Cape Town's informal settlements widely recognized that active participation in sanitation initiatives strengthened service delivery outcomes and improved accountability from local authorities. Likewise, found that in Johannesburg, high levels of community agreement on the importance of participation translated into more effective waste management and environmental sanitation practices. The Clara Town findings thus resonate with the South African experience, underscoring that strong community consensus on the value of participation is a critical driver of sustainable sanitation and health improvements. Both contexts show that when the majority of residents perceive their involvement as impactful, it enhances ownership, responsibility, and long-term outcomes.

✓ *Households in Clara Town are Motivated to Maintain Cleanliness Due to Community Engagement*

The data show that a large majority of respondents in Clara Town perceive community engagement as a key motivator for maintaining household cleanliness. Specifically, 56.8% agreed and 25.5% strongly agreed, together accounting for over 82% of respondents. Only a small fraction disagreed (6.1% combined) or were neutral (11.6%). These findings suggest that active community engagement, such as meetings, awareness campaigns, and collective sanitation initiatives, significantly influences household behavior. When households observe collective action, peer accountability, and local leadership involvement, they are more likely to participate in maintaining cleanliness. The small proportion of disagreement may reflect households that are less influenced by social norms, lack the necessary resources, or feel excluded from community initiatives.

Similar trends have been documented in South Africa. For instance, (Mathee et al. 2019) reported that households in Johannesburg's informal settlements were more likely to engage in sanitation practices when community-based programs and local meetings emphasized collective responsibility. Likewise, Nleya and Thompson (2018) found that participatory sanitation initiatives in Cape Town increased household compliance with cleanliness and hygiene standards, as

residents felt motivated by both social recognition and local leadership involvement. These comparisons suggest that community engagement serves as a powerful behavioral motivator, not only in Clara Town but also in South African urban and peri-urban contexts, underscoring the importance of sustained participatory programs for achieving lasting improvements in sanitation practices.

✓ *Community Participation has Improved the Maintenance and Sustainability of Sanitation Facilities (e.g., Toilets, Waste Disposal Sites).*

The data indicate an overwhelming consensus among respondents regarding the impact of community participation on maintaining cleanliness and improving sanitation in Clara Town.

Specifically, 76.3% strongly agreed and 19.2% agreed, together representing 95.5% of respondents. Only a minimal fraction expressed disagreement (2.7%) or remained neutral (1.8%). This demonstrates that residents perceive community participation as a critical factor in promoting effective sanitation practices. The strong agreement suggests that active involvement, collective decision-making, and engagement in sanitation programs significantly influence household behavior and overall community hygiene. Such widespread acknowledgment highlights the success of participatory initiatives in fostering a sense of ownership and responsibility among residents. The very small proportion of dissenting or neutral responses may reflect households with limited involvement, differing priorities, or challenges accessing community programs.

A study by Mathee et al. (2019) found that participatory sanitation initiatives in Johannesburg's informal settlements significantly improved household engagement in cleanliness and waste management. Residents who were actively involved in community forums and collective sanitation projects reported higher compliance with hygiene standards. Likewise, Nleya and Thompson (2018) reported that in Cape Town, communities with strong participatory governance structures exhibited more consistent sanitation outcomes, as engagement fostered social accountability and motivation to maintain communal cleanliness.

These studies suggest that, as in Clara Town, active community participation is a key driver for sustainable sanitation improvements, reinforcing the importance of structured engagement, local leadership, and regular awareness activities.

✓ *Sanitation Programs that Include Community Engagement have Better Health Outcomes (e.g., Reduction in Diarrheal Diseases)*

The data from Figure 23 reveals a strong consensus among respondents regarding the positive impact of community engagement on maintaining cleanliness in Clara Town. Specifically, 74.5% agreed, and 20.5% strongly agreed, collectively accounting for 95% of the respondents. Only a small fraction expressed disagreement (2.6%) or remained neutral (1.8%). This overwhelming agreement underscores the significance of community involvement in fostering a culture of cleanliness. It suggests that when residents actively participate in sanitation initiatives, they are more likely to uphold cleanliness standards in their households and surroundings. The minimal disagreement and neutrality may indicate that a small portion of the community either does not participate in such initiatives or perceives them as ineffective.

The findings (Waterkeyn et al, 2005) present the study in Zimbabwe, where community-based approaches have proven effective in improving sanitation outcomes. For instance, a study introduced Community Health Clubs (CHCs) in two districts, which significantly changed hygiene behavior and built rural demand for sanitation. The CHCs utilized participatory methods to engage community members in discussions and activities aimed at improving hygiene practices, leading to enhanced sanitation outcomes. Additionally, a study by Nelson (2021) examined various water, sanitation, and hygiene (WASH) interventions, highlighting the importance of community participation in achieving sustainable sanitation improvements. The study found that when communities are actively involved in decision-making processes and implementation of sanitation projects, there is a higher likelihood of success and sustainability.

These studies from Zimbabwe align with the findings from Clara Town, reinforcing the notion that community engagement is a critical factor in improving sanitation practices and maintaining cleanliness.

✓ *Lack of Community Participation Leads to the Failure of Some Sanitation Interventions.*

The data from Figure 25 indicates that 94% of respondents in Clara Town believe that community participation plays a crucial role in the success of sanitation interventions. Specifically, 65.8% agreed, and 28.2% strongly agreed, while only 2.6% disagreed, 1.3% strongly disagreed, and 2.1% remained neutral.

This overwhelming consensus suggests that residents recognize the importance of their involvement in sanitation initiatives. Active participation likely fosters a sense of ownership, accountability, and collective responsibility, which are essential for the sustainability of such interventions. The minimal disagreement and neutrality further emphasize the general agreement on the positive impact of community engagement in sanitation efforts.

The findings (Ding et al. 2021) associate with the study in rural China, where community participation has been identified as a key factor in the success of sanitation interventions. Highlighted that the effective participation of rural residents in sewage treatment is crucial for the success of rural sewage treatment projects. The study emphasized that improving the effective participation of rural residents is the key to the success of rural sewage treatment projects. Additionally, a study by Xu et al. 2025 evaluated rural environmental sanitation governance policies in seven Chinese cities. The study found that while the overall content design of these policies is reasonable, there are obvious deficiencies in policy implementation. To enhance policy effectiveness, the study recommended constructing a holistic framework integrating dynamic adjustment mechanisms and multi-stakeholder collaboration. These studies align with the findings from Clara Town, reinforcing the notion that community participation is vital for the success of sanitation interventions. The recognition of this importance by residents in Clara Town mirrors the emphasis placed on community involvement in sanitation projects in rural China.

✓ *Community Members have Received Training or Awareness on Sanitation Practices Through Participatory Programs*

The data from Figure 26 indicates that a significant majority of respondents in Clara Town recognize the importance of community participation in the success of sanitation interventions.

Specifically, 69.2% agreed, and 25.5% strongly agreed, collectively accounting for 94.7% of respondents. Only a small percentage expressed disagreement (1.1% strongly disagreeing and 2.6% disagreeing), with 1.6% remaining neutral. These findings suggest that residents perceive active community involvement as a crucial factor in the effectiveness of sanitation programs. Such participation likely fosters a sense of ownership, accountability, and collective responsibility, which are essential for the sustainability of sanitation initiatives. The minimal disagreement and neutrality may reflect households with limited involvement, differing priorities, or challenges accessing community programs.

The findings (Salom and Khumalo 2022) support the study in Namibia, where community participation has been identified as a key factor in the success of sanitation interventions. For instance, a study investigated the critical success factors for community management of rural water supplies in the Ohangwena Region. The study found that governance, leadership attributes of committee members, training and capacity building, level of community involvement, coordination, and support are critical success factors for effective management of rural water supplies. Additionally, Deffner 2013 examined the participatory implementation of sanitation infrastructure in urban areas of north-central Namibia. The study highlighted that involving communities in the planning and implementation phases of sanitation projects leads to more sustainable outcomes, as residents are more likely to maintain and utilize facilities they helped design and construct. These studies align with the findings from Clara Town, reinforcing the notion that community participation is vital for the success of sanitation interventions. The recognition of this importance by residents in Clara Town mirrors the emphasis placed on community involvement in sanitation projects in Namibia.

✓ *Participation in Sanitation Programs has Empowered the Community to Take Charge of Its Environmental Health.*

The data from Figure 27 reveal that a substantial majority of respondents in Clara Town recognize the importance of community participation in the success of sanitation interventions.

Specifically, 60.3% agreed, and 34.2% strongly agreed, collectively accounting for 94.5% of respondents. Only a small percentage expressed disagreement (0.5% strongly disagreeing and 2.1% disagreeing), with 2.9% remaining neutral. These findings suggest that residents perceive active community involvement as a crucial factor in the effectiveness of sanitation programs. Such participation likely fosters a sense of ownership, accountability, and collective responsibility, which are essential for the sustainability of sanitation initiatives. The minimal disagreement and neutrality may reflect households with limited involvement, differing priorities, or challenges accessing community programs.

Similar patterns have been observed in Botswana, where community participation has been identified as a key factor in the success of sanitation interventions. For instance, a study by Bolaane (2011) investigated the constraints and challenges faced in improving sanitation in rural Botswana. The study found that community involvement was critical in overcoming barriers to sanitation improvements, as it enhanced local ownership and accountability. Additionally, the UNICEF WASH Sector Analysis for Botswana (2023) highlighted the importance of community engagement in sanitation governance. The report emphasized that strengthening community participation mechanisms could lead to more effective and sustainable sanitation outcomes. These studies align with the findings from Clara Town, reinforcing the notion that community participation is vital for the success of sanitation interventions. The recognition of this importance by residents in Clara Town mirrors the emphasis placed on community involvement in sanitation projects in Botswana.

• *Objective#3 Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities in Clara Town, Montserrado-Liberia*

✓ *Barriers to Achieving Universal Health Coverage*

The most important factor affecting the success of sanitation and health efforts in Clara Town, cited by 32% of

respondents. This is followed by infrastructure (20%), issues related to resources and quality (15%), financial barriers (11%), weak government policies (7%), and discrimination or neglect (2%). These results indicate that while structural and financial challenges are significant, residents strongly believe that active community participation is the key driver of successful sanitation projects. Community involvement likely boosts ownership, accountability, and collective responsibility, which are vital for maintaining health and sanitation programs. Infrastructure and resource shortages also remain critical, showing that community engagement alone is not enough without additional support in facilities, materials, and policy frameworks.

Similar observations have been reported in Namibia. Salom et al. 2022 found that community involvement is essential for the success of rural water and sanitation management in the Ohangwena Region. Governance, leadership, training, and active participation were identified as key factors influencing project effectiveness. Furthermore, Deffner (2013) emphasized that participatory approaches in urban sanitation projects in north-central Namibia significantly contributed to sustainability, with residents assuming responsibility for maintaining and managing facilities. These studies suggest that, similar to Clara Town, community involvement is a vital factor in the success of sanitation programs in Namibia, with infrastructure, resources, and supportive policies serving as complementary elements.

➤ *Qualitative Data*

➤ *Discussion And Findings*

- *Objective #1: To assess the impact of community participation on Environmental health and sanitation in Clara Town. Mountsorrado County-Liberia*

✓ *Research Question: What are the Gaps in Achieving UHC and Community Participation*

The findings from the National Public Health Institute of Liberia (NPHIL), particularly through its Division of Environmental and Occupational Health (EOH), highlight several key barriers to advancing Universal Health Coverage (UHC) through environmental and occupational health interventions. These barriers are multifaceted, spanning institutional, infrastructural, human resource, community engagement, and financing domains.

Institutional fragmentation and overlapping mandates emerged as a major barrier. The lack of clearly defined roles among NPHIL, the Ministry of Health (MoH), and the Environmental Protection Agency (EPA) leads to inefficiencies in service delivery. This aligns with findings from Ghana, where environmental health governance is also challenged by overlapping responsibilities among the Ministry of Health, Environmental Protection Agency, and local metropolitan assemblies. In Ghana, fragmentation has similarly been associated with delays in waste management programs, inadequate enforcement of sanitation laws, and reduced community-level coverage of preventive services (Amoah et al., 2021). These parallels suggest that without integrated governance structures, both Liberia and Ghana experience challenges in embedding environmental health within broader UHC efforts. Weak surveillance and data systems were another critical gap. NPHIL's efforts to monitor water quality, waste management, and workplace exposures are constrained by underdeveloped reporting mechanisms at the community level. Similarly, in Ghana, studies indicate that environmental health monitoring at the district and community levels is limited, which hinders timely detection of hazards and reduces evidence-based decision-making (Mensah et al., 2020). In both contexts, weak data systems compromise the ability to plan, prioritize, and allocate resources effectively, leading to inequitable service coverage.

Uneven service readiness in environmental health and waste management further limits preventive health outcomes. Liberia's National Healthcare Waste Management Guidelines exist, yet implementation is inconsistent, echoing Ghanaian experiences where compliance with hospital waste segregation and disposal protocols varies significantly across urban and rural areas.

The findings (Amoah et al., 2021) are similar to Ghana; insufficient infrastructure and resource constraints at health facilities have been linked to higher occupational exposure risks for staff and increased public health threats in surrounding communities. Human resource limitations also reduce the reach and effectiveness of environmental and occupational health services. Liberia faces shortages of specialized staff, including inspectors and environmental health officers, similar to Ghana, where the density of trained environmental health personnel is insufficient to meet population needs, especially in informal urban settlements (Mensah et al., 2020). These human resource constraints undermine preventive health interventions that are critical to achieving UHC objectives. Community participation in environmental health remains episodic in Liberia, with engagement primarily during emergencies or ad hoc campaigns. Ghanaian studies highlight a similar pattern: while some local communities are mobilized during sanitation drives or outbreaks, sustained and institutionalized participation mechanisms are often lacking, reducing accountability and trust (Amoah et al., 2021). Both contexts demonstrate that without systematic community engagement, preventive and environmental health interventions may fail to achieve intended coverage and sustainability.

Finally, donor dependence and sustainability challenges in Liberia mirror experiences in Ghana. Heavy reliance on external

funding for sanitation, occupational health, and workplace monitoring programs threatens the continuity of services. Ghana's environmental health programs have similarly struggled with sustainability due to reliance on project-based donor financing, leading to interruptions in community sanitation initiatives and preventive campaigns (Mensah et al., 2020). The Liberian experience in Clara Town highlights that achieving UHC through environmental and occupational health requires more than policy frameworks; it necessitates coordinated governance, robust data systems, adequate human resources, sustained community participation, and financial independence. The parallels with Ghana suggest that urban slum communities in West Africa face similar environmental health constraints that directly impede UHC. Lessons from Ghana, such as decentralized environmental health planning, integration of community health volunteers, and district-level monitoring, could inform Liberia's strategy to strengthen environmental health within UHC frameworks.

The findings regarding the Ministry of Health (MoH) of Liberia reveal a complex interplay of structural, financial, human resource, and governance-related barriers that constrain the country's progress toward Universal Health Coverage (UHC) and meaningful community participation.

Financial barriers and inequitable access were identified as a critical challenge. Despite the Essential Package of Health Services (EPHS) aiming to provide standardized care, many communities, particularly rural and peri-urban areas, continue to rely on out-of-pocket payments. This mirrors the situation in Nigeria, where studies have shown that out-of-pocket expenditure remains the dominant method of health financing, particularly among low-income populations. In both contexts, reliance on personal payments creates inequities in access, reduces service utilization, and undermines financial risk protection, a key pillar of UHC (Ekman, 2007; World Bank, 2022). Infrastructure and logistics challenges were also highlighted. Liberia's health facilities in hard-to-reach areas experience shortages of essential medicines, poor road access, and weak referral systems. Similarly, in Nigeria, health service delivery in rural and urban slum areas is often hampered by inadequate infrastructure, irregular supply chains, and transportation difficulties, leading to delays in care and low community trust (Onwujekwe et al., 2019). Both countries demonstrate that robust infrastructure is foundational for effective service coverage.

- *Objective#3 Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities in Clara Town, Montserrado-Liberia*

- ✓ *Research Question: What are the Barriers to Achieving Universal Health Coverage (UHC) in Urban Slum Communities in Clara Town, Montserrado-Liberia*

The review of secondary data on Clara Town, Monrovia, highlights persistent barriers to achieving Universal Health Coverage (UHC) in urban slum contexts. Across the perspectives of the National Public Health Institute of Liberia (NPHIL), the Ministry of Health (MoH), and WHO, several consistent themes emerge: environmental and infrastructural challenges, financial constraints, human resource shortages, weak community participation, poor service quality, and dependence on donor funding. These factors collectively hinder equitable access to essential health services and limit meaningful community involvement in health governance.

Environmental and infrastructure challenges were prominent. Clara Town's inadequate sanitation, poor drainage, and limited access to clean water exacerbate communicable disease transmission and reduce the effectiveness of preventive interventions. Overcrowded housing and weak facility infrastructure further constrain service delivery (NPHIL & MoH, 2020; UNICEF, 2022; Anjorin et al., 2024). Uganda faces comparable challenges in its urban slums, particularly in Kampala and other rapidly growing cities, where inadequate drainage, informal settlements, and limited health facility capacity impede the delivery of basic services. Studies from Uganda highlight that slum residents experience frequent outbreaks of cholera and diarrheal diseases, largely due to poor environmental conditions (Kyobutungi et al., 2008; Makinde et al., 2019).

Financial barriers and inequities remain a critical limitation in Liberia. Despite free primary healthcare initiatives under the EPHS, households in Clara Town incur high out-of-pocket expenses for medicines, diagnostics, and transportation (MoH, 2021; World Bank, 2022). Uganda's experience mirrors this challenge: even with a policy of free public health services, many urban poor face indirect costs such as transport and informal fees, which restrict access and create inequities, particularly for women, children, and informal workers (Ataguba & McIntyre, 2012). Human resource shortages and service quality issues also constrain UHC. Liberia struggles with insufficient numbers of health workers and uneven deployment, resulting in long wait times and reliance on informal providers (MoH, 2022; World Bank, 2022). Similarly, the findings (Makinde et al., 2019) align with Uganda; human resource deficits, especially in urban slums, reduce coverage and limit the quality of preventive and curative services. Both countries face the challenge of retaining trained personnel in high-density, low-resource settings, which undermines service reliability and community trust (Makinde et al., 2019). Weak community participation emerged as another barrier. In Clara Town, involvement in health planning is often ad hoc, limited to emergency campaigns rather than structured, ongoing participation (NPHIL & MoH, 2020; Alwan, 2024; UNICEF, 2022). Uganda has faced similar challenges: community engagement in urban slums tends to be project-based, with limited institutionalized mechanisms for decision-making and accountability. Studies suggest that where community health committees are active and empowered, service uptake improves and interventions are more

sustainable (Tumusiime et al., 2020). Sustainability and donor dependence pose additional challenges. Liberia relies heavily on external funding for urban health and sanitation initiatives, creating uncertainty for long-term service provision (World Bank, 2022). Uganda exhibits a parallel pattern: donor-funded urban health projects risk discontinuation once external support ends, emphasizing the need for domestic financing and institutional capacity to sustain interventions (Ataguba & McIntyre, 2012). Social determinants of health further exacerbate barriers. Poverty, low education levels, and informal employment in Clara Town limit access to services and contribute to health disparities (WHO, 2023). Uganda faces similar constraints in urban slums, where socioeconomic deprivation, poor housing, and limited access to clean water and sanitation amplify health inequities and reduce progress toward UHC (Kyobutungi et al., 2008). The Liberian experience in Clara Town underscores the multidimensional nature of barriers to UHC and community participation, encompassing environmental, financial, human resource, social, and governance factors. Uganda's urban slums exhibit comparable challenges, suggesting that lessons from successful interventions such as institutionalizing community health committees, strengthening local infrastructure, and improving human resource distribution could inform strategies in Liberia. Addressing these barriers requires integrated approaches that combine infrastructure investment, equitable financing, human resource strengthening, sustainable community engagement, and domestic financing strategies to reduce donor dependency.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. Introduction

This chapter presents the summary, conclusion, and recommendations of the study on the role of community participation in achieving Universal Health Coverage (UHC) in Clara Town, Montserrado County, Liberia. It consolidates the key findings from both primary and secondary data and aligns them with the study objectives. The summary provides an overview of the research background, the statement of the problem, the methodology, and the results, while the conclusion highlights the implications of community participation for environmental health, sanitation, and access to healthcare. Recommendations are also provided to strengthen policy and practice for UHC in Liberia.

B. Summary of the Study

➤ Summary of the Introduction

Globally, achieving UHC remains a central challenge, with Sub-Saharan Africa and South Asia recording the lowest service coverage indices (WHO, 2023). Liberia reflects this struggle, particularly in slum communities such as Clara Town, where overcrowding, poor sanitation, and weak infrastructure create a high disease burden. Although local initiatives exist, they remain fragmented and unstained. This study was designed to evaluate the impact of community participation on environmental health, sanitation, and healthcare outcomes in Clara Town. Despite international and national commitments, Liberia continues to face severe barriers to UHC. Clara Town, as one of Monrovia's oldest slums, is plagued by weak sanitation systems, poor drainage, limited healthcare access, and poverty (Edwin, 2014). While community participation has emerged in the form of neighborhood clean-ups and awareness campaigns, its contribution to UHC outcomes has not been systematically studied. The research has been guided by the objectives of the study: 1. To assess the impact of community participation on environmental health and sanitation, 2. To evaluate the impact of community engagement on health and sanitation initiatives, 3. To identify barriers to achieving UHC in the urban-slum community. The study adopted a mixed-methods cross-sectional design. Quantitative surveys and qualitative interviews were used to gather data from residents and community leaders. Data were analyzed using descriptive and inferential statistics in SPSS, while qualitative data were analyzed thematically. The study was conducted in Clara Town, Montserrado County, a densely populated urban slum in Monrovia with an estimated 7,800 residents. The target population included residents, traders, health assistants, and community leaders. A total of 380 respondents were sampled using Yamane's formula at a 95% confidence level. Simple random sampling was applied to ensure fair representation. Primary data were collected using structured questionnaires and interviews. Secondary data were drawn from the WHO, Ministry of Health, NPHIL, and other sources. Triangulation was applied to enhance the reliability of findings.

➤ Key Findings

• Demographic Findings

The study indicated that females comprised 51% of the participants, while their male counterparts comprised 49%. The majority of participants were aged 35–44 years (39.5%). The majority, 23.7% of the respondents, have attained tertiary education, reflecting moderate literacy levels. 38.9% had lived in Clara Town for 6–10 years, reflecting long-term settlement.

• Objective One: Impact of Community Participation on Environmental Health and Sanitation in Clara Town, Montserrado County-Liberia

✓ Primary Findings:

- The findings show that 23% of respondents reported significant improvement in sanitation from participation.
- 61% reported moderate improvement in sanitation.
- 81.8% indicated active participation in sanitation activities (clean-ups, drainage clearing).
- Qualitative Secondary Data: WHO (UNICEF 2014) emphasized that participation improves the sustainability of sanitation. AFDB 2012 found that poor sanitation in Liberia during and after the war undermined while environmental health deficits remained a key barrier to UHC in African slums.

• Objective Two: Impact of Community Engagement on Health and Sanitation Initiatives in Clara Town, Mountsorrado-Liberia

✓ Primary Findings

- These findings represent 59% indicating that projects lacked long-term funding and coordination, limiting sustainability.
- 68% agreed that engagement improved hygiene behaviors, reduced open defecation, and raised awareness of maternal and

child health services.

- 73% reported participation in awareness campaigns, sanitation drives, and health monitoring committees.
- Qualitative Secondary Data: (O'Mara-Eves et al. 2015) concluded that CE improves preventive health outcomes. (George et al. 2016) found that engagement enhances accountability in health delivery. (WHO 2020) emphasized that community engagement strengthens equity in health access.

• *Objective Three: Barriers to Achieving UHC in Clara Town*

✓ *Primary Data*

- The data show 63% cited poverty, weak policies, and low education as barriers to participation and access
- 65% identified weak infrastructure, poor drainage, and waste management as health threats.
- 71% reported financial barriers (high out-of-pocket payments, limited health workforce).
- Secondary Data Support: WHO (2023) reported that 150 million Africans are impoverished annually due to health costs. Edwin (2014) documented Monrovia's chronic waste management crisis. IRIN News (2018) linked congestion and poor toilets in Monrovia's slums to persistent disease outbreaks.

C. *Conclusion*

➤ *Demographic Characteristics*

The study revealed that community participation and engagement play a critical role in improving sanitation and health outcomes in Clara Town, Montserrado County. With females slightly outnumbering males (51% vs. 49%) and a significant proportion of respondents having attained tertiary education (23.7%), the findings suggest that the community has a moderate literacy level capable of driving collective action. Long-term settlement (38.9% living in Clara Town for 6–10 years) further indicates strong potential for sustained community-driven initiatives.

➤ *Objective One*

Regarding objective one, the study concluded that community participation has had a measurable impact on sanitation. While only 23% reported significant improvement, a majority (61%) acknowledged moderate progress. Importantly, over 80% of residents are actively engaged in clean-up activities, drainage clearing, and related efforts, underscoring that participation is central to sanitation improvements. However, these gains remain partial and require reinforcement through coordinated policies and infrastructure support.

➤ *Objective Two,*

In relation to objective Two, Community engagement was shown to enhance hygiene behavior, reduce open defecation, and increase awareness of maternal and child health services. More than two-thirds (68%) observed improved preventive health practices, while 73% confirmed involvement in health awareness and monitoring activities. These outcomes validate that engagement not only strengthens sanitation but also improves accountability and equity in health access. Yet, sustainability is limited by weak funding and coordination mechanisms, which threaten the long-term success of community initiatives.

➤ *Objective Three,*

Under objective three, barriers to Universal Health Coverage (UHC) in Clara Town were identified as primarily socioeconomic and structural. Poverty, limited education, and weak policies restrict community participation, while inadequate infrastructure, poor drainage, and fragile waste management systems exacerbate health risks. Financial barriers, particularly high out-of-pocket payments and limited health workforce availability, remain critical challenges. These findings align with broader evidence showing that economic vulnerability and inadequate service delivery mechanisms undermine health equity in Liberia's urban slums.

Overall, the study concludes that while community participation and engagement significantly improve sanitation practices and health behaviors in Clara Town, systemic barriers poverty, weak infrastructure, fragile funding, and policy gaps, continue to impede progress toward UHC. Sustainable interventions will require strengthening policy frameworks, mobilizing resources, and enhancing infrastructure to complement the strong community willingness to engage in sanitation and health initiatives.

D. *Recommendations to Key Stakeholders*

➤ *Ministry of Health (MoH)*

- Increase domestic financing to reduce high out-of-pocket payments for health care costs.
- Strengthen human resources: recruit, train, and retain more health workers

- Upgrade health infrastructure, supply chains, and referral systems.
- Institutionalize structured community participation in planning and monitoring.

➤ *National Public Health Institute of Liberia (NPHIL)*

- Strengthen surveillance and information systems to be more robust beyond the outbreak era.
- Lead interventions in sanitation and environmental health through research-driven initiatives and effective policy implementation.
- Institutionalize community engagement in disease prevention and health promotion.

➤ *Local Government Authorities (Montserrado County / Clara Town Councils)*

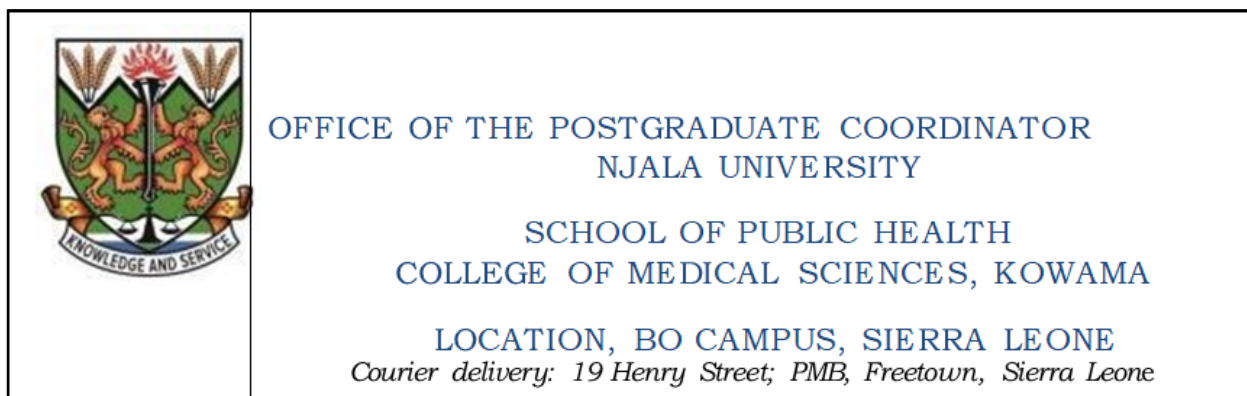
- Integrate structured community participation into health planning.
- Maintain and improve WASH infrastructure and services.
- Act as a bridge between community needs and national institutions.

➤ *Research and Academic Institutions*

- Conduct targeted research on slum health interventions.
- Provide evidence-based recommendations for improving UHC access.
- Collaborate with MoH and NPHIL to evaluate interventions and strengthen health outcomes.

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APPENDICES**APPENDIX A: PERMISSION LETTER**

From: Daniel Juma Sama (PhD)
 To: HON. Chairman,
 Clara Town Community.
 Montserrado County, Liberia.

Date: June 3 2025.

REQUEST FOR PERMISSION TO COLLECT DATA IN YOUR COMMUNITY.

Dear Sir:

I am writing to kindly request your institution's support in granting Lucia Shaw permission to collect essential data for her thesis writing. Ms. Shaw is currently pursuing her Master of Public Health (MPH) at the School of Public Health, Njala University, and is dedicated to conducting a significant thesis research study titled: **"ASSESSING THE ROLE OF COMMUNITY PARTICIPATION IN ACHIEVING UNIVERSAL HEALTH COVERAGE: A Case Study IN CLARA TOWN MONTSEERRADO COUNTY, LIBERIA.**

The collection of field data is not just a requirement; it is a key component of a thesis that illustrates the rigor and originality author. By permitting HIM to gather this information in your institution, you would be playing a critical role in supporting a promising scholar committed to enriching the field of public health.

I sincerely urge you to provide **Mr. Musa Amara Kanneh** with the necessary permission to carry out her data collection. Your cooperation would greatly contribute to her academic journey and the advancement of knowledge in this key area of study.

Best regards

Daniel J. Sama(PhD)
 Postgraduate Coordinator
 School of Public heal

APPENDIX B: RESEARCH QUESTIONNAIR

NOTE!!! YOU HAVE THE RIGHT TO ACCEPT OR REFUSE ANSWERING THIS RESEARCH QUESTION WITHOUT ANY FORM OF INTIMIDATION.

DO YOU AGREE TO THE TERM AND CONDITION TO RESPONSE TO THESE QUESTIONS?

A= NO

B= YES

➤ *Demographical Data*

• *Gender:*

Male

Female

• *Age:*

ABOVE 55 YEAR
35-44 YEARS
18-24 YEARS
25-34 YEARS
45-54 YEARS

• *Educational Level*

PRIMARY EDUCATION (ELEMENTARY)
TERTIARY EDUCATION (UNIVERSITY EDUCATION AND ABOVE)
OTHERS (VOCATIONAL)
NO FORMAL EDUCATION
SECOUNDRY EDUCATION (JUNIOR AND SENIOR

• *Occupation*

OCCUPATION
HEALTH WORKERS
STUDENT
COMMUNITY HEALTH ASSIS
UNEMPLOYED
TRADERS

• *How Long have You live in Clera Town?*

MORE THAN 10 YEARS
6-10 YEARS
1-5 YEARS
LESS THAN 1 YEAR
SECTION A: 1. How often do members of your community participate in sanitation activities (e.g., cleaning, waste disposal)?
Very often
sometimes
None
Never
Rarely

2. What motivates you or others in the community to participate in environmental sanitation activities?

Fear of Disease outbreak
Personal interest in clean environment
Health awareness campaign
Community Leadership Encouragement
None

3. Which of the following sanitation activities do community members commonly participate in?

Moderate
None
Low
High
Very Low

4. How would you rate the level of community participation in sanitation and environmental health initiatives?

Yes, significantly
I do not Know
Not at all
Yes, to some extent
None

5. In your opinion, has community participation improved environmental sanitation in Clara Town?

Yes, significantly
I do not Know
Not at all
Yes, to some extent
None

6. What are the major challenges to community participation in environmental sanitation?

Poor coordination
All of the above
lack of community involvement in health decision
lack of awareness/ tools
None

7. Who organizes or leads most of the sanitation efforts in your community?

Religion or Youth group
Local Government/ Municipality
Community based organization
None
It is done individually

8. Are there regular community meetings or awareness sessions about environmental sanitation?

Occupationally
Rarely
Yes, Occupationally
Never
None

9. What impact do you think community participation has on reducing environmental-related diseases (e.g., malaria, diarrhea)?

High Impact
Low Impact
None
No Impact
Little Impact

10. Would you be willing to participate more if there were incentives (e.g., recognition, support)?

Yes
Not Sure
No
Maybe
None

Question #1. Community members are regularly involved in planning health programs in clera town

*

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1
2
3
4
5

2. The success of sanitation projects is due to the active participation of local residents. .

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1
2
3
4
5

3. Community meetings and discussions help in improving sanitation outcomes.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1
2
3
4
5

4. The involvement of community leaders has positively influenced sanitation initiatives.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1
2
3
4
5

5. Households in Clara Town are motivated to maintain cleanliness due to community engagement.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

1
2
3
4
5

6. Community participation has improved the maintenance and sustainability of sanitation facilities (e.g., toilets, waste disposal sites).

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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7. Sanitation programs that include community engagement have better health outcomes (e.g., reduction in diarrheal diseases).

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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8. Lack of community participation leads to the failure of some sanitation interventions. .

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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9. Community members have received training or awareness on sanitation practices through participatory programs.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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10. Participation in sanitation programs has empowered the community to take charge of its environmental health.

1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

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Purpose: To explore deeper insights into perceptions, experiences, and opinions.

1. In your view, what are the main challenges that prevent effective access to healthcare services in Clara Town?
2. How would you describe the availability and quality of health facilities in your community? What improvements do you think are needed?
3. What are the major financial or economic barriers you face when trying to access healthcare?
4. How do government policies or local health initiatives affect your ability to receive needed healthcare services?
5. Can you describe how infrastructure issues (e.g., roads, water, electricity) impact healthcare delivery in your area?

Option 1, Roads and Transportation: Poor or impassable roads make it difficult for patients especially in emergencies to reach health facilities on time, leading to preventable complications or deaths.

Option 2, Water and Sanitation: Lack of clean water affects hygiene in health facilities, increasing the risk of infection and disease transmission.

Option 3, Electricity and Power Supply: Clinics without reliable electricity may be forced to close early or operate only during daylight, limiting access to care, especially during emergencies at night.

6. Have you or your family ever experienced discrimination or neglect when seeking healthcare? If yes, please explain.

No

7. What role do healthcare workers (nurses, doctors, community health assistants) play in helping or hindering healthcare access in Clara Town?

Option 1 Frontline Service Delivery: Nurses and community health assistants often serve as the first point of contact, especially for minor illnesses, maternal and child health, and immunizations

Option 2, Health Education and Promotion: Community health workers play a key role in educating residents on sanitation, disease prevention, family planning, and nutrition

Option 3, Trust and Cultural Competence: Many healthcare workers are from the local area or understand the community's culture and language, which helps build trust and encourages people to seek care early

Option 4, Referral and Follow-up Services: Skilled healthcare workers are able to refer complex cases to higher-level facilities and conduct follow-up care, ensuring continuity of services.

8. Do you believe there is enough community involvement in health decision-making? What would improve participation?

Yes

No, why?

9. What specific social or environmental factors (e.g., overcrowding, waste, poor sanitation) contribute to poor health in your community?

Option 1, Air Pollution from Burning Waste: People often burn household waste due to lack of collection services, releasing smoke and harmful toxins into the air

Option 2, Low Health Literacy and Poverty: Many community members lack adequate knowledge of hygiene practices or cannot afford proper sanitation materials (like soap or disinfectants), which worsens the situation.

Option 3, Limited Access to Toilets: Open defecation or the use of poorly constructed pit latrines is common in some parts of the community, increasing the risk of fecal contamination and disease spread.

Option 4, Unsafe Drinking Water: Many residents rely on shallow wells or hand pumps that are easily contaminated,

especially during the rainy season

Option 5, Poor Sanitation and Waste Disposal: Inadequate drainage systems and lack of regular waste collection lead to open dumping and stagnant water

Option 6, Overcrowding: Many households are densely populated, with multiple family members living in small, poorly ventilated spaces. This makes it easier for communicable diseases like tuberculosis, respiratory infections, and skin diseases to spread rapidly.

10. If you could recommend three key changes to ensure better and sustainable healthcare coverage for Clara Town residents, what would they be and why?

Option 1 Implement Affordable and Inclusive Health Financing Mechanisms. Why: Financial barriers often prevent people from seeking timely healthcare. Introducing or expanding community-based health insurance, subsidies, or other affordable payment options will help more people access necessary care without falling into poverty due to medical costs, promoting equity in healthcare access.

Otion 2 Enhance Community Health Education and Engagement. Why: Empowering residents with knowledge about disease prevention, hygiene, nutrition, and when to seek medical care can reduce the burden of preventable illnesses.

Option 3 Strengthen Primary Healthcare Infrastructure. Why: Many residents rely on local clinics and community health centers as their first point of care. Improving these facilities with adequate medical supplies, trained staff, and reliable equipment will enhance early diagnosis and treatment, reduce overcrowding in hospitals, and provide more accessible care within the community.