UNIVERSITY FOR DEVELOPMENT STUDIES

ASSESSMENT OF COMMUNITY-LED TOTAL SANITATION TOWARDS OPEN

DEFECATION FREE COMMUNITIES IN BAWKU WEST DISTRICT OF THE

UPPER EAST REGION OF GHANA

MAGDALENE AYAMGA

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UPPER EAST REGION, GHANA

BY

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(BA. INTEGRATED COMMUNITY DEVELOPMENT)

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JULY, 2022

DECLARATION

Student

I hereby declare that this dissertation/thesis is the result of my own original work and that, no part of it has been presented for another degree in this University or elsewhere:

Candidate's Signature: ....   Date: ....

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Supervisors

I hereby declare that the preparation and presentation of the dissertation/thesis was supervised in accordance with the guidelines on supervision of dissertation/thesis laid down by the University for Development Studies.

Principal Supervisor's Signature: ………………….   Date: ……………………………

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ABSTRACT

Open defecation is one of the primary causes of faecal contamination of water bodies and the transmission of faecal microorganisms. As part of efforts to end open defecation, this study assessed the contribution of Community Led-Total Sanitation towards Open Defecation Free communities in the Bawku West District. The study ascertained community-led total sanitation processes and triggering tools, explored community-led total sanitation challenges, evaluated Community-Led Total Sanitation outcome and examined ways of improving community-led total sanitation. A case study design and a qualitative approach to data collection were employed to gather data from 47 respondents including (25 Water and Sanitation Management Teams, 12 Natural Leaders, and 6 Focus Group Discussions across five selected Open Defecation Free communities and 4 institutional stakeholders. Key Informant Interview guide, In-depth Interview guide, and Focus Group Discussion guide were used in addition to participants' observation to collect qualitative data. The study established that; pre-triggering, triggering and post-triggering processes were used in programme implementation. The main triggering tools applied were; walk of shame, defecation map, glass of water, and medical calculation. The study revealed that, community level-total sanitation major challenges included; over-reliance on community-level stakeholders, sustainability issues due to local materials used in latrine construction, nature of soil/ground challenges and ineffective post-open defecation free monitoring. The study again discovered that, effective facilitation/communication, provision of allowance to community stakeholders, strengthening post-open defecation free monitoring, enforcement of open defecation bye-laws, were critical in improving community led-total sanitation. The results indicated that, despite the challenges with the programme, the model has made some significant contributions towards open

defecation free communities in the district. Hence, the study recommends that; facilitators should duly follow community led-total sanitation processes, while adopting/adapting community entry protocols based on the context. It is also suggested that, facilitators should have a better understanding of community setting (culture, norms, beliefs, etc.), to ensure effectively combined triggering tools and put measures that prioritize post-open defecation free monitoring and follow-ups to avoid a relapse.

ACKNOWLEDGEMENTS

DEDICATION

I dedicate this work to the Ayamga family and my loved ones, for their love, support and encouragement in all my educational endeavours. The Lord's continuous blessings be upon us all!

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ACRONYMS

UN-----------------------United Nations

USAID-------------------United States Agency for International Development

UNICEF-----------------United Nations Children's Fund

WASH-------------------Water, Sanitation and Hygiene

CLTS---------------------Community-Led Total Sanitation

WHO---------------------World Health Organization

WSMT--------------------Water and Sanitation Management Team

NL------------------------Natural Leader

CLTS---------------------Community-Led Total Sanitation

OD-------------------------Open Defecation

ODF----------------------Open Defecation Free

NGO---------------------Non-Governmental Organization

CWSA--------------------Community Water and Sanitation Agency

GSS-----------------------Ghana Statistical Services

EAWAG----------------- Swiss Federal Institute of Aquatic Science and Technology

SDG---------------------Sustainable Development Goals

MSWR-----------------Ministry of Sanitation and Water Resources

WSSCC---------------- Water Supply and Sanitation Collaborative Council

RANAS---------------- The Risk, Attitude, Norms, Ability and Self-regulation

FGD---------------------Focus Group Discussion

IDI----------------------In-Depth Interview

KII----------------------Key Informant Interview

STROBE--------------- Strengthening The Reporting of Observational Studies in Epidemiology

MDG------------------- Millennium Development Goal

PHC------------------Population and Housing Census

DEHO-----------------District Environmental Health Officer

DEHU----------------- District Environmental Health Unit

DHPO-----------------District Health Promotion Officer

WV--------------------World Vision

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Globally, open defecation (OD) is regarded as a critical health challenge that is affecting the lives of almost one billion people and contributing significantly to the death of an estimated 842,000 people annually (UNICEF/WHO, 2015; Osumanu et al., 2019). Another significant contributor which results in faecal contamination of water bodies and the transmission of faecal microorganisms is unsafe sanitation, particularly open defecation (Prüss-Ustün et al., 2014)**.** Establishing from the current trends with regard to sanitation and hygiene, the United Nation (UN) agency estimates that about 90 countries are not likely to achieve SDG target 6.2 on sanitation for all by 2030 (World Health Organization, 2018). Apparently, no OD by 2030 remains a challenge because it necessitates the application of both appropriate and affordable technologies as well as a supporting organisational structure (Mara & Evans, 2018; UNICEF/WHO, 2019).

WHO (2018) refers to sanitation as the provision of facilities and services for the proper disposal of human waste (urine and faeces). Open defecation, on the other hand, is the practise of removing waste from the body of humans via the anus; outside in and around one's local community; farm fields, river banks, bushes, or other public places due to a lack of access to toilets, latrines, or any other type of improved sanitation facilities (USAID, 2018). Defecating in that open has adverse effects on the health of humans, contributing to diarrhoeal diseases and childhood stunting (Osumanu et al., 2019). Aside from this, poor sanitation also has an adverse economic impact (loss of income due to treatment cost and inability to carry out livelihood activities) as a result of time spent in caring for diarrhoeal cases. As a result, achieving sustainable sanitation for all is critical;

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nearly 2.3 billion people still lack even basic sanitation services (WHO, 2018). Another 600 million people have limited sanitation access, which means they share with other households (WHO/UNICEF, 2017). Open defecation is still practised by an estimated 892 million people worldwide, with 90 percent of them living in rural areas (WHO/UNICEF, 2015). Averagely, 16% of 'open defecators' live in developing countries, whereas, 20% also live in the least-developed countries (WHO/UNICEF, 2019).

According to WHO/UN (2019), it is generally believed that the practice of open defecation is more prevalent in the case of Sub-Saharan Africa. WHO/UNICEF (2017) found that close to 200,000 children under the ages of five died from diarrhoea related sicknesses annually in Sub-Saharan Africa while the numbers dying from cholera within the region were noted to be similarly high. The causes of these deaths were as a result of poor sanitation, unhygienic practices including excreta disposal, resulting in unsafe water supplies and consumption of contaminated foods (World Health Organization & UN-Water, 2019).

In corroborating this finding, UNICEF, Plan International and Water Aid (2015) and WHO (2018) asserted that about 1.1 billion people (15% of the global population) practice OD. In the case of Ghana, only 15 % of the population of over 27 million Ghanaians have access to improved basic sanitation and 18.6% of the poorest do not have access to improved sanitation, compared to only 5% of the rich who are without access to improved sanitation. This lack of access to improved sanitation has resulted in the high rates of OD in the country, especially among the poor (Ministry of Sanitation and Water Resources, 2018)

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Kar (2005) and Msuya et al. (2018) indicated that, one strategy for improving sanitation access is Community-Led Total Sanitation (CLTS), in which participants are guided into self-realization of the importance of sanitation through activities called "triggering." The threat of open defecation in Ghana necessitated the implementation and adaptation of the CLTS intervention championed by some organisations. Crocker, Saywell, and Bartram (2017) and Msuya et al. (2018) proffered that Dr. Kamal Kar founded the CLTS model in the year 2000 while evaluating rural water and sanitation programme under Water-Aid, Bangladesh and their partner NGO, Village Education Resource Centre in Bangladesh.

According to Crocker et al. (2016), CLTS employs participatory methods to assist local communities in analysing their sanitation status and jointly seeking solutions after discussing the negative consequences of OD. CLTS is thus an integrated and innovative sanitation promotion strategy in which communities are mobilised to eliminate OD in order to achieve and maintain Open Defecation Free (ODF) status. It entails facilitating the community's own observation, appraisal, and analysis of their sanitation profile, defecation practises, and consequences, ultimately leading to collective action to become ODF (Kar & Chambers, 2008; Crocker et al., 2016). Kar and Milward (2011) also opined that CLTS is anchored on three main but critical steps in its operationalization and implementation. In the view of some authors, these steps are as follows; pre-triggering (community sanitation profiling), triggering (assist communities in realising their practises in terms of sanitation), and post-triggering; assist beneficiaries/participants to find solutions to the challenges of improper sanitation (Kar, Chambers, & Plan, 2008; Venkataramanan & Shannon, 2016; Crocker et al., 2017; Safari et al., 2019). These steps

are intended to enable communities to take the first steps toward achieving ODF status and scaling up (Kar, 2005; Crocker et al., 2017).

According to Kar and Milward (2011), in the last ten years, Kamal Kar has used training, advocacy, and consultant services to promote, propagate, and spread CLTS in more than 43 countries around the world, primarily in Asia, Africa, and Latin America. As a result, CLTS has experienced a surge in its spread, implementation, and adoption in over 43 countries worldwide, with at least seven countries incorporating CLTS into their national sanitation policies. CLTS Foundation's founder Kar, continues to facilitate an effective but functional coordination with CLTS practitioners, policymakers, and governments around the world. As a result of these efforts, some countries have done exceptionally well in reducing OD. A case in point being rural Vietnam, where formerly about 43% of the population practiced OD in 1990, but by 2015, this figure had reduced drastically to 1%. Similarly, in Bangladesh, the corresponding figures were 40% and 2%; whereas, in Mexico the records revealed were 51% and 4% (WHO/UNICEF, 2015; USAID, 2018).

After several sanitation approaches failed (such as the use of subsidies, top-down toilet construction, etc.), Ghana adopted the CLTS as a sanitation model for the rural folk. CLTS emphasizes on gender equality and social inclusion of women, children and the marginalized in addressing the sanitation challenges (Ntow, 2014; Davis, 2015). As a result, the CLTS implementation in Ghana draws collaboration from regional, district, and community level structures such as Community Water and Sanitation Agency (CWSA) at the regional level, Environmental Health and Sanitation Department at both the district and regional levels, Non-governmental Agencies (NGOs) at the community level, Ghana Water and Sanitation Authority (GWSA) at the regional/district level, and

leaders from the implementing communities known as Natural Leaders (Ntow, 2014). The target of CLTS is on the entire community and not just the behaviour of an individual in the CLTS process. So, Natural Leaders (NLs) spontaneously emerge and take up leadership and exemplary roles by not only spreading the message to other community members, but also taking the lead to start constructing their own latrines. NLs' voluntary work and commitment can help to ensure the long-term viability of CLTS beyond the life of any external project (Huda, 2009). CLTS processes encompasses; improved latrine design; implementation and improvement of sanitary practises; solid waste management; waste water disposal; protection and maintenance of drinking water sources; and other environmental measures (Kar & Chambers, 2008). CLTS aims for behavioural change and invests in community mobilisation rather than hardware, shifting the focus from individual household toilet construction to the creation of open defecation-free villages. At the heart of CLTS lies the recognition that merely providing toilets does not guarantee their usage, nor result in improved sanitation and hygiene (Msuya et al., 2018). CLTS is the way to go because it increases your confidence in your ability to build a household latrine, lowers the anticipated cost of building a latrine, and provides the capability of reconstructing or repairing the latrine in the event of damage (Harter & Mosler, 2018). According to Ghana Statistical Service (GSS), only 15 % of the population of over 27 million people in Ghana have access to safe and improved basic sanitation. However, 86.3% of the population of the Upper East Region, practice Open Defecation which is the highest rate in Ghana (MSWR, 2018). A regional report by GSS in Kumasi Metropolitan Area, indicated that, in Ghana, the minimum rate of 2.4% of open defecation practices was found in the Ashanti Region (GSS, 2014). The 2.4% of OD practices as noted in the Ashanti Region compared with close to 86.3% (GSS, 2014) of

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the population of the Bawku West District in the Upper East Region smacks of a '*bizzare*' situation therein. Could this be a lack of access to improved sanitation facilities in the district or it is just a general attitudinal issue embedded in the culture of the people? Has the introduction of CLTS in the district helped in reducing or eradicating the OD situation? These and many other questions necessitated a call for research, thus the reason for this study.

1.2 Problem Statement

Access to basic water and sanitation services, including safe drinking water, a facility where waste products are safely contained and treated, and water and soap for handwashing, is a basic requirement (WHO, 2018). This is not the case, as one of the primary causes of faecal contamination of waterbodies and the spread of faecal bacteria is poor sanitation, specifically OD (Prüss-Ustün et al., 2014). Open defecation practice is strongly associated with the development of any country and for that matter, a region/district. No country will therefore develop with high rates of improper sanitation practices and particularly OD (UNICEF/World Bank, 2019). Unfortunately, this was the situation of the people of Bawku West District in 2014 when data from GSS revealed that, 86.3% of them were engaged in OD practices.

There have been some earlier approaches to sanitation such including; insisting on communities to put up toilet facilities sometimes against their own will, prescribed high initial standards and offered subsidies as an incentive, among others, but unfortunately, all these did not solve the situation. It only led to uneven adoption, culture of dependence, partial use of toilet facilities and problems with long-term sustainability (Sah and Negussie, 2009). It was reported that, the Millennium Development Goals (MDGs) target

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on basic sanitation was generally unachieved (WHO/UNICEF, 2015). As a result, OD and the faecal-oral contamination cycle continued to spread diseases, as depicted in Figure 1.1.
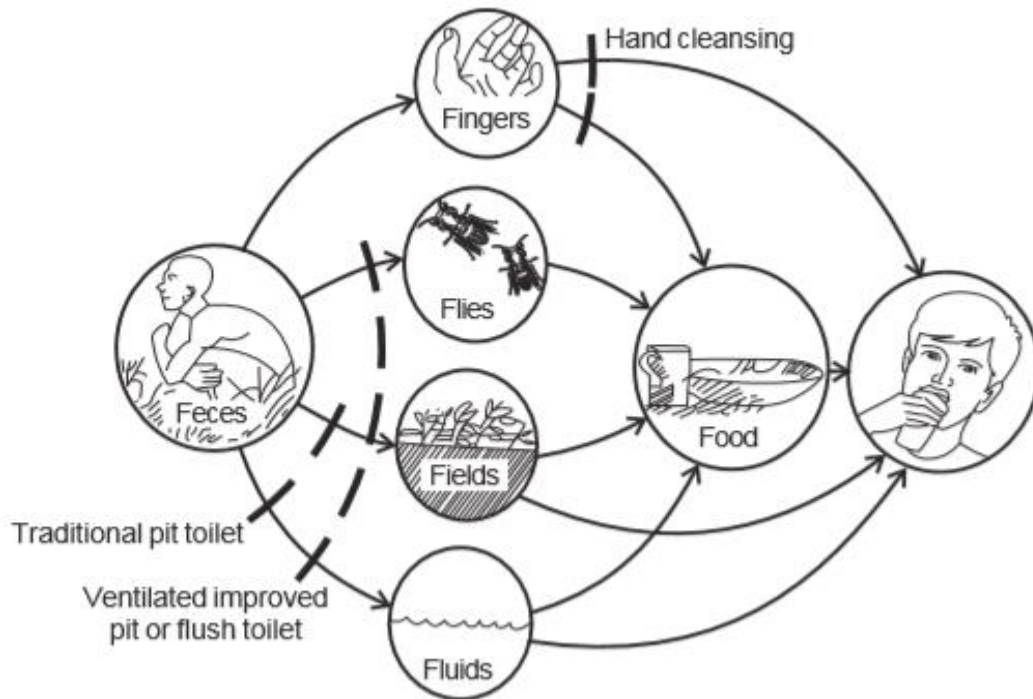
Figure 1.1: (F-diagram): Showing a Participatory Approach for the control of diarrhea Diseases.

Source: Kar (2005).

From the Figure 1.1, faecal matter has pathogens (germs) with the faecal-oral transmission routes to include fingers, flies (and other insects), fields (agriculture), fluids (contaminated water) and food. The prevalence and frequency of occurrence of this faecal-oral transmission can be blamed on OD and improper disposal of faeces (Kar, 2005). Prüss-Ustün et al. (2014) and USAID (2018) posits that, one gram of fresh faeces can contain up to ten million viruses, one million bacteria, and one hundred parasite eggs, which poses serious health risks. Hence, WHO/UNICEF (2017), indicated that, ending OD has been identified as a top priority for reducing disease burden, the reason for which OD is explicitly referenced in SDG target 6.2 and is closely associated with broader efforts to end extreme poverty by 2030. Thus, OD promotes the spread of pathogens that cause diarrhoeal diseases, which are the second leading cause of global disease burden

(UNICEF/WHO, 2019; Belay et al., 2022). Osumanu et al. (2019) affirmed that OD in Ghana results in health problems associated with diseases such as; diarrhoea, cholera, typhoid, under nutrition and poverty, which is an affront to personal dignity and the worst of it, one of the leading causes of deaths among children.

In the quest to combat this menace, CLTS model was first introduced in Bangladesh after evaluating a traditionally subsidized sanitation programme in India. The model is categorized into three phases (Pre-triggering, Triggering and Post-triggering phases). The triggering stage is shown in Figure 1.2.
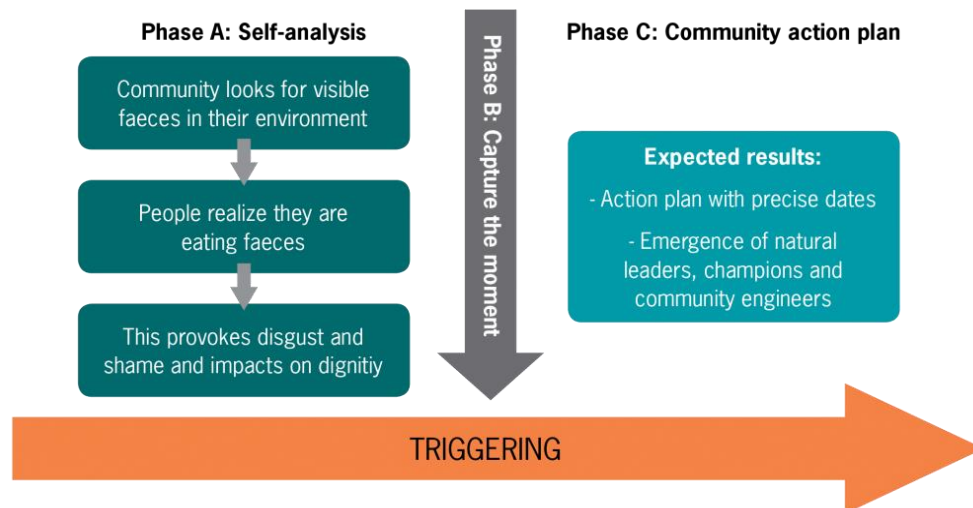
Figure 1.2: Triggering phases of CLTS implementation

Source: Kar and Chambers (2008)

CLTS usually begins with pre-triggering which is a selection of community, and steps taken by facilitators to understand the community culture, norms, beliefs and the leadership or setting of the community. Figure 1.2 which represents the triggering stage, prompts community members to look at the visible faeces within their immediate

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environment. These faeces tend to contaminate their food and water that they take (Kar & Chambers, 2008). This provokes the feeling of disgust and shame undermining the dignity of the affected people. Thus, these feelings spark and trigger the affected communities. Triggering again encourages the affected communities to build synergies and initiate actions that are geared towards ODF status. The post-triggering then encourages follow-up and monitoring of plans to ensure they are followed for the achievement of desired results (Kar & Chambers, 2008; Venkataramanan & Shannon, 2016).

Kar and Chambers (2008) postulates that, CLTS focuses on the behavioural changes required to achieve real and long-term improvements. Investing in community mobilisation rather than hardware, and shifting the focus from individual household toilet construction to the creation of open defecation-free villages. Again, the goal is to raise awareness that everyone is at risk of disease as long as a minority (say, one household) continues to defecate in public (Kar, 2010). CLTS's mission is to arouse the community's desire for collective change, motivate people to take action, and promote innovation, mutual support, and appropriate local solutions, resulting in greater ownership and sustainability. As a result, CLTS empowers participating community members to take charge of their sanitation situation through participatory assessment, community action plans, and the maintenance of behavioural practises (Kar & Chambers, 2008). The effect of CLTS on motivating people to build latrines and stop OD is widely accepted in research and practise. However, an in-depth understanding of CLTS effectiveness, the underlying mechanisms that explain success, or the target populations for which the intervention is most effective has yet to be discovered (Harter & Mosler, 2018). A demo-

CLTS study conducted by Harter and Mosler (2018) revealed that CLTS results are primarily derived from grey literature, with only a few rigorous scientific studies on CLTS effects and mechanisms presented.

In 2007, Ghana adopted CLTS as one antidote to ending OD practices. It has since been implemented and scaled up across regions and districts including the Bawku West District. With the privilege of the CLTS concept introduced in the district by some organisations for some time now, it is therefore imperative for an independent assessor to appraise the impact of this all-important intervention in order to ascertain its effectiveness or otherwise. The purpose of this study therefore, was to investigate the role of CLTS intervention in the Bawku West District and assess the extent to which it has aided in the eradication or reduction of OD towards ODF status communities for improved health and dignified lives.

1.3 Research Questions

The main research question is: What are the contributions of CLTS towards ODF communities in the Bawku West District? A series of research questions are posed in response to this main research question;

1. How has the triggering tools and processes used in CLTS model contributed to ODF in the Bawku West District?

2. What are the CLTS outcome (ODF communities) in the Bawku West District?

3. What are the challenges of CLTS in the Bawku West District?

4. What are some of the ways of improving CLTS towards ODF in the Bawku West District?

1.4 Research Objectives

The overall goal of this research is to evaluate the contribution of CLTS model towards ODF and its sustainability in the Bawku West District while seeking specifically to:

1. Ascertain the triggering tools and processes used in CLTS towards ODF in the Bawku West District.

2. Evaluate the CLTS outcome (ODF communities) in the Bawku West District.

3. Investigate the challenges of CLTS in the Bawku West District.

4. Examine ways of improving the CLTS towards ODF in the Bawku West District.

1.5 Significance of the study

Overall, the study will generate knowledge to help in advancing the course of achieving SDG 6.2 (Clean Water and Sanitation) which has a multiplier effect on SDG 3 (Good Health and Well-being) and SDG 11 (Sustainable Cities and Communities). The study will also contribute in identifying how rural communities adopt/adapt to, and effectively manage the CLTS model towards ODF as a result of the intervention of some Governmental organizations, Community Based Organizations (CBOs) and Non-Governmental Organizations (NGOs), aimed at improving sustainable sanitation practices in rural communities. It will also help to assess the contribution of CLTS towards reducing or eradicating OD in the area for improved health and dignified life for all.

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This research will be useful to governmental organisations such as the Community Water and Sanitation Agency (CWSA), the Environmental Health and Sanitation Unit, as well as non-governmental organisations, policymakers, and individuals interested in reducing or eliminating open defecation, as it will reveal some practical ways of improving the CLTS model towards ODF communities. It will also provide the history of sanitation practices, insights into the way people have coped with, or failed to cope with CLTS model towards ODF due to differing situations (community potentials or challenges) according to context. More so, the study will further make available, useful academic material for referencing students, researchers, academicians and other policy think tanks who are interested in undertaking research in the area of CLTS model as a means of achieving ODF can use the study findings as reference point.

1.6 Scope of the Study

Geographically, the study area covered the Bawku West District in Ghana's Upper East Region. In 1988, the district was formed from the then-Bawku District, now known as Bawku Municipal, as part of the new local government system. Burkina Faso borders the District to the north, Bawku Municipality to the east, Talensi/Nabdam District to the west, and East Mamprusi District to the south. The White and Red Volta tributaries of the Volta River ran parallel to the District's eastern and western boundaries, respectively. The District covers an area of approximately 1,070 square kilometres, which constitutes about 12% of the total land area of the Upper East Region. It is the fifth biggest district of the fifteen (15) districts in the Upper East Region in terms of land area (GSS, 2021).

Contextually, the study covered some CLTS processes used during the programme implementation which include; pre-triggering, triggering and post-triggering. The main

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triggering tools applied in the programme were; walk of shame, defecation map, glass of water and medical calculation. It again covered some outcome of CLTS implementation including; knowledge gained on some of the health predicaments associated with OD practices by communities, commitment of community members to construct household latrines, emergence of natural leaders and other champions to support the programme, ODF verification, and so on.

Another focus of the study was on some of the challenges the CLTS programme is confronted with. They included; nature of soil/ground issues, collapse of latrines as a result of the use of local materials for construction, lack of motivation for community level CLTS champions, financial/economic challenges, and social and attitudinal phenomenon. Other content of the study was on some ways of improving CLTS. They include; CLTS facilitators compliance with community entry protocols, application of right triggering tools based on context, careful application of incentives to vulnerable groups, creation of community level OD byelaws to guide and guard community members towards ODF status and ensuring effective post-ODF monitoring to prevent relapse.

1.7 Organisation of Thesis

The thesis is organized into six (6) Chapters. The first Chapter constitutes the background of the study, problem statement, research questions, objectives of the study, significance of the study, scope of the study, and organization of the study. The second Chapter captures relevant literature on open defecation, CLTS and how it has contributed to ODF communities or otherwise. It also addresses the theoretical review, conceptual review, empirical review and summary. Chapter three constitutes the research methods, design,

philosophy of the study, sources of data; study population, sampling frame and sample size, sampling techniques, data collection instruments and methods of data analysis. Chapter four again entails the presentation of results while Chapter five is on discussion of field data or findings. The last Chapter entails summary of major findings, conclusion and recommendations.

CHAPTER TWO

Literature Review
MODELS AND CONCEPTUAL ISSUES ON CLTS

2.1 Introduction

This chapter reviewed some models that underpin the research, and adopted and/adapted one of the models. The chapter further conceptualized the study by reviewing literature related to the current study.

2.2 Theoretical Framework

2.2.1 **The Risk, Attitude, Norms, Ability and Self-regulation (RANAS) Theory**

The RANAS model examines the factors that influence the behaviour of a group of people and target those factors in a manner as to bring about a change in behaviour among the people. In brief, it is an easily applied method for measuring behavioural factors, assessing their influence on behaviour, designing tailored strategies that change behaviour and measuring the effectiveness of these strategies.

This is further explained in figure 2.1.

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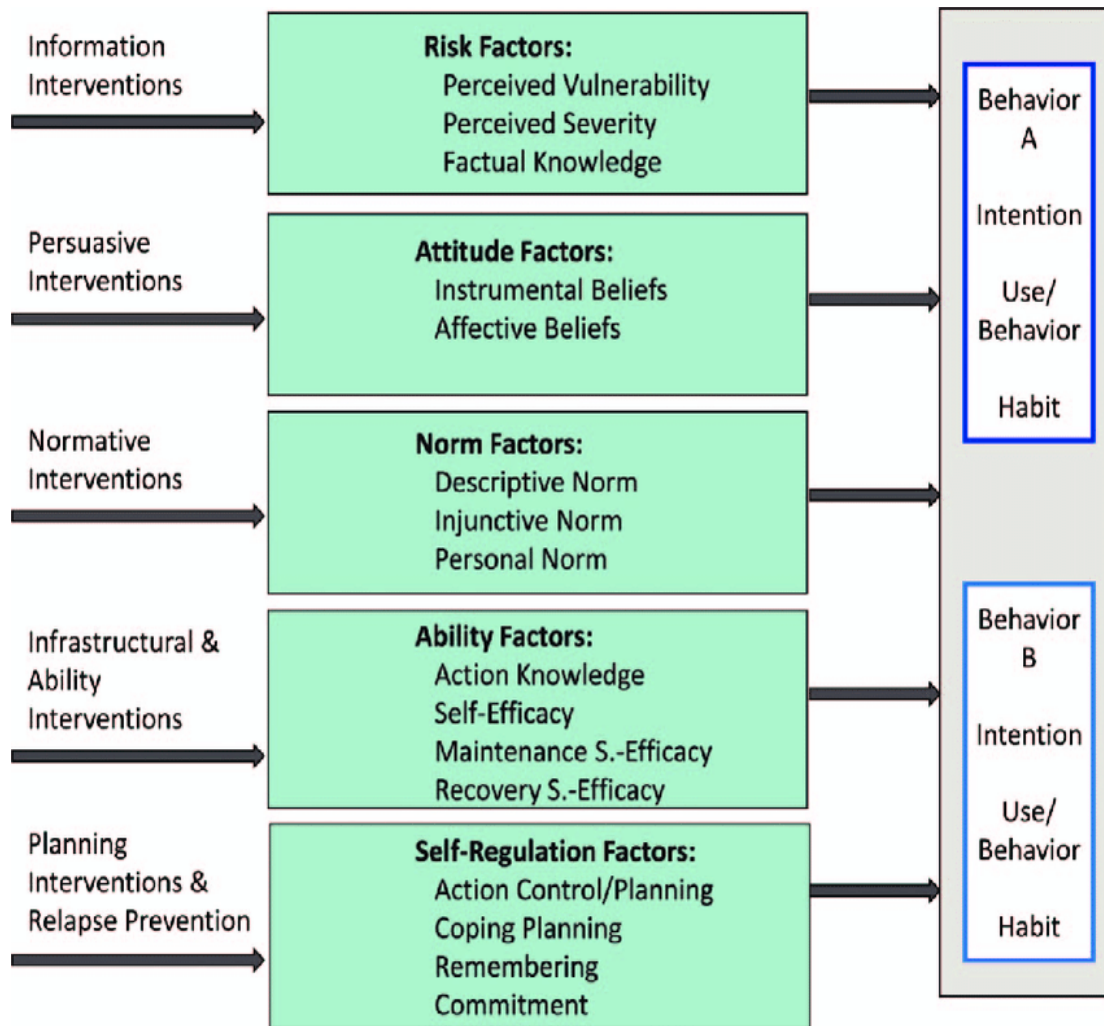
Figure 2.1: The RANAS model showing the various interventions including; Information, Persuasive, Normative, Infrastructural and Planning.

Source: Mosler (2012)

Mosler (2012) asserts from Figure 2.1 that the construction of household latrines is influenced by social and physical context determinants such as the risk factor block, attitudes, norms, ability, and self-regulation factor blocks (RANAS). That is, changes in people's attitudes toward the benefits of owning a latrine are to blame for the construction of household latrines. The Norm factor increased community members' awareness of their social environment's behaviour with regard to latrine construction, leading to a

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greater perception that community leaders would approve of latrine construction in their communities. Participants gain confidence in their ability to construct, maintain, and repair their own household latrine.

According to Mosler and Contzen (2016), the RANAS model approaches involve four systematic steps which are followed in order to do a comprehensive investigation on issues surrounding behavioural change and adaptation (Figure 2.2).
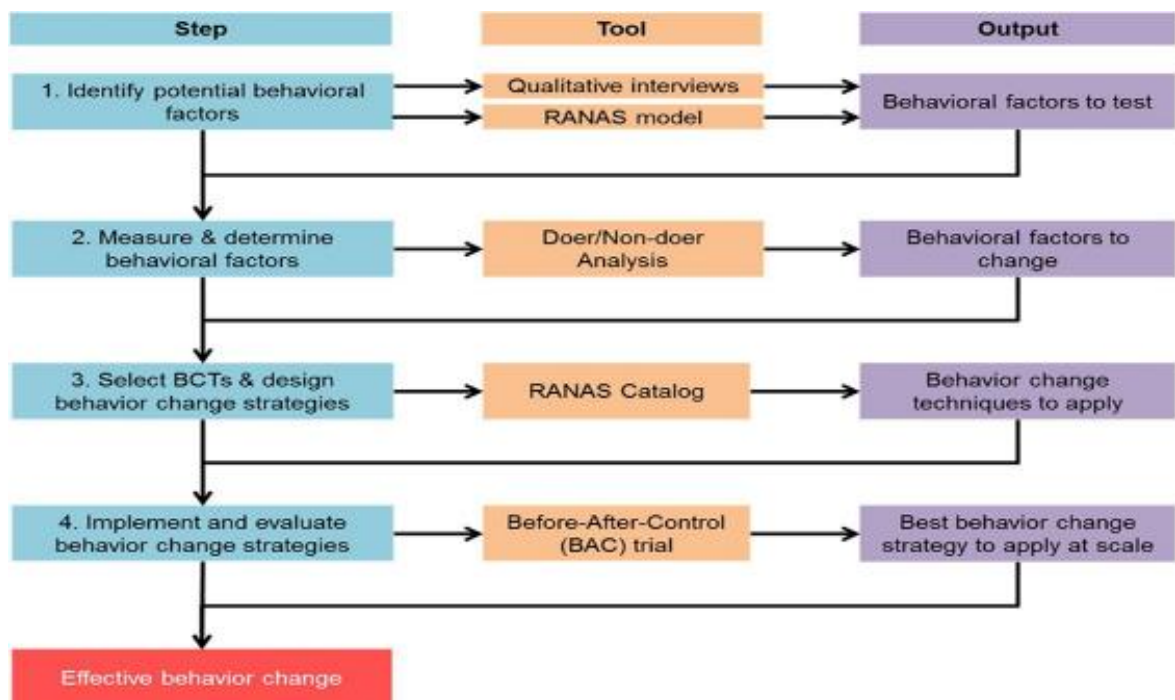
Figure 2.2: The RANAS model describing the systematic steps and approaches to behaviour change.

Source: Mosler & Contzen (2016).

From Figure 2.2, before effective behaviour change can be achieved, it is crucial to consider these four key steps or approaches; identify the potential behavioural factors, measure and determine behavioural factors, select behavioural change techniques (BCTs) and design behaviour change strategies as well as, implement and evaluate behaviour

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change strategies (Mosler & Contzen, 2016). Situating the RANAS Model approaches in this study, step one involved the identification of the exact behaviour to be changed and the definition of the target group. In the case of this research, the issue investigated on was CLTS and its implementation and the target group is residents of the Bawku West District. It was important to understand or ascertain the triggering tools and processes used in the CLTS process towards ODF in the Bawku West District. Hence, research employing this model must gather information among the residents in order to appreciate their experiences, involvement as well as the tools used by stakeholders in the implementation exercise.

In spite of the efforts being made to make the CLTS programme successful in the Bawku West District, there are some challenges militating against the success of the programme which may be accounting for why 86.3% of the population are engaged in OD practices (MSWR, 2018). Step two involved the determination and measurement of factors that promoted practices that worked against the success of CLTS in the area. This included, identifying these factors and indicating how they influenced the practice of OD and the need to link how each factor that drove the practice of open defecation.

After these factors are identified, step three involves the evaluation of CLTS outcome in successful communities in the area in order to determine their sustenance or relapse while Step four involves drawing behavioural change techniques and designs in the CLTS model in order to deal with the phenomenon and find strategies/ways to improve on it.

2.3 Conceptual and Empirical Issues on CLTS

Empirical is seen as an outcome dependent on experience or observation alone, without using scientific method or theory, especially as in research works (Bhattacharya, 2008).

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Hence, the sector reviewed the works of other authorities who have looked at the issues of CLTS and the findings they have made in their endeavours. The purpose of this review was to identify the broader issues on CLTS and ascertain which aspects needed further investigation. This knowledge was necessary as it helped shape and guide the research on the contributions of CLTS towards ODF communities. Within the confines of this study, topics covered included:

2.3.1 **Triggering tools and processes used in CLTS towards ODF statuses in Communities**

It has come to the fore that, over the past few years, Kar (2010) and Maulit (2014) have provided guidelines on best ways to elicit the washing of hands with soap under running water. These guidelines were created for the UNICEF Malawi participatory programme to help inculcate in their citizenry the attitude of always washing their hands with soap at critical moments or whenever they use their hands in any form of engagement (Maulit, 2014). Maulit developed these guidelines by making inference from Kar (2005) and the collaborative effort between UNICEF and the Salima District Council in Malawi. The authorities stated that UNICEF has in the past, conducted a CLTS campaign to help promote good sanitation and hygiene in Malawi. Taking a cue from the activities of the Salima District Council was thought to be the right to go because the Council had attempted to incorporate handwashing into their triggering process, and also have data showing high numbers of new handwashing facilities been built after CLTS. Biran et al. (2022) agreed with Maulit (2014) that, CLTS campaign provided an excellent opportunity to facilitate handwashing behavioural change. The only problem, according to the authorities, is the fact that the 'triggering tools' for the right implementation of the programme had not been well-known by the implementers in Malawi. As a result, this

thesis attempts to document some practical tools which can be used as a part of CLTS in order to trigger realization among communities on the importance of handwashing with soap. Maulit (2014) therefore puts forward ten (10) triggering tools that were thought to have the potential to improve handwashing with soap among Malawians. These included; anal cleansing materials, shit and shake, cassava or egg demonstration, charcoal smearing, smelly hands, faeces on baby nappies, scratch and smell, wall contamination, food sharing and dirt under fingernails were the ten (10) tools he suggested for consideration by all development units which considered the option of embarking on handwashing with soap campaigns.

Nine of these tools have previously been tested by the Salima District Council of Malawi and tenth one by the Engineers Without Boarders (EWB), Canada. In the view of Biran et al. (2022), triggering tools aimed at changing behaviours should be field-tested, else it would not yield the expected impact. As stated already, the guidelines are simple to be understood by any person who gets hold of this knowledge. Due to this, anyone who decides to embark on any field activity to help promote handwashing with soap can use it. The author admits that developers should be wary of this fact and consider the condition of the community they want to undertake this test in order not to go amiss.

Novotny et al. (2018) in their study on CLTS in rural areas of low and middle-income countries noted that CLTS has become a prominent behaviour change approach to change sanitation practices at the community level with the main aim of achieving and sustaining ODF status. They further explained that, the introduction of CLTS has been presented as a reaction to the unsatisfactory results of previous sanitation interventions which focused predominantly on the centralised provision of sanitation hardware. Their study avers that,

the use of CLTS across many developing countries has led to various differences and modifications with respect to the use of triggering tools.

Lawrence et al. (2016) discovered that CLTS is one strategy for increasing sanitation access in their study on sanitation beliefs and behaviours and their relationship to improved sanitation in some selected communities in Zambia. According to Lawrence et al. (2016), the perceived impact of CLTS on sanitation practises revealed that triggering activities and programmes elicited strong emotions such as shame and peer pressure, which influenced individuals and families in the construction and use of latrines and hand-washing facilities such as tippy-tap. The study found that, in contrast to other sanitation models, CLTS appears to have a significant influence and is effective in encouraging the adoption of improved sanitation behaviours. According to the Focus Group Discussion (FGD) reports, nearly all community-level participants, including children, parents, and school teachers, were aware of CLTS implementation in their area. Again, the study revealed how leveraging community leadership, including traditional chiefs and village headmen, and implementing appropriate triggering activities are powerful tools for encouraging communities to embrace the CLTS programme, which leads to the construction and use of toilets. According to the authors, roughly three-fourths of participants reported positive changes in the community (or in themselves), such as the construction of new latrines and increased latrine usage and handwashing behaviours. The relationship between improved hygiene and sanitation practises and health was generally well understood among participants.

Likewise, Snel (2011) and Lawrence et al. (2016) also revealed that children are influential in enforcing sanitation and behavioural change messages and activities. They

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also stated that by using a community-based approach, local residents were able to come to their own conclusions about the importance of sanitation and develop local-based strategies to implement changes. According to their findings, gender-related cultural dynamics influenced individuals to use a latrine. Lawrence et al. (2016), like Harter et al. (2018), claimed that emotional factors influenced community members in the construction of latrines. These researchers' study had a large sample size as well as a diverse set of participants. Despite this diversity, general perceptions of CLTS were consistent across demographic groups, including gender, age, and geographic distribution.

One limitation of this study was the inability to conclude the long-term effects of CLTS in the Zambian rural community. This is especially important given the literature's lack of agreement on this critical aspect of the programme. Further research can thus be conducted to investigate the long-term impact of CLTS on sanitation behaviours. Another limitation that may limit the generalizability of the research findings is the use of CLTS champions for programme input. CLTS champions were volunteers who were rewarded with cell phones and airtime in exchange for reporting on the status of villages. This was intended to serve as motivation, but there was a risk of fraudulent reporting because the reporting was contingent on the incentives received.

2.3.1.1 Triggering during CLTS implementation

In another study conducted by Kar (2005) on triggering CLTS implementation, it was revealed that, CLTS is based on stimulating a collective sense of disgust and shame among community members on open defecation. He opined that CLTS aims at triggering self-realization among community members to change their own behaviours. Triggering

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processes of CLTS therefore helped community members to collectively decide on tackling open defecation.

He also espoused the fact that, attitudes and approaches of facilitators were crucial in the triggering process of CLTS programmes in communities. In addition, the study revealed that, successful implementation of CLTS programmes were dependent on favourable conditions existing in specific communities. Kar (2005) therefore concluded with a recommendation that, the most appropriate way of evoking the desired change is through the community. Hence, where donor agencies, government departments, national and international NGOs, and other stakeholders decide to integrate CLTS into their sanitation programmes, or use it as an entry point for broader livelihoods or health programmes, they must put that into consideration. His study however failed to specifically discuss the various triggering techniques as contained in most CLTS programmes.

2.3.1.2 Emergence of natural leaders in CLTS triggering process

Huda (2009) discovered that natural leaders are an important part of the entire CLTS process in his study on the emergence of NLs through the profile and market campaign (CLTS Approach) in Bangladesh. He expounded further that they were very influential in the success of the programme right from the moment they emerge and agreed to lead the rest of the community members. To him, natural leaders usually spent some hours of the day for CLTS, by orienting households including children (sometimes through songs, meetings, house to house engagement, etc.) on some of the ways to make their community ODF. The study concluded that, the role natural leaders play in CLTS cannot be overlooked as they formed part of the main pillar that made CLTS a success.

2.3.1.3 Assessing the magnitude of CLTS triggering to certification of ODF villages

Ogendo et al. (2016) presented another point of reference in the literature on CLTS, and their study aimed at assessing the magnitude of CLTS triggering certification of ODF villages in rural Kenya. This was a descriptive ecological study that used routinely collected CLTS county pooled data in 2014 in Kenya, which is located in eastern Africa. The study area was made up of 47 semi-autonomous counties and had a population of 46 million people, with the majority of natives living in rural areas. To analyse and manage the collected data, the data were abstracted into an excel database from the CLTS data sets obtained from all 47 counties in the country. The proportions of certified ODFs per county were compared to the number of human resources, collaborative partnerships, and budget allocated using pooled county data. Ogendo and associates (2016) discovered that the number of triggered villages had decreased significantly when compared to those that had reached the certification stage, despite the county meeting the 100 percent triggering target. The proportions per county decreased significantly during the process of claiming, verifying, and certifying ODF villages. However, the proportion of CLTS facilitators and certified villages per county was incongruent. Based on the study findings, only 5% of the villages in the counties were certified, owing to a loss of momentum. More resources should be directed toward monitoring and supportive supervision of CLTS. According to the study, the improvement of sustainable ODF villages and behaviour change ultimately reduced the disease burden. The findings of the study had the advantage of being representative of the entire country. Strengthening The Reporting of Observational Studies in Epidemiology (STROBE) guidelines were also used to ensure the quality of reporting from a policy standpoint. The study's geographical confinement to Kenya was

a limitation. Furthermore, the study is insufficient due to the use of aggregated data and the short period of evaluation of programme outcomes.

Contrary to Ogendo et al. (2016), Lawrence et al. (2016) averred that, emotive factors such as "name and shame" rather influenced community members in the construction of latrines. This led to an increase in the number of households who constructed latrines. They also explicated that CLTS has been rolled out with minimal rigorous evidence on its effectiveness and impact on sanitation and health outcomes. They further argued that communities' selection for triggering should be based on community characteristics and resources, as that would facilitate its success.

2.3.2 **CLTS outcome in ODF communities towards ODF towards SDG6**

Safari et al. (2019) discusses lessons learned from the national sanitation campaign in Njombe District, Tanzania and brought to fore the fact that, sanitation is one of the basic needs of many developing countries. Sanitation is widely recognised and accepted, and it has been included in the Sustainable Development Goals (SDGs). Goal 6 of the Sustainable Development Goals aims to "ensure the availability and sustainable management of water and sanitation for all" (UN Goal 6). Safari et al. (2019) use a qualitative study to document how the CLTS approach was implemented in Njombe DC in Tanzania. The study assessed CLTS implementation progress and defined CLTS implementation success factors. It is worth noting that a longitudinal study would have given a more reliable results of such study. This therefore means that the duration for the study, that is, two months was inadequate for such a study. Again, data collection for Safari et al. (2019) involved a review of relevant documents and field visits. These data collection instruments were not enough for achieving the objectives of the said study.

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The authorities in this study employed a purposive sampling technique in selecting villages for a study on lessons learned from the national sanitation campaign in Njombe District, Tanzania. Safari et al. (2019) made the basic assumption that villages with more experience implementing CLTS activities would provide better insights into the sanitation transformation process. According to the study, this assumption resulted in a more effective study result. The study included twenty-four (24) Focus Group Discussions (FGDs) in total. The findings revealed that, triggering was initially perceived negatively in communities due to the use of 'shame' words, which community members felt disrespected. Safari et al. (2019) stated that these communities in Njombe District later adopted this approach due to its effectiveness in communicating sanitation messages and motivating them to abandon their OD practices. This is contrary to Sah and Negussie (2009) who revealed that, community leaders did not feel good with facilitators using 'shame' words such as, they eat their own faeces to trigger them. The study concluded by endorsing some of the best mix of sanitation education as instruments that were potent in raising community awareness and ensuring success in sanitation campaign. They include regulation and enforcement, changing collective behaviour, and enforcing village sanitation laws.

However, some limitations of the study were observed in that, the study period was too short. It is reviewed that if the period for the research was extended adequately, it would have provided a more reliable result. Again, it is proposed that a random sampling from a given population would have aided the researchers to achieve ordinary data for a more viable result from the study. Finally, the employment of observation and interview session with the community folks would have provided a more viable result from the

study. In all, the study is worth academic discussion and usage for national development (Safari et al., 2019).

Another study by Abramovsky et al. (2016) titled, improving CLTS targeting with evidence from Nigeria, revealed that, various governments in low- and middle-class countries in an attempt to meet some sustainable development (SDG) goals were adopting and deploying a range of programmes and policies to accelerate progress towards the new global goals of which CLTS is inclusive. The primary purpose of the study was to investigate and establish the effectiveness of the CLTS intervention one year after the programme's implementation. Abramovsky et. al. (2016) in their study asserted that Nigeria is one of the countries that has officially adopted CLTS as an approved approach in their national strategy for scaling up sanitation and hygiene. After three years of intensive piloting in collaboration with WaterAid, UNICEF and local governments, the approach was officially adopted in 2007, as a means to meeting the seventh Millennium Development Goal (MDG) of reducing open defecation rates by half by the year 2015. The study employed the quantitative methodology to support its findings which indeed proved the effectiveness of CLTS intervention, a year after the programme's implementation. From the findings of the study, it became apparently clear that the CLTS implementation could be broken down into four distinct phases namely: planning, mobilization, triggering and follow-ups; with each phase playing an imperative role in the implementation of CLTS approach. Abramovsky et al. (2016) further suggested that the findings and recommendations of the study could improve the targeting of CLTS in Nigeria, and possibly other countries, freeing up scarce resources to identify and test complementary sanitation approaches suitable for more urbanized communities.

2.3.2.1 Effectiveness of CLTS and other sanitation interventions/approaches

Venkataramanan and Shannon (2016) and Croker et al. (2021) also averred in their related studies, explaining further that CLTS is widely seen as a universally applicable approach for rural communities, but however, the characteristics of communities may result in diverse outcomes. In assessing change and progress in triggered communities, baseline situations have to be properly understood and that, CLTS often times attempted to put people on the sanitation ladder by convincing them to stop OD. The study of Crocker et al. (2021), again stated that in improving sanitation, other approaches such as sanitation marketing (the application of the best social and commercial marketing practices to change behaviour and to scale up the demand and supply for improved sanitation, particularly among the poor) could be applied in addition to the CLTS approach. Venkataramanan and Shannon (2016) also explained further that CLTS attempts to trigger collective change through facilitators who encourage and motivate people to analyse the impact of open defecation in their communities and take action on their own.

Crocker and associates stipulates that CLTS is a community-led process which involves community leaders taking charge of their own sanitation situation. The study further noted that CLTS monitoring activities comprised a variety of processes and outcome indicators but ultimately focused on achieving free open defecation and that latrines built as a result of CLTS were often of poor quality which affected the sustainability of CLTS outcomes. In order to improve understanding of CLTS effectiveness and sanitation outcomes in communities, Venkataramanan and Shannon (2016) postulated that these communities must stay bound to the actual approach that has been implemented. They further highlighted that CLTS practitioners needed to carefully consider sanctions that

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actively encourage participation in practice. The study investigated how CLTS is employed in various continents in these countries (Cambodia, Lao PDR, Nepal, Indonesia, Uganda, Niger, and Haiti). However, their research did not pay specific attention to CLTS implementation in Ghana, precisely the northern sector.

2.3.2.2 Potential effects of CLTS implementation

Okolimong et al. (2020), on the effect of a CLTS intervention on sanitation and hygiene in the Pallisa District of Uganda whereby they examined the potential effects of CLTS implementation on sanitation and hygiene status focusing on knowledge, latrine and handwashing status and prevalence of diarrhoea in children younger than 5 years and ODF status. The results of their study indicated that, CLTS was effective in improving knowledge levels of communities on sanitation and hygiene. Further, their study revealed that, the community's exposure to CLTS processes such as pre-triggering, and post-triggering sessions as well as follow-up visits were very important in CLTS implementation as it is a way to broaden their knowledge levels on sanitation and hygiene. Again, their findings revealed that, community members who were more knowledgeable on sanitation and hygiene were more likely to adopt better sanitation and hygiene practices as this determines the individual's attitude to adopt positive behavioural change. Okolimong and associates further noted that, CLTS trigger communities to demand for sanitation and hygiene facilities and adopt sustained behavioural change leading to abandonment of their OD practices.

Sarpong (2010), similar to Lawrence et al. (2016), in his research on children's involvement in CLTS during project interventions, highlighted the importance of involving children in CLTS. His research was done in Oboyambo community in the

Central Region of Ghana. Also, Venkataramanan et al. (2018) in their study on systematic review of journal-published on CLTS from seven databases and sixteen websites on the quality of CLTS activities indicated that CLTS programmes do not uniformly follow guidance on technical support since most communities are self – focused on identifying solutions in stopping OD. They further argued that CLTS programmes should routinely incorporate technical support into the post-triggering stage. However, the sample size used in their study seem to be inadequate for analysis to be made and conclusions drawn.

In another study by Bevan and Thomas (2009) on community-based sanitation approaches in West Africa expounded that community-based approaches to complete sanitation focused on behaviour change and total sanitation had impact on some parts of Africa. Kar (2010) noted that community approaches to total sanitation stipulated a set of guidelines of best practice from global community-based sanitation programming that consist of community leadership, behaviour change and elimination of OD. The study of Bevan and Thomas (2009) further explained that CLTS tended to be more successful as a result of the triggering process during the dry season. They further argued that sensitization and adaptation of the approach to the needs of the community looking particularly at the marginalized and extremely poor is required for successful CLTS implementation. Kar (2005) in his guide identified that CLTS must be built from within the community with wider dissemination both laterally and organically. Bevan and Thomas (2009) further claimed that facilitation of CLTS implementation was key to a successful dissemination of community approaches for total sanitation especially at post-triggering stage.

2.3.2.3 CLTS implementation in Ghana

A study on the effectiveness and mode of CLTS operation in Ghana indicated that, CLTS was adopted in Ghana as a method for promoting basic sanitation in the rural areas. This substituted the support form of sanitation (subsidy sanitation approach), which had failed to put an end to OD practises after its implementation lasted for several years (Harter & Mosler, 2018). Since its adoption in Ghana in 2010, the country has made some efforts to scale up CLTS to all districts. In a research conducted by Radin et al. (2020) on Ghana's CLTS implementation, it was revealed that the idea behind CLTS was to focus on behavioural change at the community level that would ensure a sustained demand for latrine use.

In the same vein as Novotny et al. (2018), they found out that CLTS was a behaviour change campaign that aimed at making communities free from OD. They highlighted that CLTS subsidy intervention aims at improving sanitation technology to households for proper construction of latrines. Employing the benefit-cost model, their study found that households with different types of latrines statuses offered a higher quality latrine. Attention was also drawn to the fact that, CLTS is achieved through various exercises designed to make people more aware of their current unsanitary conditions and practices. The research further explicated that the stages of CLTS which sought to elicit a sense of shame that will motivate community members to engage with and change their sanitation behaviours and construct latrines.

Novotny and associates expounded that, traditional CLTS intervention and CLTS subsidies intervention was more likely to exceed costs which may provide higher returns on investment, compared to other sanitation interventions. They further noted that the

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traditional CLTS and CLTS with subsidies were more attractive in most cases than other investments but sometimes the CLTS with subsidies came with its own issue of ownership and or usage challenges. It is worth noting that, CLTS implementation through the Government-led project focussed its intervention on 5 out of the then 10 regions including; Northern, Volta, Central, Upper West and Upper East. While studies found that, some of the districts across the 5 Regions who benefitted from the Government-led project recorded successes, the same cannot be said for other districts as there are still some challenges that need to be addressed (Harter & Mosler, 2018).

2.3.3 **Challenges confronting the implementation of CLTS**

Sah and Negussie (2009) have asserted in a study on: Addressing CLTS scale and sustainability issues in Rural Africa that, OD remains a great challenge particularly in Sub-Saharan Africa despite efforts over the years to deal with the phenomenon. According to them, there was a 30% increase in open defecation in Sub-Saharan Africa between 1990 and 2004. Citing interventions by various Non-Governmental Organizations (NGOs) to deal with and improve sanitation within Sub-Saharan Africa, Sah and Negussie noted that none of these interventions met their ultimate goal of implementation. They added that the failure of previous interventions in the sanitation section led to the development and pioneering of the CLTS concept or model by Kamal Kar in Bangladesh. Even though this sanitation model has helped improve sanitation in many communities, it was identified that some challenges still hamper the scaling up of CLTS in many parts of Sub-Saharan Africa. According to Sah and Negussie (2009), some of these challenges identified included;

- Communities where subsidy has been provided in the past are less receptive to implementing CLTS and triggering is much more challenging. Future subsidies by other NGOs or the government may have negative effects on what the CLTS process achieves.

- There are differences in natural leaders' efficiency and commitment, commitment among stakeholders and understanding including the ability to follow the CLTS approach and steps.

- There is a severe shortage of skilled staff who can effectively and efficiently facilitate the CLTS process. Insufficient personnel numbers have hampered continuous follow up and monitoring resulting in loss of interest.

- Community facilitators need to trigger action in manners that do not result in shaming and disgusting of the communities. A community leader in Tanzania indicated that; ''*Sikufurahia kuambiwa tunakula kinyesi, sio utanzania kuongea hivyo*''. Meaning, they do not feel good if facilitators tell them they eat one another's faeces, it is not usually said plainly like that in Tanzanian.

- Government policies must be changed through advocacy so that CLTS is recognised as a successful methodology for creating ODF communities that live in dignity'' (Sah & Negussie, 2009).

In another study, Oluwatuyi et al. (2020) acknowledged that since the adoption of CLTS in Nigeria, it has been scaled to some deprived areas just like the findings of Harter,

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Inauen, and Mosler, (2020) for that of Ghana. However, Oluwatuyi and colleagues speculates some major challenges still exists which can be leveraged on as a point of evaluation by the Nigeria Government in order to identify possible areas of improvement. Oluwatuyi and colleagues identified some CLTS challenges in Nigeria, including socio-cultural factors, geophysical soil conditions (sandy, rocky, etc.), over-reliance on subsidies, population, poverty, literacy, untrained personnel, and the attitude of some communities (households), among others which are similar to some of the challenges identified by Sah and Nuggessie (2009) in CLTS study in rural Africa.

As a result of these ongoing challenges, the researchers identified a number of health issues that will persist due to improper sanitation, particularly OD practises resulting from ineffective CLTS programme implementation. Communities where socio-cultural barriers/socio ethno-geographical factors cannot be overcome, or communities that fall into any of the categories of the challenges identified in this study, will undoubtedly struggle to achieve healthy status. With effective facilitation, the end result is usually likened to setting fire in a gas station. As part of breaking down the barriers/challenges identified, facilitators should not be hesitant to solicit for the assistance of community and natural leaders in order to reduce perceived beliefs, taboos, and superstitions while concentrating on creating a plan to stop OD and achieve comprehensive sanitation. The study recommended that, government's commitment to the development of skilled facilitators, stakeholder engagement, collaboration with the health sector (public), as well as the empowerment of health institutions should be considered in order to expand the CLTS programme to remote communities. They emphasised once more that in order to secure comprehensive coverage of local communities in Nigeria, CLTS requires effective

mobilisation, lobbying, and a sizeable financial commitment from the government at all levels. Investigate how agencies, global organisations, non-governmental organisations, and charitable organisations may help Nigeria achieve the CLTS objective.

Although the study used qualitative research approach and unveiled some substantial findings, the study had some limitations. Applying phenomenology as a research design and gathering data from the community members through interview and questionnaire would have given a more substantial, accurate and dependable data for the study for national and academic development. Again, the study was done in the context of Nigeria only and hence, findings could therefore not to be generalized.

2.3.3.1 CLTS as a gendered approach

Contrary to Novotny et al. (2018) and Radin et al. (2020), Davis (2015), in his study emphasized on gender and CLTS approaches and how a gendered approach to this subject matter improves hygiene and sanitation. To Davis (2015), one of the most notable strategies put in place to curb hygiene and sanitation problems is the CLTS approach. He went on to say that it has been proven and is internationally recognised as a method for achieving and maintaining open defecation free (ODF) communities, which is a first step toward universal improved sanitation. Just like Davis (2015), Harter (2019) in her study on the effectiveness of CLTS in promoting safe sanitation revealed that, CLTS implementation and practise has resulted in some positive gender outcomes, such as increased respect for women's contributions, improved community interactions, and decreased domestic violence. Davis' study, which was conducted in a small number of communities in Madagascar, looks at how gender influences the experiences and outcomes of the CLTS approach to sanitation and hygiene.

Using qualitative research methods, the study makes use of gender dynamics - common issues and patterns - in four villages covered by the Global Sanitation Fund in Madagascar (FAA) in the Itasy Region of Madagascar. The Itasy region was chosen because it is one of the FAA's longest-serving regions, as well as the villages are easily accessible for conducting interviews and are close to the capital, Antananarivo. Semi-structured interviews with 30 community members, six FAA staff and partners, and three sanitation and gender experts were used to collect empirical data. The findings and analysis of the study demonstrated that where the CLTS process has been applied, there were positive outcomes for both sanitation and the empowerment of women. According to the study's findings, both men and women believe women have less ability and opportunity to actively participate in village meetings, primary governance, and decision-making forums. The data also confirmed that women did not participate as actively in decision-making in CLTS-specific meetings, such as triggering and post-triggering sessions. This suggests that when developing community solutions to sanitation problems at the time of the study, women's suggestions and needs may not have been adequately considered. The study concludes and recommends that women in Madagascar be empowered and given a voice in issues concerning hygiene and sanitation (Davis, 2015).

2.3.3.2 The dynamics and sustainability of CLTS

In a study on the dynamics and sustainability of CLTS: mapping challenges and pathways, Movik and Mehta (2010) found that, despite the success stories the model has documented since its inception, CLTS still faces some challenges in terms of scope and impact. The study also revealed that, up to this point, the CLTS approach appeared to be unplanned prior to implementation, relying solely on CLTS champions available at both the district and community levels. Unfortunately, these CLTS champions/leaders are not

available at the national level to support with policies that prioritise CLTS project implementation and coordination. They again highlighted that CLTS implementing NGOs face the challenge of meeting official implementation schedules and dealing with bureaucratic delays because different actors must be brought together in the CLTS approach to help in scaling the sporadic victories so that CLTS concept achieve a critical mass.

Scaling up CLTS in Kenya: opportunities, challenges, and lessons was also investigated by Musyoki (2010). According to the study, over the years, donor-funded sanitation programmes have focused on developing affordable latrine models that could be 'fake,' but these efforts have failed to scale up. This is due to two flawed assumptions: first, that people do not build and use household latrines because they are too poor; and second, that cheap and affordable latrine models are all that is required as a solution to OD practises. It has also been revealed in the literature that, if people appreciate the importance of living in a sanitised and hygienic environment, they will do everything possible within their means to stop OD, improve their sanitation conditions and use locally available resources to put up sanitation structures and with time go up the sanitation ladder without external subsidies (Musyoki, 2010).

The study also noted that, while CLTS was implemented at the same time, the response and outcomes were different, with uptake being faster on the Kenyan Coast and much slower in other parts, resulting in only a few places being focused on full implementation of the CLTS. The study recommended that the practise of 'no allowances payment' should not be limited to only CLTS, but also, be extended to all collaborative projects undertaken by development practitioners in collaboration with the government.

2.3.4 **Strategies for improving CLTS towards sustainable ODF statuses in Communities.**

2.3.4.1 Dynamic ways towards sustaining CLTS

With regard to ways/strategies aimed at improving upon CLTS geared towards sustainable ODF communities, Movik and Mehta (2010) studied the dynamics and sustainability of CLTS. An appreciation of inherently dynamic systems, according to some authorities, aids in a better understanding of sustainability (Movik & Mehta, 2010; Harter, 2019). These authorities emphasised the importance of distinguishing between a system's structure and its operation once more. As a result, the various ways in which individuals perceived these structures and how they functioned has an impact on their understanding of sustainability. They concluded the study by highlighting the importance of diversity and dynamism in the approach to CLTS, as well as the participation of all relevant stakeholders.

Unlike Movik and Mehta (2010), Radin et al. (2020) did a Benefit-Cost Analysis of CLTS by incorporating results from recent evaluations and analyses regarding the costs and benefits of CLTS, a sanitation intervention that relied on community-level behavioural change in a hypothetical rural region in Sub-Saharan Africa where 200 villages and 100,000 people were studied. Radin et al. (2020) concluded by suggesting that many communities will have economic investment opportunities that are more attractive than CLTS. It was recommended that careful economic analysis of CLTS in specific locations should be done.

In a study in five communities in the Kumbungu District, Anas (2020), uncovered that there was a rise in sanitation related diseases resulting from non-availability of latrines in

households and lack of clean water resources. She suggested that, while natives should be positive about CLTS, the government should also pursue a rigorous health education programme to build their knowledge bases and positive attitudes toward the CLTS processes. The government should also combine CLTS with health education in order to increase both their knowledge and positive attitudes toward the processes of CLTS.

In another study on urban sanitation and the environment, Berendes et al. (2018) investigated on the relationship between sanitation and faecal contamination in public environments in 4 neighbourhoods with low-income status in Accra. They argued that exposure to faecal contamination in dense areas significantly contributed to enteric infection risk. Their study recommended the clustering of contained household sanitation which can sometimes lead to lower level of faecal contamination within drains in the public domain. They highlighted that the health risks associated with poor sanitation were complex due to exposures to faecal contamination and they further suggested the regular emptying of onsite containment system as necessary to providing safe and sustainable sanitation in urban areas.

2.3.4.2 Impact of CLTS on latrine ownership

Harter et al. (2020) in their quantitative research on how does CLTS affect latrine ownership in Ghana? noted that a strong sense of cohesion as well as inclusion and firm solidarity between residents served as a basis on which CLTS can work successfully. Harter and associates indicated that the process of CLTS intuitively affects the factors in the mind-sets of individuals that sought to change their behaviour with regard to latrine construction. Thus concluded that CLTS is successful in evoking change among people in a variety of cultural settings.

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A cross-sectional case study together with Risks, Attitudes, Norms, Abilities and Self-Regulation (RANAS) model of behaviour change, Harter et al. (2018) studied how CLTS affected latrine ownership in Mozambique. Using logistic regression analysis, Harter et al. (2018) asserted that, crucial factors such as positive social context are a prerequisite for a successful CLTS process. Harter and associates further added that CLTS appears to cause a snowball effect through which many community members also construct household latrines. The research indicated that, behaviour change is transferred in determining latrine ownership. They further stated that pre-existing social context factors helped in the construction of latrines in some selected communities of Northern Mozambique. The authorities also discussed that end-line surveys should be adopted in uncovering changes in the frequency of latrine construction and behaviour changes.

Harter et al. (2020) applied the same RANAS model to focus on the psycho-social determining factors of CLTS in a longitudinal design. The study sought to determine whether applying the risks, attitudes, norms, abilities, and self-regulation (RANAS) model using evidence-based interventions could improve CLTS effectiveness. The trial study was carried out in two districts; Sawla-Tuna-Kalba and Bole in the Northern part of Ghana. A total of 132 communities were chosen from these districts based on criteria such as having at least 25 households. However, to obtain the 3125 households sample required by their statistical approach, an additional seven communities were included, and 25 households interviewed in each, where possible.

The study found that the effects of CLTS on latrine construction were significantly mediated by changes in four determinants: others' behaviour and approval, self-efficacy, action planning and commitment, changes in vulnerability, severity, and barrier planning

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were positively related to latrine construction but were not affected by CLTS. Hence, behaviour change techniques that fortified the relevant factors within CLTS should be sustained. Furthermore, the authorities revealed that medical costs for OD-related illnesses such as diarrheal diseases were calculated and compared to costs for latrines constructed from local materials. This was done to help participating communities understand the importance of having a latrine in order to avoid OD-related illnesses. Harter and associates concluded by recommending the application of the RANAS model in programme interventions as a way of improving CLTS. More research is needed, however, to understand the effects of RANAS-based interventions combined with CLTS over longer follow-ups.

2.3.4.3 Improving CLTS from a community's perspective

Another study was conducted by Kumar et al. (2012) on community-based approach on how CLTS can be improved in Indonesia. The authorities found that, improving follow-up processes and practises at the community, district, and all other levels to ensure effective and excellent training during triggering, and monitoring and follow-up after triggering is critical for the success of CLTS. Implementing a system where an independent team verifies the villages as ODF before declaring their status as ODF is one of the most important aspects of the entire exercise. Investing in high-quality training is critical because it determines the triggering quality, post-triggering follow-up at the village level as well as other supporting factors (Kumar et al., 2012; Mansour & Esseku, 2017). Kumar and associates indicated that, a combination of factors ultimately determines the accomplishment of sustainable ODF communities, and at some point, strategic ways of strengthening the CLTS pillar of the national sanitation strategy and its scaling up is required to solve these key issues;

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- District-wide policy and programme approach with no a no-subsidy.

- In-depth training of CLTS trainers and facilitators at the district and regional levels to build their capacities on facilitation.

- Effective triggering that can lead to a community's decision to abolish OD and the adoption of a coordinated local response to help the community reach its goal(s).

- Effective monitoring and following up after triggering (post-triggering).

- Independent assessment and verification of communities who declared themselves ODF villages (Kumar et al., 2012).

However, the study was unable to increase its sample size to cover the entire country. Given that Indonesia has 465 districts, sampling only three districts represent not up to 1% of the entire country. In the same vein, given the country's 65,000 villages, sampling 12 villages from it is empirically insignificant. This constraint, which may be as a result of resources and time challenges, may be overcome by focusing and orienting the research primarily on qualitative issues.

One of the study's implicit assumptions, supported by other previous studies (particularly the March 2012) - Water and Sanitation Programme (WSP) research on; achieving sustainable ODF communities (learning from East Java) was that CLTS could result in more rapidly and sustainable outcomes on the ground such as recording higher numbers of ODF communities across the country. Nevertheless, caution must be taken to avoid manifesting bias in the study's findings as a result of this assumption which would

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negatively impact the rigour and quality of the research. Another method of mitigating any biases in the CLTS context would have been to include an ODF community that was not achieved through CLTS (if any) as one of the 4 villages selected.

2.3.4.4 Role of implementation factors for the success of CLTS on latrine coverage

In another study by Harter et al. (2019) on the role of implementation factors for the success of CLTS on latrine coverage in Rural Ghana, they noted that CLTS describes the approaches to stopping open defecation in rural areas by motivating participants to construct household latrines and reach high latrine coverages in target communities. Multiple regression analysis revealed that latrine coverage was significantly related to attendance at the CLTS meeting, the number of supportive community leaders, the expectation of participants of receiving an incentive, and the number of follow-up visits. The results from their study revealed that, the chances of owning a latrine by households'/community members who took part in a transect walk was about nine times higher than those that did not participate in the walk of shame. Contrary to Sah and Negussie (2009) regarding the provision of incentives, their study came to a conclusion that, the success of CLTS can be improved by investing in follow-up visits, support of local leaders, and the careful application of incentives. They reiterated that, CLTS facilitators should therefore focus their attention to the processes following the community meetings.

Some key strengths were noted in their study in that, for the first time, several factors (community size, community composition, location, etc.) describing the implementation process were compared against each other on their role for the success of CLTS. Implementation of CLTS was realized across a broad range of contextual settings and

demographic (community size, community composition, location), so the results held strong external validity. CLTS, as implemented in this study might be considered scalable both for other regions of Ghana and for other countries in West Africa.

There were however some limitations of the study that needed to be considered. The study used cross-sectional data from only onetime point and therefore does not allow for causal conclusions on the influences of implementation factors of CLTS on latrine coverage. Another limitation is that the study did not take into account the initial community conditions that influenced the success or failure of CLTS, such as community social context, which has been shown to be important to CLTS success. Furthermore, the study did not consider interactions of different factors, which should be included on future research agendas, as well as manipulation of different ways of CLTS implementation; thus, the aforementioned limitations have allowed for additional research to be conducted in the area.

2.3.4.5 Sustainable pathways for CLTS

According to Movik and Mehta's (2010) study on the dynamics and sustainability of CLTS: Mapping challenges and pathways, what distinguishes CLTS from previous community-based approaches such as top-down toilet construction is the emphasis on facilitation instead of training. Rather than educating and telling them what is best with regard to proper sanitation and hygienic practises to adopt, CLTS model resort to instilling a strong sense of self-awareness in them, which triggers action. The study also stated that distinguishing between a system's structure and its functioning is critical to appreciating the sustainability of dynamically interacting systems.

Diverse groups may emphasise different areas of a system, and this diversity, as well as the implicit trade-offs and the potential challenges they pose for scaling up must be explicitly acknowledged (Crocker, Saywell, & Bartram, 2017). Movik and Mehta went on to say that because of the complexity of system dynamics and the diverging ways of perceiving and assessing such dynamics, there were bound to be disagreements about what factors matter most in CLTS and how to respond to shocks and stresses. Finding sustainable paths, then, entails making decisions that explicitly acknowledge these various points of view and contestations, as well as clearly defining the desired goals and trade-offs. Thus, acknowledging that, all participants, whether community members, government officials, NGO staff, activists, or academics, are necessarily positioned and partial. Whether CLTS is framed as a path to better sanitation or, more broadly, as a route to empowerment, it is a normative issue that connects it to both overarching goals of poverty reduction and social justice. It as well provides the specific ways in which different groups define and refine these goals in a given setting (Movik & Mehta, 2010).

Crocker et al. (2017) confirms the study of Movik and Mehta (2010) that, there is the need to be aware of the dynamics and different understandings that exist with regard to these approaches, and to focus on adaptive learning and experience exchange. Such cross-fertilisation efforts could be usefully explored through the institutional hubs of networking and experience sharing that are required to scale up CLTS, and could potentially offer huge benefits in terms of charting new, more robust, and long-lasting sanitation pathways.

2.3.4.6 Opportunities and lessons for CLTS scale-up

Musyoki (2010) noted in his study on Scaling up CLTS in Kenya: opportunities and lessons that ensuring the right institutional culture is created is essential for the successful implementation of CLTS. This necessitates the identification of champions who understand the CLTS philosophy and are capable of monitoring and assisting frontline staff in observing them. Instead of working through a loose, sporadic arrangement that leaves CLTS scaling up to isolated individuals, there is a need to build strategic partnerships with relevant players at various levels. This is consistent with one of the challenges of CLTS implementation identified by Movik and Mehta (2010), which is that CLTS leaders and champions are typically at the community and district levels and are not available at the national policy level to assist in facilitating the prioritisation of sanitation projects and assisting in activity coordination. The study also stated that by using a systematic deliberate approach and committing institutions to CLTS, the process will evolve into a self-facilitated and spreading movement or practise that can be sustained within the existing structures. Plan Kenya is in the process of establishing a small CLTS Unit (with a minimum of three staff) whose mandate will include advocacy, hands-on training (including mentorship and coaching), monitoring, evaluation, research, and documentation. The unit would also play an important role in networking and partnership development to facilitate sharing and learning among practitioners in Kenya, the region, and around the world. According to Musyoki's findings, in order for CLTS to be scaled up with quality, it must be more strategic and systematic in its implementation, which necessitates the establishment of strategic partnerships and support structures at various levels (national, district, and community) as well as the designation of specific

staff and resources for functions such as coordination, monitoring, evaluation, research and documentation.

A study by Oluwatuyi et al. (2020), on a dive into CLTS challenges in Nigeria and the way forward, investigated how facilitators can harness the available positivity or benefits of community members' participation in the CLTS programme. According to their study, this strategy aids in harnessing the potentials of numerous community members to assist in cleaning the community and instilling proper and habitual hygiene protocols in the community. The study revealed that, before the start of the CLTS programme, it is critical to establish or determine the leadership setup of the community, their beliefs, norms and cultural, as well as the different areas of positive change that exist in the community. This is especially needed when dealing with varied ethno-geographical settings. As a result, CLTS facilitators will be better able to identify opportunities if they have a good understanding of the community's socio-cultural practises. This would enable them to successfully break the norms and barriers and capitalise on opportunities, resulting in a positive trigger of behavioural change. According to the authorities, studying the context and adapting the right trigger is critical for improving CLTS implementation. That is, it is critical to understand the appropriate mechanisms and tools required for triggering communities. The authors also stated that exploration of individual behaviour or as a group is evident. As a result, facilitators should be able to reach a point where the community is making a concerted effort to change attitudes and accept responsibility for ending OD. The declaration of such an effort can begin with a person (which could be a Natural Leader, Chief, Assemblyman, etc.), and the facilitator must be on the lookout for ways to amplify that person's voice until it becomes a collective decision.

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Another study on how rural communities sustain sanitation gains, with a focus on Cambodia and Ghana, by Tribbe et al. (2021), revealed that CLTS is a widely known intervention for eliminating OD in rural communities. Earlier studies, according to the authorities in this study, investigated the contextual and programmatic factors that influence the outcome and performance of CLTS. However, little is known about the conditions that sustain latrine coverage and use at the community level (Mosler, Mosch & Harter, 2018). The study hypothesised three types of community conditions as the foundation for CLTS sustainability: engagement of community leaders, intensity of monitoring and follow-ups, and assistance to poor/vulnerable households. These three hypotheses were tested in Ghana and Cambodian communities.

According to the study report, they applied fuzzy-set Qualitative Comparative Analysis (fsQCA) to identify the sequence of conditions that influenced current latrine coverage and household latrine use. Tribbe and colleagues discovered that active leaders, intensive pro-poor support, more follow-up visits to track progress against actions, and continued post-ODF monitoring resulted in high latrine coverage and consistent latrine usage in Ghana.

In Cambodia, on the other hand, high latrine coverage was observed in communities with active community-level CLTS leaders rather than traditional leaders. In Cambodia, latrine use was also lower in communities with high community engagement, pressure from traditional leaders, monitoring and follow-up, and financial support to vulnerable or poor households. As a result, they concluded their study by stating that there is evidence regarding the critical role community leaders played in ODF achievement and sustainability, which is contextually based on country specifics. Traditional leaders (such

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as community chiefs, elders, and so on), Water and Sanitation Management Teams (WSMTs), natural leaders (such as community members who were chosen or volunteered to support the programme), and political leaders were among these leaders (that is, elected officials). Similarly, Huda (2009), in his research also found that communities with active natural and traditional leaders had higher latrine coverage due to ongoing post-ODF follow-up than communities without active natural and traditional leaders.

2.4 Summary of Chapter

The chapter reviewed some of the models that underpinned the research. The chapter conceptualised the study and further reviewed literature on; Triggering tools and processes used in CLTS towards ODF statuses in communities, Challenges confronting the successful implementation of CLTS programming, CLTS outcome practises in ODF communities towards achieving Sustainable Development Goal 6 (SDGs) and some ways to improve the CLTS towards sustainable ODF statuses in communities. The next chapter seeks to look at the methodology guiding the study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the research methods/approaches used in the study. The section delves deeper into the study area by providing information on the study area's profile, research philosophy, research design, target population definition, sampling techniques, sample procedure and data collection instruments, sample size, and methods of data analysis. The chapter concludes with the ethical considerations that were used. The purpose of this chapter was to examine the methodology that guided the study.

3.2 Profile of the Study Area

The research area for the study is the Bawku West District in the Upper East Region of Ghana. The Bawku West District is one of the 260 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, and it forms part of the 15 municipalities and districts in the Upper East Region. The district is located in the north-eastern part of the Upper East Region with Zebilla as the administrative capital. The district shares boundaries with Burkina Faso to the North, Bawku Municipality to the East, Talensi/Nabdam District to the West and East Mamprusi District to the South. It lies roughly between latitudes 100 30'N and 110 10'N, and between longitudes 00 20'E and 00 35'E (Ghana Statistical Service, 2014).

3.2.1 **Population Size, Structure and Composition**

According to the 2021 Population and Housing Census (PHC) report by the Ghana Statistical Service, the demographic characteristics of the district include large household sizes**.** The report also showed that the population of the district stands at 144,189 with

70,781 males and 73,408 females (Ghana Statistical Service, 2021). Males constitute 49 percent while females represent 51 percent of the district's population. About ninety (90.8%) percent of the population is rural. The district has a sex ratio (number of males to 100 females) of 92.2. The population of the district (less than 15 years) is youthful (45.1%) depicting a broad base population pyramid which tapers off with a small number of elderly (65 years and older) persons (6.9%). The total age dependency ratio for the district is 108.6, the child dependency ratio is higher (94) than old age dependency ratio (14.4). The study area was purposively selected because it is also part of the areas where Water, Sanitation and Hygiene Management projects have been sited.

3.2.2 **Water, sanitation and waste disposable in the District**

The 2021 Housing and Population Census revealed that, the main source of water for drinking in the district is bore-hole/pump/tube well which represents 65.2%, followed by protected well representing 14.1%. The use of bottled water and other forms as source of drinking water is non-existent in the district. Similarly, for the main source of water for other domestic use, borehole/pump/tube well is the predominant source representing 64.5%, followed by protected well (14.4%). However, rain water which represents 0.1%, tanker supply/vendor provided representing 0.1% and others also 0.1% are the least used water sources for other domestic purposes.

In terms of bathing and toilet facilities, data shows that majority of households (86.3%) use no facility (bush/beach/field), followed by KVIP (6.6%). Also, the least used toilet facilities by households are bucket/pan (0.1%). Majority of households also use own bathroom for exclusive use (43.7%), followed by private open cubicle (23.3%). The least used bathing facilities by households are bathroom in another house (0.1%).

The 2021 Population and Housing Census again revealed that, about 29% of households dispose of their solid waste by burning. With regards to liquid waste disposal, 47.5% of households in the district dispose their liquid waste onto their compound. Figure 3.1 is a map of the Bawku West District of the Upper East Region of Ghana showing communities within the district where data was gathered for the study.
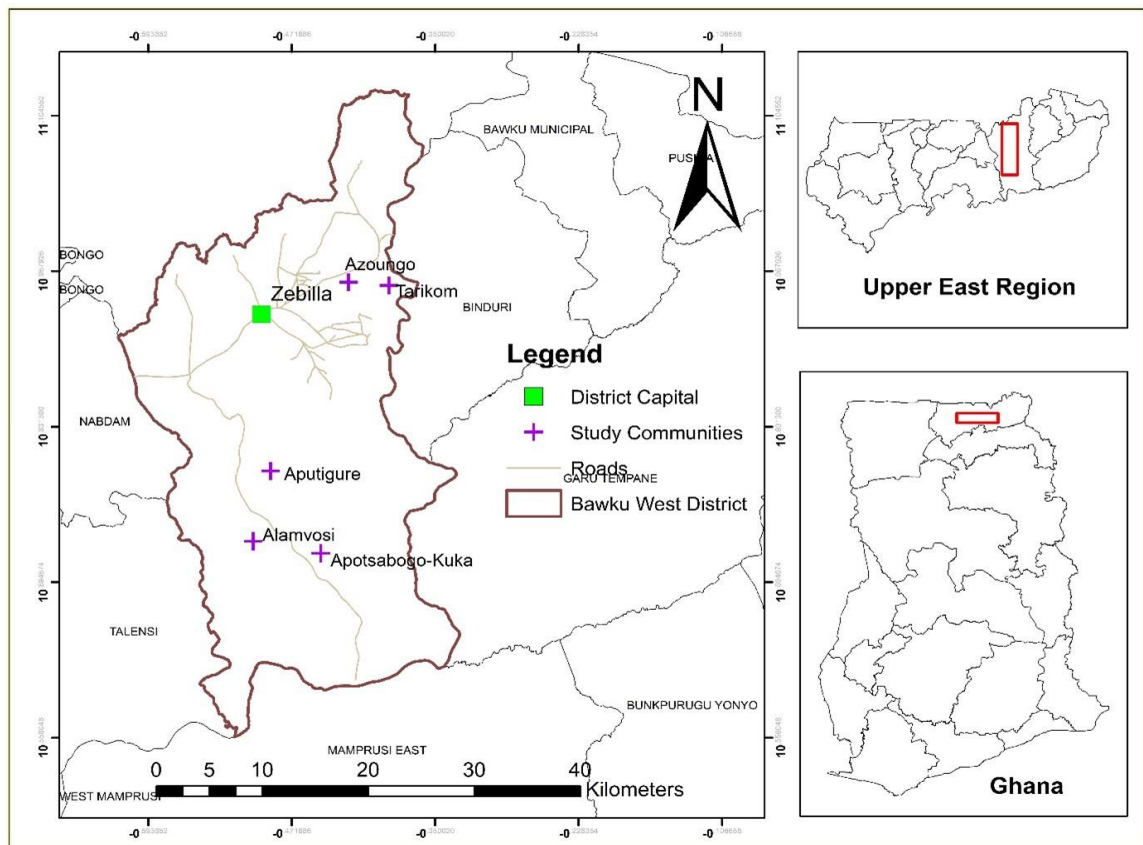
Figure 3.1: Map of Bawku West District/Upper East Region
Source: Baddianah (2022).

3.3 Research Philosophy

Every research methodology is bounded by a philosophy or paradigm which guides the study. In view of Kamal (2019) and Creswell (2003), methodological process of a research is influenced by the philosophical ideas about the nature of reality, values,

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knowledge, as well as the theoretical framework that informs comprehension, interpretation, book selection, and research practice on a given area of study. According to Schwandt (2001), a paradigm is a shared world view that represents the beliefs and values in a discipline and that guides how problems are solved. Based on the above, research paradigm is therefore significant in every research. Given this, the Interpretativist or the Constructivist paradigm was applied for the study. According to Kamal (2019), interpretativist research paradigm posits that knowledge is subjective to individuals because it is usually constructed socially and dependent upon the mind and how it perceives it. This philosophy says that, the truth lies within the human experience, perceptions and behavior. This implies that, it puts into consideration the experiences, perceptions, stories, norms and belief systems of the people within their natural environment where the participants live and that is their legitimate knowledge. Hence, the justification as to why the current study seeks to assess CLTS model towards ODF communities in Bawku West District.

3.4 Research Design

The case study survey approach was used to guide this study. The case study design is an investigative tool that is commonly used in studying social phenomena (Baxter & Jack, 2008; Kusi, 2012). Qualitative approaches to data collection were used to gather data from respondents. Baxter and Jack, (2008) and Denzin and Lincoln, (2005) posited that qualitative research provides an "interactive naturalistic approach to the world". In effect, qualitative research studies things in their natural settings (i.e. as they are) in an attempt to make sense of the information collected or interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005).

According to Korstjens and Moser (2017), qualitative research is a kind of research that probes and comes out with deeper insights into real-world problems. It helps to gather participants' experiences, their perceptions, and behaviours. It also seeks to answer the how and why whose answers are not easily put into numbers unlike the how many or how much (Korstjens & Moser, 2018). Generally, qualitative research design is not linear in the same way quantitative design is because of the open-ended nature of the research questions (Cleland, 2017). Phenomena such as behaviours, experiences, attitudes, among others can be difficult to quantitatively capture accurately. As a result, qualitative approach allows participants themselves to explain how, why, or what they were thinking, feeling, and experiencing at a particular time or during an event of interest.

Hence, one of the strengths of qualitative research is its ability to explain processes and patterns of human behaviour that can be difficult to quantify (Foley & Timonen, 2015). As indicated by Baxter and Jack (2015), qualitative case study is a research methodology that enables the researcher to explore a phenomenon within some particular context by gathering data through various sources, and it undertakes the exploration through variety of lenses in order to reveal multiple facets of the phenomenon.

Hence, the research design used enabled the researcher gather in-depth information concerning the nature and status of the situation on the ground as it existed at the time of the study.

3.5 Target Population

The target population constituted the Water and Sanitation Management Teams (WSMTs), Natural Leaders (NLs) and some community members who came from and lived in these communities. It is believed that, these WSMTs and NLs have in-depth

knowledge in the area of study based on their involvement before, during and after the intervention.

3.6 Data Collection Tools and Techniques

Semi-structured and open-ended Key Informant Interview (KII) Guide was administered to the NLs and WSMTs within the communities. It was divided into five main sections where section one delved into demographic data of respondents, section two sourced information on CLTS processes and triggering used towards ODF communities, section two was on CLTS outcome in the district, section three was on challenges hampering CLTS implementation in the district and the last section which is section five, sourced data on some of ways of improving the CLTS model to ensure positive outcomes of CLTS programme is sustainable. Also, a Focus Group Discussion (FGD) guide was used to interview adult households' members in the study communities who were 18 years and above. According to Lawrence et al. (2016), children are one of the influencers in enforcing messages and activities of sanitation and behavioural change. Hence, a FGD guide was also administered to children aged 10 to 17 years as way of seeking their views in the study area.

The essence of these FGDs was to help the researcher validate information gathered from the WSMTs and NLs. The first section of the FGDs was about some basic information of the communities regarding their sanitation such as number of existing and functional latrines, sources of water, among others. The rest of the sections sourced data on CLTS processes and triggering tools, CLTS outcome in their communities, challenges of the CLTS programme and some ways of improving the CLTS programme. Institutional interview guide was again administered to officials of District Water and Sanitation

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Agency, the District Environmental Health Department of the District Assembly, NGOs into CLTS, and a representative of community's health promotion officials from the District Health Directorate. These institutions and organizations are necessary in the study because they are usually the facilitators of CLTS programme intervention in the District.

3.7 Sampling Techniques

The study adopted purposive and convenient sampling to select targeted respondents for data collection. Purposive sampling is a non-probability sampling technique whereby the variables chosen for the sample population is dependent on the judgement and knowledge of the researcher and the context of the study (Etikan et al., 2016). According to Etikan and Bala (2017), if purposive sampling is done accurate, it helps the researcher take out irrelevant responses that is not related to the context of the study. To Korstjens and Moser (2017), once the criteria are well spelled out with the standards set for the systematic analysis based on the specific objectives, choosing units that provide meaningful responses can easily be done. Even though, purposive sampling is subject to the researcher's biases and may be ineffective in gathering data from a large population, it allows the researcher to gather qualitative data, which leads to better understanding and more accurate research results (Korstjens & Moser, 2018). Also, because the researcher collects information from the exact participants, the results are relevant to the research context (Korstjens & Moser, 2018).

Using purposive sampling for the study, the researcher selected key informants from Water Sanitation Management Teams (WSMTs) and Natural Leaders (NLs). Purposive sampling was again used to select respondents from Community Water and Sanitation

Agency staff, Water, Sanitation and Hygiene (WASH) officer from World Vision, District Health Promotion Officer from the District Health Directorate and District Environmental Health officer who all represented CLTS stakeholders at the District level. Convenience sampling was also used in selecting respondents who represented the six (6) FGDs. Convenience sampling or accidental sampling is a non-probability sampling method where the researcher selects sample members from easily accessible and available participants. Since CLTS involved all community members, it was necessary to gather responses from other community members (those above 18 years and children aged 10 to 17 years) in order to validate the data that was gathered from the NLs and WSMTs who represented the key informants for accuracy. These five selected communities at the time of the research, were verified and certified as ODF through the CLTS programme.

3.7.1 Sample Size

A sample size of 47 respondents from the various key informants and FGDs was used for the study. A summary of the various sampled stakeholders that were interviewed is indicated on Table 3.1 (institutional CLTS stakeholders) and 3.2 comprising of both community and institutional levels.

Table 3.1: District CLTS

Stakeholders in District CLTS	No of Respondents Contacted
Bawku West District Health Directorate	1
Bawku West District Environmental Health Unit	1
Community Water & Sanitation Agency	1
World Vision (NGO)	1
Total	**4**

Table 3.2: Community Level Interview

Community Selected	Population	WSMT Composition	Number of NL	FGD (Number of Participants)	Gender Composition
Azongo	1458	5	3	2(9 Women Group and 8 Men group)	Males and Females Separate
Apotsabgo-Kuka	1230	5	3	1/(12)	Mixture
Tarikom	741	5	2	1(10)	Mixture
Alamvosi	513	5	2	1(9)	Mixture
Aputigure	856	5	2	1(12) Children	Mixture
		25	**12**	**6**	
District CLTS			4		
Grand Total			**47**		

Source: Field study November, 2021

3.8 Sources of Data

3.8.1 **Primary Data**

The study used semi-structured interviews, focus group discussions guide, in-depth interview guide, and key informants' interviews guide. As part of validating data, the researcher embarked on transect walk within the communities while observing and interacting with a few community members. Data was gathered on CLTS processes, main triggering tools applied, project implementation issues or challenges, adaptation constraints and capacity building impact and changes in the design of the project and its impact. These techniques were adopted to gather data from Water and Sanitation

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Management Teams, Natural Leaders health promotion officer from Bawku West District Health Directorate, District Environmental Health Unit of the Bawku West District Assembly, Community Water and Sanitation Agency and World Vision. It was again used to source data using the FGDs which comprised of adult community members from age 18 and above and children group (between age 10 to 17). Having gathered the data through this first-hand information, the study was able to identify some opportunities that supported CLTS model towards achieving universal sanitation as well some constraints that worked against the CLTS programme from realizing its goal. Again, the study was able to establish the extent to which CLTS has contributed to ODF communities leading to the reduction or eradication of open defecation as well as promoting sanitation and hygienic practices and behaviours within the study area. The research also gathered historical data on socio-economic, environmental and institutional interventions at local and national government levels which provided strong basis that helped to attain the study objectives.

3.8.2 **Secondary Data**

Secondary data involved data sourced from evaluation reports, project appraisal documents, baseline and monitoring documents, quarterly reports, impact assessment reports, working papers, project documents, books and online/internet sources and draft materials produced by international aid agencies, Governmental bodies as well as Non-Governmental Organizations (NGOs) in the study area.

3.9 Data Collection Procedure

A letter of introduction was obtained from the Department which enabled the researcher to access the research site. The letter of introduction was presented to each of the

participants by the researcher and when granted the opportunity, the objective of the study was clarified to them. Interviews were scheduled with participants and each of them were later engaged according to the schedule. The various research instruments (key-informant interview guide and focus group discussion guide) were administered by the researcher after all of the formalities and modalities were duly followed and the appropriate consent of the participants/respondents was granted. The researcher then conducted personal interviews with the participants and these interviews were done in a manner that did not conflict with working hours for both the researcher and respondents.

3.10 Data Analysis

Interview data were analysed using thematic content analysis. In summary, the data were first transcribed, codified and compared with the note taken during the data collection. After transcribing and codifying the data, it was analysed based on the themes generated from the research objectives (Male, 2016). Data were interpreted based on the emerging patterns and contradictions that firmed the research findings in an empirical manner devoid of any bias in the study.

These steps through which the data were analysed, is further expounded as follows;

- ➤ Transcription: all tape-recorded data was transferred onto paper, read thoroughly and compared with notes taken in order to grasp the idea of what the data was about.

- ➤ Checking and editing of data: transcribed data that had similar meanings, were further divided into smaller units based on their relations. This was made possible by reading of each paragraph while capturing the various

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themes that was in each of the paragraphs. Themes that were similar were put together to make related units.

➤ Analysis and interpretation: meanings were assigned to the various themes generated from the second step. In order to achieve this, the researcher made meaningful understanding of the themes that were presented. The psychological interpretation made was then used as the evidence.

➤ Generalization: The similarities and differences that existed between the several interviews were ascertained and categorization or codification developed. The various units were then summarized and put into similar paragraphs (those related) while the differences were also grouped into individual or separate paragraphs.

➤ Validation of data: data validity was ensured by the researcher and a colleague was also made to read through the transcripts in order to validate the findings. Through these processes, the central theme was then obtained.

Also, some of the findings were quoted as reported by respondents as part of presentation of findings. In doing this, data that had similar or same meanings from across the various respondents, were put together to form one quotation for such respondents without losing the meaning or content. Also, those independent responses that made meaningful contribution to the study, were quoted as such. Going through these processes has helped to exhaustively address the research objectives of the study.

3.11 Ethical considerations

Social research is about people and also involves gathering data from people (Punch, 2005; Sarantakos, 1998). According to Israel and Hay (2006), there is the need to ensure protection of participants by; developing a trust with them, ensuring integrity of the research is promoted, guarding against any form of misconduct and impropriety that in anyway might reflect on their organizations, or institutions and cope with any new challenging problems. In view of this, permission was sought from the various stakeholders; organizations (both private and public), traditional authorities within those jurisdictions the study communities are sited and all other stakeholders involved. Apart from this, verbal informed consent was sought from participants at the beginning of every interview through to the end. Again, participants were given the options to withdraw at any point in time during the interview as and when they wished to. Participants or respondents were again told at most; what time duration the process was going to last for, right from the start of the interview. They were assured of confidentiality and anonymity of their responses they gave. This has been ensured through the use of pseudonyms to represent their responses as a way of protecting their identity. In cases where photos, recordings or videos were taken, respondents were informed and their consent sought before that was done. Where children were also involved, consent was taken from their parents and the children as well before pictures, audios or any other data was gathered from them.

3.12 Summary of Chapter

This chapter assessed the research methods that the study adopted for gathering information or collecting data based on the objectives of the study. The chapter contains the study area, profile of the study area, research philosophy, the research design, the

definition of the target population, sampling techniques and data collection instruments, sample size, sources of data, ethical consideration, and methods of data analysis on data that was collected. This would help in better interpretation and discussion of subsequent chapters. The next chapter which is chapter four, presents the findings of the study based on data gathered from respondents.

CHAPTER FOUR

RESULTS

4.1 Introduction

The chapter presents analysis on participants' socio-demographic characteristics which include; sex, level of education, occupation, and community of residence. The chapter also reports findings on the triggering tools and processes used in Community Led Total Sanitation (CLTS) model toward Open Defecation Free (ODF) in the study area. Results on the outcome of CLTS practices in ODF communities; challenges of CLTS in the District; and possible ways of improving CLTS towards ODF in the Bawku West District are also presented.

4.2 Socio-demographic characteristics of respondents

The socio-demographic characteristics of key informants' respondents who participated in the study (25 WSMTs, 12 NLs and 4 institutional CLTS champions) are hereby analysed. and the results are presented as follows using the total number which is 41 while the rest of the 6 are those respondents who constituted the FGD.

From the demographic characteristics of respondents (key informants), it was realized that, majority of respondents (80%) indicated they were engaged in the informal sector as their major occupation of which farming was their main occupation and sometimes combined with other forms of petty trading such as pito brewing, 'table shop', shea butter production, etc., while 20% were reported to have formal jobs such as teachers, health workers, etc. All children's group were reported to be pupils. More than half of the respondents were male (69%) and 31% were female. The mean age of respondents was 39±15 years, with a minimum of 9 years and maximum age of 75 years. Less than a

quarter of the respondents were between 18 and 35 years (27) and the lowest (20%) were 60 years and above while the rest of the respondents between the age of 36 to 60 were the majority (53%). The bracket of 12 to 17 years was part of the FGD. More than half of the respondents (66%) had no formal education, less than a quarter (20%) had attained Tertiary, while the least (14%) represented those who only had basic, secondary or Middle school education. In terms of religion, Christians represented almost half of the respondents, and they were the majority with 49%, followed by traditionalist also represented 41% while the least which is 10% were Muslims. The rest which is 6 (12.8%) represents respondents who participated in the Focus Group Discussion (FGD). One of the FGD were children between the ages of 10 to 17 years, a merger of male and female represented (3 groups) and one each for only male and only female, totalling 6 FGDs in all. This is summarized in table 4.1;

Table 4.1: Respondents' socio-demographic characteristics

Socio-demographic characteristics		NLs	WSMT	District Environmental Health Officer DEHO	CWSA	District Health Promotion Officer (DHPO)	WV	Totals	
								Number	percentage
Gender	Male	9	16	1	1	0	1	28	69
	Female	3	9	0	0	1		13	31
Educational status	Non formal education	8	19	0	0	0		27	66
	Basic/Secondary	2	4	0	0	0		6	14
	Tertiary	2	2	1	1	1	1	8	20
Occupation	Formal sector	2	2	1	1	1	1	8	20
	Informal sector	10	23	0	0	0		33	80
Religion	Christian	6	11	1	0	1	1	20	49
	Muslim	1	2	0	1	0		4	10
	Traditionalist	5	12	0	0	0		17	41
	12 to 17	0	0	0	0	0			
Age range	18 to 35	3	7	0	0	1		11	27
	36 to 60	6	13	1	1	0	1	22	53
	61/+	3	5	0	0	0		8	20

Source: Field study, November, 2021

4.3 Processes and Triggering tools applied during CLTS implementation

4.3.1 CLTS implementation processes in Bawku West District

From the findings, the following were identified as processes used during CLTS implementation in the Bawku West District; Pre-triggering, Triggering and Post-triggering.

4.3.2 **Pre-triggering as a CLTS process**

Pre-triggering basically included the selection of a community and also building rapport with community leaders and their members. As narrated by the District level CLTS stakeholders, they indicated that, as part of community development protocols and in order to leverage on the support of communities' chiefs and leaders, all their programme areas (beneficiary communities) were initiated through community entry. With this protocol, they first met with the chiefs and elders of the various communities. Communities where their chiefs and elders bought into the idea, gave their full support and such communities were still enjoying the benefits of ODF.

4.3.3 **Triggering as a CLTS process**

Triggering also involved the use of participatory approaches and the moment of 'ignition' (through the application of CLTS triggering tools), to build a sanitation profile of the community, including their OD practices. It was at that moment that community members internalized and made conscious decision about the need to shift from their OD behaviour and construct household latrines and make good use of them. Again, it was at that same moment that Natural Leaders emerged and volunteered as CLTS stakeholders to lead the

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rest of the community members in their mission to end OD. This was possible after indigenes gained some level of knowledge regarding the negative impact of diarrhoea and other OD related illnesses on them, especially their children. As narrated by institutional CLTS champions, FGDs WSMTs and NLs, it was unveiled that; during the triggering stage, it was necessary for some volunteers who had that power to lead and support the agenda at the community level to be identified. It was at this stage that we the community appointed some people (due to their records and potentials of leadership in the community) to lead and mobilize the rest of the community members to draw action plan, supervise meetings, monthly community clean up exercise and support the vulnerable groups to also construct their own latrines. Hence, the emergence of natural leaders and the use of already existing WSMTs (who were supporting with the management of community water sources) to support the course of ending OD.

4.3.4 **The application of the Triggering tools and their influence towards ODF in the District**

This section is focused on the main triggering tools used in CLTS implementation and how the application of those tools influenced communities towards ODF in the Bawku West District. It is usually at this stage that, triggering as a CLTS process is maximally utilized. As reported by the various respondents (NLs, WSMTs, mixed FGDs, Women only and Men only FGD, children FGD and institutional CLTS champions), findings are analysed herein in accordance with informants' assertions on the contribution of triggering tools to the CLTS programme.

It was found from this study that, the main triggering tools used for CLTS programme in the District included; transect walk, glass of water, defecation map and medical

calculation. In the recall of participants' knowledge, these tools were used by implementers to trigger community folks on open defecation (OD), general sanitation and health related issues towards open defecation free (ODF) community.

4.3.4.1 The application of 'Transect walk' as a triggering tool and how it influenced CLTS

On transect walk, participants explained it "as the first process where they were engaged in a conversation on open defecation practices while taking a walk around the community. For example, they outlined that, the transect walk was part of the practical session where facilitators of the CLTS programme took them on a walk tour around the community [which exposed them] to the practice of OD. As narrated by some informants, they indicated that;

> *"...the transect walk/walk of shame was shameful and disgusting. We spotted faecal matter in the open yards, under trees, behind shrubs, on river banks and even close to people's houses as we took a tour round the community" (NL 2, 51years, NL 5, 29 years, 01/10/2021).*

In the same vein, a discussant during FGD also brought to the fore the following which was confirmed by the rest of the FGD participants as follows:

> *"...sadly, when we were going round the community to check for visible faecal matter, we came across faeces and even plastics littered all over different corners of the community"* (FGD – Mixed Group: Azoungo community, 05/11/2021).

Another issue of interest was during FGD (female group only) and this centred on awareness levels regarding undertaking transect walk during triggering. A discussant among the female FGD group also reported that, the CLTS implementers asked them if they were willing to take a walk with them and show them their community. According to respondents, they had no idea that the facilitators wanted to see their places of convenience (defecation). It was on their way around they asked them to take notice of the feaces dotted all over the community and its environs. The group indicated that;

> *"...shameful indeed it was as we all felt very embarrassed seeing this amidst strangers in our community" (FGD, females only, 06/11/2021).*

From the interviewees' assertion, about 89% of them indicated that the transect walk was reported as one of the initial and most effective triggering tools among the others used by CLTS programme implementers to expose indigenes to their OD practices in the various implementing communities.

Regarding how the triggering tool (transect walk) influenced OD practices, about 90% of respondents reported that the tool exposed community members to indiscriminate practice of OD done even very close to houses which was not known by them previously. The process of transect walk made participants feel ashamed that amidst the CLTS programme implementers, spots of faecal matter were dotted all over people's compounds.

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4.3.4.2 The application of 'Glass of water' as a triggering tool and how it influenced CLTS

The use of glass of water was done using two approaches. Participants identified it as one of the triggering tools used by CLTS programme facilitators to 'condition' their mind on open defecation practices. In order for community folks to appreciate this, a glass of water was shown to them without anything added and then they were asked to drink from it. At that stage, everyone at the gathering was ready to drink. However, in the second phase when sand (implying faeces), was added to the glass of water and they were once again asked to drink, they all refused to drink from it.

When probed further on why they refused to drink the glass of water the second phase, the respondents indicated that;

> *"...they felt the water [was] contaminated in the second phase, of which they [participants] did not feel safe to drink unlike the first stage"* [WSMT 9, 23, 17 (45, 62 and 39 years) respectively] and [NL 7 and 3 (25 and 37 years) respectively, 19/10/2021 & 07/11/2021].

To affirm the above, a participant during FGD, men group at Azoungo community reported, the programme facilitator took them through how a glass of water can get infected using sand to represent faeces. This was affirmed by the rest of the group members.

Another discussant also asserted in the FGD mixed group that, as part of the triggering process, they fetched a glass of clean water and asked how many of them were willing to drink. Everybody said they would willingly drink it. After that, the facilitator fetched sand with his hand, added it to the glass of water and asked if they were all still willing

to drink from the same glass of water? But this time round, they all said no. When probed further as to why they refused the second time, they indicated that*;*

> *"...the water was polluted the second time and we would not want to drink polluted water since we can see it as such" (FGD – Women and men group, Tarikom community, 07/11/2021).*

One of the leaders of the Water and Sanitation Management Team (WSMT) also reported that, using the glass of water as a triggering tool was a demonstration to them [community folks] on how their waterbodies/sources over the years have been contaminated with faeces due to the practice of OD.

> *"...unfortunately, we [community folks] unknowingly drunk from these contaminated sources, resulting to the many diarrhoea cases we used to experience as a community" (WSMT chairman, 43 years - Aputigure community, 05/11/2021).*

Also, on the use of glass of water, the findings revealed that the process influenced respondents OD practices by allowing community members to become enlightened on how they have unknowingly been drinking contaminated water as a result of the OD practices when the water is not treated. For example, the study found that the glass of water informed respondents to be aware that just as the sand was added to water, that was how OD practices made it possible for their water sources to become contaminated with faecal matter. Hence, the glass of water mixed with sand made community folks to feel how their drinking water becomes unhealthy when they continue to practice OD. Furthermore, it was reported by respondents that the use of glass of water gave a better

explanation to respondents on how water sources be it stream, well, or pipe borne water got possibly contaminated with faecal matter as a result of their OD practices.

4.3.4.3 The use of 'Defecation Map' as a main triggering tool and how it influenced CLTS

Again, from the study's findings, the third triggering tool used by CLTS programme implementers to activate their mind on open defecation practice was the use of a "defecation map". Regarding this tool, one of the respondents reported that, they were asked to sketch locations of their water sources and places of OD on a piece of paper. As narrated, this was said to have happened after their return from the transect walk [thus far], everyone who took part had an idea of locating water sources and open OD areas.

A FGD group and a natural leader in their assertion indicated that;

> *"The sketches made we [respondents] realize that there was a greater possibility of faeces drops in those open places being washed into the water sources by the rains*" (FGD – Mixed Group: Apotsabog community, 05/11/2021).

WSMT and NLs informants also acknowledged as follows:

> "*The use of pictures and maps drawn by facilitators combined with their own sketches gave community folks deeper insights into the consequences of OD practices linked to water pollution and health predicaments*" (WSMT participant 15, 41 years old and NL participant 2, 33 years old – 02/10/2021 to 23/11/2021).

Making reference to the statements, the findings suggest that the use of defecation maps as a tool, triggered community folks to realize how contaminated their water sources were

in the event of heavy rainfall as a result of OD and it became a more serious problem when the water is drunk without being treated.

In addition to the foregone, combined with the use of defecation map, the study found that respondents were able to come to terms with the fact that OD influences the contamination of waterbodies, particular when there is heavy downpour of rains. For instance, it was said that,

> *"...the defecation map used by CLTS programme facilitators informed us [participants] how our open defecation routes are linked to our water sources"* (NLs, WSMTs, mixed FGDs – Oct./Nov. 2021).

From the findings regarding the process of explaining OD demonstrated with the aid of defecation maps made respondents realize, it was possible with rainfalls to wash faeces into their water sources, thus making it contaminated for their health needs. This was indicated by about 70% of the respondents.

4.3.4.4 The use of 'Medical Calculation' as a triggering tool and how it influenced CLTS

With regard to the use of medical calculation, the findings revealed that many of the study participants at the community level identified it as the last tool used to trigger their conscience about open defecation practices in the study areas.

However, in Aputiguri community, the children group in the FGD and a natural leader, noted that, medical calculation as a tool was incorporated during a transect walk in the form of discussion. For instance, it was reported that, during the transect walk, they were asked how many among them [participants] ever suffered from cholera, diarrhoea,

typhoid and other sanitation related diseases when they spotted faeces openly displayed in and around the community.

In another vein, informants in other communities regarding the use of medical calculation as a triggering tool also had this to say; we were asked to recall the number of times in a week or month our children, spouses and other family members fell sick of OD related sicknesses. This was after we were told examples of such and how much we roughly spent as in time and treatment. After a few narrations, we realized that,

> *"we used to spend so much resources (including time and money) in taking care of ourselves anytime we fell ill of OD related sicknesses"* (NL 6, 45 years, NL 11, 31 years and WSMT 2, 51 years, WSMT 3, 28 years, 02/11/2021 to 10/11/2021).

The children also stated that,

> *"Diarrhoeal diseases made some of them to absent themselves from school, sometimes for a week as a result of being admitted in the clinic, which affected their performance"* (FGD, children group – 18/10/2021).

These assertions were confirmed by the health promotion officer who indicated that, according to their annual reports…

> *"diarrhoeal cases before CLTS intervention in those communities, we recorded high but since the intervention, there have been a reduction in those cases"* (DHPO, Nov. 2021).

From the results, informants and participants at the community levels perceptions regarding their constructs showed that, the medical calculations aided them [participants]

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to realize they have for the past years been medically and psychologically worse-off as a result of OD practices. The revelation was made known to them after the medical calculation exercise when informants and participants realized the medical expenditure incurred on sanitation related diseases and the opportunity costs forgone to their family and business activities could have been productive elsewhere. However, the consequences of OD on their health made them to loss massive productive hours.

Again, linking the study findings to the use of medical calculation as a triggering tool for the CLTS programme, it was reported that; the medical calculation made them to remember the number of times they [respondents] as community members visited health facilities with sicknesses that were related to poor sanitation and hygiene issues and the amount spent. For example, a woman narrated her ordeal on how she and her husband spent all their money on taking care of their little baby. In another account, a widow also spoke of how her three children who suffered from diarrhoea and went on admission at the hospital resulting in their inability to do any other activity to care for their livelihood and after a greater 'chunk' of their earnings were expended on defraying medical bills. All these revelations came after the DEHO and DHPO took participants through on the signs and symptoms of diarrhoea, typhoid and other OD related illnesses. Therefore, taking cues from the narrations, it could be interpreted that the medical calculation prompted respondents at the community levels the sense of realizing that;

> *"...indiscriminate OD practices were what caused our expenditure on diseases such as cholera, typhoid, and diarrhoea to go high. When we sought treatment at health facilities, the health workers told us we were suffering from diarrhoea,*

typhoid, etc. when they took ill'' (NLs, Mixed FGD groups, Women only, WSMTs – Nov. 2022).

From the study findings, it was revealed that the use of triggering tools was helpful and beneficial to participating community members as it enabled participants appreciate the consequences of OD practices and the need to construct their own latrines to avert the situation. Applying pairwise ranking, respondents were made to rank which tool ignited them most to construct household latrines. The results showed that, the walk of shame was the initial and most effective tool with about 89% of respondents affirming to it. Next was the application of the medical bill calculation which stood at 79% with the least being defecation map, representing 70%, and so on as indicated in table 4.2.

Table 4.2: Pairwise ranking of how triggering tools influenced household latrine construction

S/N	Triggering Tool applied	Number	Percentage
1	Walk of shame/Transect walk	42	89
2	Medical calculation	37	79
3	Glass of water	36	77
4	Defecation map	33	70

Source: Field study, November, 2021

4.3.5 **Post-triggering as a process in CLTS**

Post-triggering was where community members developed an action plan (design) on how together, they were going to construct household latrines. It was also at the post-triggering stage that CLTS implementers made follow-ups to all beneficiary communities to ensure members adhered to the design of their action plans. Responses from NLs and WSMTs as well as the children's FGD did indicate that, there were regular follow ups by District level CLTS team to monitor progress against task and render advice where necessary and also ensuring a weekly clean-up exercise is done through the support of District CLTS.

> *"...this helped us take actions that aided minimize the effects of unhygienic/filthy environment and we made commitments to construct our own latrines using the action the community agreed on and end OD practices" (NL, 35 years, WSMT, 43 years-29/10/2021).*

Findings from the CLTS implementers at the District level revealed that, the whole CLTS process was a tough one but certain communities, such as smaller ones in remote areas which had a homogenous population were noted to be more favourable for CLTS. They further revealed from their report that;

> *"...they faced greater challenges in triggering larger villages with different population more especially those situated close to cities (peri-urban areas) and also linked to major roads than smaller and indigenous communities that were far and located in remote areas"* (DEHO & CWSA informants- 09/10/2021).

4.4 The outcomes of CLTS programme in the Bawku West District

The main goal of CLTS programme in the District was to reduce OD. This section unearths the outcomes associated with the CTLS programme in the district over the period of implementation.

According to the respondents, the outcomes of CLTS programme was initially received negatively but later left a positive imprint. It came to the fore during FGD and revealed by a discussant that;

> "…*before, we community members received the programme negatively. The negative aspect the programme brought was the shame and disgust community members felt amidst strangers observing our practice of OD*" (FGD, Women group, 05/11/2021).

Complementing the assertions of participants at the community level, the District Environmental Officer, affirmed that;

> "…*through the implementation process of CLTS, participating communities were pessimistic about the CLTS programme because of the shame and disgust they felt regarding their OD practices when we [facilitators of CLTS programme) engaged them in the transect walk process.*" (DEHO informant, 12/12/2021).

However, the overall outcome of the programme ended leaving a positive footprint. This was because, participants in all the communities indicated that, through the CLTS programme, they received some form of education on the health predicaments associated with OD practices, the awakening of their minds to construct their own household latrines

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with local materials, and to this, about 47 out of 90 communities were declared ODF at the time.

According to Natural Leaders and WSMT leaders who were interviewed, it was unanimously said that,

> "…*amidst the visitors/facilitators during the transect walk, we [informants] felt ashamed. However, after the successful implementation of the programme, we became proud of ourselves because at least each household constructed their own latrines…hence, we no longer practice OD, and would not feel ashamed when the visitors come around again*" (NLs & WSMTs, 29/11/2021).

These assertions were confirmed by the district CLTS stakeholders.

4.4.1 Knowledge on health predicaments associated with OD practices

Regarding health-related issues emanating from OD practices at the community level, respondents during FGD expressed their views as follows;

> "A*s a result of the CLTS programme, beneficiary communities have realized the health predicaments associated with OD such as cholera, diarrhoea, typhoid etc., and its associated cost*" (FGD mixed group, male only and female only - Oct. 2021).

The words of some NLs, WSMTs and some of the FGD groups revealed that;

> "*…CLTS broadened their knowledge to a better understanding that, their health predicaments on OD related illnesses were closely associated with OD the community practiced* (NLs, WSMTs & FGD Participants assertions, 15/11/2021).

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This was noted when they were taken through the medical calculation exercise. Hence, the study found that with the education given on best sanitation practices through the programme and lessons learnt in the triggering process, respondents expressed satisfaction to have gotten a better understanding that;

> *"it was more expensive to treat OD related diseases than to construct a self-owned household latrine" (NLs, WSMTs & FGD, mixed group – Oct. 2021).*

It was therefore brought to the limelight that, this served as a wakeup call for community folks to work towards constructing their own latrines. Hence, the narratives from respondents showed that, the CLTS programme has made community folks to feel self-dignified, safe and proud because they now had a safe and accessible place to defecate as and when need be.

4.4.2 **Commitment towards the construction of household latrines through CLTS**

The ultimate of the CLTS process indicated generally that, where participating communities had their chiefs and elders accepting the programme and remained resolute and committed to constructing their own household latrine, it contributed greatly towards the goal of CLTS. For instance, respondents (both at the community level and stakeholders) in their views noted that;

> *"…constructing own household latrine increased community folks' accessibility to the facility even at midnight and protected them (users) from reptile bites which hitherto was a very common occurrence"* (FGD, mixed group & NL 09, 29 years, 10/11/2021).

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The narratives from the respondents were resolute to affirming that, the CLTS programme gave community folks the focus to construct and complete their household latrines within a shorter period of time. In the words of the District WASH officer for World Vision, he indicated that;

"…some of these communities *even completed their household latrines in less than six months in some cases and they all promised to repair and or reconstruct new ones when the old one is broken down or damaged*" (WASH Officer, World Vision, 15/11/2021).

From the results of the study, the respondents revealed that,

"*through the CLTS, community members' commitment to construct their own household latrines in order to save money, promote good health of their people and keep their environment clean so they can live safe and healthy*" (DEHO & CWSA, 10/11/2021).

NLs, WSMTs and some FGDs revealed that, after Knowing the health consequences of OD, households became committed in constructing latrines to end OD and also for their own healthy living and were more than willing to reconstruct another one in case current ones get full-up or collapsed.

The children group also had this to say;

"*Through the CLTS programme, my father had agreed and constructed a toilet for us and this has helped us from contracting OD related illnesses unlike before*" (FGD, Children's group, 16/10/2021)

4.4.3 **Declaration of community as ODF**

Reports from various respondents on this phenomenon indicated that:

"*The CLTS programme promoted communities' achievements of ODF due to the strict compliance and enforcement of sanitation bye-laws instituted by Natural leaders, WSMTs, chiefs, implementers and community members*" (all FGD groups, 15/11/2021).

In another vein, some of the respondents also indicated that, due to the collaborated effort by all key actors (NLs, WSMTs etc.) and some community leaders including the chief, elders, assembly members, etc. who were all involved in the programme process, many of such communities were declared ODF in less than six months' period.

"*...however, a few communities took more months before being declared ODF, especially communities where the full support of the community leaders and CLTS community level leaders were not given*" (Respondents from WASH, DEHO, CWSA, 13/11/2021).

Findings gathered showed that, with the education and sensitization gotten from the entire CLTS implementers and facilitators, consciously, community members embraced the CLTS initiative and worked towards ending OD using the action plan. Subsequent follow-ups on the action plan of CLTS revealed that, majority of households finished constructing both household latrines and handwashing facilities (tippy-taps) while those who could not finish, were supported especially widows, the disabled and the aged. This

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led to study communities being declared ODF." (Respondents from DEHU, NLs and WSMTs, November, 2021).

4.4.4 **Impacts associated with the successful implementation of CLTS Programme**

Finally, on the outcomes of CLTS programme, the study revealed that the programme had a positive impact as all the communities visited were declared ODF. When asked on some of the benefits associated with being declared ODF now as a result of CLTS intervention, findings from respondents as expressed in their constructs indicated that;

> *"...The CLTS programme helped them to improve upon their health practices such eating hot meals, washing our hands at critical times, keeping our houses and surroundings clean always, and stoppage of OD practices.* When probed further, they added that;

> *"...now, they feel comfortable to pluck vegetables from their backyard farm and cooking without fear of their food being contaminated with faeces. We now live in a community that is clean without odour unlike before. Also, there is a general improvement in the performance of our wards in schools as they spend less time on hospital beds and a reduction of houseflies contaminating our food and water, etc."* (FGD men's group & women's group, 15/10/2021 & 11/11/2021).

In another response from FGD discussants, notably the women group, it came to light that the CLTS programme taught them how to improve their sanitation and health practices. They revealed that as they did that,

> *"...it has made every user to feel self-dignified for using the latrine especially the women, coupled with the general health benefits they now experience as a*

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result of reduced OD related ailments after implementation." (FGD women group, 30/10/2021).

And it was again revealed by various respondents that with the successful implementation of CLTS in their community, they realized constructing and owning their own household latrines has been of great importance. For example, the following revelation came up;

"...it increases our access to a latrine even at midnight, and also protect users from reptiles. They are now proud of themselves, proud to receive visitors and also feel self-dignified for the ability of the latrine to protect their privacy when defecating" (All FGD groups, NLs and WSMTs, October & November, 2021).

4.5 The challenges of CLTS implementation in the Bawku West District

This section sheds some light on findings regarding the challenges the CLTS programme encountered during the programme implementation as narrated by respondents.

It was revealed by respondents in this study that, some latrines frequently broke down due to the nature of their soil, including the use of purely local materials for household latrine construction, triggering during the raining season. There was also the issue of reluctance on the part of some few locals to strictly follow action plans in some communities, coupled with lack of motivation for a few leaders who volunteered their services. Poverty on the part of some households were the challenging factors that affected the smooth implementation of CLTS programme. These challenges are categorized into the following themes;

4.5.1 **Nature of soil/ground**

Touching on the issue of frequent breakdowns of the latrines, some respondents at the District level noted that, some parts of the communities are rocky in nature which makes diggings difficult, other parts are sandy which in most cases makes the ground too loose making it unstable to dig while some other parts is water-log, making it difficult to reach the required feet for latrine construction. All of these results in the frequent collapse of household that are sited in such areas especially when the community experiences heavy downpour of rain.

A discussant in a FGD had this to say;

> *"...the nature of the ground/soil in this community is not helping us. If it is too hard, we struggle to dig, if it is water-log too, constructing a latrine there won't last as it cannot contain much water whenever it rains heavily. We also experience situations that the soil is sandy which is in a way loose to dig making our efforts in vain."* (FGD mixed groups, – Oct./Nov. 2021)

4.5.2 **The use of local materials for latrine construction**

At the community level for example, it was reported that apart from the nature of soil, the fact that many households used local materials such as sand or clay mixed with water, wood and zinc with little or no cement to make the slab strong enough, *made the latrine susceptible to frequent collapse or damage after their construction, and it was even more terrible in the year they experienced heavy downpours (WSMTs, NLs – Nov. 2021).*

According to discussants in the FGDs and some other respondents, they indicated that;

"…*the soil texture in our communities is poor coupled with no/limited cement used and when latrines are constructed using entirely local materials, some of the latrines especially those sited on low lying land areas easily collapsed due to the heavy rainfall in the rainy seasons*" (NL, 39 years, WSMT, 42 years, all FGD groups, October & November, 2021).

The findings suggest that under the CLTS programme, many of the latrines were constructed with the use of local materials, and as a result, made some of them to breakdown or get damaged due to the bad soil texture which is unable to withstand heavy rainfall pressure. In a response given by the DEHO, it was noted that, "inadequate funds also made it difficult for some vulnerable household groups to purchase vent pipe and roofing sheets for the construction". As a result, it was reported that in the community, only a handful of households were able to use blocks, mortar and water closet to construct latrines under the CTLS programme. Figures 4.1 and 4.2 both depict the use of entirely local materials and a combination of local and some form of improved materials for household latrine construction respectively.

Plate 1: Local materials used to construct household latrine with tippy-tap for handwashing

Source: Field photo – October/November, 2021

Plate 2: The use of local and some improved materials for household latrine construction with tippy-tap for handwashing.

Source: Field photo – October/November 2021

4.5.3 Triggering during the peak of raining season

This was regarded as a major challenge in CLTS implementation. Respondents made it known that, where triggering is done prior to or during the raining season, chances of its failure were very high. Institutional CLTS champions had this to say;

"...we are indeed learning as the years go by from this CLTS and one of the key lessons I have learnt from this CLTS programme is that, triggering must be done right after harvesting where rains have subsided drastically and community members are also less busy, this in most cases leads to its success. However, where triggering is done prior to the raining season, it means you are in for

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disaster as a facilitator and you will likely not succeed." (CWSA, DEHO –
Oct./Nov., 2021)

4.5.4 **Social and attitudinal challenges**

Reluctance on the part of some community folks who did not just care whether they have
a safe place of convenience or not. Rains and other social gatherings were also noted as
challenging factors that slowed down the process of CLTS in the communities to be
declared ODF. At the community level. For instance, it was noted by some respondents
that, during the CLTS programme implementation, rains caused disruptions of meetings,
digging and construction of latrines. The programme implementation also coincided with
cultural activities at the time and that in a way, affected turn out in meetings and other
CLTS gatherings. Also, market days, funerals and other social issues interrupted
activities of the CLTS especially digging and timely construction and completion of
latrines. Some of the CLTS leaders outlined as follows;

> *"...it is sad to say but I think most of the community members prioritized their*
> *markets, funerals, weddings and other social gatherings to the programme and*
> *anytime a meeting coincided with any social event, the turnout was very low"*
> (Natural Leader 5, 43 years, 04/10/2021).

Limiting it to whether their culture posed a challenge to the CLTS programme, some
respondents had this to say;

> *"There is no gainsaying that culture posed a challenge because our*
> *culture is not against having our own latrines. However, rains, funerals,*
> *naming ceremonies, weddings and farming activities affected people's*

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attitude to be reluctant to participate and consciously follow the action plan for timely completion of project" (FGD Women's Group Participants, 12/11/2021).

From the men's perspective, they also indicated that;

"they do not have any cultural or traditional issues that are against CLTS, hence, we did not experience any cultural challenges. However, we only saw OD as an old age practice which we inherited" (FGD Men's Group Participants, 10/11/2021).

Confirming from the institutional stakeholder informants, their views corroborated with what the community informants and participants revealed as follows;

"From our experience as facilitators, we did not experience traditions and culture as a barrier against CLTS in the communities we have introduced CLTS so far. The OD practice was a normal thing they grew up and saw from the practices of their forefathers and also continued it with little knowledge about the consequences" (Respondent from DEHO, 15/11/2021).

However, according to one of the institutional respondents (CWSA), despite culture not being a challenge hindering the community from constructing their own household latrines, some community members were still very reluctant in ensuring that they work as per the community plans and actions. This in some cases delayed the whole timelines originally given for the completion of their household latrines.

According to the DHPO respondent, she indicated that some of the things were natural occurrences in almost every project implementation, but she is unable to give much insight to information as she was not part of the frontline implementers of CLTS. However, being someone who was born and bred in the district, she does know that OD is just a behaviour of the people but there is no culture against ending OD practices. In confirmation to this, the DEHO from the district assembly had this to say;

"...culture is not considered a barrier to communities constructing household latrines in the district" (Respondent from DEHO 20/11/2021).

4.5.5 Lack of motivation for community level CLTS stakeholders

Again, on the challenges associated with the implementation of CLTS programme, it was acknowledged that lack of motivation for leaders who volunteered their services and poverty on the part of households affected the process. On lack of motivation for Natural and WSMT leaders, key informants and participants at the community level explained that their perception about volunteerism was not properly conceived to mean "absolutely free". NLs complained of lack of motivation package which affected their enthusiasm to devote full-time for their duties as sometimes,

CLTS community level leaders continued to narrate that;

> *"...it was really difficult for them (NL and WSMT leaders) to move from one house to the other to keep reminding people about their commitments, because there was no motivation package such as means of transport to facilitate our roles"* (WSMT 9, 35 years, NL 2, 42 years and NL 12, 27 years, 07/10/2021).

From the FGD discussants, it was revealed that because there was no monetary support and or motivation, some households were unwilling to work within the action plan and some even accused NLs and WSMTs of been paid especially anytime we went to district level for training. This led to some disagreements but finally it was resolved and every household built their own latrines. They added that,

"...there was no means of transportation for the community level CLTS leaders. Apart from that, the CLTS team leaders were not also given any form of allowance as motivation for their efforts and this was not their initial understanding about volunteering to work" (all FGDs, 05/10/2021).

The district level institutional stakeholders also confirmed assertions made at the community levels that, per their experience working with the NLs and WSMTs, to them, non-motivation of the CLTS leaders at the community level was a challenge in almost all the communities. At the beginning of the intervention, they did not really have issues of being motivated, but along the line, they raised some issues about it. Some even used to call us to complain of the difficult nature of the work since they had to visit households almost every day especially at that time they were working towards becoming ODF.

When probed further about the challenges, the District level CLTS team added that, they believe their major issue was about means of transport to aid them do their work effectively since they worked from one household to the other to ensure constant reminder was given to household members to work as per their plans of action. Apart from what the communities faced; we also had some challenges in getting fuel to undertake post ODF monitoring which made some of the ODF communities to relapse

since they were not seeing us again. Assertions made by DEHO and CWSA indicated that,

> *"...on the part of some of the NLs and other CLTS leaders at the community level, they did their work well at the first stage. However, subsequently, some of them relaxed because they felt unmotivated"* (Respondent from DEHO & CWSA, 12/11/2021).

4.5.6 **Financial/economic challenges**

With regard to poverty being a challenge, it was revealed at the community level that, poverty affected many peasant farmer households which made them unable to construct latrines. From the words of one of the natural leaders, he stated that;

> *"they did not have enough to even feed themselves let alone to talk of construction of resilient/strong latrines"* (Response from a Natural Leader).

Hence, due to inadequate funds, people resorted to constructing the traditional improved pit with vent pipes using local materials. One of the WSMT informants did indicate that;

> *"...only a handful of household members have used blocks to build the entire latrine and their latrines are still standing strong despite the heavy downpours over the period"* (WSMT Key Informant, FGD Women Group, 03/11/2021).

From the narrations, it is obvious noting that, poverty was one of the main reasons why many people found it difficult to construct their own improved latrines. This

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is because it is relatively expensive to construct an improved latrine, hence, we resorted to using only local materials to construct which was much cheaper.

Another revelation was relayed by a respondent at the District level as follows; Generally, poverty has been a challenge during the CLTS programme in the various communities. However, it was more alarming in some households than others. In some of our engagements and monitoring exercises, we noticed that, some households were not following the timelines set by the community. This made us begun raising concerns as to why they were not doing so and we were informed that;

> "…those group of households were *very vulnerable and almost all of such people did not have youth or grownup children to support them to dig and construct"* (DEHO respondent, November 2021).

4.5.7 **Gender inclusion and participation, conflict and post-triggering follow-up challenges**

On the contrary, according to participants' views, it was noted that; gender discrimination and participation, conflict, inadequate artisans and poor post-triggering follow-up were not among the factors that militated against CLTS programme. From the interview transcripts, the key informants and participants acknowledged the fact that:

> *"The CLTS programme was gender-inclusive and participatory which gave equal chance for women, men, the disabled, and children to be actively engaged in the entire process"* (FGD women's group & NLs key Informants interviews, 05/10/2021).

In cases where the vulnerable groups such as widows, the disabled, women and the aged could not dig and construct latrine, NL's and WSMT leaders mobilized the youth to assist and support them dig and construct their own latrines.

That notwithstanding,

> *"...all meetings and projects on CLTS at the community levels were reported to be all-inclusive and participatory"* (DEHO & World Vision, District level CLTS Informants – November, 2021).

4.5.8 **National level CLTS challenges**

Data gathered at the District level CLTS indicated that, CLTS is mostly implemented by NGOs who usually collaborate with the various district assemblies and institutions and the government only supported it as and when they got funding. A respondent from one of the institutions elaborated that, the non-availability of the CLTS champions at the national level makes CLTS implementation more challenging. Their availability at the national level would have aided with policies to support CLTS. CLTS champions based at the District usually facilitate the programme and are responsible for supervising champions at the village level. We are also being supervised by the regional level

champions, but we do not have CLTS champions at the national level to support with advocacy and policies in favour of CLTS for sustainable scale-up.

4.5.9 **Limited post-ODF monitoring by project facilitators and implementers**

From the study findings, it was revealed by respondents that, post-ODF monitoring is one of the serious challenges faced by CLTS implementation in the Bawku West District. Some discussants made this assertion;

"...at the start of the CLTS programme, post-triggering follow-up to track progress of work was swift by both the community and District level CLTS leaders. However, this is not the case ever since we became ODF community. This makes it difficult to follow-up on those whose latrines may breakdown as a result of heavy downpour of rain or other factors" (FGD mixed groups, men's group, women's group and children's group – Oct./Nov., 2021).

In order to validate this assertion made by these FGDs, the District level CLTS team were asked how often they undertake post-ODF monitoring. The district CLTS leaders had this to say;

"...our focus as CLTS facilitators/implementers has always been on OD communities and how to facilitate for them to end OD. As soon as a community obtains ODF status, we celebrate them and shift our attention to other communities for scale-up. This is as a result of limited resources as we the officers are not provided with fuel to support us monitor ODF communities" (DEHO and CWSA respondents – November, 2021).

With regard to the challenges of CLTS implementation, six came out strongly, notably; nature of soil/ground, the use of local materials, triggering during the peak of raining

season, financial/economic challenges, lack of motivation for community CLTS champions, and limited post-ODF monitoring. Using pairwise ranking, financial/economic challenges was the highest (96%), next was the nature of soil/use of local materials (87%) and the lowest (62%) being unavailability of national CLTS champions with details represented in table 4.3.

Table 4.3: Pairwise Ranking of the main challenges besetting CLTS implementation in the district.

S/N	Challenges	Number	Percentage
1	Financial/Economic constraints	45	96
2	Nature of Soil/Ground	41	87
3	The use of local materials	41	87
4	Lack of motivation for community CLTS champions	39	83
5	Limited post-ODF monitoring	39	83
6	Triggering during the peak of raining season	35	74
7	Lack of national level CLTS stakeholders	29	62

Source: Field survey – November, 2021.

4.6 Strategies for improving CLTS towards ODF communities in the Bawku West District

Ending OD practices require finding innovative strategies to improve on CLTS programme towards not just ODF communities, but sustainable ODF villages. Hence, this section explores views from respondents who were involved in the processes of CLTS programme implementation in the Bawku West District in that regard. As categorized below, some of the strategies in which programme facilitators/implementers could use to improve on CLTS model in the District include; facilitators recognition and strict adherence to community entering protocols, understanding community settings during CLTS processes and in organizing meetings, the use of practical triggering tools which the community folks understand better, enactment of OD byelaws, the consistent engagement with community folks on sensitization and follow-ups to track progress of plans during post-triggering, dry season triggering, intensifying post-ODF monitoring, careful provision of incentives for vulnerable household members, intensifying post-ODF monitoring.

4.6.1 Project implementers' compliance with community entry protocols

On the strict recognition and compliance with laid down protocols in communities for CLTS implementation, including organization of meetings, it was reported by the WASH Officer respondent that;

> "*...one way to improve on CLTS is the strict recognition and adherence by programme facilitators. Adhering to the laid down protocols gives facilitators an upper hand to win the hearts, trust and support of chiefs and elders in the*

communities to rally behind them to make the programme a success" (WASH Officer, World Vision, 05/11/2021).

4.6.2 **Creation of OD byelaws at the community level**

Findings again revealed that, creating OD byelaws during triggering is very crucial in improving CLTS. About 95% of respondents indicated that, if the community create these byelaws by themselves with support from the District CLTS leaders, it becomes more effective than if they are brought from somewhere for them to adopt. The District level institutional CLTS leaders and community level CLTS champions had this to say;

> *"...byelaws are critical for the success of CLTS programme since they are set by the communities themselves. Byelaws should be created to be no respecter of anyone, not even the elders and chiefs of the communities. Hence for fear of undergoing the consequences of what the byelaws have for offenders, community members would adhere to avoid been found guilty.*" (DEHO, CWSA, NLs and WSMTs – Oct./Nov. 2021).

Furthermore, results emanating from the engagements with the community and other institutional stakeholder respondents all confirmed to the foregoing assertion as espoused to by the various participant groups. According to the report gathered, community byelaws were created in past for various purposes and no household member was exempted. Everyone was considered equal before the law, including the chief and his family. In some cases, the byelaws came with penalties for anyone who was found guilty. Some penalties included; payment of fines, punishment of different forms (making you

to collect your faeces with your bare hands, among others which was crucial in putting the entire community on their toes to avoid been punished.

4.6.3 **Emergence of community members as volunteers (NLs and other CLTS Champions)**

Herein, findings indicate that, natural leaders play very key roles towards the success of CLTS programme. Their consistent engagement of community folks in sensitization and follow-ups to track progress and remind households to follow plan cannot be undermined. According to key informants, and participants;

"*...consistent monitoring and evaluation processes ensured by NLs, WSMT and other CLTS champions would inspire the cooperation and collaboration of community members which is critical for the success of CLTs programme*". (FGD, mixed group, FGD women's and men group & children's group, 05/11/2021 & 13/11/2021).

Again, the study findings revealed that if community members themselves emerge as volunteers to serve as Natural leaders and WSMT leaders, community folks would see and accept the CLTS programme as their own initiative leading to its success. Some respondents had this to say;

"*...ensuring that CLTS champions and leaders emerge from the beneficiary community would facilitate the programme success because community members would see it as their own*" (Respondents from DEHU, and CWSA, 15/11/21).

4.6.4 **Dry season triggering**

According to the 85% of respondents, triggering is more effective during the dry season. This is because, participants are less busy during that time and also, communities did not experience rains that would disrupt the pits dug for latrine construction. Hence, if triggering is effectively done during the dry season, the CLTS programme would be more successful. A discussant revealed this during an FGD;

> *"...my main source of income is through farming; how then do I leave my farm and participate in meetings when do not have control over the rains. Also, when the trigger during the raining seasons, structures of household latrines can easily breakdown because of incomplete structures. This was supported by the rest of the FGDs participants"* (FGD mixed group and men's group – October 2021).

4.6.5 **Application of appropriate triggering tools and siting of household latrines**

Beside the recognition and adherence to community protocols and entry, another modality which could aid the successful implementation of CLTS programme, is the use of practical triggering tools. Applying triggering tools contextually would make community folks understand the essence of the intervention. For instance, in the FGDs held, it was revealed that:

> *"...triggering tools are integral part of CLTS implementation as it is considered as capturing the moment. It is usually at the triggering that communities are made to understand the negative consequences of OD on their health and the get ignited and decide to end their OD practices. Hence, if the tools used are not practical*

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and applicable in their context, it would amount to nothing'' (District CLTS team,

NLs and WSMTs, November, 2021).

This therefore implies that, if these tools are appropriately applied based on the context of the beneficiary group in mind, it would help improve on CLTS for scale-up".

When asked to further explain how proper and timely siting of latrines would contribute to the success of the programme, the natural leader indicated that, timely support of the 'samasama' (DEHO) during siting of household latrines in every household is essential as this would determine when households can start their latrine construction. Ignoring this would lead to

> *"...negative consequence since household heads may not have that technical*
> *knowledge on how to appropriately site to avoid the impacts of poor siting of*
> *household latrines" (NLs, FGDs, WSMTs, 18/10/2021 & 11/11/2021).*

4.6.6 **Regular post-triggering follow-up by both District and community level CLTS stakeholders**

In an FGD (mixed group), it was revealed that frequent visit by the 'samasama' people to see progress of work, regular organizing of meetings by NLs and WSMTs to remind community members of their commitments to construct latrines, house to house monitoring by NLs and WSMT to remind household members to construct latrine is very crucial for CLTS success.

During an FGD sessions (men and women only), the rest of the group members affirmed to the above by indicating that;

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"*There is the need for day to day visit of households by NLs, WSMT to remind us of our commitment to construct household latrines for the benefit of all. Regular visit by facilitators or District CLTS stakeholders is also important as it would help keep indigence on their toes to complete their various tasks in accordance with their plans*" (FGD mixed groups, men's group, and women's group - 15/11/21).

4.6.7 **Careful provision of incentive package to vulnerable community members**

As part of ensuring the success of the CLTS programme, the study found out that, a careful provision of incentives to those who cannot afford to build strong and resilient latrines should be considered. **About 70%** of respondent indicated this would help solve or reduce the issue of frequent breakdown/collapsing of household latrines as a result of local materials used,

Some of the FGD groups had this to say;

"…*we are all aware of all those who are vulnerable in this community, hence, if there is support for such people to also construct strong latrines, it will help the entire community*" (FGD women's group & FGD men's group – November, 2021).

4.6.8 **The use of communal labour as a support system for the vulnerable**

Furthermore, respondents at the community level and institutional stakeholders acknowledged that, communal labour is one strategy in improving CLTS. Hence, community members, especially the youth, can mobilize themselves with the facilitation of the community CLTS stakeholders and assembly members and chiefs in some cases,

to support those recognized as the vulnerable to construct their own household latrines. Results gathered at both the community and District levels showed that;

> "*the use of community labour provides a support system to the vulnerable group like widows, disabled, aged and extremely poor individuals to construct their own latrines*" (NLs, WSMTs, FGDs and DEHU, October to November, 2021).

4.6.9 Enactment of bye-laws by indigenes to guide compliance to timeline towards ending OD practices

From the findings gathered, 83% respondents' assertions showed that, **bye-laws** are effective in ensuring the success of ODF communities and should be done at the community level and by the community themselves. Some of these may include, operation 'dig and burry' until households construct their own latrines, general clean-up exercise, using your bare hands to collect faeces if found defecating in the open, offenders to be summoned to the chief's palace for him to take action as and when necessary and the payment of a fine for those who breached the byelaws. All 4 respondents' assertions at the community and institutional levels indicated that;

> "*...as communities fighting OD, it is necessary to enact byelaws on water, sanitation, hygiene and health related issues. These should be geared towards curbing OD practices in the communities. For example, a fine between Ghc20 – 100 can be imposed on all victims who are found culpable*" (NLs, WSMTs and all FGDs, October to November, 2021).

4.6.10 Strengthening post-ODF monitoring and follow-ups

As part of strategies to improve on CLTS implementation, strengthening post-ODF monitoring came out strongly as one way that can help improve the CLTS model. As narrated by FGD discussants, they revealed that;

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"...initially when CLTS was introduced in our communities, there was regular day to day visit of households by NLs, WSMT to remind us of our commitment to construct household latrines for the benefit of all. There was also regular visit by facilitators or District CLTS stakeholders (at least thrice a week), which helped to keep we the beneficiaries on their toes to complete our various tasks on time. But as soon as we attained ODF status, the District CLTS team hardly visits us again" (all FGD groups – October/November, 2021).

From the findings, seven strategies for improving CLTS stood out including; strengthening post-ODF monitoring, enactment of OD byelaws, the use of appropriate triggering tools, compliance with community entry protocols, availability of functional CLTS champions at community, district, regional and national levels, regular post-triggering follow-up by both community and district CLTS champions, and dry season triggering by facilitators. Using pairwise ranking, respondents ranked the strategies to determine the most effective to the least effective. The results indicated that, facilitators compliance with community entry protocols was the highest with 98%, next was the application of practical triggering tools (93%) with the least being dry season triggering (74%). This is represented in table 4.4.

Table 4.4: Pairwise ranking on ways/strategies for improving CLTS

S/N	Strategies	Number	Percentage
1	CLTS facilitators compliance with community entry protocols	46	98
2	The use of practical triggering tools base on context	44	93
3	Post-triggering follow-up CLTS champions at community and district levels	41	87
4	Existence of functional CLTS champions at community, district, regional and national levels	41	87
5	Creation of OD byelaws	39	83
6	Investing in post-ODF monitoring	38	80
7	Dry season triggering	35	74
8	Careful provision of incentives to vulnerable households	33	70

Source: Field study – October/November, 2021

4.7 Summary of Chapter

This chapter examined participants' socio-demographic characteristics such as gender, age, level of education, occupation, and community of residence. The chapter presented the findings gathered on the triggering tools and processes used in the CLTS model towards ODF communities in the study area. The outcomes of CLTS interventions in ODF communities, the challenges of CLTS implementation in the district, and some

potential strategies for improving CLTS towards sustainable ODF communities in the

Bawku West District were also highlighted. The next chapter will discuss the gathered

results or findings and how they can be positioned within the theoretical framework

(RANAS Model) and the extent to which the findings were linked to the literature.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discusses the issues emanating from the results and have been put in perspective according to the study objectives. The discussions are then juxtaposed with literature to see the extent of agreement or dissociation from the works of other authors.

5.2 CLTS processes and Triggering tools used during CLTS implementation in Bawku West District

5.2.1 **CLTS Processes and triggering tools applied**

From the findings, three phases of the CLTS implementation processes have been revealed in this study notably; Pre-triggering, Triggering and Post-triggering. It came up in this study that at the pre-triggering phase, facilitators familiarised themselves with the culture, norms and beliefs of the communities. There was also initial meeting with the chiefs and other people who matter in the community to discuss issues of mutual interest. The triggering process made use of some tools to get community members ignited/triggered in order to end OD practices. The post-triggering process was where community members designed action plans with precise dates on the construction of their household latrines. District CLTS team and facilitators also made follow-ups to monitor plans against actions. These findings are consistent with Safari et al. (2019), in terms of lessons learned from a national sanitation campaign in Njombe District, Tanzania. According to their data, the CLTS process included all three major steps of the CLTS approach, including pre-triggering, triggering, and post-triggering. Safari and colleagues also stated that during the pre-triggering stage, facilitators became acquainted with the village in terms of cultural barriers as well as enablers of appropriate sanitation and

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hygiene practises. Following that, a formal communication with the village authorities was held to explain the purpose of the triggering in the area. This study's findings are also consistent with those of Oluwatuyi et al. (2020), who investigated the challenges of CLTS in Nigeria. These authorities as part of their findings noted that, prior to the commencement of CLTS programme, it is critical to establish the culture of the communities, their beliefs, norms and governance structure as well as those areas of positive change that exist within the community. They further expounded that, sometimes triggering differs based on the ethno-geographical settings of the area or communities. Therefore, a good appreciation of the community's socio-cultural structure would enable implementers/facilitators to recognize existing prospects and strengths of the community in order to trigger successfully and sustainably.

The triggering stage made use of four main tools including; the walk of shame, the use of a glass of water, defecation map and medical calculation. The walk of shame exposed community members' inappropriate behaviour regarding OD as they spotted faeces while engaging in a tour round the community. It is worth noting that, among these four main triggering tools used in the District, about 90% of interviewees assertion indicated that, transect walk was the initial and most effective triggering tool. This is because, respondents attested to the fact that, as they walked around and saw their own faeces especially in the midst of strangers/visitors, they felt embarrassed and that triggered them to see the need to construct their own latrines after being sensitized about the consequences. This assertion is consistent with the findings of Harter, et al. (2019), when they reported that, the chances of owning a latrine by households'/community members who participate in a transect walk was about nine times higher than those that did not

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participate in the walk of shame. This finding again, aligns with Lawrence et al. (2016) where they averred that, emotive factors such as "name and shame" rather influenced community members in the construction of latrines which led to an increased in the number of households who constructed latrines. This study's finding however disagrees with Sah and Neggussie (2009) where their study found that in Tanzania, community leaders told facilitators to find other means of igniting community's action without necessarily using shaming and disgusting language. A feedback from a community leader in Tanzania indicated; ''*Sikufurahia kuambiwa tunakula kinyesi, sio utanzania kuongea hivyo*'' which implies, we are unpleased when we are told plainly that we eat one another's faeces. That is not the Tanzanian manner of speaking.

The glass of water was also used to demonstrate how 'safe water' can be contaminated using soil, animal faeces, etc. according to the findings, when it was only the water at the initial stage, everyone was interested in drinking it but at the second phase where sand (representing faeces) was dropped into the water, they refused to drink it, thus, exposing their consciousness as to the implications of drinking contaminated water which could result in OD related diseases such diarrhoea, cholera and typhoid. Another triggering tool used was the defecation map whereby their water sources as against where they eased themselves and other important landmarks were sketched with the help of photos/pictures from facilitators. They became educated on the routes to which their water may get contaminated as a result of rainfall or other factors. This is in consonance with a study on determining the effectiveness and mode of operation of CLTS by Harter and Mosler, (2018). These authorities in their study found that, open defecation map which aids community members to locate their houses and important land marks of their community

as well as the places used for open defecation is important. According to their study, further activities are the description and demonstration of faecal-oral transmission routes with the goal of community members realizing that with open defecation 'they are eating one another faeces'. This study finding also agrees with Harter et al. (2020), where their study indicated that, an improvised map was sketched on the ground and these enabled community members to locate their houses on it, and then added places they used for open defecation in order to appreciate the possibility of OD practice contaminating their water sources.

The medical calculation revealed to community members how much they spend on sanitation related diseases (diarrhoea, cholera, etc.) anytime they visited the hospital. It therefore opened communities understanding that, the consequences of OD on their health ailments makes them spend a lot on hospital bills and also lose more productive hours. This finding aligns with the study by Harter et al. (2020), where they revealed that, medical costs were calculated for OD related illnesses such as diarrheal diseases and compared to costs for latrines built from local materials.

It is worth noting that, although, other processes and triggering tools exist and work based on context, this study's finding revealed that, the processes applied during CLTS implementation in the District were the pre-triggering, triggering and post-triggering, and the main tools were; Walk of shame, glass of water, defecation map and medical cost calculation. It was again unveiled that, each of the tools and processes played unique roles towards the triggering of community members to construct and use their own latrines. Hence, an effective combination and application of these triggering tools will trigger communities and enable them achieve ODF status sustainably.

5.3 Outcome of CLTS implementation in the Bawku West District

According to the study findings, the outcomes of CLTS programme were positive, even though, it was initially received with some misgivings by the local people.

5.3.1 **How community members initially received the CLTS programme**

The CLTS programme made community members feel ashamed and disgusted amidst strangers observing their OD practices. The negative aspect was closely associated with one of the triggering tools mostly used by CLTS implementers which is the 'walk of shame'. This walk of shame triggers communities to construct their own household latrines by evoking disgust and shame to local people observing each other's faeces in the presence of strangers as they went on a transect walk in the community. This brought in a feeling of discomfort among them. This finding is consistent with the findings of a study conducted by Safari et al. (2019) on the lessons learned from the national sanitation campaign in Njombe District, Tanzania. According to their findings, triggering was initially perceived negatively in communities due to the use of 'shame' words, which community members saw as disrespectful. Safari et al. (2019) went on to say that these communities in Njombe District later adopted this approach due to its effectiveness in communicating sanitation messages, which encouraged them to abandon their OD practices.

5.3.2 **Positive imprint the CLTS programme left**

The overall outcome of the programme ended leaving more of a positive imprint than that of negative impacts based on the revelation made by respondents based on the following indicators below.

With the education and sensitization on the best sanitation practices through the programme and lessons learnt through the application of the triggering tools and processes, beneficiaries expressed satisfaction to have gotten a better understanding regarding the close relationship between OD practices and their health. Through the CLTS programme, they realized their health predicaments, notably cholera, diarrhea and typhoid, were all associated with OD practices. They concluded that, *it was indeed more expensive to treat OD related diseases than to construct a self-owned household latrine*. This finding is in consonance with a study conducted by Okolimong et al. (2020), on the effect of a CLTS intervention on sanitation and hygiene in the Pallisa District of Uganda whereby they examined the potential effects of CLTS implementation on sanitation and hygiene status focusing on knowledge, latrine and handwashing status and prevalence of diarrhoea in children younger than 5 years and ODF status. The results of their study indicated that, CLTS was effective in improving knowledge levels of communities on sanitation and hygiene. Further, their study revealed that, the community's exposure to CLTS processes such as pre-triggering, and post-triggering sessions as well as follow-up visits were very important in CLTS implementation as it is a way to broaden their knowledge levels on sanitation and hygiene. Again, their findings revealed that, community members who were more knowledgeable on sanitation and hygiene were more likely to adopt better sanitation and hygiene practices as this determines the individual's attitude to adopt positive behavioural change.

With reference to another positive outcome of CLTS implementation, the findings revealed that, CLTS was successful in triggering collective change through facilitators who encourage, sensitize and motivate people to analyze the impact of OD in their

communities and take action towards ending OD practices. This finding again, goes to support a study by Okolimong et al. (2020), whereby they stated that, CLTS trigger communities to demand for sanitation and hygiene facilities and adopt sustained behavioural change leading to abandonment of their OD practices.

Further on, the positive outcome from the CLTS programme in the study district was that, it enabled households to construct their own latrines using local materials. Respondents revealed that, CLTS was possible in their communities because, the programme sensitized them to make use of locally available materials within their vicinity and they became ODF villages/communities. This finding agrees with Crocker et al. (2019), regarding the effectiveness of CLTS and other sanitation approaches. Crocker and associates revealed that, CLTS sensitizes and ignites participatory communities to appreciate the need to end their OD practices, thereby using local materials for their latrine construction.

Another positive outcome of the CLTS implementation was the declaration of communities as ODF. Respondents indicated that, despite initially receiving CLTS programme negatively, they still succeeded in been declared as ODF communities. Respondents attributed part of their success to the strict compliance of OD byelaws and the key roles NLs were very influential in the achievement of ODF as they moved from house to house to remind households about their commitment towards ending OD with support from WSMTs. This finding is in harmony with the results of Huda (2009), whereby he opined that, natural leaders spent some time within a day to support CLTS by orienting households and community members, and most especially children. The findings of this study revealed that, the strict compliance of sanitation bye-laws by

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community members, as well as the day-to-day monitoring and reminders given to households to construct their own latrines yielded the desired results on time in the district as some communities within a duration of 6 – 8 months were declared ODF.

5.4 Challenges besetting CLTS implementation in the Bawku West District

It was revealed herein that, the CLTS programme, just like any other development intervention, was not without challenges. As a result, CLTS implementation in the District faced diverse challenges as narrated by respondents. Some of these challenges highlighted included; the issue regarding the nature of soil in the locality, the use of local materials which did not make the latrine strong, natural, social and attitudinal issues such as rain, funerals or other social gathering, motivation for community level CLTS stakeholder related challenges, gender inclusion and participation issues, issues of communication flow, monitoring and supervision issues and national level CLTS challenges.

With regard to the nature of soil, respondents narrated that, their soil texture is sometimes clay and is unable to hold water. Other respondents also complained of their land being so rocky during the dry season, making it extremely difficult to dig to the required level before construction. In such cases too, the pit easily became full and household members needed to reconstruct again. This finding is consistent with the findings of Oluwatuyi et al. (2020), who discussed the challenges of CLTS in Nigeria, stating that the geo-physical conditions of some villages made the provision and construction of household latrines a significant burden on community members. The condition of the soil being hard in nature made it difficult to dig pits, whereas communities with sandy grounds made it very unstable to dig due to its loose nature. Oluwatuyi et al., (2020) added that rocky soils in

some deprived areas of Nigeria made it difficult for such communities to dig pits for the construction of household latrines.

Again, it became clear from the narratives that the frequent use of local materials (clay or sand mixed with water with little or no cement) made the structure unable to withstand the test of time, causing some latrines to collapse. This finding is consistent with Venkataramanan and associates (2016) study, which revealed that CLTS ultimately focuses on achieving free open defecation and that latrines built as a result of CLTS were frequently of poor quality, affecting the sustainability of CLTS outcomes. According to the study findings, social and attitudinal behaviours were among several challenges impeding the District's implementation of CLTS. It was discovered that some community members were virtually hesitant or unwilling to attend meetings or adhere to the timelines of the action plans drawn during triggering, which had an impact on the sustainability of CLTS outcomes. This finding is consistent with the results of a study conducted by Oluwatuyi et al. (2020), where they revealed that, the behaviours of people who literarily do not care, have no regard for household and environmental sanitation and general good health which accounted for most of the causes of OD practises. Hence, their strong will to continue with lifestyles that were unhealthful, has recognised to be a serious issue hindering CLTS effectiveness in Nigeria.

It is worth noting that, the culture of the people did not influence or hinder the CLTS process in the case of the Bawku West District regarding its implementation. This was evident when a community informant and a participant during the institutional stakeholder meeting said that they as facilitators did not encounter the situation of traditions and culture of the people being a barrier against CLTS implementation in their

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communities. They however indicated that while growing up in their communities, they witnessed their grandparents and parents practice OD, and it was adopted as a normal practice and had little or no knowledge about the negative repercussions or consequences associated with it. This finding was however found to be inconsistent with a study conducted by Oluwatuyi et al. (2020) on challenges facing CLTS in remote areas in Nigeria where they concluded that, socio-cultural factors were among the major challenges facing CLTS implementation as the culture of the people encouraged them to practice OD which made it difficult for communities to embrace the CLTS concept.

The findings further revealed that due to lack of motivation for NLs, some of them later became inactive in doing their work especially during post-ODF monitoring. This was brought to the fore when one of the CLTS leaders at the community level narrated how tedious the work is and the fact that they oftentimes trade-off their economic activities to ensure the entire community achieve ODF status as well as post-ODF monitoring. This finding disagrees with Lawrence et al. (2016) where the authorities noted that, as part of the CLTS programme, volunteers (NLs) were rewarded with cell phones and airtime as a form of motivation to support in reporting on the status of villages.

Another challenge faced by the CLTS implementation in the District which was identified by respondents is the financial or economic challenge in which some respondents re-counted how difficult it was for them to afford three square meals a day for their families. They therefore saw spending some amount of money to buy cement for household toilet construct as a luxury. This seems to agree with the findings of Oluwatuyi et al. (2020), in a study in which they revealed that, even in the case of household latrine construction using local materials, collective effort is required by the community which is still

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considered too high for some community members due to their inability to afford slabs, cement and other materials. They saw food as a basic necessity that needs to be provided. They therefore considered it a waste of incomes to avert such resources on latrine building. It therefore calls for a huge effort to facilitate commitment on the part of such individuals. Unfortunately, with the CLTS concept, no subsidy is given to communities to construct their own household latrines, but rather, communities are triggered and when they come to the realization of the need to end OD, they worked towards constructing household latrines.

It is important to note that, most communities where these CLTS programmes were implemented in the district had their indigenes being mainly peasant farmers and/or petty traders. As such, most of these households found it difficult to raise income to buy the required materials to at least make a strong concrete slab for their latrine construction and therefore resorted to the use of available and affordable local materials such as the use of mud as bricks to construct toilets which in most cases collapsed during heavy downpours. This finding emanating from this study suggests that, such communities needed some form of assistance (subsidy) to enable them construct sustainable household latrines. This was however found to be contrary with the findings of Sah and Negussie, (2009) who have asserted in their study on CLTS regarding addressing the challenges of scale and sustainability in rural Africa. Their study revealed that, communities where subsidy had been provided in the past were less receptive to implementing CLTS and triggering which was noted to be much more challenging. They also claimed that future subsidies from other NGOs or the government could undermine the CLTS process's goals.

One other challenge that was revealed through this study was the unavailability of CLTS champions at the national level. The district level CLTS stakeholders indicated that, CLTS is mostly implemented by NGOs who usually collaborate with the various district assemblies with little support from the government. As a result, there is limited information regarding CLTS at the national level. Therefore, prioritizing CLTS at the national level would facilitate decisions in terms of policies that would support more funding and also promote the proper coordination of the CLTS programme. This finding affirms the results of a study by Movik and Mehta (2010) on the dynamics and sustainability of CLTS: mapping challenges and pathways. Movik and Mehta (2010), indicated that, despite the success stories the CLTS model has documented since its inception, the implementation of CLTS is still beset with some challenges in terms of scope and impact. Their study also revealed that, the CLTS approach until now, seemed to be unplanned before implementation and has heavily relied on the presence of CLTS champions such as NL at both the community and district levels. Unfortunately, such leaders and champions are not available at the national policy level to support in facilitating, coordination and prioritization of sanitation projects and activities.

Form the findings of the study, the district amidst the challenges is a fertile ground for the CLTS programme. In view of this, if all communities are triggered by knowledgeable and well-trained facilitators who follow all protocols and apply appropriate triggering tools contextually, beneficiary communities would stand high chances of becoming ODF. However, this would only be sustainable if a lasting solution is found for the above challenges identified as hindering the sustainability of ODF declared communities.

5.5 Strategies for improving the CLTS programme towards sustainable ODF communities in the Bawku West District

For CLTS to be effectively implemented and achieve its purpose, innovative ways/strategies must be carried out by programme implementers in order to achieve and maintain sustainable ODF status in the various communities. Hence, this objective sought to find out some of the innovative strategies/ways to support the CLTS programme achieve sustainable results. From this study findings, it was revealed that, knowledge of community setting, strict recognition and adherence to community entry protocols, the use of practical triggering tools based on context, creation of OD byelaws, dry season triggering, post-triggering follow-up and post-ODF monitoring were some of the effective strategies that can improve CLTS implementation.

The findings of this study showed that, knowledge of community setting is critical for the success of CLTS programme, hence, facilitators/implementers should endeavour to carry out a background check of the communities to understand the community's setting (in terms of their culture, beliefs, norms, etc.), before implementation begin. This knowledge is necessary as it will well position them to properly relate with communities contextually. This is consistent with the findings of Oluwatuyi et al. (2020), where their study revealed that, before the commencement of CLTS programme, it is critical to establish or understand the cultural practice, norms, beliefs and leadership setting and various areas of positive change within the community. This is particularly important when dealing with people from different ethno-geographical settings.

Another way of improving CLTS is the creation of sanitation byelaws at the community level. Respondents indicated that, ODF/sanitation byelaws come with consequences such as payment of fines and other punitive measures for offenders, hence, would put

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community members on their toes to do what is right towards ODF agenda. This finding is consistent with Safari et al. (2019) where their study endorsed some of the best mix of sanitation education as instruments that were potent in raising community awareness and ensuring success in sanitation campaign. They include regulation and enforcement, changing collective behaviour, and enforcing village sanitation bye-laws.

Compliance with community entry protocols was identified as one strategy for improving the CLTS programme since it makes community leaders and members feel recognized and valued. Compliance to protocols also gives an opportunity for facilitators to win the trust and support of community chiefs and leaders. Hence, poor community entry may lead to disregard for community leadership, which would likely result in the programme failure. This finding agrees with the assertions of Tribbe et al. (2021), on how rural communities sustain sanitation gains in Cambodia and Ghana and their findings showed that, as part of improving CLTS programme, there are pieces of evidence with regard to the critical role community leaders played in ODF achievement and sustainability. These leaders include traditional leaders (such as community chiefs), WSMTs, natural leaders (such as community members who are selected by the community or volunteered to support the programme), and political leaders (that is, elected officials).

The application of practical and appropriate triggering tools based on context and in manners which make community members understand and appreciate the CLTS programme was identified as key for CLTS success. The study findings revealed that, applying practical triggering tools enables indigenes to better understand and appreciate the consequences of OD practices to their health and general wellbeing. This finding agrees with a study by Oluwatuyi et al. (2020), where the authorities revealed that, in

order to improve on CLTS implementation, studying the context and adapting the right trigger is critical. That is, facilitators knowing the right tool and mechanism for community triggering. The reporters further noted that, exploration of individual behaviour or as a group is apparent. Hence, facilitators should be able to arrive at a stage where there is a collective effort by the community to change attitude and take the responsibility of ending OD. Declaration of such effort can start from a person (which could be a NL, Chief, Assemblyman etc.) and the facilitator must be alert to amplify the voice of such a person until it becomes a collective decision.

One way of improving CLTS programme according to this study is to target triggering of communities during the dry season. The findings revealed that, more households are available to participate in CLTS implementation activities during the dry season than the raining season period. This finding is consistence with Beven and Thomas (2009) where the authorities revealed that, CLTS tended to be more successful as a result of the triggering process during the dry season. Also, the continuous engagement of households by volunteers (NLs and WSMTs) is one major strategy for the success of the CLTS programme in the district. As part of their roles, natural leaders and other champions are expected to take up leadership roles of CLTS programme on daily basis including going from house to house to remind and sensitize them on the need to construct their own latrines, organizing CLTS meetings, among others. This finding is in line with the results of Huda (2009), where he indicated that, natural leaders spent some hours of the day for CLTS, by orienting households including children (through songs, meetings, house to house engagement, etc.) on some of the ways to make their community ODF.

Another strategy of improving CLTS programme according to the findings, is through investing in post-ODF monitoring and follow-up. This assertion was made by a CLTS informant who indicated that; "monitoring at the beginning (post-triggering) to track progress against plans was very swift as district CLTS champions used to visit twice or thrice a week as implementation began to ensure its success. However, post-ODF monitoring is not very effective as facilitators now visit once in a blue moon". Hence, investing in post-ODF monitoring is critical as it guards ODF communities from relapsing. This is consistence with a study conducted by Kumar et al. (2012), on improving CLTS from a community perspective approach in Indonesia. Kumar and associates noted that, improving the monitoring processes and practices so as to ensure the quality of training, triggering and post-triggering and post-ODF follow-up at the village, sub-district, and district levels is crucial for successful CLTS as well as sustaining ODF communities.

Another strategy for improving CLTS is the careful provision of support to vulnerable households. This finding is consistent with Tribbe et al. (2021) where the authorities hypothesised three types of community conditions as the foundation for CLTS sustainability: engagement of community leaders, intensity of monitoring and follow-ups, and assistance to poor/vulnerable households.

5.6 Situating the study within the context of the theoretical framework (RANAS model) as proposed by Mosler (2012)

The RANAS model/approach identifies the psychosocial determinants that could steer latrine construction and then selects Behavioural Change Techniques (BCT), that target these determinants (Mosler, 2012). It involves knowing the exact behaviours to be changed, the definition of the target group and coming out with actions towards the

change. Applying the RANAS model to this study; Assessment of the contribution of CLTS towards ODF communities in the Bawku West District. It was evident that, the exact behaviours that were identified in the district centred on the attitude of community members with regard to OD. This practice encompassed all categories of community members ranging from the chiefs, elders, assembly members, men, women, the youth, children and the physically challenged.

The study revealed that, construction of household latrines was driven by determinants of the social and physical context, the risk factor block, as well as, attitude, norms, ability and self-regulation factor blocks (RANAS). It is worth adding that, changes in people's mind-sets were responsible for the CLTS intervention effects on latrine construction. The application of the RANAS model made community members more aware of the latrine construction behaviour of their social environment and led to a greater perception that community leaders approved of latrine construction in their communities. Participants then developed greater confidence that they would be able to construct, maintain, and repair their own household latrine. Through their commitment, they developed action plans with details on how, when and with the support of what (CLTS leaders), in constructing household latrines. According to Mosler and Contzen (2016), commitment is a driver that can convert a plan into action and, within the RANAS model, and this is located in the self-regulation factor block. Therefore, the RANAS model was the most appropriate analytical tool that was used to achieve the objectives of the study.

5.7 Chapter Summary

The chapter discussed the findings gathered from the study based on the stipulated objectives which included; triggering tools and processes used in Community Led Total

Sanitation (CLTS) model toward Open Defecation Free (ODF) in the study area; Results on the outcome of CLTS practices in ODF communities; challenges of CLTS in the district; and possible ways of improving CLTS towards ODF therein. The chapter further situated the study findings to the extant literature and the theoretical framework (RANAS Model) in order to relate how the model was applied in the study. The next chapter will look at the summary of findings, conclusion and some recommendations that were adopted/adapted towards the sustainability of the CLTS programme.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter, which is the last provides a summary of the major findings based on the objectives of the study which are;

 - ➢ Triggering tools used during CLTS implementation in Bawku West District

 - ➢ Outcome of CLTS programme in the district

 - ➢ Challenges militating the success of CLTS programme in the district and

 - ➢ Strategies for improving the CLTS programme in the Bawku West District

 It also presents conclusions drawn from the discussion of the results and provides policy recommendations based on the findings of the study for scale-up purposes.

6.2 Summary of major findings

6.2.1 CLTS processes and triggering tools used during CLTS implementation

The CLTS processes identified in the study include; pre-triggering, triggering and post-triggering. These processes enabled CLTS facilitators to build a satisfactory profile of the community on OD practices in order to appropriately ignite indigenes to construct latrines and end OD practices.

The study also revealed that, the most common triggering tools used by CLTS implementers in the Bawku West District included; the walk of shame/transect walk, defecation map, glass of water and medical calculations. Even though, the study identified all the tools to be important, the walk of shame/transect walk was more effective in triggering community folks.

6.2.2 **Outcome of CLTS implementation**

From the study, the programme was initially perceived negatively but the outcome realized was more as a result of the CLTS implementation process. Some positive outcomes per the findings of the study included; knowledge on health implications of OD practices, construction of household latrines, strict compliance to community byelaws set, emergence of NLs to facilitate the process at the community level making indigenes see the programme as their own and the use of communal labour as to support the most vulnerable as efforts to not leave anyone behind in the agenda. However, the initial negative outcome of the CLTS intervention according to the respondents was the shame and disgust community members felt amidst visitors/implementers during the triggering process (walk of shame/transect walk exercise).

6.2.3 **Challenges of CLTS in the Bawku West District**

The following challenges were identified as the major issues facing CLTS implementation in the Bawku West District. They include; the nature of soil/ground, the use of local materials to construct household latrines, natural, social, and attitudinal phenomena, issues with motivation for community level CLTS champions, financial/economic constraints, limited post-triggering follow-up and post-ODF monitoring and non-availability of NLs at the national level CLTS. All of these

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challenges were identified as threats to the sustainability of CLTS, but prominent among them was the financial/economic challenges local people had to grapple with in their quest to construct improved and sustainable household latrines for improved health.

6.2.4 **Strategies for improving CLTS in the Bawku West District**

This study revealed the following as ways of improving CLTS in the Bawku West District; knowledge of community setting, strict recognition of community entry protocols, post-triggering follow-up, motivation of NLs to aid them work effectively, dry season triggering and investing in post-ODF monitoring. It was noted that, if these are effectively done, it would help CLTS facilitators/implementers carry out CLTS successfully and sustainably in the Bawku West District.

6.3 Conclusion

In conclusion, the study unveiled that, CLTS has played a key role in the promotion of improved sanitation and hygiene practices in the Bawku West District. Also, it was discovered that, sensitization, education and the application of the CLTS processes and triggering tools based on context, communities understand better that their health is a determinant of their sanitation practices. Amidst the challenges of the CLTS programme since its inception, it has contributed to some communities in the district been verified and declared as ODF. Hence, the findings showed that, the Bawku West District is a fertile ground if the CLTS processes are duly followed while effectively and appropriately combining the triggering tools during scale-up. This would therefore have a positive outcome and lead triggered communities to be declared and obtain Open Defecation Free (ODF) status sustainably.

The findings again revealed that, the relationship of participating in CLTS programme and owning a latrine was conciliated by contextual social factors as well as psychosocial determinants. Analysing data gathered also showed that, the probability of constructing a household latrine was dependent on the knowledge of existing contextual social factors within the various communities (Risks), the feeling of the individual about the new behaviour while comparing the cost and benefits in constructing the latrine (Ability), the behaviour of others in the community including their (dis)approval of having a household latrine (Norms), personal self-confidence in latrine building, maintain it and bouncing back in cases of relapse (Ability), as well as putting actions to prevent relapse and ensure the continuous usage of latrine (Self-regulation). This was realized during the CLTS triggering event where the appropriate tools were applied. Hence, it is worth noting that, the RANAS model to behaviour change was applied during the CLTS programme in the study district.

6.4 Recommendations

Based on the findings and conclusion, the study made the following recommendations:

1. CLTS processes should be duly followed by programme implementers for the programme to be fully accepted in the local communities.

2. Community entry protocols should be adopted and adapted by CLTS facilitators based on context in order to leverage on the support of community leaders.

3. A better understanding of community setting (culture, norms, beliefs, etc.) is very critical and this must be diligently done for facilitators not to impinge on residents' rights.

4. CLTS facilitators/implementers should effectively combine triggering tools based on context to enable communities appreciate the essence of the programme and end OD practices.

5. Triggering during the dry season is more successful than during the raining season and in this regard, it is recommended for facilitators to do so during the dry season.

6. Positive outcomes of CLTS should be recognized and reinforced by CLTS implementers. This could be in the form of a developmental project such as boreholes. If this is well done, it can serve as an influence to nearby communities to adopt positive behaviours and work on ending OD in their communities, whether triggered or not so they could also benefit from similar developmental projects.

7. Even though, CLTS involves the use of local materials by households to construct their own latrines, a careful provision of incentives or materials by the district assembly for the most vulnerable identified groups (especially cement), is key in order for them to construct resilient slabs for their latrines.

8. CLTS facilitators and communities' leaders and members should give children the chance to participate in CLTS as they are recognized as one

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of the influencers in enforcing messages and activities of sanitation and behavioural change. It will also mean, catching them young to understand the essence of basic sanitation and hygiene practices so they grow with it.

9. Community level CLTS stakeholders should be given some form of assistance at the community level, be it monetary (allowance) or means of transportation to aid them in their day to day movement. This should be a community initiative led by the chief and opinion leaders to support them since they trade-off their personal work to do CLTS activities. This would motivate them to do more especially after the community has been declared ODF and the district level CLTS champions do not regularly visit the communities again.

10. There should be national level CLTS stakeholder(s) through the Ministry of Sanitation and Water Resources (MSWR), to coordinate the Regional, District and community level CLTS champions/stakeholders. Their existence would help strengthen policies to support CLTS programme as well as ensure the availability of CLTS data at all levels especially the national level for planning purposes.

11. Future research should consider both qualitative and quantitative work within the Bawku west and other districts implementing CLTS in the region.

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APPENDICES

6.5 **Appendix 1: Interview guide for Natural Leaders (NLs) and selected members of the**

Water and Sanitation Management Teams (WSMTs) members

UNIVERSITY FOR DEVELOPMENT STUDIES, NYANKPALA CAMPUS

DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY SCIENCES

This interview guide is designed to assess the Community Led Total Sanitation towards Open Defecation Free communities in Bawku West District of the Upper East Region of Ghana. Please answer as truthful as possible. You may give your name or not. The information given is for academic purposes and would be treated confidential.

Interview guide for Natural Leaders (NLs) and selected members of the Water and Sanitation Management Teams (WSMTs) members in Bawku West District.

SECTION ONE

DEMOGRAPHIC DATA

Name: Community name:

Age: Phone number:

Sex: [1] Male [2] Female

What is your religion? [1] Christianity [2] Islam [3] ATR

What is your current educational level? [1] Never been to school [2] Primary [3] JHS [4] SHS [5] Tertiary

What is your household size? [1] 1-2 [2] 3-4 [3] 5-6 [4] above 6

What is your occupation? [1] Formal [2] Informal

How many economic dependents do you have? [1] 1-2 [2] 3-4 [3] 5-6 [4] above 6

How does your household draw water from for household cooking and drinking?

[1] Borehole [2] Well [3] River [4] pond [5] Dam (6) others, please specify………………

What is the distance of this water source to your house? [1] 1-2M [2] 3-4M [3] 5-6M [4] above 6M.

GPS:

SECTION TWO: CLTS PROCESSES AND TRIGGERING TOOLS USED TOWARDS ODF COMMUNITIES

1. Do you have knowledge about CLTS? If yes, how did you hear of it?

2. Has CLTS been implemented in your community?

3. If yes, what processes did the facilitators used to start CLTS programme in your community?

4. What triggering tools were used in the implementation of CLTS in your community?

5. How do you rank which tool influenced more on latrine construction?

6. How did you feel during the application of those tools, and why did you feel that way?

7. What lessons were drawn from the application of each of the tools

8. Which of the tools were effective in triggering you as a person

9. Which factors promoted the achievement of the CLTS in your community?

10. Did the community as a whole meet to confirm their commitment to stop OD?

11. How many people were at the meeting?

12. How many women and children were at the meeting?

13. Within what period of time after the implementation of CLTS, did your community attain ODF status?

14. What actions were taken to achieve ODF?

15. What type of toilet do you use in your household?

16. Is your household latrine covered after use?

17. What activities is/are available to protect the privacy of the users of your household toilet/latrine?

18. How did the WSMT facilitate the promotion of the CLTs in your community?

19. How did the Natural Leaders facilitate the promotion of the CLTs in your community?

20. How proud are you to own a latrine? If yes, why?

21. How expensive is it to construct your own latrine?

22. How many of your relatives within your community constructed their own latrine?

23. How much concern do people who are important to you (e.g., family, parents, and friends) approve that you construct a latrine?

24. What materials are necessary for the construction of a hygienic latrine?

25. How sure are you that you can finish the construction of a latrine even if problems arise (e.g., you run out of money, materials, etc.)?

26. Imagine that the latrine got damaged. How available will you be to repair the latrine again?

27. How important is it to you to construct your own latrine?

28. Do you have a plan how you will gather the materials for the latrine construction? (Explain)

SECTION THREE: CHALLENGES OF CLTS

29. How does the nature of land (topography) affect the CLTS implementation in the community?

30. What are the barriers to continuous follow-up visits on the CLTS implementation?

31. What are the challenges in material resource/fund mobilization for CLTS?

32. What are the artisanal challenges for CLTS in your community?

33. What are the technological challenges for CLTS in your community?

34. Are there other challenges the CLTS programme faced?

35. With those challenges identified, how would you rank them?

36. Did you experience conflict during CLTS? If yes, what conflict issues arose from the implementation of CLTS in your community?

37. What cultural practices or attitudinal challenges militate against the CLTS in your community?

38. What social challenges (income, age, educational status, etc) arise from the CLTS towards ODF?

39. What are some of the communication barriers in the implementation of the CLTS in your community?

40. What were some of the gender discriminations in the implementation of the CLTS in your community?

41. What other barriers militate against the participation in CLTS towards ODF in your community**?**

SECTION FOUR: CLTS OUTCOME (ODF COMMUNITIES)

42. Where do you and your family defecate?

43. What is the distance of your household to the latrine of your household?

44. How often do you respond to natures call?

45. Where does your or (do your) household (members) draw water from for hand washing after visiting natures call?

46. What is the rate of access of your household to the toilet facility?

47. When you compare your community that the CLTs is implemented with communities without CLTS, what are some of the benefits that your community derived through CLTS?

48. What are some of the benefits that you derive from the implementation of CLTS after becoming ODF in your community?

49. What are the modes of waste disposal in your household?

50. How safe are these waste disposal modes?

SECTION FIVE: STRATEGIES FOR IMPROVING THE CLTS FOR ODF

51. Which institutions or organizations collaborate to implement CLTs in your community?

52. What specific roles did each of these organizations play?

53. How does each of these roles contributed to the success of the CLTs in your community?

54. Explain how each of the following stakeholders support the CLTs in your community?

i. Chief……………………………………………………………………………………...

ii. Assembly Member……………………………………………………………………….

iii. Youth groups…………………………………………………………………………….

iv. Women…………………………………………………………………………………

v. children…………………………………………………………………………………

v. District CLTs team………………………………………………………………………

v. Regional CLTs team…………………………………………………………………….

55. Describe the collaboration among the community, District CLTs and Regional CLTs team?

56. What roles does the WSMTs play in this committee play?

57. How functional is this committee?

58. What is the gender composition of the WSMT?

59. How regular do the WSMTs meet?

60. What bye-laws exist in your community for promoting ODF?

61. If these bye-laws exist, how are they enforced and what sanctions exist on the breach of the byelaws?

62. What are the key moments you wash your hands?

63. How does the use of natural leaders aid the promotion of ODF in your community?

64. What new things have NLs learned from the CTLS activities? (Positive or/and negative)

65. How can CLTS stakeholders (NLs & WSMTs) capacities be improved for sustained ODF?

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66. Do district and regional level CLTS stakeholders undertake post-monitoring of ODF communities in your communities? If yes, how regular?

67. Is your community still ODF? If yes, what has contributed to that and if no, why?

68. What can be done differently to improve upon and sustain CLTS programme?
69. How would you rank these ways identified for improving CLTS?

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6.6 **Appendix 2: Focus Group Discussion (FGD) Guide**

UNIVERSITY FOR DEVELOPMENT STUDIES, NYANKPALA CAMPUS

DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY SCIENCES

Assessment of Community Led Total Sanitation towards Open Defecation Free communities in Bawku West District of the Upper East Region of Ghana.

Focus Group Discussion (FGD) Guide

SECTION ONE:

Community name:

Number of Latrines in the community:

Sources of water:

GPS:

Number of people in FGD:

Date:

Name of Facilitator:

SECTION TWO: CLTS PROCESSES AND TRIGGERING TOOLS APPLIED DURING CLTS TOWARDS ODF

1. Do you have knowledge about CLTS? If yes, how did you hear of it?

2. Has CLTS been implemented in your community?

3. If yes, what processes did the facilitators used to start CLTS programme in your community?

4. What triggering tools were used in the implementation of CLTS in your community?

5. Which of the triggering tools was most effective and which one was the least effective?

6. How did you feel during the application of those tools, and why did you feel that way?

7. What lessons were drawn in the application of each of those tools?

8. Which factors promoted the achievement of the CLTS in your community?

9. Did the community as a whole meet to confirm their commitment to stop OD?

10. How many people were at the meeting?

11. How many women and children were at the meeting?

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12. Within what period of time after the implementation of CLTS, did your community attain ODF status?

13. What actions were taken to achieve ODF?

14. How did the WSMT facilitate the promotion of the CLTS in your community?

15. How did the Natural Leaders facilitate the promotion of the CLTS in your community?

16. What materials are necessary for the construction of a hygienic latrine and are they expensive?

17. How sure are you that you can finish the construction of a latrines even if problems arise (e.g., you run out of money, materials, etc.)?

18. Imagine that the latrines got damaged. How do you plan to gather materials to repair or construct again?

19. How important is it to you to construct your own latrine?

SECTION THREE: CHALLENGES OF CLTS

20. How does the nature of land (topography) affect the CLTS implementation in the community?

21. What are the barriers to continuous follow-up visits on the CLTS implementation?

22. What are the challenges in material resource/fund mobilization for CLTS?

23. What are the artisanal challenges for CLTS in your community?

24. Are there other challenges the programme faced?

25. How would you rank these challenges?

26. What conflict issues arise from the implementation of CLTS in your community?

27. What cultural practices or attitudinal challenges militate against the CLTS in your community?

28. What social challenges (income, age, educational status, etc) arise from the CLTS towards ODF?

29. What are some of the communication barriers in the implementation of the CLTS in your community?

30. What were some of the gender discriminations in the implementation of the CLTS in your community?

31. What other barriers militate against the participation in CLTS towards ODF in your community?

SECTION FOUR: CLTS OUTCOME PRACTICES (ODF COMMUNITIES)

32. Where do the community defecate now?

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33. Do you have a functional WSMTs and NLs?

34. What roles does this committee play?

35. What is the gender composition of the WSMT and NLs?

36. How regular do the WSMTs meet?

37. What bye-laws exist in your community for promoting ODF and how are they enforced?

38. When you compare your community that the CLTs is implemented with communities without CLTS, what are some of the benefits that your community derived through CLTS?

39. What are some of the benefits that you derive from the implementation of CLTS after becoming ODF in your community?

40. What are the modes of waste disposal in your household?

41. How safe are these waste disposal modes?

SECTION FIVE

OBJECTIVE FOUR: WAYS OF IMPROVING THE CLTS FOR ODF

42. Which institutions or organizations collaborate to implement CLTS in your community?

43. What specific roles did each of these organizations play?

44. How does each of these roles contributed to the success of the CLTs in your community?

45. Explain how each of the following stakeholders support the CLTs in your community?

i. Chief…………………………………………………………………………………

ii. Assembly Member………………………………………………………………….

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iii. Youth groups…………………………………………………………………………………

iv. Women………………………………………………………………………………………….

v. Children………………………………………………………………………………………….

v. District CLTs team…………………………………………………………………………………

v. Regional CLTs team………………………………………………………………………………….

46. Describe the collaboration among the community, District CLTs and Regional CLTs team?

…………………………………………………………………………………………………….

47. What are the key moments you wash your hands?

48. How can CLTS stakeholders' capacities be improved for sustained ODF?

49. Is your community still ODF? If yes, what has helped you maintained it and if no, what made you relapse?

50. Does district level CLTS stakeholders undertake post-ODF monitoring? If yes, how regular?

51. What can be done differently to sustain and improve upon CLTS status?

52. From the highest to the lowest, rank the different ways of improving upon the programme?

6.7 **Appendix 3: IDI Guide - Institutions**

INTERVIEW GUIDE

IDI GUIDE - INSTITUTIONS

SECTION ONE:

Demographic data:

Sex: [1] Male [2] Female

What is your religion? [1] Christianity [2] Islam [3] ATR

What is the name of your organization or institution?

Which year did you start implementing CLTS in your catchment area?

SECTION TWO:

1. How did you select communities for CLTS programme?
2. What processes did you apply in CLTS?
3. Did you use any triggering tools? If yes, which of them did you apply and why?
4. Was any of the triggering tools more effective in triggering community members and why?
5. How would you rank them based on most effective to least effective?
6. How many household latrines have been constructed in your catchment area?

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7. How many of these households' latrines are in use?

8. What is the number of households with hand washing facility (including availability of water soap and or ashes)?

9. Are there households with well dug soak-away pits? If yes, how many of these households are with soak-away pits

10. Are there still instances of OD in the communities? Have children stopped OD? How about adults, have they equally stopped OD?

11. How regular are your OD inspections or monitoring? (Probe for whether it is weekly, monthly, quarterly and if so further probe for the number of OD inspections carried out in each of these sessions?

12. Do you have availability of data of action plans and defecation maps during CLTS? If yes, how did that help communities achieve ODF status?

13. Do you have natural leaders? If yes, what is the number of active natural leaders and how did they contribute to ODF achievement in your catchment area?

14. Do you have functional WSMTs? If yes, how did they contribute to ODF achievement in your catchment area?

15. Did you face any major challenges during CLTS implementation? If yes, what are some of them and how did you overcome them?

16. How would you rank these challenges from the highest to the least?

17. Have there been any impact of the CLTS programme in beneficiary communities? If yes, what impact has it made?

18. What was the overall outcome of the CLTS programme?

19. After carrying out the community self-assessment, do you confidently say declared ODF communities within your section all live by CLTS standards and are still ODF? If yes, what is making them maintain their ODF status and if no, what accounted for their relapse?

20. What lessons have you drawn from the CLTS implementation? Has that influenced how you are scaling up CLTS in other communities?

21. Would you recommend CLTS as a good intervention for scale-up? If yes, what in your opinion can be done differently to improve on CLTS programming?

22. How would you rank these strategies of improving on the CLTS programme for scale-up?

Plate 3: Women group

Plate 4: Mix group