UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE

THE ROLE OF WOMEN IN COMMUNITY-LED TOTAL SANITATION PROGRAMME IMPLEMENTATION IN THE KUMBUNGU DISTRICT, NORTHERN REGION OF GHANA

AMDIA IBRAHIM

2019

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‘‘THE ROLE OF WOMEN IN COMMUNITY-LED TOTAL SANITATION PROGRAMME IMPLEMENTATION IN THE KUMBUNGU DISTRICT, NORTHERN REGION OF GHANA’’

BY

AMDIA IBRAHIM (B.A Integrated Community Development)

(UDS/MCHD/0217/15)

THESIS SUBMITTED TO THE DEPARTMENT OF PUBLIC HEALTH, SCHOOL OF ALLIED HEALTH SCIENCES, UNIVERSITY FOR DEVELOPMENT STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN COMMUNITY HEALTH AND DEVELOPMENT

OCTOBER, 2019

DECLARATION

Student Declaration

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:

Student Name: IBRAHIM AMDIA **Student ID**: UDS/MCHD/0217/15

Student signature: ……. Date: ……

Supervisor's Declaration

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

Supervisor's Name: DR VIDA N. YAKONG **Date**: …… ... ……

Signature: ……

ABSTRACT

Women participation in Community-Led Total Sanitation is considered to be essential element in developing communities. (Managing the sanitation facilities effectively and sustaining it, is as a result of women active involvement throughout Community-Led Total Sanitation process) For some years now in Ghana, rural women participation in community led total sanitation seems encouraging, but yet a few are being involved in decision-making and planning. The study explored women's role in Community-Led Total Sanitation programme implementation in Kumbungu District. A cross sectional descriptive design and mixed method was used to carry out the research work. Kumbungu District was the study setting and the study population consist of women and female natural leaders of sixteen years and above were the participants. The Four (4) communities which included, Timonayili, Tigyoring, Gbanzogu, and Zangbaling Kukowhich were purposively selected for the study. The sample size of the research was eighty-six (86) households' respondents' for quantitative and thirty-two (32) respondents for 4 focus group discussions in all the communities. Data source was primary and secondary, where primary data were collected from focus group interviews with the used of interview guide and pre-tested questionnaire was administered from households. Secondary data were from relevant books, articles and journals that were in line with the research work and also from internet. Purposive sampling technique was used to select the four (4) study communities and females' natural leaders who were part of the gender analysis for focus group discussions whilst simple random sampling was used to select households' respondents in each community. Quantitative data was analyzed using statistical package for social scientists and qualitative data were manual thematic analysis. The study revealed how women involvement in CLTS activities accelerated the achievement of ODF in the District. Women were able to convince and support their husbands to construct household latrines within the stipulated time by carry water, picking stones, flooring, plastering, cooking and even supporting financially and also championed general cleaning of the environment. The study recommends that, Kumbungu District Assembly should ensure that the CLTS field facilitators always involve women in CLTS activities and in decision-making in community development programmes for the achievement of ODFs and its sustainability.

ACKNOWLEDGEMENT

I will first of all thank my supervisor Dr. Vida N. Yakong for spending her precious time to guide me with useful suggestions and corrections throughout this research work. I also want to acknowledge the support of Mr. Dason Abdulai, (Head of Department of Community Development and Social Welfare) for releasing his staff Mr. Kasim and Mr. Atugiba Kumbungu District Assembly to support in the data collection in the field. I also wish to thank Mr. Imoro the Environmental Health and Sanitation Unit (DEHO) for the contribution made to this work and Mr. Adam at Timonayili Unit Committee member. My sincere thanks also go to my dearest husband for the numerous contributions and support given to me during this project work and not forgetting the community Female Natural Leaders as well as those who might have supported me in diverse ways for making this work a success.

DEDICATION

I dedicate this work to the Almighty God for making it possible for me, to my mother Hajia Ayishetu Abukari, and in lovely memory of my father Alhaji Yakubu Ibrahim, my dear lovely husband, kids and my sister Wasila Ibrahim for their support given.

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LIST OF ABBREVIATIONS

BASIs	Basic Sanitation Information System
CIDA	Canadian international Development Agency
CLTS	Community-Led Total Sanitation
CRS	Catholic Relief Services
DDMC	District Disaster Management Committee
DICCS	District inter-agency coordinating committee on Sanitation
DoCD	Department of Community Development
EHSU	Environmental Health and Sanitation Unit
FGD	Focus Group Discussions
GSGDA	Gender Shared Growth and Development
GSS	Ghana Statistical Service
IDS	Institute for Development studies
MICS	Multi indicator cluster survey
MMDC	Metro Municipal District Chief Executive
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
NLs	Natural Leaders
OD	Open Defecation
ODF	Open Defecation Free
PRA	Participatory Rural Appraisal
RCC	Regional Coordinating Council
RICCS	Regional Inter-Agency Coordinating committee on Sanitation
RING	Resilience in Northern Ghana
RSMS	Rural Sanitation Model and Strategy

SADA	Savannah Accelerated Development Authority
SIDA	Swedish International Development Cooperation Agency
SNV	Netherlands Development Organization
SPSS	Statistical Package for Social Scientists
STF	Stock Taking Forum
UN GWTF	United Nations Interagency Task Force on Gender and water
UNICEF	United Nations International Children Education Fund
VERC	Village Education Resource Centre
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

Globally, poor sanitation is a major threat to development which is having negative effects on the progress of the country's health, gender equity and economic development. It is estimated globally that, 2.4 billion people do not have access to improved sanitation facilities 946 million people also defecates in the open (Njuguna & Muruka, 2017). The main causes of mortality for children under age five are diarrheal diseases and acute respiratory infections that are linked to poor water sanitation and hygiene. It is estimated that, 1.8 million people die every year from diarrheal diseases and acute respiratory infections which retards the country growth and development (United Nations Children Funds (UNICEF) and World Health Organization (WHO), 2015).

Nationally, 22.9% people living in Ghana do not have sanitation facility, therefore resorting to open defecation and 15% of the country population use improved unshared sanitation facilities making Ghana second for open defecation in Africa (UNICEF, 2015). In Ghana, the highest rate of open defecation is practiced in Upper East Region with 89%, Northern Region has 72% and Upper West Region has 71% (UNICEF, 2015). This means that, more than 70% of people living in the Northern Regions of Ghana defecate in the open. The situation is not different in the Kumbungu District. Northern Region is made up of twenty-six (26) Districts and in the launch of the Districts ODF league table Kumbungu District was placed 12th position. (Environmental health and sanitation unit, 2017).

Sanitation has been a great concern in Ghana where governments have put in policies that recognizes the concept of communities leading in their sanitation issues with the help of a Community-Led Total Sanitation (CLTS) officer. It has been realized that, the approach can easily change people attitudes towards good sanitation practices and ignite efforts by communities for the improvement of the sanitation situation in their communities (Rural Sanitation Model and strategy (RSMS), 2011).

Communities taking lead in addressing their sanitation issues collectively is termed as Community-Led Total Sanitation (CLTS) approach in the rural sanitation model and strategy document. It is an integrated approach that leads communities to achieve ODF. CLTS empowers community members to realize the negative effects of OD, hence latrines are constructed to eliminate OD and achieve ODF status. This concept focuses on instilling a change in sanitation behaviour, rather than just constructing toilets. The community members together decide how they will hygienically make their environment clean to achieve ODF status. CLTS focus is on stopping the practice of OD as a first step and starting point to changing behaviour, constructing, using and maintaining a household latrine, regular washing of hands with soap under running water at all critical times, handling of food and water hygienically and safe disposal of animals and domestic waste (Kar and Chambers,2008).

Kamal Kar was the pioneer of CLTS in North West Bangladesh in the late 1999 and into 2000, (VRC) and partnered with Water Aid Bangladesh. The approach has now been adopted in many parts of Asia, Latin America, Africa, and Middle East. Over 20 countries now use the approach. (Kar and Chambers, 2008).

The implementation of CLTS in Ghana is in nine Regions; however, all the Districts in Northern Region are implementing CLTS. The approach is participatory and enables the community members to analyse the sanitation situation and collectively internalize the consequence of practicing OD on public health (Kar K., 2008).

Women and girls traditionally are seen to be responsible for domestic water supply and hygienically maintaining their homes and the environment. Women have a stake in improving water and sanitation services and its sustainability (UNICEF, 2003). It is necessary for women to be involved in CLTS due to the role they play in ensuring that there is water in their households, taking care of the children and the sick as well as managing the household sanitation since; they are those who suffer the consequences of inadequate sanitation services (Daalen, 2014). Most women who do not have access to basic sanitation facilities like household latrine, normally wait for night to fall before they can defecate which has serious effects on their health. Waiting for long to defecate can lead to increase chances of urinary tract infections, chronic constipation and also having psychological stress on them. Women who do go out alone in the night to defecate are at risk of sexual and physical assault (United Nations Water and Sanitation, 2006). This sanitation crisis is detrimental not only to women's health but also to their education, dignity, community status, and over all well-being. With improved sanitation, women all over the world will experience an elevated standard of living in several aspects (WHO/UNICEF, 2014).

Women who have access to improved sanitation facilities in their households and at their work places enjoy better health and are able to work effectively. When women families are healthier, they spend less time in caring for the sick members in the family. Many

women do make efforts in getting access to safe drinking water and sanitation as they continue to involve themselves in the technical operations and management of water and sanitation services. They are seen as skilled workers capable of achieving high levels of training and expertise there by leading to the attainment of ODF. The increased status of many women finds them in a better position to generate income which has a direct or indirect effect of increased good sanitation practices. Women do play a vital role in raising awareness on sanitation issues in communities they live, and improved WASH are the first steps to empower women in developing countries in sanitation (UN GWTF, 2006).

1.*2* Problem statement

Integrating gender in sanitation requires addressing the differences in gender roles (UNICEF,2010). The participation of Women in CLTS activities is not encouraging in the Kumbungu District as compared to the men, women involvement is usual poor (UNICEF, 2014). This low participation of women in the CLTS activities has impacted negatively on the spirit of CLTS as entrenched in the Environmental Sanitation policy (WHO/UNICEF, 2015). Women are those who are mostly affected by water sanitation and hygiene (WASH) activities but when it comes to planning and decision making, they are sometimes not involved, or their contributions are minimal. Studies have reported that, meaningful participation of women in decision making, implementation and evaluation of developmental projects especially the ones that mostly affects by their welfare such as water and sanitation projects, often lead to project success and sustainability Prokopy (2004) Ladele et al. (2011) Marks and Davis (2012) Harmon (2013) cited in Mensah (2015). Hence, low participation of women in the CLTS process

leads to the slow pace of achievement of ODF in the Region. Statistics from the environmental health and sanitation directorate indicates that Over 3,000 communities have been triggered but only 527 attained ODF status in Ghana (Environmental Health and Sanitation Unit, 2016). Most of the studies concentrated on general role of women in the water and sanitation with mostly the role they play in water committees in the communities. Although water is an undeniably critical and prominent feature in the water and sanitation discourse, few studies has been conducted to establish the roles of women in the CLTS processes in achieving open defecation free.

This study seeks to assess the role of women in CLTS; as engaging in the process from the triggering to post triggering stage in the communities they live and to leverage all their potential to enable their communities attain Open Defaecation Free Status in k

Kumbungu District

1.3 Research questions

1. What are the roles of women in Community-Led Total Sanitation (CLTS) processin achieving ODF in the Kumbungu District?
2. What hinders women's full participation in the CLTS process in achieving ODF?
3. How does the involvement of women in CLTS accelerate the achievement of ODF?

1.4 Main objective

To assess the contribution of women in CLTS process against Open Defecation in the Kumbungu District.

1.5 Specific objective

1. To determine women's role in CLTS in achieving ODF in Kumbungu District.
2. To ascertain the hindrance of women's participation in the CLTS process
3. To explore how women's involvement in the CLTS will accelerate the achievement of ODF in Kumbungu District

1.6 Conceptual frame work of the study

A generalized understanding of how CLTS process is related directly to women's role in the communities and the achievement of ODF. From the framework, it is observed that Women involvement in the CLTS triggering process and their role as women on hygiene and sanitation is shaped by their household roles and the care they give to their family members to ensure they are healthy. Community led Total Sanitation process requires a holistic approach, which can only be achieved if women are fully part of the sanitation process. For CLTS to achieve ODF within the stipulated three (3) months there should be full involvement of women in the process. If women are targeted in the pre-triggering, triggering and post triggering processes women will be emerged as natural leaders and will be part of decision-making process.

In CLTS process when a community is triggered their awareness is being created for the community to take their own action by stopping OD and putting in temporal measures such as dig and burry, sharing of latrines of those who have latrine already whiles they are constructing latrines and practicing of hand washing with soap under running water, at all critical times and clean environment towards attainment of ODF. The CLTS process goes with sanitation business and marketing for people to make their own choice and improve on sanitation facilities for sustainability. People are given a wide range of prices

in sanitation options which are appropriate to the local environment, to the needs of the people economy and to the health of the people which will lead to improve sanitation facilities towards achieving ODF. Total sanitation can be achieved only if people who are the users and beneficiaries of sanitation programmes and projects are involved in the planning and implementation of sanitation programmes. This will help build the capacity of women since they are key community activists in CLTS sanitation improvements and sustainability.

Figure 1.1 below shows the Conceptual Framework of the role of women on community led total Sanitation. The research will be carried out within this framework

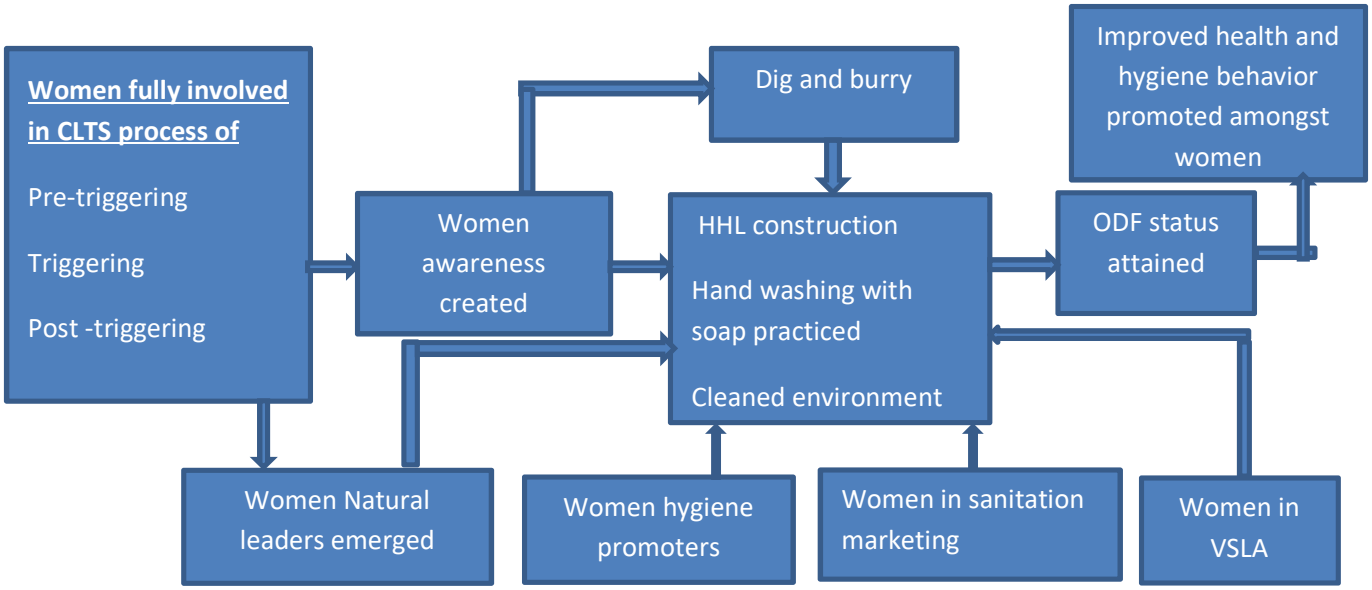


Figure 1.1 Conceptual Framework of the role of women in community led total Sanitation

Author's concept

The design is drawn on a set of core assumptions that explain what changes should happen in order to lead to ODF status with improved health and hygiene practices.

Moreover, there are assumptions that with the involvement of women in CLTS activities it will lead to the attainment and sustainable ODF status.

1.7 Justification

The issue of open defecation is a great concern in Ghana especially Northern Region. Open defecation poses serious health threat to people much particularly children under five and women. This led to the approach of CLTS to stop OD and attain ODF. In spite of many donor agencies in the Kumbungu District, implementing CLTS to stop OD for the attainment of ODFs much has not been achieved. There is the need to reveal the underlying role of women in CLTS process that will facilitate the achievement of ODFs.

The study will provide inputs into environmental sanitation policy formulation in the country in general and the study district in particular, enhancing women involvement in CLTS will boost economy efficiency since there is a high correlation between poor sanitation and human cost due to illness.

It will also add to the existing body of knowledge for a useful academic material for referencing, researchers who want to undertake research into women and sanitation can use this study as reference.

1.8 Operational definitions

Operational definition is the subjective meaning given to the terms used in the research. Even though its meaning is subjective it must nonetheless conform to known fact

(Atindanbila, 2013).

Community

Community refers to a group of people living together in one place, where they practise common ownership of things such as living space; or where they share values, ideas, responsibilities, resources, religion, race, profession; or some particular characteristic that identifies and bring them together (Botchwey, 2006).

Community led

It is a situation where community members take their own initiatives to change their sanitation situation from bad practices to good ones with the help of CLTS field facilitator. All community members take steps to stop open defecation by constructing latrine in every household to achieve ODF.

Total Sanitation

When community members no longer practice OD and about 80% latrines and hand washing facilities are being constructed and are in use with cleaned environment without open faeces.

Role of Women

Role is a socially ascribed behavior of a person within a particular society, a particular sex group is expected to perform a role that society ascribed it. Women undertake reproductive roles (Childbearing/rearing and domestic tasks), productive work done by women for pay in cash or in kind and community management role is also undertaken by women at the community level, as part of their reproductive role to ensure the provision and maintenance of the scarce resources for collective consumption, such as water and sanitation (International Labour Organization, 1998).

Open defecation free

When a community no more practice OD and latrines and tippy taps are constructed and being used in a community

1.9 Organization of Chapters

This thesis report is put into six chapters. Chapter one (1), contains the general overview, problem statement, research questions, research objectives, justification and the organization of the study. Chapter two (2) discusses the relevant literature and conceptual frame work on the role of women in community led total sanitation in achieving ODF, while chapter three (3) centered on the profile of the study area and the research methodology. The Chapter describes the research design, profile of the study area, the Study unit, sampling procedure, sample size, methods of data collection and analysis procedure. Chapter four (4) presents the results of the study, Chapter five (5) focuses on the discussions of results and Chapter six (6) is conclusions and recommendations drawn from the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on Community-Led Total Sanitation; role of women and gender to identify various concepts that have shaped the thinking and practice of CLTS by practitioners. It also looks at legal and institutional framework to explore the basis within which Gender mainstreaming is anchored.

2.2 Community led total sanitation

Community-led total sanitation drives its meaning from the Rural Sanitation Model and Strategy (RSMS), which is a document developed to tackle Rural Sanitation. In the last two decades, CLTS gained its popularity when Dr. Kamal Kar pioneered it in 1990s, governments and development workers have noted its impact on achieving positive health outcomes and poverty eradication. In this regard, a number of scholars have been attracted to this field of study. Community-Led Total Sanitation has been described as a “radical new approach” to help populations without adequate hygiene and sanitation (Robinson, 2006). However, despite its approval the role of women in CLTS remains unclear.

CLTS emphasizes a change in sanitation and hygiene behaviour instead of focusing only on latrine construction. Community members are triggered into implementing a wide range of behavioural changes which include stopping Open Defecation (OD), hand washing with soap under running water at all critical times, use of hygienic latrines and hygienic handling of food and water amongst others. The approach of CLTS focuses on collective decision-making and the development of action plans by community members

that will move people from OD toward ODF environment. This is critical in view of the high rate of OD practice all over the country.

The Participatory Rural Appraisal (PRA) principle that "they can do it" is fundamental in the CLTS approach and PRA methods including but not limited to the following are used:

i. Community members are guided by the field facilitators to Map the ground in other to show where people live and where they defecate;
ii. The field facilitators with the community members do transect walks (walk of shame) to visit and stand in those places;
iii. Calculations of quantities of shit (the crude local word is used) and identifying pathways to the mouth;
iv. Field facilitators demonstrate Faecal Transmission Routes to illustrate the Faecal Oral transmission.

Hence, leading to the shocking recognition that, "We are eating one another's shit". The CLTS triggering is designed in a way that, when community members are triggered it leads to a moment of ignition and a collective decision to end OD followed by action to become ODF. When triggering is successful, Natural Leaders (NLs) emerge and people start to dig holes and build latrines which have no standard models of construction (Chambers, 2009).

Moreover, CLTS seeks to stimulate a collective sense of disgust and shame among community members as they confront the crude facts of practicing mass OD and its negative impact on the whole community life. The basic assumption of the triggering is that; human being cannot stay unmoved once they have learned that they are ingesting shit. The goal of the facilitators is purely to help community members see for themselves

that open defecation has disgusting consequences and creates an unpleasant environment Kar and Chambers (2008). It is then up to community members to decide how to deal with the problem and to take action.

However, the most generalized definition as used by both researchers and development practitioners is that, CLTS refers to an integrated approach to achieve and sustain ODF status Kar (2005). It entails the facilitation of the communities to analyse their sanitation profile, their practices of defecation and its consequences leading to collective action by the communities to become ODF Kar and Chamber (2008).

The outline of the process involved in the CLTS as shown in figure 2.1 below

The process of community led total sanitation

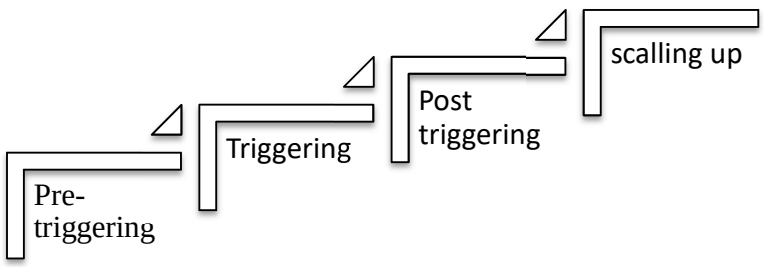


Figure 2.1 Community led total sanitation process

Source: Handbook for CLTS

Following the above, it is recognized that CLTS in practice is a strategy that seeks to attain ODF status moving away from the inefficiencies of the previous methods by adopting the bottom up approach and participatory modules based on country and area specific targets. The nature of CLTS has a given impetus for local communities to use local solution to deal with sanitation problems. The strategy has led communities to

construct household latrines using local materials and technologies (Pickering et al., 2015).

NGOs in Bangladesh over the years have been pioneering the CLTS approach to sanitation development. This has been attributed to the realisation that the traditional strategy which has been characterised by formal methods and teaching people of what to do to attain personal and communal hygiene has been ineffective in attaining sustainable sanitation (Robison, 2006). Also, the Central Government Led or subsidy method of provisions of latrines have not also helped much. For example, a survey conducted in rural India revealed that, large portion of the country's population still indulges in OD in spite of government intervention (Coffey, et al., 2014).

Bangladesh has witnessed a massive reduction in open defecation among its rural folks using the CLTS. This has scaled most in India, Indonesia Cambodia and Pakistan and has provided perhaps an empirical evidence for countries with similar challenges especially in Sub-Saharan Africa where open defecation is wide spread to adopt it as a strategy to improving sanitation. (Kar and Chambers, 2008).

Indeed, the paradigm ~~s~~hift represents a critical milestone in sanitation delivery. The observations above have necessitated a paradigm Shift to effectively deal with sanitation and eventually achieve open defecation free status. Robison (2006) outlined the focus of the new strategy as follows: Focus on stopping O D rather than building Toilets; the need for the community members to collectively take an action on stopping OD within their communities; subsidy for toilet construction is not given (the households are to construct latrine with their own resources); available local materials are being promoted for latrine construction (instead of outsiders imposing standard latrine on them)

World Water forum also noted the role of CLTs and sanitation development and presented the significant difference that existed in the conventional approach to sanitation and the community led approach (Ijjasz, 2006). This is illustrated in Table1.1 below:

Table 2.1Traditional Approach Verse CLTS approach

Elements	Traditional approach	CLTS approach
Focus	Latrine construction (hard ware input)	Stopping OD by the community
Technology	One fixed model	Menu of options
Motivations	Household level individual subsidy	Igniting behaviour change through self-realization of health externalities caused by OD
Time frame	Long and unknown	Short
Financial	Individual upfront hardware subsidy for latrines construction	Outcome-based reward grant at the community level
Monitoring	Focus on number of household latrines constructed	Focus on meeting ODF outcome
Impact	20-40% coverage	Full coverage and behaviour change

Source: Ijjasz (2006), World Water Forum, Mexico.

The sustainability of improved sanitation has become a great concern for most governments' and policy makers. In most countries' sanitation has been made a political priority where some have set targets and road maps designed to achieve open defecation

free (IDF, 2011). largely due to the fact that sanitation is associated with positive health outcome. This has been demonstrated in studies in Mali which revealed positive outcomes on diarrhoea and child stunting in areas where CLTS was practiced (Pickering, 2015). Furthermore, the negative effects of inadequate sanitation may also increase women's vulnerability in WASH house and (Cavill, 2015).

The importance of sanitation has also been noted by the World's Governing Body, the United Nations with the aim of eliminating OD by 2030 as envisaged by the sustainable development Goals (WHO, 2015). In Ghana, the concept of CLTs have been piloted and even scaled up in 2015 achieving certain landmarks in the area of its implementation. Ghana has adopted the CLTS as an approach for basic rural sanitation promotion. The approach has replaced the subsidy approach which failed to end the practice after some years of implementation. The country has been making efforts to scale up the CLTS implementation in all districts in Ghana since 2010.

The implementation of CLTS is in five Regions in Ghana and it is government-led. The Environmental Health and Sanitation Unit is leading the implementation with support of the Department of Community Development. The implementing Regions are Upper East, Northern Region, Upper West, Central Region and Volta Region. Whiles there are some reports of achievements made in some Districts with the implementation of the approach. There are still some challenges that need to be addressed.
The implementing organizations of the approach are Plan Ghana, Netherlands Development Organization(SNV),Global Communities, Resiliency in Northern Ghana (RING), SPRING, Water aid with its local partners World Vision Ghana, Catholic Relief Services, Care international Ghana, the organisations implementing the approach include,

Plan Ghana, Global communities, Netherlands Development Organization (SNV), Resiliency in Northern Ghana (RING), Spring, Water Aid, Catholic Relief Services, World Vision Ghana, Care International Ghana and Quasi Government institutions like Community Water and Sanitation Agency (CWSA) also implementing CLTS (Institute of Development Studies IDS,2015).

This study understands CLTS as solution to rural development. The underrepresented or deprived populations are usually at the local level and consist of the poor, illiterate, vulnerable groups like women and minority ethnic group (Arthur, 2017). The implementation of CLTS in Ghana is not without challenges, which are shared among development partners, government and NGOs. Particularly, challenges at the District Assembly, a lead agent of development at the local level has been identified by the institute for development Studies (IDS) as follows:

- The business potentials have not been developed by the private sectors to respond to the increasing demand of latrines in the communities.
- Some of the MMDAs do not prioritise basic sanitation
- Week reporting by MMDAs
- Week coordination at the Regional and District level.

2.3 Open Defecation (OD)

Open defecation is where people go out in bushes forest open fields, open bodies of water or other open spaces to practice OD instead of using a toilet to defecate (UNICEF, 2015). Open defecation is the discharge of human faeces body in an open area; this has several effects on society. It pollutes the environment; causes disease and can lead to death. A

survey conducted in Rural India revealed that, large portion of the country's population still indulges in OD in spite of government interventions (Diane et al., 2014). Cross sectional analysis carried out in 112 Districts in Indian showed that, high rate of OD is associated with risk of child stunting spears et al. (2013) further, a study in the Bolgatanga Municipality in Ghana found faecal coliform bacteria in 60% of sachet water that was examined (Oyelude and Ahenkorah,2012).

2.4 Open Defecation Free (ODF)

Open Defecation Free refers to a situation where community members do not defecate in the open but rather use a latrine, (a) no open faeces is found in the community /environment, (b) all community members use safe technology option for disposal of faecal matter. Where ''Safe Technology Option'' means no contamination of surface soil, ground water or surface water; excreta inaccessible to flies or animals; no handling of fresh excreta; and freedom from odour and unsightly condition" (Singh, 2015). When a village or a community with a certain percent of the population are using toilet facilities instead of pooping in the open (Plan International, 2014).

2.5 Role of women in sanitation

The role women play in creating awareness on water sanitation and hygiene in their communities is vital and improving water sanitation and hygiene for women are the steps to empowering women in the developing countries Life Water Organization (2014). Women are central to the development of rural areas and to national economics UN women (2017). Women's role in National development should engender active involvement or presence in all fields as they can contribute more positively as compared to males towards the development of all social aspects of life (Ehsan, 2018). Similarly,

women's work has traditionally been centered in taking care of the children, cooking for the family, cleaning the home and fetching of water with children to support in household latrine construction (Tropical Resources, 2011). For culture, women are always those who collect water, transports and users of water in the developing countries and tend to have main responsibility for their health and managers of domestic water as well as promoters of home and community-based sanitation.

2.6 Women involvement in CLTS in accelerating the achievement of ODF

Women are recognized as key players in development as such, WASH objectives cannot be met without women's full participation (UNICEF, 2003). Women serving as managers at the household level have a higher stake in the improvement of the WASH sector. In sanitation and hygiene gender is an important concept because women have the primary responsibility of maintaining sanitation facilities and its practices in the household level. There is a relatively widespread discourse arguing that, it is necessary to empower women in hygiene and sanitation in order to sustain the sanitation behaviour for both sexes Davis (2015). Additionally, it has been reported that women do take over the latrines after construction work is done, by training children on how to use the latrine hygienically Shelly (2015). A study in Uganda demonstrated that women undertook numerous CLTS activities and influenced their spouses to have sanitation accessories/facilities installed within their homes (Plan Uganda, 2012). Similarly, another study revealed how women are dynamic and are able to persuade their husbands to construct household latrines (Mahbub, 2008). In fact, a major role been played by women is pressuring people to stop practicing OD and construct latrines (IRC, 2O11). Women staying at home have gotten some benefit from the CLTS process by experiencing the

benefits of ODF achieved in their communities. Some women also emerged as natural leaders and are placed to check community members to stop practicing OD and construct latrines. Women's skills in CLTS process have been improved substantially and they are able to take on different roles to improve themselves and the community's situation as a whole. Women's importance in CLTS have been recognized in maintaining and sustaining sanitation and hygiene services. However, there is the need to consider gender in CLTS process in order not to over burden women. A systematic way of gender integration, equality and women empowerment as in the Pan-Africa programme gives better results. If men and women are working together, discussing and cooperating on CLTS at an equal level, women can then assert their rights by improving social position and obtained gender transformation results in the process.

2.7 Gender mainstreaming and women integration

It occurs when men, women, boys and girls are properly integrated in policies and programmes at all levels in the development efforts in terms of decision-making, leadership, and management. This process allows both sexes to be involved in decisions-making that affects them and their communities in which they live. It has been argued that, there exist inequalities between men and women in terms of political participation, decision-making as well as men and women having different economic opportunities (UN, 2002).

2.8 Legal and institutional framework in women integration

There are volumes of literature in Ghana and worldwide ensuring the right of women and the need for integrating their concerns into development process: the convention to eliminate all forms of discrimination against women (CEDAW), adopted since 1979 by

the UN General Assembly urged states to undertake a number of measures to end discrimination against women include:

- To integrate principle of equality of women and men in their legal system abolish all the discrimination laws and rather adopt appropriate ones for all the sexes
- To put in place public institutions and tribunals that will effectively protect women against all discrimination.
- To make sure all acts of discrimination against women by persons, organization or enterprises are being eliminated.

In making this and other protocols a reality the 1992 constitution states that, "The enjoyment of rights of effective participation in development processes including rights of people to their own associations free from state interference and to use them and protect their interest in relation to development processes, right of access to agencies and official of the state necessary in order to realise effective participation in development process; freedom to form organisations to engage in self-help and income generating projects; and freedom to raise funds to support those activities;"

Furthermore, the medium-term priority policies focus of the government of Ghana to address constraints of Gender Equity and Women Empowerment and thus achieve transparency, accountability and responsive government (Gender Shared Growth and Development II (GSGDA), 2015).

2.9 Institutions responsible for integrating women in CLTS local level

The Environmental Health and sanitation Unit (EHSU), the Department of Community Development (DoCD) and School Health Education Programme (SHEP) at the District Assembly are some of the Key institutions responsible for CLTS. The Departments are

required to mainstream gender within the framework of the Medium Term Development plan of the District Assemblies. These Departments and Units are required to do gender analysis, identify gender gaps and plan on how to address them. In conducting gender analysis, societal roles and responsibilities of men, women, boys and girls, as well as power relations between them and how these power relations influence access and control over resources such as land, household latrine, credit and technology; access to time, markets, information (especially on available public services), and public institutions (decision-making). It is also to identify the practical needs and interests (basic services such as education, health, water and sanitation including waste management etc.) and the strategic needs/interests (which will lead to a change in the status of men and women, such as facilitating access to rights and entitlements, and empowerment), and their implications for service delivery. (National Development Planning Commission, 2017)

2.10 Factors hindering women's full participation in CLTS

Although mainstreaming gender and particularly addressing the concern of women is being pursued and even used as a yardstick against which countries are measured on how progressive and democratic they are, the effort is not without challenges**.** A study conducted by Arandan (2016) in Kenya revealed how men dominate in decision-making on sanitation and hygiene issues even though, they are less affected by the consequences of poor sanitation. A study conducted on the role of women in sanitation decision-making in rural coastal Odisha India, stated that socio-cultural factors of women in their communities and household levels dynamics often prevents them from getting involved in sanitation related decisions, hence household latrine construction decisions are only done by men Routray et.al. (2017). According to Vernooy (2005) as cited in Mensah

(2015), “the mere increase in the number of women in a project or programme or giving women the space to focus on a small activity do not necessarily mean they are meaningfully participating in the project. Simply inviting women to meetings without considering the meeting time and space, their domestic workload and ability to speak at meetings will not yield any meaningful result.”

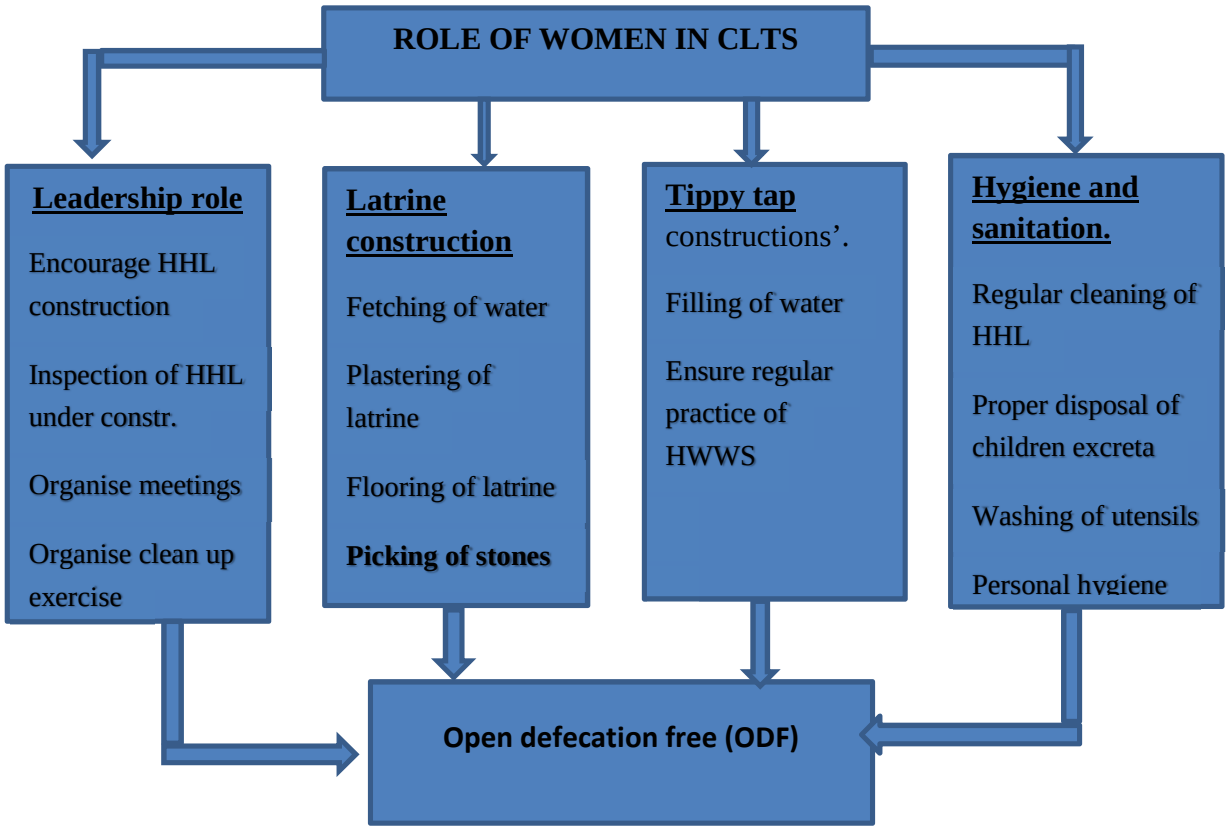
Similarly, gender analysis conducted by Department of Community Development, Tatale Sangule District Assembly indicated that, most of the women do not take part in decision- making on WASH but men rather take decision for the women to abide by (Tatale Sangule District Assembly, 2015). Women have tried to change the traditional power dynamics of women and men since there are clear division in roles, where men dominate in the planning and decision-making on WASH investment, they hold the household purse and do the latrine construction, their role is seen as supervisory whiles women are responsible for WASH issues and taking care of the family (Daalen V. T., 2014). This suggest that, women’s full potential in respect of CLTS needs to be harnessed. A research conducted on gender mainstreaming in CLTS came out with findings that, women’s reproductive, productive and community roles overburdened them as men do not do much in these multiple roles, thereby making women not to get enough time to participate actively in CLTS (Kpandai District Assembly, 2015). In order to effectively deal with women’s participation and eliminate open defecation Daalen (2014) outlined some important role as follows;

- Women involvement in decisions-making on CLTS at the community and household level.
- Women playing roles as Natural leaders in the community

- Women playing roles as Health Volunteer
- Women help in construction of household latrine and
- Women have a big role in improving hygiene and sanitation.

Women's role in CLTS process and practice is encapsulated in the diagram below:

Figure 2.2 women role in CLTS



Women Role in Community Led Total Sanitation process

Source: Authors own conceptualisation

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provides information about the methodology employed in the study. The study covers profile of the study area, study design, study population, study unit, sample size, sampling techniques, data source, questionnaire as the research instrument, data collection procedure, data analysis, pretesting and ethical considerations.

3.2 Study Area

The study was conducted in four (4) communities under Kumbungu District which were, Gbanzogu, Timonayili, Zangblung kukuo and Tigyoring that have achieved ODF status. Kumbungu is a District that was carved out of the then Tolon/Kumbungu District with Legislative Instrument (L.I) 2062 of 2011was inaugurated on the 28th June, 2012 with Kumbungu as its District capital.

3.2.1 Location and size of the District

The location of the District is in the Northern flank of the Region which covers a land mass of approximately 1,599 km square and shares boundaries with Mamprugu/Moagduri district, Tolon and North Gonja Districts to the North, to the West is Sagnerigu District to the South and Savelugu/Nanton Municipal to the East. The District is made up of 115 communities with 24 electoral areas (EAs), One (1) Town council (TC) and Five (5) Area councils (AC). They include; Gupanerigu, Gbullung, Zangbalung, Dalun and Voggu Area councils and the Kumbungu town council being the administrative capital (Ghana Statistical Service (GSS), 2010).

3.2.2 Demographic characteristics

The population of the District stands at 39,341with a male population of 19,686 and a female population of 19,655 with estimated growth rate of (3%). The density of the population is approximately 50 inhabitants per square Kilometer. Females constitute about 50% of the population whilst that of males also stands at 50%. (Population and Housing Census, 2010).

About 54% of the District population is below the ages of 20 years, this indicates how largely the youthful population in the District. The proportion of children under 15 years is 45%. Dependency ratio is the ratio of non-productive persons (Age 0 to 15 and 65 years and above) to persons within the economically active age group of 16 to 64 years is 1:1. This means that, in every household, each person within the economically active group has one dependent individual to take care of in addition to herself. The District has 115 communities, most of them are farming communities with less than 500 population. A population of 5000 is used as a threshold for Urban-Rural dichotomy, the District has two (2) urban centers, and they are Kumbungu the (District capital) and Dalun. (GSS, 2010).

3.2.3 Topography and drainage

Generally, the land is undulated with a number of scattered depressions, no availability of marked high elevations in the District. A number of rivers, streams and most prominent White Volta are drained in the District, the major rivers with their tributaries show dendrite drainage pattern where most of the dendrites dry up in the dry season.

3.2.4 Gender

The population of the district is basically made up of men, women, boys and girls who are identified by their roles and responsibilities that are attached to them by the society. Like many societies across the country, the roles and responsibilities of the people in the Kumbungu district are not different. Males are regarded as the breadwinners of the families and women as dependents.

The District is patriarchal when it comes to power and gender relations and therefore making men and boys more powerful. This means that men take decisions in the district. This does not mean that women are absolutely left out of decision-making; men sometimes consult the women before main decisions are taken.

Men are purely entitled to land; information and many other resources whiles women are supposed to be taken care of by men and therefore should be subservient.

A clear example of gender stereotype is often choosing the male child over the girl child to attend school when resources are scarce to take them both. This makes the girl child less educated and uninformed. The girl child is marginalized and confined to the kitchen; this affects the standard of education of the girl child, as the society does not put any importance in the girl's education. Ghana School feeding Programme and the help from CAMFED may reshape and bring more of the girl child to school.

Women constitute about 50% of the population of the District forming a bulk of farm labour. They also engage in marketing and processing of agricultural produce. However, women access to agricultural lands and credit is very limited. Only 0.75% of women farmers had access to credit in 2013 (kumbungu District profile 2014). Which is marginal improved over 2012 of 0.5%. This is due to inadequate education and information,

inadequate credit facilities, lack of collateral, low capacities of women in business, certain cultural and traditional practices. Consequently, women are incapacitated to generate enough income to emancipate them economically, particularly, women headed households. Moreover, women are not fairly represented in the District Assembly and the Area Councils. This limits their participation in local governance and in decision-making that affect their lives.

As a result of these, women still do subservient work in the household and the larger society with its attendant abuses such as wife beaten, rape, low enrolment and performance of school pupils and broken homes. These affect general development in the District as well as the people wellbeing.

To address the gender disparity in the district, the district has a gender desk officer charged with the responsibility of collaborating with development partners to work towards bridging the gap. In addition, the assembly has instituted a scholarship scheme to assist needy girls to further their education.

The assembly is also running two vocational schools in the district for girls aimed at encouraging the girls to engage in income generating activities. This has help reduce the incident of girls from the district migrating to the bigger cities to erg a living from menial jobs.

3.2.5 Climate change and disaster management

The major land degradation issues are the cutting of trees for firewood, charcoal burning in some parts of the District. The Assembly in collaboration of the Ministry of Energy is introducing gas cookers and cylinders to the communities to help curb the use firewood as source of domestic energy.

The Assembly is in partnership with the Environmental Protection Authority (EPA) to embark on afforestation projects in selected communities under the GEMP Programme.

The opening of the Bagre Dam in the Burkina Faso cause flooding in communities along the White Volta in the district during the peak of the raining season. The District NADMO in collaboration with other stakeholders educates communities along the White Volta to move to higher grounds during the peak of the raining season. In addition, the District Disaster Management Committee (DDMC) chaired by the DCE works towards mitigating disasters in the districts as well as acting as a rapid response team to disasters.

The District liaises with the Ministry of Agriculture, Savannah Accelerated Development Authority (SADA) and other development partners to support farmers to cultivate assorted food crops at Botanga Irrigation Project so that they will not solely depend on rain fed agriculture. This is aimed at mitigating the effects of climate change on food production in the district.

3.2.6 Socio-cultural characteristics

The people of Kumbungu District are predominately Dagombas. However, other few tribes like Gonjas, frafras, and Ewes who are fishing along the White Volta. Dagombas constitute (95%) of the District population (Kumbungu District profile, 2014).

The predominant Religions are Islam and Traditionalist. However, there are Christians across the population especially in the urban settlements.

The housing pattern in the district is generally of mud structures with thatch roofs. A small proportion of the mud houses are plastered with cement. The kind of roofing's for these buildings are mostly vulnerable to rain storm, strong wind hazards and also insect

attack. Due to the unavailability of the schemes/layouts for these communities, these settlements are unplanned.

3.2.7 Economic activities

The economic activity in the District is mainly farming, which is practiced only on raining season and subsistence farming with a few of them engaged in irrigation farming of vegetables in the surroundings of Botanga Dam. It accounts for 60% of the labour force of the district population, this shows the agrarian nature of the economy. In the rural and the urban areas in the District, most of them cultivate food crops like rice, maize yam, groundnut and others.

The people standard of living is generally low as compare to the National average as indicated in the District Poverty Mapping. The earnings of the people are very low and will not be able to save for development. The average income per month for a household is GH¢20.20. Nationally, Northern Region is amongst the poorest Regions in Ghana and in the Northern Region, Kumbungu is as well amongst the poor Districts since majority of its people are peasant and subsistent farmers.

3.2.8 Education

The basic educational system has 80 public Primary schools, 23 Junior High School and 1 Senior high school.

There are 80 public nurseries which cater for children of pre-school age. The level of illiteracy is high. Gross enrolment is 21,518 (%) but it's about 75% for boys and 25% for girls. Health (Kumbungu District Assembly profile, 2014)

3.2.9 Water and sanitation

Eighty percent (80%) of the District population have adequate access to potable water. The major water supply system in the District include pipe born water, boreholes, wells, and hand-dug wells sources of water supply in the district include the following: wells, boreholes, hand-dug wells and pipe borne water. Sanitation however is very poor in the district. Going to toilet in the open and in the bush is common practice. Garbage and refuse are littered all around and in the major towns there are a few refuse dumps. About 10% of the population has access to build toilets. There is no cesspool emptier in the district to dislodge liquid waste in the District. (Kumbungu District Assembly profile, 2014)

3.3 Study design

Across-sectional descriptive survey was used to carry out the research work in four (4) communities that carried out gender mainstreaming in CLTS processes and have achieved ODF. It is cross-sectional because research data was collected at one point in time for all the study units. The study describes the roles of women in CLTS processes in achieving ODF. A research design is the blueprint or mould for producing knowledge. Research design is selected according to the set objective one intends to achieve. It is largely determined by the research questions and the most appropriate design to generate data in order to answer the research questions (Ogah, 2013). It also refers to the outline, plan or strategy used by the researcher in order to get answers to the researcher questions. It specifies to the researcher how the data will be collected and analysed. This study

employed a mixed method (qualitative and qualitative) due to the nature of the research questions to be addressed.

3.4 Study Population.

A study population is the universal set of all respondents or members that contain the characteristics of interest (Twumasi, 2001, p.85). The study population consist of women who live in the Kumbungu District, Northern Region. However, four (4) selected communities (Timonayil, Tignyoring, Gbanzogu and Zangbalung Kukuo) women were accessible. Females of sixteen years and above were the participants of the study. The reason being that, at that age they are active and are likely to be involved in any sanitation activities as well as development interventions than those below that age.

The study targeted 86 households, which were distributed within the 4 communities chosen in the research.

3.5 Sample Size Determination.

The sample size of the research was eighty-six (86) households' respondents for the quantitative study and thirty-two (32) respondents for 4 focus group discussions in all the four (4) communities for qualitative studies.

The following formula by Cochran was used to calculate the sample size from the target population

Thus,

$$n = \frac{Nt2\ S2}{Nd2 + t2\ s2}$$

$$n = \frac{147x\ (1.96)2\ x\ (0.867)2}{}$$

147 x (0.118)2 + (1.96)2 x (0.867)2

n= 86 Households

Whereas:

n = samples size

N= Number of population.

t2 =Trust of 95% (Confidence Interval)

S2 = Pre-estimation of the variance

t2= Difference between the average of the sample and the population.

Where,

Planning for some respondents lost to follow-up

The formula below will be used

N (number of recruit)× (% retained) =desired sample size

N× 0.95 =86

N = $\frac{86}{0.95}$ =91

Therefore 5 more questionnaires were added to the 86-sample size to take care of the lost to follow-up.

Through proportional quota sampling, the sample was distributed to the various study sites as showed below

Table 3.1 Distribution table of the sample size per a community

No	Community	No. of households	Sample size
1.	Gbanzogu	47	28
2.	Timonayili	29	17
3.	Zangbalunkukuo	48	28
4.	Tigyoring	23	13
	Total	**147**	**86**

3.6 Inclusion criteria

Only females 16 years and above in the households were part of the study. CLTS natural leaders and hygiene and sanitation promoters in the four study communities as well as officials from the District Assembly were also included.

3.7 Exclusion criteria

Household members who were not females and CLTS natural leaders such as land lords, males and females below 16 years were not part of the study.

3.8 Sampling techniques

Sampling techniques of Probability and non-probability were employed for the study. The two sampling techniques used in this study were purposive sampling for qualitative while simple random was used for quantitative sampling.

3.8.1 Purposive sampling

Purposive sampling is a form of non-probability sampling technique that is deliberately used to choose Participants due to the qualities they possessed and are willing to provide the information by virtue of knowledge or experience. (Etikan et al., 2016). Four communities were purposively sampled in order to get the targeted women who were part of the implementation of gender mainstreaming in CLTS in these communities and have insight to the concept. These four communities were the only communities in the District which UNICEF/Government of Ghana (GoG) implemented Gender Mainstreaming in CLTS and have achieved ODF in order to get their views on women role in CLTS process. Focus group discussions were held in each of the four (4) communities and women who were purposively chosen were those who were involved in the implementation thus female natural leaders and hygiene and sanitation promoters to determine their roles in facilitating the achievement of ODF.

3.8.2 Simple random sampling

The study applied simple random sampling in selecting the households in the four communities according to their names by the helped of the community volunteer who has all the household names. Each household in a community was given a random number which was written on small pieces of paper and folded into a bowl. The numbers were randomly hand-picked by the community volunteer till the required proportional sample per community and those whose names coincided with the random numbers picked were included in the study.

3.9 Data source

Data were gathered both from primary and secondary sources respectively. Primary data was gathered from participants in the study area, the researcher also made use of information on internet to enrich the study. Both qualitative and quantitative research data collection techniques were employed, they were focus group discussions and household questionnaires been used to solicit information from the communities on women role in CLTS.

3.10 Instruments for data collection

The researcher used survey questionnaire to interview households and focus group guide for the female natural leaders. The questionnaire was administered by the interviewer due to the anticipation that, most of the respondents might not be literate and cannot read and write and also to probe on the open-ended questions. The questionnaire was adopted from previous surveys on CLTS studies by Mensahl (2015) and Hotor (2017).

3.10.1 Quantitative Data Collection Instrument

Questionnaire was used to collect primary quantitative data from respondents of the study. Questionnaire is a set of questions or items that are to be answered by a respondent in a research (Ogah, 2013).

The Questionnaire was designed to measure the four objectives in addition to socio – demographic characteristics of the respondents. It entails open-ended and closed ended questions and was administered using interviewer's method because most of the respondents were not able to read and write. The questionnaire had five main sections as presented below:

Section A reviewed the socio-demographic characteristics of respondents including age, sex, educational background marital status, occupation ethnicity and religious denomination etc.

Section B had questions on the overall knowledge of sanitation on CLTS was measured on eleven (11) questions with varied responses to each question.

Section C looked at the activities of women in CLTS and was measured on seven (7) questions.

Section D contained questions on factors that contribute to women low participation in CLTS which was on three (3) questions.

Section E looked at women involvement in CLTS in contributing to the achievement of ODF was on seven (7) questions.

3.10.2 Qualitative Data Collection Instruments

Focus Group interview was done with an interview guide. The respondents for the data collection were female natural leaders, hygiene and sanitation promoters. The researcher purposefully selected the respondents based on the knowledge they have on the research topic.

3.10.2.1 Focus group discussions (FGD)

Focus group discussions guide was on the four objectives of the research study which was categorized into four (4) sections below

Section A: women role in CLTS: the activities of women

Section B: Hindrance to women participation in CLTS

Section C: Women involvement in achieving ODF

Section D: strategies to properly involve women in CLTS

They were open ended questions with more probing and were guided by the above sections.

The interviews were conducted at the interviewees' own convenience in their various communities. Before the interview started the groups consented to the discussions by signing a consent form. Their anonymity was guaranteed by giving those numbers and that, their responses will be identified by their numbers. The researcher conducted the Focus group discussion with the help of District CLTS facilitators. Eight (8) respondents of CLTS female natural leaders and hygiene and sanitation promoters made up the focus group discussion for each community. For the researcher to get interactive discussions, members were in a horseshoe sitting arrangement. Discussions were in Dagbani and maximum time spent was 1hour in order not for fatigue to set in the respondents in soliciting information on women role in CLTS in the communities. A note pad was used to take down notes and audio recorder used to record during the discussions.

3.11 Pre-testing, Reliability and Validity

3.11.1 Training of research assistants

Two research assistants were employed and given training to support in the data collection in the field. They were officers whose work was related to the topic of the study.

3.11.2 Pre-test

The researcher ensured that the study instrument designed was reliable and valid. This was achieved after the researcher pre-tested the questionnaire on 10 respondents in Malshegu with similar characteristics of the study area. The pre-testing exercise enabled the research to identify and correct unrealistic and wrong questions from the pre-testing exercise before the actual field work. The exercise helped the researcher to update the

questionnaire and then being able to determine the time it will take to administer a questionnaire,

3.11.3 Reliability

A test is seen as reliable when it is used by a number of different researchers in a stable condition with its results being consistent without varying. Reliability of results reflects consistency and replicability over a period of time. To ensure the reliability of the instrument the test-retest method was used. The researcher administered the interview guide randomly and purposively to respondents in a community outside the study area. A second set was administered to different respondents in a different community after an interval of two weeks with the same interview guide with different numbering pattern. There was reliability in the test considering the consistency in the instrument used since very similar responses were given

3.11.4 Validity

Validity of the instrument used was ensured by giving out the interview guide to lecturers with expertise in the field of methodology in the University for Development Studies (UDS) Tamale. The researcher also sought positive suggestions from senior colleagues who finished their MPhil thesis in the University for Development studies, this helped the researcher to rework on it with regards to its content. Construct Validity was used to ensure that the measure was essentially measuring what it was intended for and no other variable.

3.12 Ethical considerations

Ethical considerations are a vital component of academic research that must be taken seriously. In carrying this research, high ethical standards were adhered to and the ethical protocols that guided the research are presented below.

3.12 Data storage and usage

All participants were assured that, the data collected will be saved by only the Principal researcher. The data collected shall be secured on hard disks for reference and evidence purposes only. An introductory letter from UDS was submitted to the District Assembly to seek for permission and permission was granted before the communities were entered. The respondents' consents were sought before interviewing them and confidentiality was ensured.

Data analysis and results presentation

Data gathered were analyzed quantitatively and qualitatively by using Statistical Package for Social Scientists version 22.0 for quantitative and manual thematic analysis for the qualitative.

Quantitative Data Analysis

The data obtained from the field was checked for consistency and accuracy before real analysis was done. The quantitative data was analysed by using statistical package for social Scientists (SPSS) version 22.0 The analysis was descriptive statistics, frequencies and percentages in order to answer the research questions.

Analysis of qualitative data

Qualitative data gathered from the field with the use of audio recorder during the FGD was transcribed with the assistance from the trained research assistants. The data was analyzed based on the emerged themes relative to the research questions.

Focus group discussions data were transcribed from notes and the audio recorder with the helped of the research assistants. The method used was thematic framework analysis by Braun and Clarke (2013). This framework involves six procedures

1. Familiarization of data: the researcher familiarized the by listening to the recorder and reading the scripts over and over to note down some key ideas.
2. Generating of initial codes: preliminary codes were generated by the researcher which were numerous but gave indication of the context of the data.
3. Searching for themes: the researcher combines and split some of the codes under the emerging issues.
4. Reviewing themes: the themes developed this stage were refined further by merging some themes and doing away some.
5. Naming and defining themes- the researcher named the themes that actually represented the meaning of the themes in a concise manner.
6. Producing the report: the researcher compiled reports with examples that reflect with the themes and objectives of the research work. Themes that answered the research questions were used.

3.13 Conclusion

The research study gathered data from interview schedules and focus group discussions by using qualitative and quantitative methods.

These methods have ensured reliability and validity of the research finding by means of data triangulation. The information gathered from questionnaires were cross checked with that of the FGDs for consistency. Field visits and data collection were conducted by the researcher and two research assistants for data credibility and to ensure reliability.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.1 Introduction

The chapter presents analysis and results of the data gathered from field. The analysis was done both quantitatively and qualitatively according to the research objectives. The results first looked at the demographic characteristics of the respondents followed by the role of women in CLTS, factors/hindrance of women full participation in CLTS activities and how women involvement in CLTS accelerates the achievement of ODFs in the communities. Focus group discussions were also presented to confirm or disconfirm the results from quantitative data.

4.2 Demographic characteristic of respondents

The study involved 86 participants as shown in table 4.1 below. The mean age of the respondents was 38.49 with a minimum age of 16 and a maximum of 66.

4.2.1 Age structure of respondents

Respondents with ages 16 to 66 years were interviewed. From table 4.1 below, it can be observed that, a greater number of the respondents (33.3%) fell between the age range of 36-45 years, the next range of age (26-35) which was close to the majority category was made up of 23% of the respondents. The age category of (16-25) years of respondents made up of 17.4%. Those who were (46-55) years represented 20% of the respondent. This was followed by an elderly age range (56-66) years which was represented by 3.4% of all respondents. The highest age that was recorded in the study was 66 years, which was represented by only 1.1% of the respondents.

Table 4.1 Demographic Characteristics of Surveyed Households

Characteristics/ Grouping	Mean	Min.	Max.	Frequency	Percentage (%)
Age:	38.49	16	66		
• 16-25				15	17.4
• 26-35				20	23.0
• 36-45				29	33.3
• 46-55				18	20.7
• 56-65				3	3.4
• 66+				1	1.1
Total				**86**	**100**
Gender:	-	-	-		
• Male				1	1.2
• Female				85	98.8
Total				**86**	**100**
Religious Affiliation:	-	-	-		
• Christian				3	3.5
• Islam				83	96.5
Total				**86**	**100**
Ethnicity:	-	-	-		
• Dagomba				86	**100**
• Others				-	-
Total					
Educational Level:					
• No School				73	84.9
• Primary 1-3				10	11.6
• Primary 4-6				3	3.5
Total				**86**	**100**

Marital Status	-	-	-		
• Married				80	93.0
• Divorced				1	1.2
• Widowed				5	5.8
Total				**86**	**100**
Occupation	-	-	-		
• Crop Farming				21	24.4
• Animal Farming				1	1.2
• Petty Trading				64	74.4
Total				**86**	**100**

Source: Field Survey, 2018

4.2.2 Religious affiliation of respondents

From table 4.1 above, majority of the respondents thus 96.5% were Muslims and only 3.5% percent represented Christianity. This indicates that, the Kumbungu District is a Muslim dominated settlement like many other towns in the Northern Region of Ghana.

4.2.3 Ethnicity of respondents

Kumbungu District as part of the many towns in the Northern Region is predominantly a Dagomba settlement. This explains why the entire units of analysis for the study were Dagomba by ethnicity.

4.2.4 Educational level of respondents

From table 4.1 above, out of the 86 respondents, (73) had no formal education; representing 84.9 % of respondent', (10) of them had formal education representing 11.6% from primary 1-3 and only (3) 3.5% representatives had education from primary 4-6.

4.3 Role of women in the CLTS process

This section presented results relating to the question used to explore respondents' role in the CLTS process. The questions and their corresponding responses are presented in the table 4.3 above.

4.3.1 Consultation at the household and community level on the action to be taken after CLTS.

To find out whether women were involved in the decision to take action after CLTS triggering both in the community and at the household level, majority of the respondent answered 'yes' representing (65) 76% of the respondents consulted before the action was taken whilst (21) 24% answered 'no' for not being consulted before taken the action.

4.3.2 Activities women were involved in the CLTS process?

Women were asked in what activities they were involved in the CLTS process, majority of the respondents representing (45) 52% were those who fetched stones, sand and water for latrine construction, (25) 29% answered that they ensured proper disposal of children faeces, (10) 12% of the respondents' reported regular cleaning of the surroundings and the least was (6) 7% of the respondents' indicated they were involved in hygiene and sanitation promotion to ensure people stop OD and construct latrines use and maintain them . The results are displayed in the table 4.3.

4.3.3 Women partaking in house household latrine construction

Respondents were asked whether they were part of the household latrine construction or not. All the respondents (86)100% answered 'yes' in taking part in the household latrine construction in their various houses. Table 4.3 displayed the result

4.3.4 Role of women in the household latrine construction

Respondents were further asked in the role they played in the household latrine construction. In relation to the question, an overwhelming majority of respondents' of (79) 92% representing Fetching of water, Plastering and flooring of the latrine, (4) 5% of the respondents indicated they were involved in digging of latrine, and the least of the respondents' (3) 3% reported they were only involved in putting up the structure of the latrine.

Table 4.2: Women role in the CLTS process

	FREQUENCY	PERCENT%
Were you consulted at the household and community level on the action taken after CLTS		
Yes	65	76%
No	21	24%
Total	**86**	**100%**
What activities were you involved in the CLTS process?		
Fetching of stones, sand and water for latrine construction	45	52%
Hygiene and sanitation promotion	6	7%
Proper disposal of children faeces	25	29%
Cleaning of the surroundings	10	12%
Total	**86**	**100%**
Did you take part in the household latrine construction?		
Yes	86	100%
No	-	-
Total	**86**	**100%**

What role did you play in household latrine construction?		
Digging of the latrine hole	4	5%
Building of the supper structure	3	3%
Fetching of water, Plastering and flooring of the latrine	79	92.%
Total	**86**	**100%**

Source: Field Survey, 2018

Anecdotal evidence from the FGD Number 1 member 4 seems to support the result, example below aptly explains the assertion just made**:**

''I was there when the officers came to talk to us on sanitation, almost all the community members were there and we were told on the effects of OD, how we are somehow eating our faeces and they took us round to where we do OD and by the time we returned to the venue everybody was ashamed for practicing OD and then promised to construct latrines and stop OD''…… (Woman from Timonayili)

FGD number 2 member 6 gave her views:

''*After the CLTS triggering meeting my husband told me that it is good we construct our own latrine and actually stop practicing the OD and I greed with him before we started the construction process''*…… (Woman from Tigyorin)

FGD Number 4 member 5 has this to say:

"*Women were involved in the CLTS activities, I sweep the compound and the surrounding early in the morning, properly dispose children faeces off, I also collected stones to line the latrine pit and carried water, sand to plaster and floor the latrine our household latrine" …… (Woman from Gbanzogu).*

4.4 Hindrances to women effective participation in CLTS

This section presents results of the analysis relating to the questions asked to explore factors that hinders women effective participation in the CLTS. The question and corresponding responses are presented in the tables 4.3

4.4.1 Cultural factors hindering women full participation in CLTS.

A question was asked on whether the cultural issues affected women participation in the CLTS or not. An overwhelming majority of the respondents' (80) 93% answered 'no' to cultural issues affecting women participation in the CLTS and only (6) 7% of the respondents' answered 'yes' that cultural factors are affecting women participation. The figure below depicts the results of the views of the respondents'.

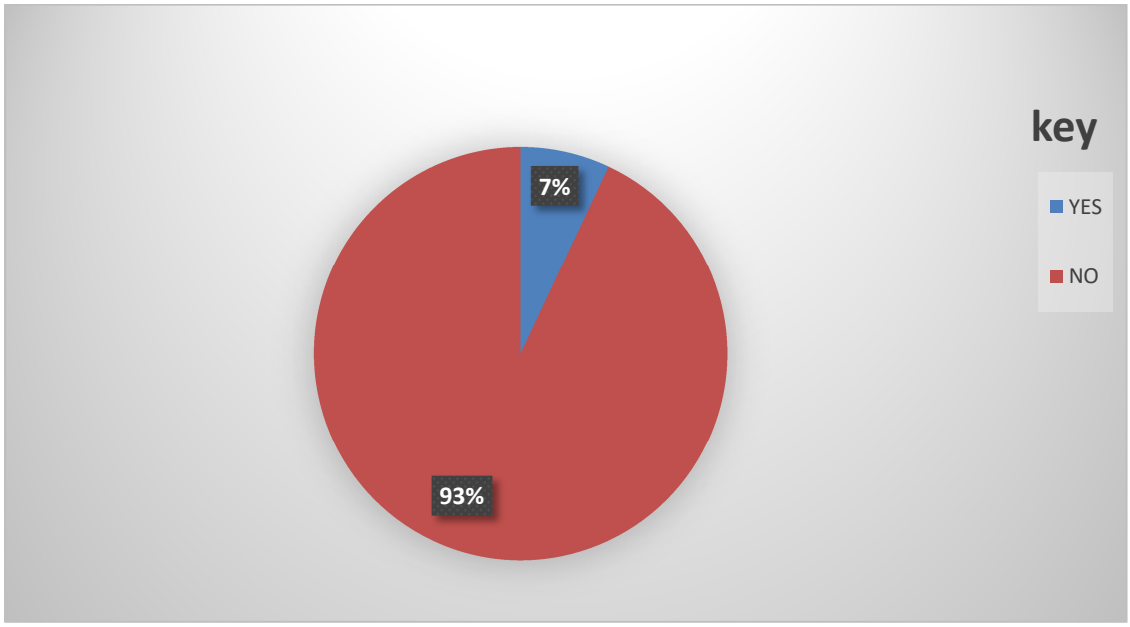


Figure 4.1 pie chart depicts cultural factors hindering women full participation in CLTS.

Source: Field Survey, 2018

4.4.2 Factors hindering women full participation in CLTS

Respondents were asked on what hinders women full participation in the CLTS activities. The analysis reported that, a proportion of (26) 30% of the respondents' indicated when women are taking care of children and household chores without the help of the men, (25) 29% of the respondents' reported that during farming season CLTS activities slow down, (20) 23% of the respondents' showed that when pipes are not flowing and there is no water for construction and cleaning of sanitation facilities, (10) 12% was of the view that, during funerals and social events they are not able to fully participate in the CLTS activities and the least was (5) 6% representing Lack of materials and tools for sanitation activities in the community.

Table 4.3 Factors hindering women full participation in CLTS

Responses	Frequency	Percent
During Funerals and other Social Events	10	12%
During Farm season CLTS activities slows down	25	29%
When Pipes are locked and there is no water for constructions & cleaning sanitation facilities.	20	23%
Lack of materials and tools for sanitation activities in the community.	5	6%
When taking care of children and household chores without men support	26	30%
Total	**86**	**100%**

Source: Field Survey, 2018

4.4.3 Social Roles that Inhibit women effective participation in CLT

The study explored women's roles in CLTS and the challenges they encountered in making efforts to improve sanitation. The study sought the views of women on factors that hinder their full participation in CLTS activities. Majority of the respondents' representing (34) 40% of reproductive roles that hinders women full participation, (32) 37% of the respondents' representing productive roles, whilst a proportion of (18) 21% of the respondents' indicated community roles hindering women full participation in CLTS and the least (2) 2% represented other reasons. The table 4.4 depicts the results of the analysis

Table 4.4 Social Roles that Inhibit women effective/complete participation in CLT

Roles that Hinders Women s' Participation	Frequency	Percent
Reproductive Roles	34	40%
Productive Roles	32	37%
Communal Roles	18	21%
Others	2	2%
Total	**86**	**100%**

Source: Field Survey, 2018

During the focus group discussion (FGD) number 3 member 8; has this to say on hindrance to women participation in CLTS which Conformed to the above analysis;

''I have to wake up early in the morning to attend to my children by bathing them, cooking and breastfeeding my little baby, going to fetch water and wash their clothes, so I am not able to carry out sanitation activities''..…. (Woman from Gbanzogu).

FGD number 2 member 3 support the findings above;

''I wake up early in the morning to go to farm to pick groundnut or shea-nuts so until I returned from the farm the sanitation activities are on hold and also when there are social events like funeral''…… (Woman from Zangbalung Kukuo)

4.5 How women involvement in the CLTS will accelerate ODF achievement

This section present results relating to the question used to explore respondents' involvement in the CLTS and how it will accelerate the achievement of ODF. The questions and their corresponding responses are presented in table 4.4

4.5.1 Knowledge and skills acquired by women in CLTS process

Questions were asked on the knowledge acquired in the CLTS process in order to facilitate CLTS activities. A significant number of respondents' representing (45) 52% were those who indicated hygiene and sanitation knowledge acquired through CLTS sensitization, (31) 36% was for those who indicated skill and knowledge acquired on household latrine construction, (6)7% representing construction of tippy taps (hand washing facility) and the lowest was construction of soak away pit representing (4) 5% of the respondents. The results are depicted in table 4.5 below.

4.5.2 Decision making on the construction of sanitation facilities

A Question on women involvement in the decision making on construction of sanitation facilities was asked and majority (80) 93% of the respondents' answered 'yes' for being part of the decision making on household sanitation facilities construction and the least of the respondents' were (6)7% answered 'no' to women involvement in decision making on household sanitation facilities construction. The table 4.5 provides results as obtained from questions posed to the respondents'.

4.5.3 Women natural leaders in CLTS

With regards to whether women were part of the CLTS natural leaders or not, all respondents' answered 'yes' representing (86) 100%. The table 4.4 depicts the results of the respondents'.

4.5.4 Role of female natural leaders' in CLTS

A question was asked to explore the role of women in CLTS leadership. (29) 34% of the respondents' indicated that they **e**ducate, encourage and frequently remind colleagues

women about hygiene and sanitation activities in the community whilst (28) 32% were those who organise community clean up exercises and inform community members about it for all to participate in the clean-up, (21) 25% were those who indicated house to house inspection of latrine under construction to encourage households to speed up the construction work and the lowest were (8) 9% representing those who represent the community in meetings on CLTS.

4.5.5 Do women have access to these sanitation facilities?

Analysis on women having access to sanitation facilities at their households' level was enquired. Where all the respondents' (86) 100% answered 'yes' for having access to sanitation activities. The result is depicted in the table 4.5

4.5.6 Has your community achieved ODF?

A question was asked on whether the community has achieved ODF or not. All the respondents (86) 100% affirmed that the community has achieved ODF. The table 4.4 depicts the results of the analysis.

4.6 Has the involvement of women accelerated ODF achievement?

Another question was asked to explore whether the involvement of women has actually accelerated the achievement of ODF in the community. Majority of the respondents (82) 95% answered 'yes' and (4) 5% of the respondents' do not agree that it is the involvement of the women that has contributed to the achievement of the ODF. The table 4.5 depicts the results of the question.

Table 4.5 Women involvement in accelerating CLTS process

Knowledge and skills acquired by women in CLTS process		
Hygiene and sanitation knowledge	45	52.%
Construction of household latrine	31	36%
Construction of tippy tap	6	7%
Construction of soak away pit	4	5%
Total	86	100%
Women in decision making on the construction of sanitation facilities		
Yes	80	93%
No	6	7%
Total	86	100%
Are women part of CLTS natural leaders		
Yes	86	100%
No	-	-
Total	86	100%
Women natural leaders role in CLTS		
Educate, encourage and frequently remind colleagues women about hygiene and sanitation activities	29	34%
Represent community in CLTS meetings outside the community	28	32%
Organise community clean up and inform community members about it	21	25%
House to house inspection of latrines under construction	8	9%
Total	**86**	**100%**
Do women have access to these sanitation facilities?		
Yes	86	100%
No	-	-
Total	**86**	**100%**
Is the community ODF?		
Yes	86	100%
No	-	-
Total	**86**	**100%**
Do you think the involvement of women accelerated CLTS process?		
Yes	82	95%
No	4	5%
Total	86	100%

In Focus Group Discussion (FGD) number 4 member 7 gave her views on some of the knowledge and skills acquired during the CLTS engagement with the sanitation officers below:

''I have gotten knowledge on hygiene and sanitation, the effects of ingesting faeces, and I have also acquired some skills on latrine and hand washing facility construction and also learnt how to properly wash my hands with soap under running water at all critical times''….. (Woman from Tignyorin)

In Focus Group Discussion (FGD) number 3 member 6 gave her views on some of the roles played by the women below:

"*We educate our children and community members on good hygiene and sanitation practices such as hand washing with soap under running water, household water treatment and safe storage, mobilise each other for general cleaning and also attend sanitation meeting*" ..... (Woman from Zangbaling Kukuo).

In FGD number 2 member 1 has this to say on the ODF achievement below:

''we have stop practicing OD with our children and we have also constructed toilet with tippy tap that all household members are using because of that some officers came to verify us and declared us ODF''…… (Woman from Timonayili)

The roles identified below indicated that women are generally contributing much to the construction of household latrines. FGD No. 4 member 1 supports the result, for example below is the view expressed by her:

"I fetched water for the construction of the latrine, collected stones, plastered and floored the toilet and always fill the tippy tap with water, and also contributed money to help my husband pay for the digging".

CHAPTER FIVE

DISCUSSION OF RESULTS

5.1 Introduction

This chapter discusses the results of the study findings. The findings have been discussed in relation to findings of similar studies in Ghana and the entire world. In areas where the findings contradict or are not in agreement with that of other studies, reasons are given for the possible causes of the disparities in the findings

5.2 Demographic characteristics of respondents

The demographic characteristics of respondents such as Age, Sex, Level of Education, Occupation and religion have strong relation with social change. Dickson (1987) opines that socio-economic characteristics of respondents are considered important because it contributes in shaping the behavior of the respondents in adapting to an innovation.

Majority of the respondents (33.3%) fell between the age ranges of 36-45 years indicating that adults and matured women are those who are usually involved in sanitation activities. followed by age range of (26-35) representing (23%), 16-25 years represented (17.4%) this also indicated that teenagers are also involved in CLTS activities in the sense that, they do sweeping, fetching of water and also helping their mothers in plastering of latrines, taking care of the younger ones when they want to defecate and also do the cleaning of the sanitation facilities in the household. The least were (3.4%) from 56-66 years indicating how most of the elderly or the aged do not participate much in sanitation activities. As earlier indicated above, an overview of respondents' age suggests a strong likelihood that, a large number of women in the Kumbungu District are invariably

matured mothers, with an amount of experience in terms of family or household care and responsibility for children, given their age dynamics. Because age in many cultures, determines a person's involvement in any activity. The mean age (38.49) of the respondents further supports the above position.

Most Ghanaian societies believe in the existence of the supreme God of which Kumbungu District is no exception. The common religions practiced in the area include Christianity and Islam. The higher percent of 96.5% were Muslims while only 3.5% represented Christianity. This shows that, the study communities as well as Kumbungu District is a Muslim dominated settlement like many other towns in the Northern Region of Ghana which indicates how sanitation and Muslim Religion go together

Kumbungu District as part of the many towns in the Northern Region is predominantly a Dagomba settlement. This explains why the entire units of analysis for the study were Dagomba by ethnicity.

Out of the 86 households' respondents, 73 had no formal education; representing 84.9% of the respondent's and 11.6 percent had formal education from primary 1-3. Only 3 representatives had education from primary 4-6. Majority of the respondents who were all women or girls paints an unfortunate picture. This depicts how girl child education was completely undermined which left deep implications on rural sanitation and hygiene.

5.3 Role of women in community-led total sanitation (CLTS)

An assessment on the role women play in CLTS indicated that majority of the women 52% were involved in fetching of stones, sand and water for household latrine and tippy tap construction. 29% of women were involved in proper disposal of children faeces for

the environment to be clean in order to break oral faecal transmission and flies to their household space which is in conformity with a study by Tropical Resources (2011) which found out that, women take care of children, cooking, cleaning the interior of the home, and fetching water to support in household latrine work.

5.3.1 Role of women in latrine construction

The ubiquitous role of women as primary custodians of sanitation and hygiene extends immeasurable, this is likely so because they bear the impact of inadequate water and sanitation services (Daalen, 2014). The study identified the specific roles that women played in the construction of latrines in individual households. Largely, 92% of the women indicated fetching of water to fill the tippy tap gallons for regular practice of hand washing with soap under running water at all critical times, to plaster and floor the household latrines after putting up the structure by men so that the latrine can stand the weather for sustainability. Findings from the focus group discussion indicated significant number of women who contributed money to support their husbands to construct latrines and also cooked for them during latrine construction. This finding conforms to a study in Plan Uganda (2012) which found that, women undertook numerous CLTS activities and influenced their spouses to have sanitation accessories/facilities installed within their homes. Similarly, Mahbub (2008) study revealed how women are dynamic and are able to persuade their husbands to construct household latrines.

5.3.2 Women leaders (natural leaders) role in CLTS

The finding of women in CLTS natural leadership revealed that all the women in the study 100% affirmed that women are part of the CLTS leaders and the roles they played as leaders are to educate, encourage and frequently remind colleagues women and

community members about hygiene and sanitation activities which was 34% and that of the 32% revealed women how women regularly organise community clean up exercises and inform community members for every member to participate in order to speed up CLTS activities.

The research would not be complete without focusing on the structures responsible for managing CLTS activities in communities which women are not left out. The research therefore did not stop at the role's women play in the construction of latrines, it further unraveled the tasks and roles of women leaders (natural leaders) emerged during community triggering to lead in CLTS activities in their communities for the achievement of ODF. A larger share of women sanitation leaders' role is to educate, encourage and frequently remind other women about CLTS and their sanitation goals in achieving ODF in their respective communities. This is necessary because most women relapse into poor hygiene practices if not reminded and encouraged. The finding is in agreement with that of Davis (2015) which indicated how it is necessary to empower women in hygiene and sanitation in order to sustain the sanitation behaviour for both sexes. Another critical role identified by the researcher is that, natural leaders engage in house-to-house visits as part of inspections to ensure that all women are at the same pace in encouraging and supporting their husbands in latrine construction in other to achieve and maintain ODF status. Activities engaged in include, inspection of latrines under construction to know the level at which they have reached and to take data, inspection of refuse dumps, cleanness of latrines, household water treatment and safe storage (cleanness of storage containers, transportation of water, treatment and handling at home), availability of water

in tippy taps and regular practice of hand washing with soap or ash at all critical times and also ensure no open faeces is found in their communities.

5.4 Hindrances to women effective participation in CLTS

The study explored women's role in CLTS and the challenges they encounter in making efforts to improve sanitation. The rural sanitation model and strategy approach aims to improve sanitation by using participatory method to mobilise communities in order to address their sanitation challenges through collective action. The study sought the views of women on factors that hinder their full participation in CLTS activities. The research has proven so far the eminent role of women's in the achievement of ODF communities within the Kumbungu District. However, women effective participation in the long run still face socio-cultural and biological hindrances that require special attention as far as the progress of CLTS is concerned. The research unraveled that, periodic social events such as funeral and naming ceremonies, festive occasions usually either get women to travel out of their communities or engaged them and they are unable to make time to practice certain hygiene and sanitation activities such as, cleaning of sanitation facilities or filling in water in the hand washing facility (tippy taps). Majority 30% of the women identified this as a major limitation. The findings are in agreement with that of the Routray et.al. (2017) which stated that socio-cultural factors of women in their communities and household levels dynamics often prevents them from getting involved in sanitation related decisions. One other key limitation that was identified by women was the lack of suitable tools for clean-up exercises in the communities such as dust bins, shovels, rakes, broom gloves and Wellington boot to facilitate community cleanup exercise.

Another hindrance that prevented women from fully participating in CLTS activities was when women are performing household chores and then taking care of their family especially children and it coincides with CLTS activities. It is normally difficult to fully participate, even if they do, their minds are still at home and eventually they go home before the close of the meeting to attend to household needs. This finding is in line with the previous study which reported that women reproductive roles, productive roles and community roles overburdened them as men do not do much in these multiple roles, thereby making women not to get enough time to participate actively in CLTS activities (Kpandai District Assembly, 2015). This puts women on a routine work which do not favor CLTS activities at the household and community level.

During farming seasons, CLTS activities are equally slowed down because women usually have to very early in the morning leave home to pick groundnuts or gather shea-nuts from the wilderness. This is the period during which a larger share of women's time is spent on the farm instead of home.

The study revealed how men take lead in latrine construction but women are overburden and stressed. There is a lack of support from men to complement the efforts of women. As intimated by Daalen (2014) that men are more involved in planning and taking decision on WASH in the communities than women. Women are not deeply involved in decision-making process and their views are not sometimes listened to or their issues being addressed. The recognition of women role in CLTS is very important in creating sustainable ODF status. So therefore, it is necessary to take gender into consideration in CLTS process in order not to over burden women.

5.5 Women involvement in CLTS in accelerating the achievement of ODF status

Women undoubtedly form the heart of sanitation and hygiene in all societies. Women's key role put them in the position to be the pivot around which societal health revolve. The study revealed that hygiene and sanitation knowledge acquired by women made them to be active in CLTS activities by encouraging their husbands and fellow colleagues to construct latrines use and stop OD in order to achieve ODF status. Women continue to educate their children on good hygiene and sanitation practices since they are those who bear the consequences of poor sanitation in their households and the community as a whole. The findings are in consonance with that of a previous survey by Mahbub (2008) which found out that, women dynamic nature has made them to be able to persuade their husbands in their households to construct latrines

Women involvement in CLTS has made some of them to emerge as natural leaders and taking up leadership roles by visiting houses to remind each other on the activities to carry out in other to achieve ODF.

It was also identified that women and their children are responsible for cleaning and maintaining sanitation facilities at the household level and that women make sure they attend to their children when they are to defecate so they could properly dispose of the faeces in other not to get in touch with faecal matter. This study finding is in agreement with that of Shelly, 2015, which found that, women do take over the latrines immediately after construction work is done and also train children how to use the latrine hygienically. Women also helped their husband in plastering and flooring the toilets and also ensuring there is water and soap in the tippy tap for usage after visiting a toilet and at all critical time. The study also found out that, women are those who normally wake up early in the

morning and also sleep late are able to see and report those who practice OD to the authority or the chief for appropriate sanctions to be meted out to culprits.

This goes to support findings of IRC study in 2011, which found that women played a major role in pressuring people to stop practicing OD. The study further identified the productive changes that women involvement in CLTS has in achieving ODF status. One outstanding benefit identified is improvement of health status of women and children and the communities as a whole. The study revealed how women are now productive in engaging in their businesses such as Shea -butter production, food processing and petty trading, increased in school enrolment and retention of children in school due to the absence of sanitation related diseases like cholera, diarrhea and other related diseases.

Aside the above inherent benefits, women will take it as a responsibility to educate and share the sanitation message with the entire community starting from their children and family members if they are effectively involved and recognized in decision making. This to a large extent will sustains ODF status attained by communities.

5.5.1 Skills/knowledge acquired by women through their CLTS participation

An assessment on the Skills and knowledge acquired by women through the participation of CLTS process towards the achievement of ODF status, indicates how majority thus 52% of the respondents acquired greater knowledge and skills on hygiene and sanitation and latrine construction which has contributed to women efforts in educating their family and community members on good practices of sanitation. This finding corroborates with Life Water Organization (2014) which indicates that, women play a vital role in raising awareness about water and sanitation issues in their communities, and improved water and sanitation for women are the first steps to empowering women in developing

countries. This explains that women's consistent participation in CLTS activities has enabled them to gain insight knowledge and also exposed them to relevant information regarding sanitation and hygienic conditions which contributed to women supporting their husbands in latrine construction. Besides this, the knowledge acquired will contribute to every member of a household to have access to the latrines and will always maintain it for the sustainability of the ODF status since they have knowledge on the benefits of using a household latrine and the consequences of not using a latrine for defecating. This will accelerate the achievement of Sustainable Development Goal six (6) by 2030 WHO (2015) that seeks to achieve access to adequate sanitation and hygiene for everyone in order to end OD and also pay attention to women and girls who are in vulnerable situation. Furthermore, finding on the decisions taken before construction of sanitation facilities indicated 93% of the women were involved in the decision making before any action was taken at the household which contradicts the finding of Routry, P., Torondel, B., Clasen, T., & Schmidt, W P. (2017) that, women are those who are mostly affected by water sanitation and hygiene (WASH) activities but when it comes to planning and decision making, they are sometimes not involved, or their contributions are minimal. However, Vernooy (2005) as cited in Mensah (2015) indicated that, "the mere increase in the number of women in a project or programme or giving women the space to focus on a small activity do not necessarily mean they are meaningfully participating in the project. Simply inviting women to meetings without considering the meeting time and space, their domestic workload and ability to speak at meetings will not yield any meaningful result."

5.5.2 Has the involvement of women accelerated ODF achievement?

The study revealed that, all the communities have achieved ODF due to the involvement of women in the CLTS activities in the Kumbungu district. Majority 95% of the women indicated the effective participation of women in the CLTS activities have contributed to the achievement of ODF status in the communities and sustaining it. Their leadership role in CLTS helped in facilitating the construction of sanitation facilities and also the knowledge and skills acquired through the participation of CLTS process. The support women gave to their husbands during latrine construction both in kind (fetching of water, sand, stones, cooking, plastering and flooring of latrines) and in cash (contribution of money to pay for latrine construction) and the responsibility they took in educating the household members on the proper use of the latrines as well as community members to practice good sanitation and hygiene behavior.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introductions

This chapter deals with the conclusions of the work and recommendations for future research work. The conclusion seeks to highlight on the research findings and recommendations to draw attention to District Assemblies, other agencies and stakeholders concerned with women and sanitation to formulate and implement policies to help improve the sanitation situation.

5.2 conclusions

These are the major findings of the study;

Through the analysis, the following are the key findings of the study. Women role in CLTS in achieving ODF can be categorized into community level roles, household level role, hygiene and sanitation education and inspection/checking of sanitary facilities role.

- Women contributed throughout the entire process of constructing latrines in the following ways; fetching water/stones/sand, flooring, plastering, for construction of household latrine. Women also cook for those who are constructing the latrines and sometimes support financially for a household latrine construction.
- Women natural leaders played the following leadership roles in their communities for the achievement of ODF; which is to first educate their children and fellow community members on good hygiene and sanitation practices, encourage and frequently remind colleague women about CLTS activities and how they could all benefit in the achievement of ODF status in their various communities.

- The female natural leaders with the community elders also organize periodic cleanup exercises and inform entire community especially women.
- Female natural leaders also undertake house-to-house hygiene and sanitation education and inspection of sanitary facilities in the community to remind and encourage community members to sustain the ODF.
- Women are able to convince and support their husbands to construct household latrines.
- During funerals and other social events, women are unable to effectively participate or observe all necessary household hygiene practices. Equally, farming seasons hinder women involvement in CLTS activities since they engage more in their farm work.
- Women are also overburden with reproductive, productive and communal roles thereby hindering their effective participation.
- Men in these communities under Kumbungu district do not provide enough support to lessen women burden in fighting effortlessly to attain and sustain ODF status in the communities.
- Women involvement in CLTS has yielded positive results for the ODF achieved due to that Children and women no longer fall sick of sanitation related diseases and now have clean environment and live healthy life without bad smell. Women and girls having access to the sanitation facilities will contribute to achieve Sustainable Development Goal 6 and 5 by 2030.

5.3 Recommendations

Based on the research finding, the following recommendations are made;

Implementers and facilitators should ensure women involvement in planning, implementation, monitoring and evaluation of CLTS activities. This can create ownership and thereby lead to sustainability of ODF status in the communities.

District Assembly

- The implementers at the District Assembly of Kumbungu could ensure women involvement in CLTS activities in order to facilitate ODF achievement.
- Facilitators of CLTS at the District Assembly could frequently monitor the activities of women in CLTS in order to encourage them carry out their roles and also to identify and promptly handle ensuing bottlenecks.
- Facilitators of the District Assembly could continue to involve women in the decision-making process and their voices being heard especially on issues affecting them during CLTS activities in their communities.
- The CLTS field facilitators at the District Assembly could sensitise women to take up leadership roles.
- Facilitators could sensitize men to support women in their household chores, such as cleaning and maintenance of sanitation facilities, productive activities (farm activities to lessen their work load.
- Facilitators at the District Assembly could sensitize community members to activate their bye-laws to support women leaders work effectively.

- Frequent hygiene and sanitation education could be encouraged and supported by the District Assembly for the CLTS field facilitators to organize Local drama, songs and other activities on safe hygiene practices.
- Government of Ghana should ensure integration of gender concerns into CLTS by developing a gender integration policy document.

Ministry of gender and social protection

Ministry of gender and social protection should create gender awareness for all community members so that they can appreciate women relevance in gender mainstreaming in CLTS process

WASH partners

- Water sanitation and hygiene partners should conduct gender analysis to involve more women to accelerate achievement of Open Defecation Free

Further Research

The study recommends that, further research should be conducted on women and sanitation in other Districts in the Region that gender mainstreaming in CLTS has been implemented.

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APPENDIX I

Informed consent form

Title: The role of women in achieving Community Led Total Sanitation in Open Defecation Free

University for Development Studies Investigator:

Ibrahim Amdia

Contact 0244893818/0204229255

Email: iakiti@yahoo.com

Introduction:

A graduate student of the School of Allied Health Sciences, University for Development Studies, is conducting this study. This study forms part of the requirement for the completion of an MSc degree in Community Health and Development. The study involves interviews with households and focus group discussions to better understand your role in achieving Community Led Total Sanitation in Open Defecation Free and the challenges that might affect your involvement.

Study Steps:

With your permission, I will ask you questions about your role in Community Led Total Sanitation in achieving Open Defecation Free. I will ask you to share information about your role in Sanitation . I will meet with you at least once, for about one hour. You do not have to answer all my questions—only those you are comfortable with sharing. I will

record some of the conversations, to make sure I correctly talk about your answers. I will record only voices—no images or pictures of you will be taken. But, you may ask me not to use the recorder. If you change your mind about talking with me, that is okay, and you can let me know by talking with me in person, or by phone, up until the study is finished (30th November 2017). I can then withdraw your conversation or answers.

Possible Benefits:

I cannot promise any gain to you, but supporting me in this study may help to improve sanitation issues and programmes in Ghana.

Possible Risks:

Participation in this project may cause you some embarrassment when sharing your stories about sanitation issues in your community and your feelings about it. If you have questions or problems that need more help or support, I can discuss that with you or refer you to my supervisor for further talk.

Confidentiality:

Your identity will be kept secret. Any recordings or notes will be given a code number, and kept in a room at the University for development studies. Is only on this consent form that your name will be. only on this consent form and on one list that links your name to your code number and/or false name. The consent form and list will be stored in a different locked filing cabinet at the university. Any computer files about this research will be kept on password-protected computers that only the research team can get to.

When I report the findings of this study, I will not tell anything about you or your household that would allow others to figure out who you are. The information you provide will not identify you in any way. Some of your ideas may appear as direct quotes or may be grouped with others' answers and be used in presentations, publications, public documents, and in teaching situations. At no time will your identity be revealed.

Contact information about the research work:

Questions can be asked at any time about any part of this study. You can reach me by phone; see the top of page one for this information

Consent:

Joining this project is fully voluntary and you may turn down taking part, or may quit the research study without any effect on your relationship with the University for Development Studies or any other organization or service.

Contact about the rights of research participants:

The plan for this project has been checked to make sure it is safe and follows the rules of Ethics Board of the University for Development Studies. Questions about ethical conduct of research, contact the ethics committee office in Tamale Campus, Dungu. The research has been reviewed by the Ethic Committee of the School of Allied Health Sciences and approved.

HOUSEHOLD QUESTIONNAIRE

THE ROLE OF WOMEN ON COMMUNITY LED TOTAL SANITATION IN ACHIEVING OPEN DEFAECATION FREE

BASIC INFORMATION

1. Community name?	2. Interviewer phone number
……..	……..
3. Interview Date: (date/mm/yyyy)	**4. Respondent ID number**
……..	…….

Demographic background

Q 1. What is the age of respondent in years? Must be 15 years above	Q2. Sex of respondent
Age in years…….	1. Female 2. Male
Q3. What is your ethnicity	Q4. What is your religious denomination
1. Dagomba 2. Akan 3. Frafra 4. Fulani 5. Others (specify) …….	1. Christianity 2. Traditionalist 3. Islam 4.others(specify)

Q5. What is your educational background?	Q6. What is your current marital status?
1. No school **2. Primary 1-3** **3. Primary 4-6** **4. JSS/Middle school** **5. SSS** **6. Tertiary** Q7. What is your primary occupation?	1. Married 2. Single 3. Divorce 4. Widowed 5. No response
1. Farmer e.g. Crop 2. Farmer e.g. poultry or animals 3. Petty trading e.g. Shea butter, ingredients 4. Salary worker 5. Artisan **6.** Not working	

Community awareness on CLTS

Q.8 Does your household knows about (CLTS)?	9. Do you have a toilet in your household?
1. Yes 2. No	1.Yes 2.No
Q10. Has the Community been triggered by EHSD/DoCD in this community	**Q11.** Who was part of the triggering meeting in this household?
1. Yes 2. No 3. Don't know	1. Men 2. Women 3. Children 4. whole family 5. No body
Q12. Did you participate in this meetings?	Q13. What did you discuss in the meeting?
1. Yes 2. No	…… ……

	…… …… …… …… ……
Q14. What change did that triggering meeting caused in your family? 1. Stop practicing OD 2. Dig and burry 3. Constructed a new latrine 4. Improved upon existing latrine	

Women role in CLTS

Q15. Were women in the household consulted on actions to be taken by the household after the triggering meeting?	Q16. Did you take part in the household latrine construction?
1. Yes 2. No	1. Yes 2. No

Q17. What role did you play in the construction of latrine in your household level?

……

……

……

……

Q18. Do you have women leading sanitation activities (natural leaders) in this community?

1. Yes
2. No

If yes, what role do they play?

.....
.....
.....
.....

Q19. What result did the involvement of women in the CLTS triggering process yield?

1. Stopping open defecation
2. Dig and burry
3. Construction of latrine
4. Sharing of neighbor latrine

Hindrance to women participation in CLTS?

Q20. What prevents women to fully participate in sanitation activities?

1.Reproductive roles

2. Productive role

3. Community role

4. Others

Q21. Are there cultural issues that prevent women from participating in CLTS process?

1.Yes

2. No

If Yes, what are why…….

……

……

……

Q22. What challenges do women encounter in performing sanitation activities?

…… …… …….

Women involvement in achieving ODF

Q23. What skills have women acquired in CLTS participation that contributed to ODF in this community**?**	Q24. How are such skills being applied to improve the wellbeing of women in the community?
…….. …….. …….. ……..	…….. …….. …….. ……
Q25. Do women take part in decision making on the provision of sanitation facilities. 1. Yes 2. No	Q26.Do women and girls have access to these sanitation facilities? 1. Yes 2. No.
Q27. Do you think the involvement of women in CLTS led to the community attaining ODF? 1. Yes 2. No	

Q28. What will be the likely benefits of women full involvement in CLTS activities?	Q29.what are the suggestion to properly mainstream women into CLTS?
……	……
……	……
……	……
……	……
……	……

THANK YOU

Focus group interview guide

(For hygiene and sanitation promoters)

Community…….

Date……

1. Have you been involved in sanitation activities (CLTS)?

   If yes, in what ways were you involved?

……

……

……

2. Do you have a toilet in your house?

   ……

   ……

3. Who is responsible for maintaining sanitation facilities in your households/at home?

   .....

   .....

4. What roles do women play in (CLTS)?

   ……

   ……

   ……

……

……

5. What roles do you play as a woman natural in CLTS……

……

……

……

……...?

6. As a woman are you part of decision making in your household with regards to sanitation

If No, why? …… ……

……

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……

7. What are the barriers or constraints of women in the participation of CLTS?

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8. What socio-cultural factors inhibit women participation in CLTS?

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……

9. What skills have you acquired for being hygiene and sanitation promoters

……

……

……

……

10. How do you apply such skills to improve the welfare of your families and community?

……

……

……

……

How will the involvement of women (hygiene and sanitation promoter) in CLTS lead to community attaining open defecation free?

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……

……....

11. What challenges do you encountered in carry out your duties?

……

……

……

12. What recommendations will you give to properly mainstream women in CLTS

.....

.....

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Thank you for your time and opinions.