



**Sanitation and Health practices: A Positive Deviance study of three
Community Led Total Sanitation (CLTS) host villages in Uganda**

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Dedication

To my father David Owiny, who did what most people did not find valuable at that time. He encouraged and educated his girl children.

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This work would not have been possible without the assistance, guidance and cooperation of many people to whom I am deeply indebted.

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List of Acronyms

BUSITA	Bulo Sub-county Initiative for AIDs- (BUSITA),
CHAST	Children Hygiene and Sanitation Transformation
CLTS	Community Led Total Sanitation
DHI	District Health Inspector
HA	Health assistant
LCs	Local Councils
Non-PDs	Non-positive deviants
NSD	Norwegian Social Sciences Data Services
OD	Open defecation
ODF	Open Defecation Free
PD	Positive deviance
PDs	Positive deviants
PHASE	Personal Hygiene and Sanitation Education
PHAST	Participatory Hygiene and Sanitation Transformation Programme
TBAs	Traditional birth attendants
REC	Regional Ethical Committee
SANMARK	Sanitation marketing
UNCST	Uganda National Council for Science and Technology
VHTs	Village Health Teams

Abstract

Background: Uganda is hard hit by poor access to clean water, lack of basic sanitary facilities and practices, and the high cost of health care, all contributing to a high toll of infection-related illness. Although Uganda has one of the most advanced, harmonized and coordinated water sectors in Africa, her progress in water supply, and sanitation has stagnated in the last few years. This stagnation factor is strongly attributed to the limited political prioritization of the sector, inadequate funding, poor O&M practices and limited translation of policy into practice at different levels of governance. Responding, in 2010 the Uganda government implemented a Community Led Total Sanitation (CLTS) programme, using a participatory approach to empower communities to achieve better sanitation/health. Much can be learned from the experience of particular households in CLTS communities that managed to achieve significant sanitation improvements, despite ubiquitous deprivation.

Conceptual framework: The study therefore, used the ‘positive deviance (PD)’ method/ approach as a conceptual framework to study such success. PD is an innovative public health strategy to learn from people whose uncommon but successful behaviours or strategies enable them to find better solutions to a problem than their peers, despite facing similar challenges and having no extra resources. In the Global South, earlier evidences point to the successful application of the PD in improving child nutrition and other public health challenges but until now, it had not been used as an approach to address the need for better sanitation. Using PD, this study examined sanitation achievements in households with best practice.

Methods: Between June and September 2015, a qualitative case study was conducted in Nawango, Mpanga and Bule villages in Bulo sub-county, Uganda. These villages hosted the CLTS programme in 2013/2014 and emerged with varying results. Their variation inspired curiosity and offered the study several opportunities based on both cultural and socio economic diversities. The study then utilized a purposive sampling method in selecting experienced informants based on their association with the CLTS, position of significance in society and knowledge/participation in other past health programs. Using the local council chairpersons and village health teams as gatekeepers to these villages, both PD and non- PD households were recruitment. Field data were collected through semi-structured in-depth audiotaped interviews, and observations. Participants were 2 district health officers, 10 men, and 31 women in 41 households. Data was analyzed using Attride stirling’s thematic network analysis.

Results: Based on reported and observed sanitation and health care practices, the researcher identified 25 non-PD and 16 PD households in the 3 villages. In this context, PDs were those households who managed to practice better sanitation despite facing various health care challenges and the non- PDs were those households who despite having access to modern health care, VHTs, village drug points and health education, failed to practice better sanitation. This meant that non-PDs not only exposed their

families, but the entire community to preventable sanitary diseases. Compared to non-PD households, PDs engaged in traditional sanitary/health practices where they consulted practitioners of traditional medicine such as birth attendants and traditionalist's shrines to deal with infectious diseases e.g. diarrhea and malaria. For modern medicine such as de-wormers, PDs visited Bulo health center III and village drug points to access treatments for under-fives and expectant mothers. The high costs of treating sanitary diseases among these destitute households, coupled with fear of coercions /shame from local leaders and village mates for indiscriminate defecation, forced PD households to practice better sanitation. PDs mentioned how they had learnt the benefits of sleeping under treated nets, washing hands with ash / soap, and eliminating open defecation from health education. For indigenous health ideas, PDs revealed how listening and learning from elders and extended families had enhanced their good sanitary practices.

Conclusion: In the deprived villages studied, the use of PD was effective in identifying particular instances of good household sanitation practices amongst the majority of households that struggled less successfully to achieve good sanitation. Use of traditional medicine from birth attendants and traditionalist's shrines, visiting Bulo health center III and village drug points for treatments, high costs of treatments coupled with fear of coercions /shame and health education meetings, triggered the PD behaviors discovered in the study. Indigenous health ideas from elders and extended families also motivated PD practices. These trigger factors could be studied and targeted in future interventions to improve sanitation in households in similar villages/locations. This study is thus the first to demonstrate the value of the PD method in community sanitation research in the Global South.

Chapter One: Introduction

1.1.0 Background

Adequate sanitation, good hygiene and safe water, are fundamental to health and social economic development (Mara, Lane, Scott, & Trouba, 2010). Having access to improved sanitation results into, lower health system costs, fewer days lost at work/school through illness and care for the sick, reduced queue time at shared sanitation facilities, and eliminating open defecation (Mara et al., 2010). With approximately 215 million people practicing open defecation, Sub-Saharan Africa shoulders the greatest water and sanitation challenges (Galan, Kim, & Graham, 2013). Poor sanitation, hygiene, and water accounts for 50% of the consequences of childhood and maternal underweight and death, because it strengthens the synergy between diarrheal diseases and under nutrition. This means that the exposure to one condition, increases vulnerability to the other (Bastien, Hetherington, Hatfield, Kutz, & Manyama, 2016; Mara et al., 2010).

Uganda is hard hit by poor access to clean water, lacks basic sanitary facilities and practices open defecation, with a high cost of health care, which contributes to the high toll of infection-related illnesses in the country (Kwiringira, Atekyereza, Niwagaba, & Günther, 2014; World Bank, 2010). Although Uganda has one of the most advanced, harmonized and coordinated water sectors in Africa, her progress in water supply, and sanitation has stagnated in the last few years (WaterAid, 2010/2011). This stagnation is attributed to limited political prioritization of the sector, inadequate funding, poor O&M practices and limited translation of policy into practice at different levels of governance (WaterAid, 2010/2011). As a result, Uganda failed to meet the 2015s 77% national sanitation target. This means that, vulnerable communities remain chained to; acute respiratory infections, sanitary related deaths, disability, poverty and food insecurity (Mugambe, Tumwesigye, & Larkan, 2013; WHO & UNICEF, 2014; World Bank, 2010). According to a desk study carried out by The Water and Sanitation Program (WSP), poor sanitation costs Uganda 389 billion Ugandan Shillings each year, equivalent to US\$177 million. This sum is the equivalent of US\$5.5 per person in Uganda per year or 1.1% of the national GDP (Water and Sanitation Programme (WSP), 2012). The costs of poor sanitation in Uganda are inequitably distributed, with the highest economic burden falling disproportionately on the poorest Ugandans (Water and Sanitation Programme (WSP), 2012). And treating intermittent sanitary diseases have become quite burdensome and costly for both the people and the healthcare system (Mugambe et al., 2013). Although the line Ministries of Health and Water

have demonstrated commitment through policy developments and sanitation interventions, they continue to ignore household behaviors and community actions that promote demand creation (Mara et al., 2010). Interestingly, Uganda continues to pass various traditional top-down approaches to sanitation and hygiene. This is in addition to strings of law, guidelines and programs which promote coercive messages that elicit embarrassment, disgust, and shame to address the poor levels of sanitation (Bastien et al., 2016). The appalling sanitation challenges in Uganda are redeemable by adequate funding of the most appropriate demand driven intervention. Therefore, the government recently shifted attention from centrally planned sanitary interventions towards a demand-led participatory approach participatory to promote decentralized programs (Water and Sanitation Programme (WSP), 2012; WaterAid, 2010/2011). These interventions include; the Participatory Hygiene and Sanitation Transformation Programme (PHAST) (Peal, Evans, & van der Voorden, 2010), Children Hygiene and Sanitation Transformation (CHAST), which uses the children as change agents (World Bank, 2010), and the most promising and recent approach, the Community Led Total Sanitation (CLTS) programme (Robert Chambers, 2009; K Kar & R Chambers, 2008).

1.2.0 Community Led Total Sanitation (CLTS) – as the case

CLTS is a communications-based approach that aims to achieve “open defecation-free” status for whole communities rather than helping individual households to acquire toilets (Robert Chambers, 2009). Kamal Kar developed CLTS in Bangladesh in late 1999s. The approach uses external facilitators and community volunteers to raise (“ignite”) community awareness regarding the dangers of indiscriminate open defecation. It encourages a cooperative, participatory approach towards ending open defecation and creating a clean, healthy, and hygienic environment from which everyone benefits (R Chambers & Myers, 2016; Mara et al., 2010). CLTS has spread from South Asia to Africa and South America in the past ten years and it appears to be highly successful in certain communities (Tyndale-Biscoe, Bond, & Kidd, 2013).

Plan introduced CLTS in Uganda in 2007. Later that year, the initiative was launched with a training support from Plan Kenya and Network for Water and Sanitation (NETWAS), a Ugandan networking organization in the water and sanitation sector (Plan-International., 2011). The training started at the national level before descending to district-level government staff, Village Health Teams (VHTs) and selected community members. Plan Uganda then introduced CLTS in the districts of Lira, Kamuli, Tororo, and Luwero (Plan-International., 2011). To date, more than 50 Plan-villages are Open Defecation Free (ODF) – where every household uses a

latrine as a safe method of excreta disposal. Countrywide, 80 out of the 111 districts are now implementing CLTS. In 2012/2013, Butambala district received funding from the Ministry of Health and successfully implemented the first CLTS demo in Kibibi sub-county. According to the District health office (DHO) - Butambala, the district registered a high level of community enthusiasm and programme success from Kibibi, which further motivated them to select another sub-county to implement the programme before rolling it out to the whole district. Using independent sanitation reports gathered from all the five sub-counties, Bulo sub-county's Nawango; Bule and Mpanga villages were selected as hosts for the project. Although tremendous success was realized from these villages, district sanitation reports further indicate that each of these villages produced diverse results.

Table 1.1: CLTS report for Bulo sub-county- Butambala district

Indicator	Nawango			Mpanga			Bule		
	Before	After	% increase	Before	After	%	Before	After	%
Latrine	59%	98%	39%	46%	76%	43%	49%	88%	39%
Handwashing	15%	58%	43%	10%	40%	30%	12%	45%	33%

Source: Butambala District Health office

Why a variation occurred in the sanitation results from these three villages remained a puzzle only the CLTS host villages could solve. The urge to unearth the truth behind this unusual discrepancy motivated this positive deviance study with an aim to learn from the experience of particular households in these CLTS communities that managed to achieve significant sanitation improvements, despite ubiquitous deprivation. The 'positive deviance (PD)' method was used as a framework to study such success. PD is an innovative public health strategy to learn from people whose uncommon but successful behaviors or strategies enable them to find better solutions to a problem than their peers, despite facing similar challenges and having no extra resources (Pascale, Sternin, & Sternin, 2010). Although earlier scholarly reports indicate a successful application of the PD towards improving child nutrition and other public health challenges in the Global South, until now, it had not been used to address the need for better sanitation. Using PD, this study examined sanitation achievements in households with best practice.

1.3.0 Statement of the problem

This study explores the sanitation and health experiences as demonstrated by three rural communities and examines the variations in the what, how and where such vulnerable communities draw the motivation from to stay healthy. Uganda is hard hit by poor access to clean water, lack of basic sanitary facilities and practices, and the high costs of health care, all contributing to a high toll of infection-related illnesses. Despite enjoying various sources of support from different actors, Ugandan populations especially those living in rural and peri-urban centers continue to succumb to various preventable diseases due to extreme poverty, inadequate healthcare and water shortages. Despite facing such sanitary challenges, particular households in CLTS communities manage to achieve significant sanitation improvements, despite ubiquitous deprivation.

1.3.1 Purpose of the study

To explore sanitation and health experiences of three CLTS host villages in Uganda.

1.3.2 Research questions

My overarching research question is; how can three villages hosting the same sanitation programme, and sharing similar resources have three varying sanitation results?

The following specific research questions supported the main research question.

- When did you last fall sick and where did you get treatment? What health promotion support do you have/get in this village to stay healthy?
- What are the most common diseases in this village, how is it transmitted and who are the most affected?
- How do you understand health? In addition, what cultural practices promote your good or bad health?
- How does health influence community development and what measures have been instituted to ensure healthy a community?
- What inspired Butambala to adopt the CLTS instead of other sanitation interventions program? In addition, what lessons has the district learned since?
- What health benefits have you registered from this program,
- How do you establish and maintain contact with CLTS programme beneficiaries.

1.3.3 Significance/ relevance of the study

This research has positive implications for sanitation and health practitioners, being the first sanitation study to apply the PD approach in the global south. It also provides a foundation for future research into the sanitation arena by bridging the PD literature gap on sanitation.

This study may benefit the health and sanitation arena by contributing to positive community change by generating a better understanding of local sanitary practices and whether PD should be considered as one of the sanitation methodologies or not.

1.4.0 Summary

CLTS is a recognized technique that uses participatory approaches and local resources to solve deep-rooted open defecation practices. Before CLTS became a majority approach in Uganda's sanitation, several sanitation techniques such as PHAST, CHAST, hand washing campaigns and home improvements were implemented unsuccessfully. In this study qualitative case study, the PD approach is used to examine the sanitation achievements and experiences in households with best practice.

1.5.0 Definition of Terms

Community Led Total Sanitation (CLTS): an approach which promotes the active participation and empowerment of communities to stop open defecation (Kamal Kar & Robert Chambers, 2008; Plan-International., 2011).

The Participatory Hygiene and Sanitation Transformation (PHAST); a participatory learning methodology that seeks to help communities improve hygiene behaviors, reduce diarrheal disease and encourages effective community management of water and sanitation services (Plan-International., 2011).

Children's Hygiene and Sanitation Training (CHAST) is an approach for promoting personal hygiene among children.

Positive deviance (PD) approach: An approach to solving community problems that focuses on positive deviance within the community, rather than focusing on the community's needs. The approach uses solutions that already exist in the community to bring about sustainable behavioral and social change (Pascale et al., 2010).

Positive deviance (PD): The concept that "in every community or organization, there are a few individuals who have found uncommon practices and behaviors that enable them to achieve better solutions to problems than their neighbours who face the same challenges and barriers" (Pascale et al., 2010, p. 206).

Positive deviant: Refers to individual households who demonstrate special or uncommon sanitation behaviors and strategies that enable them stay healthy. A person is described as a "PD only in the context of a specific problem" (Pascale et al., 2010, p. 206).

Positive deviant (PD) behavior: An uncommon behavior practiced by a positive deviant that allows them to excel more than their neighbours who have access to exactly the same resources.

The following chapters describe the study in detail. Chapter 2 gives a full detailed literature review, Chapter 3 details the methodology, Chapter 4 describes the results, while Chapter 5 discusses the results and presents recommendations for future action and research.

Chapter Two: Literature review

2.1.0 Introduction

In this chapter, the researcher reviews and discusses the existing literature and studies on positive deviance and the world of work with emphasis on; the origin of positive deviance related projects. Sanitation/ health, sanitation techniques for rural areas, Community led total sanitation (CLTS) projects and strategies will be discussed. As earlier mentioned, there were few literatures on PD and sanitation although some literature was discovered on hand hygiene.

2.2.0 Sanitation

Sanitation is a complex topic, with links to health to both social and economic development. Although it affects many, it is championed by few (Mara et al., 2010). Globally, sanitation is recognized as any system that promotes proper disposal of wastes, use of toilet and avoiding open space defecation (ADB, 2011; J. Bartram & S. Cairncross, 2010). Ideally, a sustainable sanitary system should provide a clean environment that protects and promotes human health, break the disease cycle and is socio-economically viable and appropriate (Okot-Okumu & Oosterveer, 2010). Globally, 2.5 billion people lack access to improved sanitation facilities (Unger et al., 2013), granting them unrestricted exposure to faecal contaminants and a multitude of disease. An estimation is made that 4.2% or more of the annual global mortality is preventable if all people had access to safe drinking water, reliable sanitation and decent hygiene practices (Prüss, Kay, Fewtrell, & Bartram, 2002; Tumwebaze, Orach, Niwagaba, Luthi, & Mosler, 2013). This estimation may prove hard to achieve because globally, one in every five people habitually defecate in the open or use some form of improved sanitation such as a basic hygienic latrine or a flush toilet (Jamie Bartram & Sandy Cairncross, 2010). According to reports, such shared toilets are habitually filthy and disgusting to use, making them unpleasant to clean thus a provocation to relapse to open defecation (OD) (Barnard et al., 2013; R Chambers & Myers, 2016).

Recent debates concerning the post-2015 development agenda have drawn attention to neglected diseases and have focused on the importance of consensus regarding Water, Sanitation, and Hygiene (WASH) targets and indicators (Bastien et al., 2016). In sub-Saharan Africa for example, access to basic sanitation was identified as one of the most off-track Millennium Development Goals (ADB, 2011; Fewtrell et al., 2005; WHO & UNICEF, 2014). And the anticipated health benefits such as; reduction in the direct cost of hospitalization, burial costs, increased household income and safe food for consumption are increasingly hard to meet

(Esrey, Potash, Roberts, & Shiff, 1991; Mugambe et al., 2013). Much as there are numerous sanitation campaigns being implemented in rural areas, many do not often show the desired impact on communities, or a plan for their large-scale replication across the regions of need (Okot-Okumu & Oosterveer, 2010). Although the health-threatening effects of inadequate sanitation can be solved by proper budgetary allocation, fewer resources are continually committed to sanitation and hygiene (Mugambe et al., 2013; WaterAid, 2010/2011). With only 0.37% of Uganda's gross domestic product (GDP) allocated to water and sanitation development, the socio-economic repercussions of unsafe water and poor sanitation for Uganda is 1.1 % of the GDP. This cost is manifested through premature deaths, increased health costs, and productivity losses (Kulabako, Nalubega, Wozei, & Thunvik, 2010; Ministry of Water and Environment Uganda, 2015; Water and Sanitation Programme (WSP), 2012).

2.3.0. The institutional framework on sanitation in Uganda

Policy framework:

Uganda has a well-developed policy framework, originating from a constitutional provision that every Ugandan has the right to a clean and healthy environment and that it is the duty of every citizen to create and protect such an environment. Several laws, regulations, policies and strategies are in place, including the Public Health Act (1964, updated 2000), with provisions in the areas of prevention and suppression of infectious disease, sanitation and housing, as well as the protection of foodstuffs (Plan-International., 2011). The 1999 National Health Policy emphasizes sanitation and hygiene promotion as a key public health intervention. The 2005 National Environmental Health Policy establishes environmental health priorities and provides a framework for the development of services, and programs for both national and local government levels (Plan-International., 2011). The national "Improvement of Sanitation and Hygiene (ISH) strategy" applies a three-pronged approach to increase demand for improved services through supply of services to help households benefit from better sanitation and having an enabling environment. The 1997 Kampala Declaration on Sanitation (KDS) was endorsed by district political leaders as an indicator of the political will to see change: it defines ten areas of action to improve sanitation at district and other local government levels (Plan-International., 2011).

The 2010-2015 National Development Plan (NDP) recognizes CLTS as one of the hygiene and sanitation promotion approaches in the country, although there is no specific policy direction in the country to guide the adoption and application of CLTS per se (Plan-International., 2011).

2.3.1 Approaches used

Recently, Uganda made a shift away from centrally planned (top-down) provision of sanitation towards demand-led approaches to create and serve people's motivation to improve their own sanitation (Mara et al., 2010). These initiatives include; Participatory Hygiene and Sanitation Transformation (PHAST), Personal Hygiene and Sanitation Education (PHASE) and Children Hygiene and Sanitation Transformation (CHAST), and Sanitation marketing (SANMARK). The trainings for these interventions were carried out either by the Ministry of Health or other agencies for district and sub-county level personnel, and for WASH sector NGO staff and primary school teachers responsible for hygiene (Plan-International., 2011). Government has also spearheaded annual Home Improvement Campaigns, entailing the unpopular enforcement of byelaws and other sanctions to ensure, among others, that households construct latrines (Ministry of Water and Environment Uganda, 2015; Plan-International., 2011).

PHASE centers on hygiene and sanitation training for pupils, teachers, parents, and government officials. PHAST seeks to help communities improve hygiene behaviors; reduce diarrheal disease by effectively managing water and sanitation services. PHAST has received criticism from both its implementers and beneficiaries for applying 'childish' methodologies and different implementers hold an argument that PHAST could soon face abandoned due to its poor community approaches (Peal et al., 2010; WaterAid, 2010/2011; World Bank, 2010).

SANMARK uses a range of interventions to raise householders' demand for improved sanitation (Jenkins & Scott, 2007). SANMARK involves understanding householders' motivations and constraints to sanitation adoption and use. These are used to develop both demand- and supply-side interventions to ensure that appropriate sanitation products and services are available to match the demand (Mara et al., 2010; Peal et al., 2010).

Research reveals that, people are well aware of the need for basic hygiene practices, and do not need criticisms and harassments to change as is the case in Uganda (Peal et al., 2010). However, as earlier noted, previous conventional approaches in Uganda had failed to trigger sustainable behavior change, until the introduction of the CLTS.

CLTS is an approach that involves mobilizing communities to eliminate open defecation. It focuses on sanitation and hygiene behavior change, in contrast with conventional approaches to improved sanitation – typically involving household subsidies for infrastructure -which have proven neither scalable nor sustainable (R Chambers & Myers, 2016; Plan-International., 2011). CLTS empowers communities to take collective action to analyze their sanitation and waste situation, and to bring about collective decision making to stop open defecation, using

locally available resources, rather than focusing on outside interventions such as hardware. According to a report by Plan-International. (2011), CLTS promises great potential towards meeting the Millennium Development Goals (MDGs), both directly on water and sanitation (Goal 7), and indirectly through the knock-on impacts of improved sanitation on combating major diseases, particularly diarrhea (Goal 6), improving maternal health (Goal 5) and reducing child mortality (Goal 4)(Plan-International., 2011).

A report by WHO/UNICEF also states that since the adoption of the CLTS, open defecation rates declined globally from 24% in 1990 to 15% in 2011 (WHO & UNICEF, 2014). Although the decline differs from region to region, countries mostly in Eastern/South-eastern Asia and the Latin America/Caribbean have all registered steady declines. In sub-Saharan Africa at least 26 countries introduced the approach with 5 countries adopting it in their national sanitation strategies (Kar & Milward, 2011). This interesting move by the sub-Saharan Africa has not prevented the region from registering new open defecation cases daily (WHO & UNICEF, 2014).

2.3.2 CLTs challenges

Open defecation is accepted and widely supported in many rural communities, especially during travels, in the fields, and due to some cultural and customary beliefs. Therefore, the success of OD may not be registered fast enough especially when dealing with children, elderly people or persons with disability as beneficiaries (R Chambers & Myers, 2016; Okot-Okumu & Oosterveer, 2010). Another emerging issue however is the sustainability/ future of ODF status as the approach utilizes local actors (VHTs, Natural leaders) for scalability and yet motivation of such volunteers continues to be a concern. These self-motivated volunteers could improve better with some motivation (Plan-International., 2011). Another major challenge is the lack of commitment by the line ministries to institutionalize CLTS as a key approach for sanitation improvement in the national sanitation guidelines (Plan-International., 2011). The CLTS task force comprising of, Ministries of Water/Health, Water Aid Uganda, Plan International Uganda, SNV, and WSP cannot coordinate all CLTS host villages due to inadequate technical and financial challenges (Plan-International., 2011).

CLTS should introduce cheap designs for toilet construction to promote its easy operation and maintenance instead of focusing only on health benefits (R Chambers & Myers, 2016; Tyndale-Biscoe et al., 2013). Also, the current sanitation investment in Uganda is between 0.1-0.5% GDP: 4 which is lower than several estimates for what is required, therefore increased

investments in sanitation and hygiene promotion are required not only to realize health and welfare benefits of sanitation but also to avert large economic losses (Plan-International., 2011; Water and Sanitation Programme (WSP), 2012).

This study has positive outcomes, which could be incorporated into policy frameworks on sanitation to improve outcomes across all districts in Uganda. Although there is evidence of numerous sanitation studies in Uganda, a wide knowledge gap is evident with regard to studies on positive deviance and sanitation. Previous sanitation studies in Uganda have focused attention/efforts on undesirable factors that lead to poor sanitary/ health conditions rather than pursuing a strength-based positive inquiry into factors that promote better sanitary practices. This study is unique and the first in the global south to apply positive deviance in sanitation.

2.4.0 Positive deviance definition

In this section, the researcher presents evidence on the foundation of the PD approach, its benefits and possible limitations. In this section, the researcher also presents the conceptual framework guiding the study.

2.4.1. History of positive deviance

Positive deviance (PD) is a concept that states that, "In every community or organization, there are a few individuals who have found uncommon practices and behaviors that enable them to achieve better solutions to problems than their neighbours who face the same challenges and barriers" (Pascale et al., 2010, p. 206). Traced to the early maternal and child health programs in the 1970s in Vietnam, PD approach/ Hearth methodology was first used by Marian Zeitlin, as part of her pioneering work in the 1990s where she documented positive deviance in child nutrition (Zeitlin, Ghassemi, Mansour, & WHO, 1990). The PD approach aims to solve community problems by focusing on positive deviants within the community, rather than on the community's needs. The approach seeks out "positive deviants" in the community and uses their existing solutions to bring about sustainable behavioral and social change (Pascale et al., 2010, p. 206). Although the word "deviant" usually has negative connotations with lawbreakers (van Dick & Scheffel, 2015), this study will however refer to individual households who deviated from sanitation norms in a positive way as positive deviants and those that deviated negatively as non- positive deviants. Subsequently, the term deviant will have positive connotations henceforth. Although there is no universal definition of positive deviance, there are however recognized definitions that share and include the three fundamental aspects of behavior, deviation, and success (Schooley & Morales, 2007; van Dick & Scheffel, 2015). Their

adoption and use may be determined further by the appropriateness of each research discipline (Heckert & Heckert, 2002; van Dick & Scheffel, 2015).

2.4.2 Positive deviance programs

The integration of the PD into programs stimulated various PD behaviors. A number of evaluated programs demonstrate that PD approach not only succeeded in reducing rates of childhood malnutrition, low birth weight, incidences of healthcare associated infections in hospitals and improved maternal iron supplementation (Ahrari et al., 2006; Bradley et al., 2009; Marra et al., 2010; Mustaphi & Dobe, 2005; Ndiaye, Siekmans, Haddad, & Receveur, 2009)

The most rigorous example of a program that successfully applied the PD approach was from the work done by Save the Children in Vietnam on child malnutrition (Marsh & Schroeder, 2002; Sripaipan et al., 2002). The initial positive deviance inquiry (PDI) for this program identified that mothers with well-nourished children practiced one key behavior that is; *collecting tiny shrimp from the rice paddies and feeding them to their children along with the greens from sweet potato tops*. Both these foods were freely accessible to all members of the community, yet most mothers did not consider them suitable for their children (Sternin & Choo, 2000). This particular finding, along with others, were later integrated into a nutrition program that resulted in a 74% reduction in child malnutrition that remained continuous for 3-4 years after the end of the program (Mackintosh, Marsh, & Schroeder, 2002).

Another area where the effectiveness of PD is evaluated is prevention of MRSA transmission in U.S. hospitals (Singhal & Greiner, 2007). The use of PD in this field was also initiated by Jerry Sternin (Pascale et al., 2010) although it since took on a life of its own after his death in 2008. PD approach was used to identify particular hospitals staff who practiced behaviors that prevented MRSA transmission (Singhal & Greiner, 2007). This project inspired the case of Jasper Palmer, an organized deviant who devised a new method of removing an MRSA exposed hospital gown and sealing it inside a glove to prevent transmission. The success of the procedure labeled it the Palmer method and motivated its rapid spread to other staff in the facility. Research also shows that in one of the hospitals, MRSA infections declined by 55% when a PD project that required no extra resources was implemented compared to a 35% reduction in another project that had earlier applied an external quality management system but failed to sustain it due to inadequate funds (Singhal & Greiner, 2007).

PD was used to promote hand hygiene compliance, safety and behavioral change for both health care staff and patients (Boyce, 2011; de Macedo et al., 2012; Krumholz, Curry, & Bradley,

2011; Marra et al., 2013). The approach was also used to increase HIV and Hepatitis C prevention among injection drug users in the U.S. prisons, and reduced cancer risk in Guatemala (Friedman, Mateu-Gelabert, Sandoval, Hagan, & Jarlais, 2008; Vossenaar & Solomons, 2012). PD inspired healthy eating among low income pregnant women in the U.S. and to improve the nutritional status of other vulnerable groups (Fowles, Hendricks, & Walker, 2005; Friedman et al., 2008). PD not only stimulated improvements in reproductive and sexual health, but also contraceptive use in Tanzania and improved pregnancy outcomes in Egypt (Babalola, 2006; Dynes, Stephenson, Rubardt, & Bartel, 2012; Ndiaye et al., 2009).

To address non-health issues, PD has been applied in poverty and economic development (Biggs, 2008; Ochieng & Obote, 2007), the elimination of sweatshops (Arnold & Hartman, 2005) and increasing sales in for-profit companies (Pascale et al., 2010).

2.5.0 Benefits of the Positive Deviance Approach

PD promotes empowerment, a fundamental component of health promotion strategies. Similarly in child malnutrition, PD empowered hosts communities to rehabilitate malnourished children (Hendrickson et al., 2002) and since deviant behaviors are being practiced by some members of the community there is a possibility of its affordability, acceptance and sustainability in the long term (Mackintosh et al., 2002; Marsh & Schroeder, 2002; Sternin, 2002). Many researchers and practitioners further suggests that the PD approach has additional intangible benefits for communal improvement besides real-world explanations to communal problems. For example, it promotes community mobilization and enthusiasm (Singhal & Greiner, 2007), greater social networks (BUSCELL, 2008; Singhal & Greiner, 2007), reduced relief reliance (Ochieng & Obote, 2007; Schooley & Morales, 2007), and community empowerment and pride (Hendrickson et al., 2002). It also promotes collective ownership of community problems, and enhances problem solving skills (Singhal & Greiner, 2007).

2.5.1 Limitations of the Positive Deviance Approach

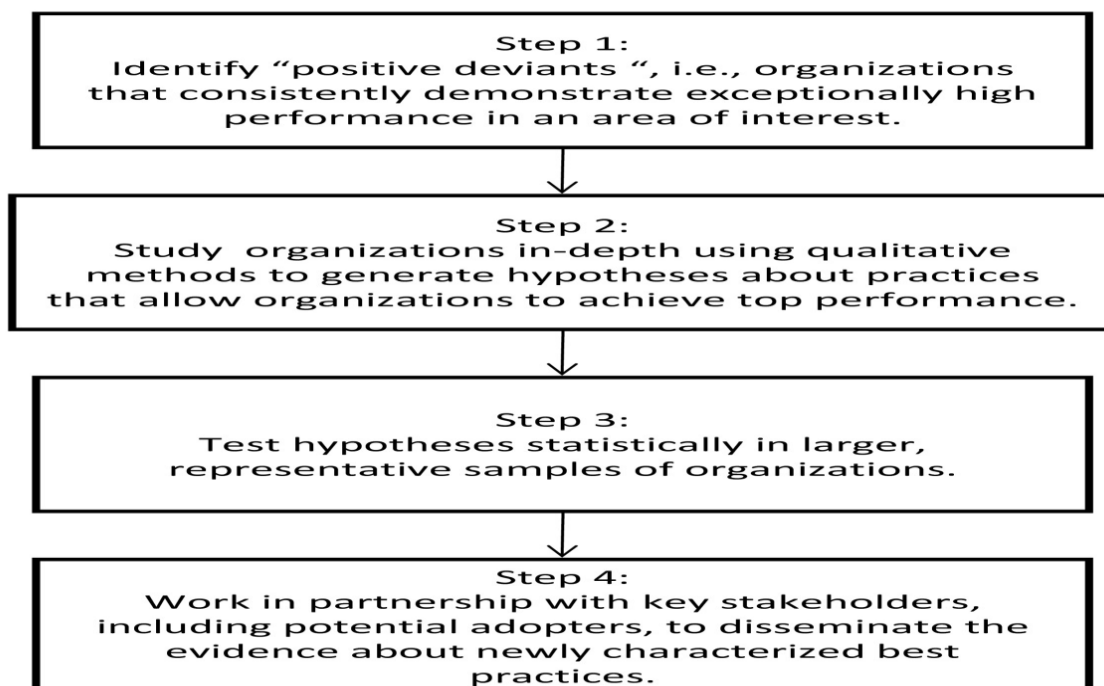
From the definition, PD approach offers solutions that can be implemented immediately using existing resources (Sternin, 2002), yet it does not largely address the underlying causes of the problem. PD is highly context specific, and cannot be transferred to other communities, or even between different seasons of the year (Berggren & Wray, 2002). A study by Lapping et al. (2002), reveals a significant difference in PD behaviors between Afghan refugees and Pakistani nationals living in the same community. Despite living in the same locality, each group required their own Positive deviance inquiry. Despite many calls for the PD approach to be used more

often in interventions (Lapping et al., 2002; Marsh & Schroeder, 2002; Marsh, Schroeder, Dearden, Sternin, & Sternin, 2004), the approach is still not included as a technique in many health promotion programs. The identification of positive deviants and extreme positive outliers imply that there are practical solutions available for evaluation and adoption and can be evaluated and distributed (Tseng, Soroka, Maney, Aron, & Pogach, 2014).

2.6.0 Conceptual Framework

The conceptual framework used for this study is the positive deviance approach proposed by Jerry and Monique Sternin (Pascale et al., 2010). Positive deviance is a strength-based approach applied to problems that require both behavior and social change. It learns from and uses individual success stories to shape communal practice. PD follows the principles that communities are experts in solving in using local resources as assets to solve their problems. Therefore, the successful application of the approach requires the existence of a concrete, widely endorsed and accessible performance measures/ variations, which the three CLTS host villages in Uganda provided this study with. The Positive deviance approach evolves through four major steps as shown in the diagram below to discover success although this study underwent only the first two steps.

Figure 2.1: Steps in the Positive deviance approach



Source: Bradley et al. (2009)

The positive deviance approach accomplishes two goals: the identification of practices that are associated with top performance, and promoting the uptake of these practices within an industry, using the steps in Figure 1 above.

This study will accomplish only the first goal, which is identifying sanitation practices associated with positive deviant households. With assistance from the gatekeepers, the researcher will identify and recruit 43 participants in Nawango, Bule and Mpanga villages. These villages demonstrated several performance indicators among majority of households. These indicators will aid the easy identification and evaluation of study indicators among (PD & Non-PDs). Such performance indicators included; domestic sanitary practices, personal hygiene, and disease incidences with regard to previous sanitation experiences. In addition, incorporating the positive deviance approach in this sanitation study provided a foundation for easy identification of exceptional performing households.

Step two: The study participants strengthen the approach with full cooperation during interview by sharing their exceptional sanitation performance strategies. This grants the researcher access to diverse interview and observations data from participants. This step according to Bradley et al. (2009) is prone to possible resistances from some organizations who do not want to share their secrets so as to maintain their competitive advantage. He reveals that when this happens, the unlikeliness of positive deviance to “produce meaningful results” increases (Bradley et al., 2009). Equally, the study participants willingly shared their sanitation experiences during the interviews. In addition, being the first of its kind in the district, this study triggered immense support from both administrative and local leadership as demonstrated during participant recruitment and mobilization. Additionally, being the first documented sanitation study to apply the unique positive deviance approach, the findings will provide positive recommendations for improving future implementations in Uganda. This study does not however go beyond this second phase. This is because of the study size and limited research period.

During this third phase, the effectiveness of the approach would be determined by testing the hypotheses generated from the experiences of best performing households in larger, representative samples. In this study, the effectiveness of PD would be revealed using results generated from the hosts villages and be tested in other districts within Uganda for similar results. Nevertheless, being a smaller study with a smaller period, the results would only be analyzed, presented, discussed and recommended for future projects. Also, since the study has no direct link to healthcare settings but local communities, there would be no need for statistical

testing (Bradley et al., 2009). Finally, observing unique examples of good performance from the PD households would help practitioners to involve them in designing future projects. The success of PD can inspire other villages and individuals to thrive. It is not possible to disseminate and replicate the results from this study, although reports will be available for future researchers who have an interest and motivation to explore and understand the possibility of applying the PD approach.

Chapter Three: Methodology

3.1.0 Introduction

Studies applying positive deviance begin with purposive sampling to promote participant and data diversity. This chapter consists of the methods applied in conducting this study. The section discusses the area(s) of study, research design, and procedures for participant recruitment, research instruments, quality control, ethical issues, data management and analysis, and limitations of these processes to the study.

The nature of this study- sanitation and health experiences - called for a qualitative research design with focus on the meanings and understanding individuals or groups attach to a social phenomenon (Creswell, 2014). This study focused on discovering facts around the CLTS, how it may have/not shaped the sanitation, and health experiences in Butambala district. During the study, the researcher applied the core characteristics of qualitative research and actively participated in all field activities during data collection and analysis (Creswell, 2014). Data collection occurred in three rural villages with an aim to understand the sanitation experiences from the participants. Using in-depth interviews and observation, researcher gathered participant opinions and witnessed different sanitary practices. The researcher also received a CLTS manual from the district as part of document gathering. All these experiences were meant to shape the final research results (Creswell, 2014).

3.2.0 Research design

The study utilized a case study tradition (Yin, 2013). Case studies are carried out within boundaries of one case/a few cases and involves communities in which the phenomenon to be studied exists (Yin, 2013). This study preferred a case study design with the intent to enhance the researcher's understanding of the different meanings individual villages ascribed to sanitation and health (Creswell, 2014). Although this study possesses the three main case study elements of description, issue and interpretation as advanced by Stake (1995), it is not a single case, rather a collective and holistic design involving three CLTS host villages (cases) (Yin, 2013).

The PD framework proposes that there is a case when a clear definition of problems and the desired outcomes have been identified. The framework maintains that it is important to determine whether there exists common/un common practices between individuals. It also suggests that during inquiries and observations, uncommon but successful behaviors and

strategies accessible to all community members are likely learned. Lastly, the framework emphasizes that intervention designs should encourage community adoption based on the findings to promote action learning.

The framework advocates for community ownership of the entire PD process with experts playing a strictly facilitator role, while allowing the community to identify their problems, discover solutions and disseminate behaviors to the mainstream community. This case study offered the researcher an opportunity to gather insight on participants' description of sanitation and their perception regarding health/ ill health. The multiple answers provided clearly demonstrated variations in thought, experience, and action even among people who share the same boundary and resources. Case study was essential especially since this study was in context with health, illness and health.

3.3.0 Study area

Butambala (0°10' N 32°19' E) is located in central Uganda, 82 km from Kampala city centre, Butambala was formerly a county under Mpigi district before receiving a district status in 2010. The district has five sub-counties with 25 parishes and an estimated population of 98,200 living in 19,742 households and 142 villages (MoWE, 2014). Butambala is largely rural with only 8.4% of the population living in urban areas. The main economic activities in the districts include semi-intensive agriculture, fishing and trade. The Ganda tribe dominates the district and Luganda is the local language spoken. The top five diseases registered at health sub district (HSD) included Malaria, diarrhoea, Acute respiratory diseases, intestinal worms and in that in order (MoH, 2014; MoWE, 2014).

Between June and September 2015, the researcher conducted a qualitative case study in Nawango, Mpanga and Bule villages of Bulo sub-county. These villages hosted the CLTS programme in 2013/2014 yet emerged with varying results. The district CLTS report provided base for their selection and the villages offered the study several opportunities for understanding different sanitation experiences based on both cultural and socio economic diversities.

3.4.0 Sampling

The study utilized a purposive sampling method in selecting informants based on their experiences with the CLTS (Creswell, 2014). Other selection criteria included position of significance in society and knowledge/participation in other health programs. The local council chairpersons and village health teams granted access as gatekeepers to these villages. The

District health office and community gatekeepers facilitated the process of participant recruitment.

Before actual data collection, the researcher made contact with the District administration with intent to introduce the study purpose and obtain a written consent. Through the District Health Officer (DHO), the researcher made contact and recruited the research assistant. Having prior knowledge and access to the study area (Bulo sub-county) did not guarantee any soft landing during the study. First, the researcher attempted to contact some gatekeepers for a meeting but in vain. After several failed attempts, the gatekeepers were successfully recruited and briefed. Secondly, when all arrangements for participant recruitment visits had concluded, all the gatekeepers cancelled their attendance in order to participate in a village celebration. Finally, after weeks of waiting, participant recruitment commenced amidst unpredictable rains and muddy roads. Some participants were recruited from their gardens and other venues convenient to them.

3.5.0 Participants

Participants' recruitment targeted diversity. Initially, the proposed plan was to interview 22 participants, but when the researcher made contact with the Butambala district, the number went to 43 for bigger representation. According to the district, the study was the first of its kind to evaluate a sanitation intervention especially CLTS. The district argued that increasing the number would give programme beneficiaries the opportunity to share their varied experiences, which would provide rich data sets for the researcher too.

3.5.1. Inclusion and exclusion

Study participants were selected mainly from three levels; the Leadership level which included local councils (LC1), and political leaders. The Implementation level included the District Health Inspector (DHI), Village Health Teams (VHTs) and Opinion leaders. Last and most important were the village households that met the inclusion criteria below. Selection of these participants drew from experiences, involvement and knowledge of sanitation and their willingness to volunteer as participant, recruitment agents and gatekeepers.

Selection based on a four-year residence status in the villages and an active participation in the just concluded CLTS programme. Forty-three (43) participants (10 male and 33 female) and aged twenty (20) to sixty two (62) were recruited. The participants were either married or single parents, widowed or persons with disability, impoverished /wealthy. To gather expert

knowledge on the villages' past and present health and sanitation condition, VHTs and LCs were included as both gatekeepers and key informants. Non-residents of Nawango, Mpanga and Bule villages and those that moved to these villages less than six months before the study, child headed households and homesteads whose residents were never home, were deliberately excluded from this study due to lack of program experiences and consent issues.

Table 3.1: Representation of participants

Village	Sexual orientation	Age bracket	Total
Nawango	Male	42-60	04
	Female	20-58	10
Mpanga	Male	37-56	03
	Female	25-56	11
Bule	Male	38-57	03
	Female	26-58	10
District level			
	Female	36	1
	Male	62	1
			43

Context: The setting for this study was purely rural. The three villages are located in Bulo sub-county of Butambala district. To access these villages, the researcher collaborated with the local council leaders (LCs) and the Village health teams (VHTs) who are residents in these communities. These same gatekeepers had earlier facilitated the identification and recruitment of study participants. They therefore, simplified communication in an area with limited literacy, long distances between homesteads, poor roads and supported the recruitment of men as participants. The researcher met most of the participants at their homesteads during the afternoon or evening hours and in the gardens for those whose schedules were busy. Participants demonstrated preference for afternoon and evenings when cultivation is finished. Participants

met in the gardens could not return home for the interviews due to distance thus a preference for such locations.

3.6.0 Methods of data collection

During this study, the researcher's emphasis was on collecting primary data. This was mainly achieved through semi-structured in-depth audio-taped interviews, and observations. The researcher applied document gathering as well. These methods were meant to ensure triangulation and increase the validity of the results (Creswell, 2014).

The researcher conducted 43 semi-structured in-depth interviews with participants from both the district and village level. Compared to structured interviews, the flexibility of this approach, gave room for both the participants and the researcher to discover important sanitation practices that had previously been ignored for instance, (using ash as a disinfectant) (Gill, Stewart, Treasure, & Chadwick, 2008). The interview questions were open-ended to build rapport and encourage participation most especially on participant's side (Creswell, 2014). The researcher used the interview guide as a reminder for the topics to be discussed (Creswell, 2014), although the order in which the questions were asked did not follow exactly its appearance on the paper.

Participant locations varied from compounds and gardens to shops and wells. The audio-taped interviews lasted between 30- 90 minutes. Passers who always stopped to extend greetings and other pleasantries before continuing with their journeys interrupted two sessions. Babies crying to be breast-fed interrupted three interviews, and loud noises made by construction vehicles passing on the roads interrupted two other sessions. The researcher always waited for the interruptions to reduce/die down before resuming the sessions. The participants conveniently selected the venues that did not expose them to any form of harm. The researcher summarized field notes at the end of each interview session with focus on observations, thoughts and ideas about the interview.

Observations: The field observation gave the researcher a first-hand experience with participants (Creswell, 2014). The researcher carried out three level observations. Researcher observed personal hygiene among half-dressed children with dry mucus and food from previous meals smeared all over their bodies. The researcher also observed and discovered that the majority of the children looked healthy despite appearing dirty. Among the adults/youth, the cleanliness of clothes and whole body appearances were promising although some youth had strong body odors.

Document gathering: Qualitative documents may include public documents such as minutes and official reports (Creswell, 2014). The researcher received only the CLTS facilitators training guide from the District Health Inspector Butambala. Plan-International, Ministry of Health and the Water and Sanitation Program (WSP)-World Bank, prepared this guide. Butambala district is the custodian of this guide and uses it to train CLTS facilitators to trigger behaviour change in communities with the aim of promoting open defecation free (ODF). The information in the mentioned guide was used to built part of the introduction and analysis sections.

3.7.0 Ethics Clearance Process

Prior to travelling for data collection, the researcher applied and received ethical clearance from the Norwegian Social Sciences Data Services (NSD). In Uganda, the Uganda National Council for Science and Technology (UNCST) and the TASO REC granted ethical clearance. Butambala district granted a written clearance and the study participants signed consent forms.

The process

The Uganda National Council for Science and Technology (UNCST) granted approval for this study based on preliminary assessment from the REC. Beforehand; the researcher had submitted a copy of the research protocol with translated consent forms and the interview guide as requested by TASO Regional Ethical Committee (REC). The protocol was approved after several weeks of waiting.

The researcher then submitted the approved copy together with three passport photos and a bank slip of a none refundable fifty USD to the Uganda National Council for Science and Technology (UNCST). The decision from the UNCST regarding the approval/ disapproval of the protocol would take a while. Therefore, due to the limited time left, the researcher went back to the research site to continue with data collection. The researcher obtained a written consent from the district Administrative Officer (CAO), granting full access to the research area. With assistance from the District Health Officer, the research assistant was recruited and the research site visited for contact.

The researcher learnt valuable lessons from this ethical process; fieldwork progress does not always go as planned. For example, before the actual study started, the researcher did not foresee that it took long before acquiring an ethical clearance. Secondly, the researcher was surprised to pay ethical clearance fees at both the National and Regional levels. These experiences taught and reminded the researcher the values of flexibility and patience.

3.8.0 Data management and Informed consent

Data collection happened in three languages, English, Luganda and Swahili. The administrative representatives at the district level were interviewed in English, one participant at village level was interviewed in both Luganda and English, three were interviewed in Swahili (a dialect spoken mostly by people who have served in armed forces) and thirty eight participants interviewed in Luganda. These three villages were characterized by limited literacy levels.

Informed consent

Informed consent is a voluntary participation agreement between a researcher and the participant signed after the participant has fully understood the implications of taking part in a study (Creswell, 2014). The participants directly consented to participate during this study. Using Luganda and Swahili, the researcher explained that no participant would receive any form of payment or coercion to participate in this study. The local leaders assisted to reiterate the significance of this study by repeating the study purpose and letters of consent to participant. Since local communities (study area) have strong attachments and respect to what their leaders say, involving the gatekeepers further facilitated bridge building with the locals. Since this was the first research study seeking community views on sanitation, everyone wanted to participate. Researcher informed participants of their free will to withdraw from the study at any point if they felt uncomfortable but none withdrew. The Researcher did not enroll any persons lacking capacity to consent in this study. Only consenting individuals 20 yrs. and older were recruited. The researcher emphasized the issue of confidentiality with participants and sought permission to audiotape interviews. Three participants however declined to be audio recorded due to health issues (cough) so the researcher took notes instead. Researcher debriefed a few participants after the interviews and due to limited time, majority of the participants were not debriefed.

3.9.0 Data management

Audio-taped recordings and transcriptions were transferred to a personal-password protected computer that only the researcher had access. The transcribed interviews and recordings were coded to ensure anonymity. The researcher plans to store all interview data for three years as reference before it is destroyed. The Researcher and assistant transcribed the audio-taped recordings, field notes and observation data from original languages to English. The research assistant had a good command of the English language and native Luganda. The researcher sourced a highly qualified and experienced assistant to enhance data credibility and originality during translation.

Role of the researcher and research assistant

In qualitative research, the role of the researcher as the primary data collection instrument is emphasized (Creswell, 2014). The researcher went into the study area with previous professional experience, which could be a potential source of bias. Nevertheless, since the researcher had not worked in this area for the last two years, it was easier to explain to the gatekeepers that the researcher had returned as a student and not as the district staff, they knew. In this way, the gatekeepers introduced the researcher to the study participants as a student. Many times, the researcher explained to the participants that their contributions towards this study would greatly enhance the quality of the thesis report. Turning that previous experience into a resource enabled the researcher to build strong relationships and rapport with gatekeepers, former colleagues and study participants.

Although the research assistant would not be responsible for the outcome of this research results or data, she mandatorily declared that she held no potential biases related to the study area. The research assistant holds a graduate degree in environmental health with twelve year's rural experience in public health. The assistant actively took part during participant recruitment, instrument translation, in-depth interview meetings/observation visits and transcribing data.

Dissemination of Findings

The primary audiences for this study are community health educators working in the field and academicians, particularly those who develop community health and sanitation programs. Therefore, the dissemination plan will include circulating the results to practitioners by sending copies to the Ministry of health-Uganda and Butambala district. The study report will also be submitted for publication in a peer-reviewed journal that has a varied audience. In conclusion, this study used a multiple case study analysis based on publicly available sanitation evidence that helped to better define the greatness of the CLTS programme presently implemented, the characteristics of previous sanitary programs, and their effectiveness in a range of contexts.

Chapter 4 describes the results of the study

Chapter Four: Data analysis and the Presentation of results

4.1.0 Introduction

The data was analysed using Attride-Stirling's thematic network analysis. The thematic networks are web-like illustrations that summarize the main themes constituting a piece of text (Attride-Stirling, 2001). The thematic network development started from the basic themes as the researcher worked inwardly toward a Global theme.

During coding, over a hundred codes were derived based on sanitation and health practices. The researcher looked at unique practices associated with deviant households, and contradictory sanitary behaviours evident and demonstrated in all the three host villages. The most outstanding and interconnected ideas were picked out to form logical, easily interpretative and most understandable codes. The researcher separated and arranged the transcripts based on the similarity of codes identified. The researcher deduced nine basic themes from the connected codes. The researcher arranged the nine groups of basic themes into four organizing themes. The researcher deduced two global themes from the organizing themes. Thematic networks were there after presented graphically as web-like nets to remove any perception of order, giving variability to the themes and emphasizing their interconnectivity throughout the network. Notably, however, these networks are only a tool in analysis, not the analysis itself. Below is the graphical representation of the webs.

Thematic Network links.

Figure 4.1.

Traditional Sanitary/Health practices identified in the 16 PD households in the three villages

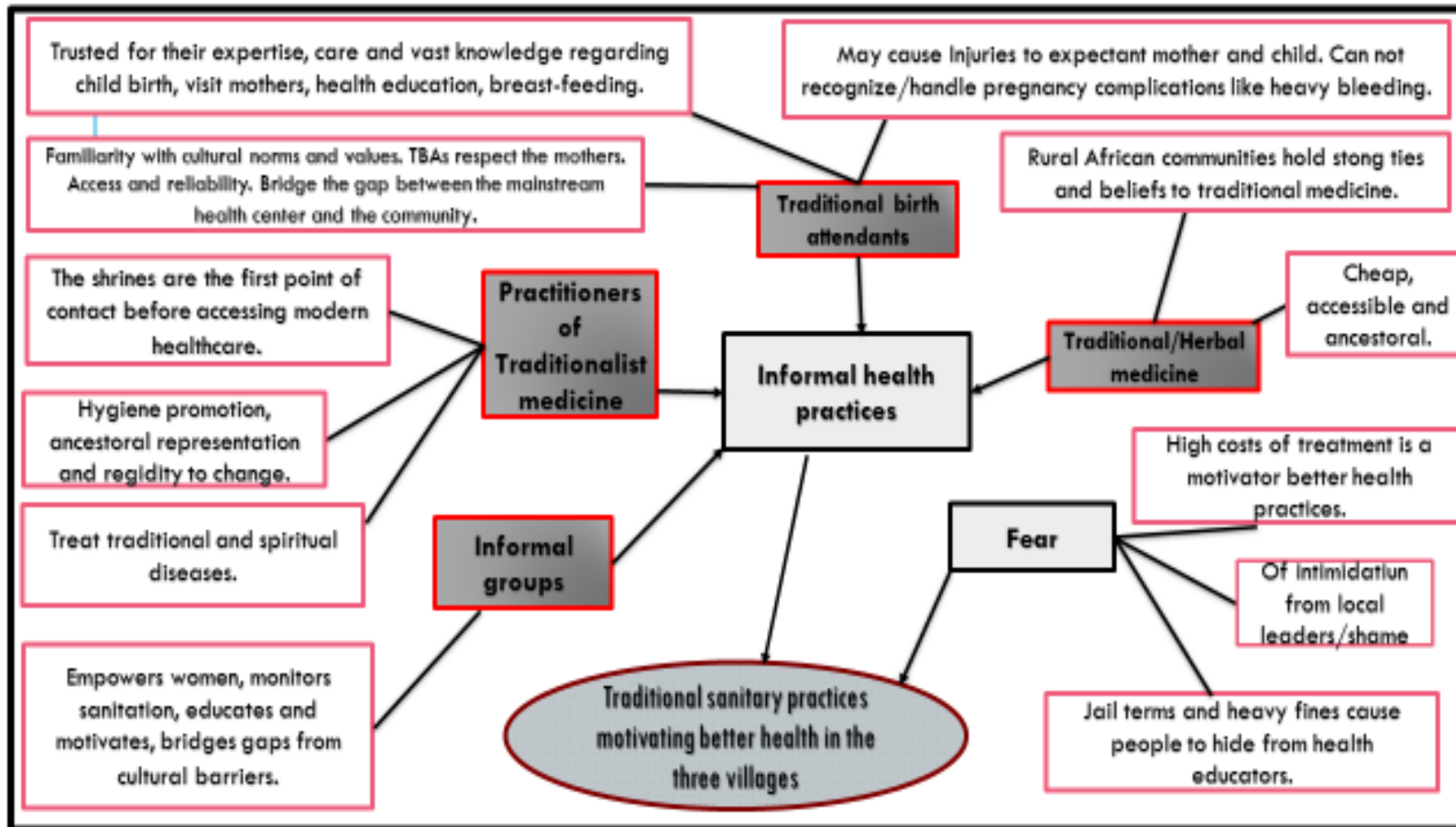
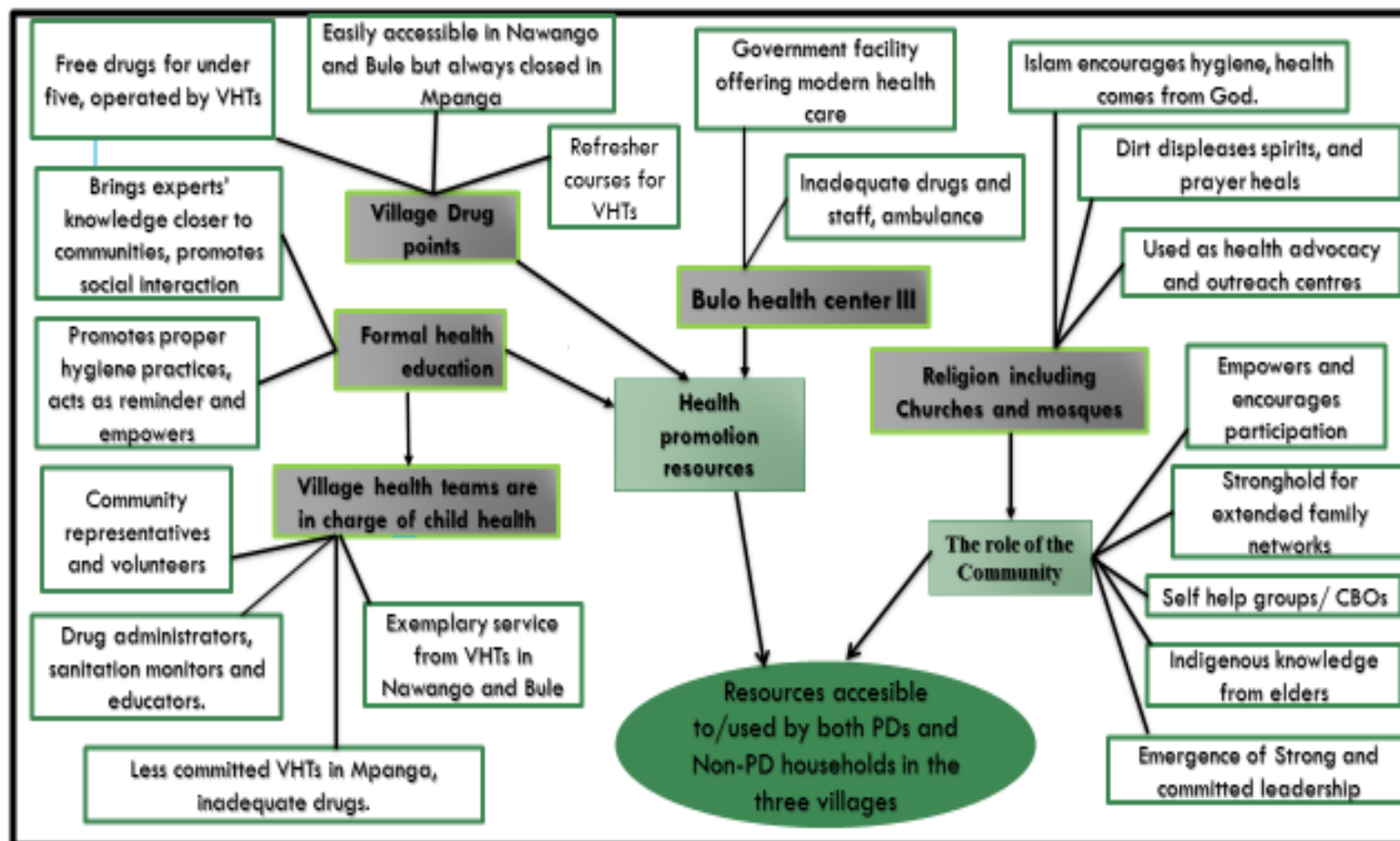


Figure 4.2

Health Promotion resources available to both PDs and Non-PDs in the three villages



4.1.1 Description of Thematic Networks

Figure 4.1. This is a network comprising of two organizing and four basic themes. The network represents the global theme; *Traditional sanitary/health practices identified in 16 PD households*. The network illustrates the key themes on which PDs adopt and maintain particular health behaviours. Below is a detailed explanation of the two organizing themes that make up this global theme.

Organizing theme: Informal health practices. This organizing theme pertains to the traditional sanitary/health education methods as described by the participants. In this context, traditional birth attendants (TBAs) motivated positive deviants. TBAs gained trust from the community (PDs) for their demonstrative expertise in childbirth and bridging the gap between modern health care and the community. TBAs are believed to be untrained and a source of risk to unborn children and mothers, yet familiar with cultural norms and values. Secondly, households demonstrated strong ties and attachments to local herbs because their ancestors used them. Similarly, the traditionalist and their shrines were first points for treatment before accessing modern medicine, shrines promote hygienic practices (treat clean patients) and traditional diseases have spiritual ties. Finally, local women mainstream sanitation and health practices through songs. They empower and educate, support and monitor group's activities. According to this organizing theme, tradition and culture supports everyday human health. It is part of humanity to hold on to indigenous knowledge. The need to protect and promote rural health understanding through non-formal education motivates particular health behaviours.

Organizing theme: Fear. This organizing theme relates to the unpleasant human reaction to something that causes pain, exposes to danger or causes shame. Protecting oneself from an anticipated cause is fundamentally important to participants. In this context, fear is perceived as beneficial for PDs and detrimental for the Non-PDs. Positive fear encourages good deeds and negative fear discourages good. The fear of costs for treating avoidable sanitary diseases and the jail term, motivated good practice and fear of heavy fines and shame sent many sanitation defaulters to hiding. According to this organizing theme, fear is a natural feeling, yet it has the capability to transform our current health conditions for the better.

Figure 2. This network comprises of two organizing themes and four basic themes. This network represents the global theme; *Health promotion resources available to both PDs and non-PDs in the three villages*. The network explicates key themes on which both PD and non-PD behaviours are identified and appreciated.

Organizing theme: Health resources promoting health. This organizing theme related to the services, campaigns and activities, including training sessions relating to sanitation, immunization and general health as described by study participants. In this context, both the positive and non-positive deviants sought and used these services although their levels of motivation differed. Health resources such as informal health education meetings, village drug points, village health teams, and the Bulo health centre played various roles in instigating both health practices and outcomes. For example, the informal health education meetings allowed participants to socialize and learn from within their culture while interacting with other members of the community. Although it does not promote confidentiality, it gives room for creativity, skills enhancement and knowledge sharing among the participants. Health assistants, village health teams and health officials trained and sensitized participants on sanitation and general health practices. The health trainers and local leaders punished sanitation defaulters through heavy fines and jail term. The health assistants were approachable and patient during monitoring meetings. Similarly, the village health teams mainstreamed health at households and took charge of child health. VHTs acted as community health representatives and volunteers, drug administrators, sanitation monitors and trainers, and lastly health educators. Although VHTs in Nawango and Bule villages demonstrated exemplary service and sacrifice, households in Mpanga village reported less commitment and inadequate drugs from their VHTs. Another basic theme is Bulo health centre III, the only government aided health centre in Bulo sub-county serving the whole population. The health centre carries out maternal, child health and minor surgeries. The centre faces challenges such as inadequate drugs, transport, staff shortage, large numbers of patients and inadequate space for admission. Such factors demotivate participants from seeking health care services. Similarly, to bridge health gap among the under-fives, village health teams receive free starter drugs at village drug points. The drug points are accessible to all however, some are habitually closed (Mpanga). Informal health sessions empower participants and act as health reminders to all.

Organizing theme: The role of community. This Organizing theme concerned Individuals who interrelated positively and worked together towards supporting the achievement of a collective goal. The community promoted health through, empowering and encouraging community participation, self-help groups / CBOs, indigenous knowledge from elders, emergence of stronger and committed leadership. Religion including churches and mosques are health advocacy/outreach centres. Participants believed that prayer heals, dirt displeases spirits

and health comes from God. In this context, a strong and supportive community creates a more stable and supportive society for the collective benefits of both individuals and the community.

The results

From the 41 household interviews, 25 Non-PD and 16 PD households were identified based on reported and observed sanitation and health care practices. The structure follows the two global themes. One, the traditional sanitation and health practices identified among the 16 PD households and secondly, the health resources and practices identified among both the PDs and Non PD households.

4.2.0: Global theme one: Traditional sanitary/health practices motivating PD households

4.2.1 Informal/ traditional health teachings

PDs engaged with different practitioners of traditional medicine such as birth attendants, traditionalist's shrines to deal with infectious diseases and self-administered herbal medicine to manage household illnesses. The shrines were the first contact point for treatment before PDs could access any modern medicine and according to them, these shrines advocated for and promoted personal hygiene. The informal women and youth groups spearheaded by local women empowered and educated people. Although the non-PDs expressed displeasure and described traditional practices as unsafe, PDs shared their positive experiences as below.

4.2.2 Birth attendants (TBAs)

The PDs recognized the TBAs as the main health care providers for mothers in the villages. TBAs gained trust for understanding people and culture. Elders or older family members appoint and train TBAs. Apart from helping to deliver babies, TBAs assisted mothers to instigate breastfeeding, educated on reproductive health issues, proper nutrition and carried out follow up visits to mothers. The PDs appreciated the good relationships they had with TBAs. Some women and their spouses revealed that in cases where TBAs referred them to the health centres, they also made it a appoint to accompany them to the health facilities. All the PDs accepted that TBAs contributed greatly to motivate and change their health experiences. The Non-PDs claimed that TBAs were inexperienced to handle babies. Accordingly, they claim that the danger they foresee for women and their babies demotivate them to seek the TBAs counsel.

“TBAs know more than we do concerning child health and they are always visiting we the young mothers whom they helped deliver of their babies” PD Namukasa.

“From our grandparents, to our parents and now us [...] every one of them delivered at the TBAs place. We do not joke with these elderly women because they know everything about child birth” PD Madiina.

The responses above reveal that successful households regularly visited TBAs because they have full trust in their expertise, care and vast experiences with childbirth.

4.2.3. Practitioners of traditional medicine / herbs

Rural African communities have strong attachments, ties, and beliefs involving the use of traditional medicine / herbs. PDs mentioned that they preferred local medicine due to easy accessibility, which made it easy to cope with illnesses. PDs believed that, traditional medicine men possessed valuable knowledge regarding diseases and herbs, which made their shrines first preferred point of contact before seeking any modern medicine. The non-PDs however maintained that, they avoided herbal medicines because they are in hygienically prepared and administered. One PD revealed that, most of the common diseases registered in the villages have links to tradition /spirituals, and only traditionalists/herbs can treat them. PDs attached a lot of belief and importance to medicine men and local herbs. For example;

“Jjaja (grandparent) does not massage medicine on your body if you are dirty [...] she is very strict when it comes to hygiene” PD Natooro.

“There is a traditional medicine man down that hill [...] we always go there to seek treatment but you have to first clean your body and wear clean clothes before approaching that shrine [...] some people spend days in that place without treatment because they travelled long distances and reach the shrine tired and dirty” PD Achieng.

These quotes are a clear indication that PDs are aware of the important role of hygiene in promoting health. Similarly, PDs revealed that they managed to keep their families healthy using disease prevention and treatment lessons learnt from the traditional medicine men. The non-PDs held a negative opinion regarding the effectiveness of traditional medicine men/herbs.

4.2.4. Informal groups

These groups empower and support the domestic sanitary/ health needs of vulnerable women. The Informal group - Bulo Sub-county Initiative for AIDs- (BUSITA), spearheaded worked with widows and youth groups to provide and promote better use of sanitary facilities among the people. The health and sanitation practices of households in this group improved tremendously. A few single mothers and widows (PDs) for example, revealed that they only

joined the group after failing to singlehandedly construct all basic sanitary facilities in their home. Six households in Mpanga village also reported that active involvement in the group had not only improved their health statuses, but also encouraged other vulnerable women to join. Participants mentioned that use of educative and interactive folk songs /plays by the group promoted best practices. Below are extracts from participants,

“During the last sanitation week celebration, we were invited by the district health inspector to present a play on child health and hand washing at the sub county [...]” we even presented a skit on hand washing in front of district officials and visitors from the ministry) PD Namugerwa.

PD Rose revealed that,

“Being a single parent I cannot afford bricks and iron sheets for the toilet [...] from the group I learnt to use banana leaves, grass, and sticks to construct facilities [...]” PD Rose.

Another PD said that,

“Since I joined the women’s group we have been helping each other with construction materials here and there [...] it’s motivating” PD Natooro.

These PD responses reveal that group cohesion and support motivate success among its members. Much as the group faces many challenges such as lack of support from formal organizations, their contribution towards inspiring household sanitation is paramount.

4.3.0 Fear and shame

From participant responses, PDs perceive fear as a positive factor and the Non-PDs perceived it as a negative factor. PDs revealed that living in fear and shame for defaulting sanitation traumatized them more. According to participant responses, the identification and intimidation of sanitation defaulters by law enforcement officers/local leaders/village mates happened during baseline surveys and walk of shame. The fear of untimely arrests and fines coupled with high costs of treating preventable diseases motivated PDs to practice better sanitation. Responses from the PDs reveal that the CLTS implementation phase changed their health behaviours for the better. The non-PDs however expressed their displeasure and said that the phase was roughly and various forms of intimidation from law enforcers during the walk of

shame, defecation mapping and demolition of old sanitary facilities ignited shame thus an encouragement to hide.

“Those who failed to construct these sanitation facilities were issued with summons to scare them. These people are very stubborn. When you just use words they will not respond so we get summons and move with policemen from the sub county” Local Leader1.

“The men get only get pressure when they realize that the health assistant will bring summons so they construct the facilities. My husband always asks me what the health assistant said during monitoring” PD Madina.

“These men fear exposure and shame so they always try to put up these facilities to” Nabagala.

4.4.0 Global theme two: Health promotion resourced accessed by both PDs and Non PDs

According to participants, these health assets included health campaigns and activities, including training sessions relating to sanitation, immunization and general health practices. In this context, both the positive and non-positive deviants in the three villages revealed access to and use of these resources. They included; informal health education – to promote household sanitation and hygiene-, village drug points – to provide drugs for under-fives-, village health teams – to educate, distribute drugs and monitor sanitation progress-, and the Bulo health center III – to provide modern health care. These resources synchronized to motivate the PDs to practice better health/ill health for Non-PDs as below.

4.4.1 Formal Health education

Participants mentioned that access to health education teachings improved their health outcomes. Health education reminded participants to practice and promote proper hygiene and sanitation practices. Participants believed that health education encouraged them to participate in activities that promoted the best local strategies for improving household health. From the analysis, the participants commended the health educators for facilitating outreach programmes and developing health campaign messages tailored to fit the needs of each individual. PDs had this to say about each of them.

4.4.1.1. Health assistant

Health assistants (HA) are public health practitioners assigned by government at each sub-county to take charge of the water, sanitation and hygiene promotion. According to participants, the HA mobilized communities for sanitation meetings, According to one PD, during the meetings, the health assistant educated them about various disease prevention routes especially the oral faecal route. Other participants revealed that the health assistant carried out regular participatory demonstrations and to trigger shame and cooperation from sanitation defaulters, the assistant involved all people in the defecation mapping exercises around the village. One PD disclosed that before attending the meeting and learning the health risks associated with open defecation, he used to defecate in holes behind the house. The non-PDs revealed that such participatory techniques motivated them to take part in the meetings yet they returned home and failed to practice what they learnt.

“We were taught how to make tippy- taps for hand washing but since I cannot afford soap, we use ash to wash and tender leaves from settaba (leafy plant) to wipe behind”
PD Makubuya.

“There are people, who started boiling drinking water and sleeping under treated mosquito nets after attending trainings organized by the health assistant” PD Nankya.

“Hamza and I never missed participating in the shit calculation exercise during meetings...it was fun [...] but I don’t have a toilet yet because am nowadays busy mining sand. I defecate in the garden or in the swamp” Non-PD Abbey.

One other non-PD explained that health education meetings had empowered people to work together and take control of their health and the frequent mobilization visits by the health assistant had made husbands responsive enough to put up facilities” p22 “.

4.4.1.2. The health educators at Bulo health center.III

Health educators (HE) in this context sensitized and encouraged participants to make use of the different medical services/treatments at the health center. According to participants, HEs conducted community health outreaches by collaborating with TBAs and VHTs to understand the various cultural and social barriers to health. According to PDs, HEs educated them to practice proper hygiene and taught women how to make cheap sanitary pads. For example, PD Namukasa disclosed that, *“When we attend ante-natal clinics and or take children for immunizations, the health workers make us undress the children for hygiene inspection and those whose children are dirty are scolded”* Namukasa.

. Another PD revealed that

“[...] I went for ante-natal [...] but I ended up learning how to make local sanitary pads from pieces of cloth.... When I reached home, I taught my daughter how to make one since we cannot afford modern sanitary pads [...]” PD Mukisa.

4.4.1.3 Village health teams (VHTs) and drug points

Village health teams are community volunteers trusted to take charge of child health care through; drug administration to under-fives, treating common colds, deworming and acting as sanitation monitors, trainers and reminders. Both PDs and Non-PDs acknowledged the mobilization roles VHTs played in child immunizations, hygiene campaigns and fencing of water points encouraged them to participate fully. Accordingly, both PDs and Non-PDs, acknowledged that through the drug points, VHTs fought to reduce cases of infant diseases and deaths in the three villages. Non-PD (Hamza) for instance, mentioned that he rarely visited the drug points, but always got his children treated at the drug points during emergencies and PD Achieng whose child developed a high fever in the night knew exactly where to take the child

for treatment. Both PDs and non-PDs complained of inadequate drugs at the points especially in the fruit and maize seasons. The non-PD households in Mpanga complained that their drug points were always locked, making it hard for their children to access starter drugs.

“Those ‘Basawo’ (VHTs) are very hard working. They are not paid yet they walk the whole village on foot, when hungry and tired and yet they do not complain” PD-Nankya.

“The place lacks drug nowadays, so far I have been there three times this week but it is still closed. I heard the VHT went to Kampala for treatment” Non-PD Ssalongo Kawoya.

From the analysis, village drug points bridge health gap among the under-fives provide free starter drugs. Although drug points are supposed to be accessible to all, some participants claim they need new VHTs for Mpanga because the drug point is always closed. The constant mobilization and monitoring by VHTs motivated PDs to avoid the occurrences of child diseases like polio, whooping, cough and measles. According to the district health inspector, there is a great reduction in disease episodes since the introduction of the VHTS as agents for CLTS in Bulo.

4.4.1.4. Bulo health center (III)

Bulo sub-county has only one government aided health center three. With one clinical officer, three nurses and one midwife, the center serves people from all the five parishes that made up the sub-county. From participant revelations, through the health, children were immunized, expectant mothers attended antenatal and other patients treated for other general illness. For example, *“Every Mondays and Tuesdays the children were taken for immunization”*. PDs acknowledged that before upgrading the center to a health center three III, they suffered from typhoid, dysentery, malaria and maternal emergencies cases. They feel that, though faced with numerous administrative challenges, the health center is an important health asset to them. The non- PDs revealed that, lack of drugs during first visits, lack of personnel, and long distances demotivated them from visiting the health center. The PDs argue that, *“the health center gets full by eight in the morning and people come from far. To get treatment, you have to come early”* PD Nangendo.

Other Non-PDs were skeptical about the genuineness of the services. An example of some quotes from Non PDs

“We buy mosquito nets on market days [...] I have never heard of free mosquito nets at the health center [...].” Kabanda

“I heard that those nets are sprayed with some dangerous poison to kill our children. I cannot lose my children just like that so we do not sleep under nets” Kyalya

The financial burden of hidden hospital costs, and the inability to have someone to entrust families with while in the hospital also discouraged some people from seeking health care.

4.5.0. The Community

The role of the community as a setting is emphasized in health promotion. From the analysis, the community promoted health through empowering and encouraging the community to participate in self-help groups. According to participants, having strong and committed leaders paved way for participation in activities that promoted the attainment of better health outcomes for all. From the responses, both PDs and Non-PDs took part in communal activities such as; ‘bulungi bwansi (traditional cleaning), clearing and repairing water sources and digging wells, helping the elderly and other communal activities as a way of working together. Participating in such activities according to participants was mandatory. Those that deviated from such societal norms were denied access to water points. Active involvement in such activities motivated people to learn how to maintain clean water collection containers, sources, homestead and personal hygiene.

4.5.1. The role of Elders and extended families

In most African settings, elders are an epitome of wisdom because they represent our ancestors and it is widely believed that a person who heeded to an advice from an elder lived longer. Similarly, all the participants interviewed recognized the existence and significances of elders in their communities. For example, the participants revealed how elders taught them to care for pre-mature babies (kangaroo style), feed infants on goat’s milk; apply particular herbs on wounds, and burn herbs in the toilets (disinfectant), and bedrooms to repel insects such as mosquitoes, flies and cockroaches. Although the PDs disclosed that elders were an important source of indigenous knowledge that needed protection, the non- PDs revealed that most elders lacked sanitary facilities, experienced food shortages, lived in poorly ventilated houses and suffered from chronic infections yet people looked to them for health guidance. Some Non-PDs went forth to say that, some of the knowledge from elders were archaic. The PDs still maintained that what they learnt from the elders were irreplaceable by any modern knowledge.

“When I gave birth to my second child, she was a stillbirth [...] Jjaja(grandparent) came and showed me and my sister in law how to tie her in the chest before dressing up[...] she said it will keep her warm” PD-Kabejja.

Similarly, Participants also mentioned that extended families disseminated various important health ideas. From the analysis, both PDs and Non-PDs participated by listening and learning from aunts, uncles and grannies who frequently provided them with sustainable health information that they later applied to achieve good/ un-acceptable household practices. Some PDs revealed that, their mothers boiled herbs to treat when they were young.

“ Once a month we young mothers visit the traditional aunts (Ssenga), to learn various marriage tricks such as cooking, tiding the homestead, reproductive health and mixing herbal medicine for different sicknesses” PD Makubuya.

While some PDs revealed that they buried children’s faeces in man-made holes to avert contamination and sicknesses, the Non-PDs maintained that they disposed children’s faeces with rubbish or left it in the open to dry off since to them, people cannot get sick from digesting children’s faeces.

4.5.2. Leadership structure

Most rural communities have and believe in their own network of relations and hierarchy of leaders from whom they tap mutual support for growth. Some of the leaders mentioned by both PDs and Non-PDs were fully recognized yet lacking formal titles. Participant responses revealed that when in need of advice, guidance, and or blessing, people turned mainly to natural / political, the health assistant (administrative) and the spiritual leaders. Every leader played significant functions in promoting health within the community. One PD revealed, *“Leaders provide guidance [...] have influence over others and respond to the needs of people”* and another said, *“leaders put the welfare of others above their own”*. The PDs mentioned that the commitment demonstrated by the local leaders in curbing down defaulters and the presence of the law enforcers threatened the men most especially, to respond positively. The non-PDs however expressed their dissatisfaction for unlawful detention and heavy fines. For example one said, *“I give them some small bribe so that I am not fined for not having a toilet ...so far I have taken two years without constructing a single facility and the chairman knows”* Aisha

Some Non-PDs mentioned that, *“The local leaders are rare in the villages and those who happen to be present also lack sanitary facilities”* Fenekas, Aisah, Kabanda, Kabali, and

Mariam. When asked how such behaviour affected their sanitary successes, Nkalubo was quick to reveal that that, he could not put up a toilet when the village chairperson did not have one. In defense of their actions, one local leader explained that,

“Implementing a successful health programme requires adequate time, resources and involvement of all participants but the CLTS took a short time yet we were required to trigger big change within a short period” Local leader 2.

Participants identified two self-motivated natural leaders who sensitized and carried out health demonstrations during the CLTS phase in two villages. According one participant, *“Hajjat used to move around in our village teaching young mothers how to construct bath shelters from banana leaves, energy saving stoves and many good family health practices”* Non- PD Madina.

PDs mentioned that although the natural leaders were not in position to serve all the three villages, their influence on household sanitation and food security were tremendous in areas where they operated. Both PDs and Non- PDs who attended such sensitization sessions reported that they learnt to; prepare local diarrhea treatments from salt and other local resources, and the leaves suitable for anal cleansing and maintaining personal hygiene.

In relation to the administrative leadership, participants praised the commitment of the former health assistant who managed the implementation of the CLTS. Mukisa mentioned that the health assistant possessed great administrative skills, which motivated her to carry out unexpected health monitoring visits when no one expected. According to PDs, those surprise visits triggered fear. Mukisa revealed that, the uncertainties of not knowing when the health assistant appeared kept the householders on their toes just in case. Non-PD Fenekas revealed that he was not pleased with those surprise visits because it always caught him aloof with no facilities in place. Another non- PD Kyalya mentioned that, *“I prefer early communication about the health visits. I don’t like being caught off guard”*. The PDs traced their success stories to the hard work and effectiveness of the health assistant although the non-PDs felt she was rough. In conclusion, all participants agreed that establishing a stronger leadership network would motivate more people to copy great examples of good sanitation and health practices from successful homesteads within the communities.

4.5.3. Religion

Participants described religion as any spiritual realm one believed in. Participants believed that one could receive healing through prayer and that, listening to preacher’s advices on health

motivated good practice. When asked how religion had motivated them to practice better health, Mukisa revealed that, those who visited the tradition shrines were able to stay healthy because the traditionalist as Namukasa mentioned, had opened their minds to an understanding that health came from God and living in a dirty home annoyed the spirits. The emphasis on health demonstrated by the traditionalist, who also doubled as healers, motivated people to stay clean and healthy. The non-PDs however believed that the presence of shrines encouraged people to indulge so much in traditional healing which had led to the deaths of some people.

While Christian churches are predominant among most African communities, the existence of the Nation of Islam and Muslim leaders in organizing Bulo sub-county should be highly considered. The preachers emphasized cleanliness among their congregations during their Sunday summons. Apart from encouraging each other to stay healthy, participants mentioned that health officials also passed health messages such as immunization dates, distribution of toilet slabs and mosquito nets, water guard and de-wormers through churches. Both PDs and Non-PDs attended church services and listened to sermons yet how each household used the information gained differently to achieve health practices and outcomes.

Islam is the predominant religion in Bulo according to participants. Both PDs and Non-PDs who belonged to the Islamic faith mentioned that their religion played an important role in motivating good health and hygiene practices. Participants revealed that Islam is known for promoting good hygiene practices. One PD revealed, *“We naturally practice good hygiene and sanitation in our homes because it is part of our religion”* Madina. Another said, *“I have never attended the health education meetings because as a Moslem, the religion emphasizes the value of sanitation and hygiene in the mosque and at home [...] it is haram (sin) against Allah (God) to be dirty”* PD Idrisa.

PD Abu-Bakr revealed that there was no need for a health educator to remind him to sweep his compound, wash his hand or construct a toilet because the religion emphasized it. The researcher observed and also discovered that the reason some Moslems (Non-PDs) did not have latrines at home, which is contrary to the religious teachings, was because they used toilets at the mosques, and enjoyed very disappointing sanitation in their homes. In summary, a strong and supportive community creates a more stable and supportive society for the collective benefits of both individuals and the community where gains might be made to improve health outcomes.

4.6.0. Observation notes

The researcher observed that most water sources were non-protected. For example, one village fetched water from a dirty hole covered in branches, dry leaves and dirt. In addition, other villages shared water with animals and used dirty collection containers. The women and girls collected the water between 12.00-05.00 pm. The researcher observed that majority of the water sources are in low-lying areas, rendering it difficult for the elderly persons, persons with disability and other vulnerable groups to access. Moreover, in some areas, the water sources are so far from human settlements.

Observation at household and meeting points: The researcher captured high water use during the mid-afternoon hours when householders are back from their farms, and homesteads stored domestic water in plastic jerry can plastic drums. Most households poorly managed waste with domestic refuse scattered all over the compounds as the wind blows. Researcher noted that households with elderly persons seemed to understand the issue of water scarcity from their complaints with children and youth. The researcher did not observe any process of boiling drinking water as earlier planned although homesteads were observed shared drinking cups and drinking water direct from the plastic jerry-cans or the well.

The researcher also observed that most toilets were traditionally constructed and various households lacked handwashing facilities while others practiced open defecation.

Chapter 5

Discussion of Results

5.1.0 Introduction

In this chapter, the researcher discusses results in two parts. The first is a general discussion of common themes that emerged in perspective of existing literature. In the second, the researcher focuses on the steps in the positive deviance approach. The chapter also includes a description of methodological reflections, policy recommendations and study conclusions.

5.2.0 Health education

Health education is any learning experiences designed to increase knowledge and attitudes for improving health among individuals and communities (UNICEF, 2005). From the findings, the health education promoted both formal and informal participatory approaches.

Attending health education meetings helped PDs in identifying needs and mobilizing local resources to trigger positive health outcomes. Much as the VHTs and the health assistant developed health campaign messages tailored to fit the needs of the beneficiary villages, active attendance and participation in meetings were individual choices. During these meetings, health educators tasked participants to describe for example, a previous food preparation session or a previous toilet visit they had taken part in rather than reciting their necessary components. Such participatory sessions motivated good and acceptable health practices by providing room for immediate discussions and corrections. Many participants expressed their inability to read and write although the trainings took place in the local Luganda language. The participants, mostly women revealed that such ineptness made it difficult for them to understand labels especially on drugs, instructions manuals and other educational materials. According to the mothers, the health risks and danger exhibited by this inability were immense especially when buying drugs from the clinics yet both the drug attendant and patient is unable to understand written materials. PD mothers highlighted the need for more adult education to this effect. According to McDonald, Bailie, Grace, and Brewster (2010), maternal education is an important determinant of infant survival and child health in rural areas. In their CLTS design, health educators knew that their target audience were rural women yet they did not attempt to translate educational material to cater for them. Successful interventions only register outcomes if they are able to address the needs of each group, for example, social and cultural groups, elite groups, and special populations. Appropriate community-based health education is culturally sensitive and

draws on social relationships to achieve success (Glanz, Rimer, & Viswanath, 2008; McDonald et al., 2010; Rabbi & Dey, 2013).

During health sessions, the VHTs disseminated health information to participants. The participants who heeded to and followed VHT instructions regarding childhood sicknesses, managed to prevent and contain those sicknesses that had already shown signs. The VHT's role in influencing health behaviours is not only evident in Bulo, but also traceable to the works of scholars such as (Haines et al., 2007). Similarly, Glenton et al. (2013) reported a reduction in under-5 mortality among mothers who gave antimalarial promptly to their sick children, and in reducing child morbidity cases in a primary-care programme in Gambia.

Informal learning is any general ongoing knowledge acquisition process where people learn by participation and daily experiences. People adjust effectively to health behaviours that are traditionally delivered in their homes (Glanz et al., 2008). Study participants attended various random informal sessions facilitated by either elders, extended families, traditional birth attendants and or traditional medicine men. Participants, who buried both adult and children's faeces as a way of preventing contamination, traced the practice to their elders. From responses gathered, indigenous health ideas were passed on to both PDs and Non-PDs. PDs strongly believed that consistent burying, disposing with rubbish and or burning faecal matter had helped them prevent disease spread. In Uganda for example, elderly people are not criticized for practicing open defecation, a case similar to Bangladesh (Spears, Ghosh, & Cumming, 2013). Ignoring such norms and tolerating such behaviours present widespread challenges to the achievement of open defecation statuses (Robert Chambers, 2009; Spears et al., 2013). Poor handling of faecal matter pose high risk of diarrhoea diseases due to wide spread contamination, death or chronic stomach ulcers (Prüss et al., 2002). Among some ethnic groups in Uganda, elderly in-laws and pregnant women are forbidden to use latrines (Robert Chambers, 2009; Okot-Okumu & Oosterveer, 2010), these cultural taboo promote shame and negative attitudes towards active participation in health campaigns and other activities to improve sanitary practices (Okot-Okumu & Oosterveer, 2010). As the elders continue to practice OD, other members of the communities also join in (R Chambers & Myers, 2016). Apart from faecal handling and practicing poor sanitation, elders have actively mobilized people to participate in CLTS and sometimes played the facilitation role. PDs who attended such sessions revealed that people preferred listening to elder/ family than to political leaders. Listening to elders not only provided PDs with solutions but motivated good practice. A CLTS study in India, revealed how elders in Aasgaon discouraged open defecation by spearheading informal health sessions (Rasal

& Kalshetti, 2011). In summary, much as some elders perpetuated open defecation in communities, there were those elders whose behaviours motivated better health practices.

5.3.0 Health promotion / health care resources

These are health assets stimulating positive health outcomes in a person's life. From the research findings, both PDs and non-PDs had access to some common health resources. Such common resources included Bulo health center, which played a tremendous role in promoting maternal and infant health in the community. PDs revealed that although the health center is overwhelmed with daily patients and shortage of medicine, it still managed to address their health needs. Participants who missed drugs and other forms of treatment never returned to the center.

According to findings, the upgrade of the center from a level two to level three centre, helped to eliminate the thirty-five kilometers distance participants used to walk to the district referral hospital. According to participants, such distances always resulted in birth complications, infant/adult deaths and other health related issues. Participants explained that rates of maternal and infant mortality cases had continued to multiply because mothers who delivered by TBAs developed complications and when referred, the lack of transport, poor roads and long distances worsened their conditions. A study by Waiswa, Kallander, Peterson, Tomson, and Pariyo (2010), in Uganda, revealed that delay in problem recognition and or deciding to seek care outside the home was the greatest contributor to death in infants. To address community health care challenges, some scholars agreed that, it was important to strengthen both health facility and community programmes as an essential for improving child and maternal health care in hard to reach areas (Haines et al., 2007; Waiswa et al., 2010).

TBAs remain a significant workforce in maternity care in many developing countries (Sibley & Ann Sipe, 2004). A traditional birth attendant (TBA) is a person who assists the mother during childbirth (Sibley & Ann Sipe, 2004). According to findings, TBAs were female member of the community who assisted expectant mothers during childbirth. Results showed that PDs consistently sought services of the TBAs because they as reliable. Although the Traditional birth attendants have no formal training and majority are illiterate, they understand the traditions and cultures of the women, which is an obvious advantage during antenatal care and childbirth (Ana, 2011). PDs further believed that TBAs gave them an opportunity no matter how small to have and raise healthy babies. They further mentioned that since the TBAs were members of their community and accepted any forms of payment ranging from farm produce to soap,

paraffin and firewood, delivering in the villages was far better than meeting bigger bills in health centers and private clinics yet they cannot afford. In rural areas, TBAs are trusted gatekeepers to the health care system for women and children. They provide accessible and affordable care thus reducing cases of maternal and infant mortality (Sousa & Mielke, 2015). Sousa and Mielke (2015) suggests that, providing traditional birth attendants (TBAs) with neonatal resuscitation training was modestly able to reduce the rate of neonatal death in infants. Although the non-PDs and Harrison (2011) maintained that TBAs are too old and set in their ways to adapt to modern healthcare methods, cannot treat any principal cause of maternal death nor keep reliable records of their activities (Harrison, 2011), providing training, support, and adequate resources to traditional birth attendants save both babies and their mothers (Hodnett, 2012).

Government set up village drug points, to provide free starter drugs for under-fives. Participants, both PDs and Non-PDs acknowledged the presence of malarial, diarrhoea, common fever and de-wormers at drug points. Although the non-PDs complained of lack of adult drugs at these points, the VHTs explained that, drug points could only serve under-fives and provide vitamin supplements to expectant mothers. According to participants, these drug points had acted as child emergency support centers to impoverished households who could not afford to purchase modern medicine. In Uganda, drug shops have become popular for distributing general health and HIV drugs, and family planning contraceptives (Wafula & Goodman, 2010). These drug shops are conveniently located in rural and hard-to-reach areas or areas with fewer private or public clinics (Stanback, Otterness, Bekiita, Nakayiza, & Mbonye, 2011).

Community health workers are described to include community-based workers, village health teams, community resource people, and workers known by local names Haines et al. (2007). The community volunteers responsible for treating and promoting child health in the study area were VHTs. According to both PDs and Non-PDs, the tremendous role played by the VHT promoted disease prevention among PDs households. After educating parents on different health issues, VHTs went ahead to remind the PDs to take children for immunizations, and provided them with drugs for the under-fives. Access to such services motivated both PDs and NPDs to manage childhood illnesses like malaria, dysentery, typhoid and stomach helminths. Research shows that the additional roles played by the VHTs have led to easy management of neonatal sepsis, promotion of healthy behaviours, and filling gaps left by the professional health workers (Glenton et al., 2013; Haines et al., 2007). PDs revealed that VHTs had helped to

reduce the costs of transport and lost yields associated with seeking health care outside the villages. The commitment demonstrated by the VHTs was reason enough to motivate both PDs and Non-PDs to seek treatment from them. Haines et al. (2007), simply put it that since community health workers easily adhered to simple clinical practice guidelines than professional health workers, people trusted them more. Although this adherence could benefit the mainstream health care system, many professional health workers lacked the background and orientation to provide a supportive environment for VHTs (Haines et al., 2007). According to Walt (1990), health professionals perceived community workers as lowly aides, yet their contribution to child and maternal health is enormous despite the overwhelming workload.

5.4.0 Role of leadership

Every organization is structured either by a formal, informal or non-formal leadership style. From findings, various leadership structures were evident in the communities. Accordingly, various leaders mobilized the communities for development activities, lobbied for projects, managed conflicts and counselled others. Study participants mentioned that through their leaders they participated in health, educational, agricultural and religious programmes. PDs were positive that if they continued to work hand in hand with their leaders they would achieved more health benefits. With good leadership, people participated voluntarily in the accomplishment of stated objectives such as fencing water sources and digging communal roads. Although some PDs believed that it was the hard work and passion demonstrated by their leaders that motivated the promotion of various welfare needs, especially for vulnerable groups, which also attracted rapid community development. The non-PDs mentioned that lazy leaders spent time gambling and drinking thus dragging their development opportunities behind. It is clear that committed and strong leaders had motivated various community health achievements in Nawango and Bule. Kellerman (2004) argues that to assume that all good leaders are good people is to be deliberately blind to the reality that human condition severely limit our ability to become better (Kellerman, 2004).

5.5.0 Community network roles

Community as a setting was an important determinant of health outcomes. A common definition describes a community as a group of people with diverse characteristics sharing common perspectives and living in a similar setting (Leskovec, Lang, Dasgupta, & Mahoney, 2009). Although this definition best describes the study area, the experiences gathered from these villages differed from one another. The community created a supportive environment needed

for participants to involve in participatory community work. The community encouraged better health practices, for example during the walk of shame, defecation mapping, shit calculations, triggering and community meetings. Participants mentioned that the setting encouraged social interactions and responsibility. According to Chambers and Myers (2016), understanding and identifying the social norm, cultures and deviants create awareness of taboos, beliefs and prohibitions that could be used to inform behaviours change (R Chambers & Myers, 2016). In relation to the prohibitions and beliefs, both PDs and NPDs revealed that they practiced open defecation at one point although some people abandoned the vice. In south Asia for example, defecating in the bush was considered a social occasion where women found time to rest from chores and responsibilities, relieve stress and have some time to think and in India, open defecation is healthy (Barnard et al., 2013; R Chambers & Myers, 2016). Findings further revealed that community participation in the CLTs implementation phase motivated positive outcomes. This can be related to a communal role in Aasgaon village in India where communal health outcomes were improved due to the collective dedication of CLTS beneficiaries in eliminating open defecation (Rasal & Kalshetti, 2011). It is believed that health promotion practices that engage all members in the community using practical strategies, achieve faster behavior change (McDonald et al., 2010). Yet the CLTs implementer at the district revealed that, due to inadequate time and resources, there was no equal involvement and participation of all beneficiaries. Yet again, it is further believed that, project inhabitants internalize and adopt good health and sanitation practices when given enough time (Nepal & Karki, 2006), because time gives room for addressing discouraging factors such as power relations, threats and intimidations, thus awakening peoples readiness to actively participate in project activities (Cobbinah, 2011).

PDs identified informal network of women (CBOs) as motivators to health and sanitation success. PDs acknowledged that through BUSITA, the women learnt how to construct bath shelters, chant pro sanitation songs and act sanitation dramas to educate the members of the community. BUSITA women mainstreamed health issues to educate and trigger health practices. Similarly, female-headed households, elderly persons, widows and persons with disability heaped praises on these CBO who offered rainwater jars, toilet slabs, mosquito nets and mama-kits to expectant mothers to support good health. The different roles played by the informal women groups, youths and the CBOs in promoting better health were worth mentioning. These success stories are similar to findings by a Water Aid and Vatsalya community-based menstrual hygiene and WASH programme in Uttar Pradesh, where boys and

men supported effective menstrual hygiene in India (Sahin, Mahon, Tripathy, & Singh, 2015). Another study by Nepal and Karki (2006), also revealed that children motivated their elders to stop practicing open defecation by chanting pro-sanitation slogans, blowing slogans and publishing their names.

The extended families such as uncles, aunts and grannies acted as learning avenues for study participants. Behaviours learned included various health practices. According to Coe, Keller, and Walker (2015), the most appropriate and effective format for teaching health behaviours is either parental, one-on-one teaching or family-oriented (Coe et al., 2015).

Religion, spirituality, medicine, mental health, neonatal death for the infant, and healthcare have been related in one way or another in all population groups since the beginning of recorded history (Coe et al., 2015; Guilfoyle & St Pierre-Hansen, 2012; Koenig, 2012). Participants reported that religion motivated them to learn and respect what their leaders said regarding health. PDs revealed that they attained good health with encouragement and lessons from their relatives. A study by Coe et al. (2015) showed that the churches promoted the health of individuals through teaching health behaviours to people, a finding related to participant responses from the study. PDs acknowledged that through their churches, they had learned to practice better sanitation from the health officials who used the church as a platform for disseminating health messages. Coe et al. (2015) believes that it is difficult to change behaviours learned in such a manner. Although the religions encouraged social ties, the lack of such ties amongst certain participants signified absence of health. The PDs mentioned that Christian concepts of love and giving which Guilfoyle and St Pierre-Hansen (2012) refer to as *agape* and *caritas*, and *zakat* in Islam were related to countless benefits especially in education and health care. Although authors such as Sloan, Bagiella, and Powell (1999) disregard the association between religion, spirituality, and health as weak and inconsistent, the same authors somewhat agree of presence of a positive link. Although participants commend the role of religion in promoting good health, Islam received criticism for promoting bad health practices through encouraging and spearheading hand washing without soap, a risky practice that exposes people to contamination by faecal matter.

5.6.0 Fear of cost and shame

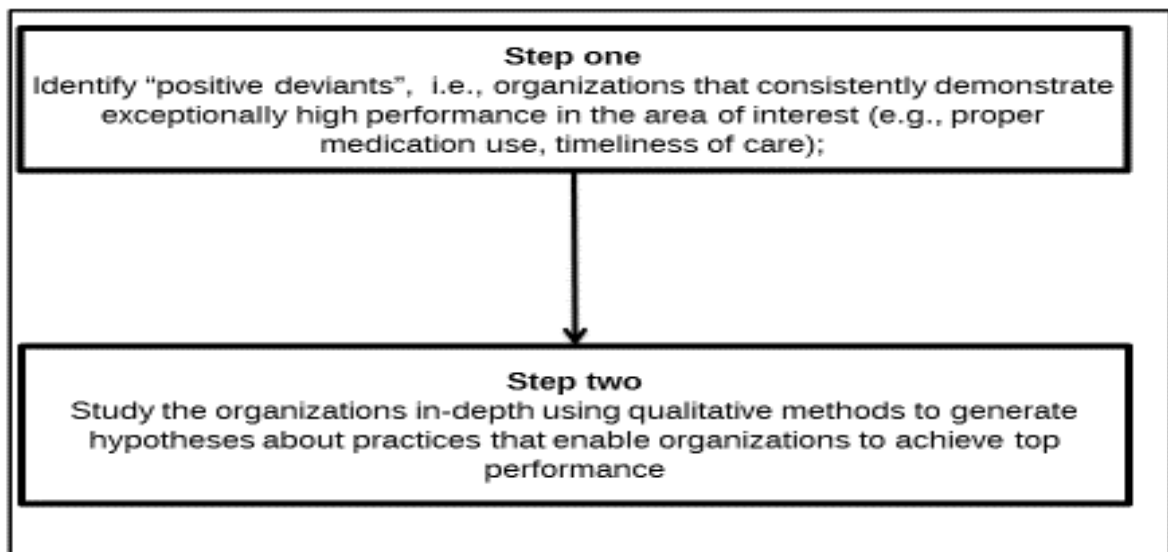
The cost in terms of inconvenience and embarrassment of not having a latrine in or near the household is high. Many households put up latrines after spending large amounts of money treating common preventable illnesses. The health indicator cost was however higher in non- PD

households who lacked facilities, practiced indiscriminate open defecation and exposed all people to diseases. PDs mentioned that they lost their income earning opportunities in the past due to re-occurrences of illnesses and time spent on looking after sick children and expectant mothers. As a result, their health expenditures kept rising and food shortages crept in due to reduced agricultural production. Some PDs mentioned that the high cost of fines one was subjected to pay on arrest for sanitation defaulting was disheartening and being poor peasant farmers, the best way to avert such is by erecting facilities. A fine is an amount of money that a judge, magistrate in court may order you to pay as a penalty for committing an offence. Therefore, fear of costs motivated PDs to construct facilities and practice better sanitation. These PDs further explained that tired of hiding, they decided to put up sanitary facilities. The non-PDs disclosed that during the community entry phase, the leaders treated them like criminals in their own homes. They claimed that they needed enough time to put up the facilities. The Non-PDs opted to hide for fear.

In summary, the discussion of results showed that, both the positive and non-positive deviants interacted, enjoyed and abused the various health promotion resources. Although these resources were readily accessible to all, both PDs and NPDs made use of them differently. PD helped in the identification of certain behaviours and practices that many thought was normal yet important in instigating health.

5.7.0 Discussion using the positive deviance approach

Figure 5.1. PD steps followed during the study



Step one. Identify “positive deviants”, i.e., organizations that consistency demonstrate exceptionally high performance in the area of interest (e.g., proper medication use, timelines of care)

From the onset, using the positive deviance approach seemed difficult in a study area like sanitation where the approach has not been applied before, yet the need to find the PDs and identify behaviours that made them successful (Berggren & Wray, 2002), was the important aim of this study. In all the three villages, the researcher applied the same selection criteria as used in the PDI to identify potential study participants. With expert knowledge and guidance from the gatekeepers, 41 participants with a four-year experience with the CLTS programme were purposively sampled from villages. Out of the 10 male participants, 4 were PDs and 6 were Non-PD households, and the 31 females, 12 were PDs and 19 were Non-PD households. The diverse representation of study participants uniquely enriched and shaped the study findings. With varying sanitation results in spite having similar socioeconomic factors such as household type, latrine and water sources, cultural heritage, poverty levels, illiteracy, local leadership and access to health care, their thriving secrets needed to be learned.

Step two. Study organizations in-depth using qualitative methods to generate hypotheses about practices that allow organizations to achieve top performance

The researcher conducted an audiotaped in-depth individual and key- informant interviews with participants identified by the gatekeepers. Participants varied by village but included household heads; married or single, widowed or persons with disability, impoverished or economically well-off and senior officers. We interviewed 41 householders to understand their perspective and experiences with the CLTS and other health care opportunities accessible to them. After formal ethical approval and appropriate participant consent, the researcher and assistant conducted the interviews, followed by the transcription and coding of audiotaped interviews. Although the researcher formally debriefed some participants after interview sessions, others were not due to time factor. All data, including the transcribed interviews and observation field notes were analyzed using the Attride sterling's thematic network links of qualitative data analysis (Attride-Stirling, 2001). The coded data were organized into themes with recurrent themes merged together. The unifying themes became the global themes. We identified that informal groups, traditionalist's shrines/ birth attendants and fear, motivated PDs to practice good health. The presence of common resources such as Bulo health center, VHTs and village drug points, motivated health practices differently among the PDs and non-PDs.

Self-efficacy and sanitation experiences

From the findings, the role of leadership is emphasized. For example, while Nawango and Bule villages tapped from the VHT support, Mpanga relied more on their Natural leaders. PDs in Mpanga explained that the two self-motivated natural leaders who rose up during the CLTS implementation phase, committed themselves to bridge the sanitation gap widened by incompetent VHTs. Findings indicate that although these natural leaders did not possess formal health trainings, they gained trust and connected with communities to initiate change in household sanitation. A close relationship with community members they say is significant for programme successes (Kegeles, Strauss, Scotti, Blanchard, & Trotter II, 2001). Secondly, there are certain beliefs that determine how people feel, think, motivate themselves and behave (Bandura, 2006). Such beliefs shaped the experiences of women in Bulo towards good health practices. For example, selected female-headed households actively participated in BUSITA group where, through folk songs and plays, they mainstreamed HIV/AIDS and Sanitation in nearby villages. Findings further reveal that, the Non-PDs, some of which were very active members in the group failed to tidy up their homes, for instance, one was heard saying, "*I am always busy practicing songs and acting so by the time I come home am very tired*". When such continual excuses became habitual, non-PDs failed to put up facilities thus exposing the whole community to sanitary diseases. In summary, finding above revealed how self-efficacy inspired

women to keep pushing, thus encouraging the development of their skills and shaping sanitary performances.

Furthermore, TBAs, extended families, elders and Traditional medicine men administered culturally accepted remedies. Participants used these herbs for general health promotion and treatment of common ailments. In Mpanga for example, salt and charcoal replaced toothpaste, and papaya leaves and ash supplemented the use of soap while some wild leaves treated diarrhoea. According to findings, TBAs educated women on various reproductive health practices such as making sanitary pads from old pieces of clothes, caring for babies, using local herbs for home-births, and most importantly, referring expectant mother to the district referral hospital. Findings show that, those who benefited more from such programs were young mothers who had no direct involvement with health care birth. There was report of tremendous improvements in the hygiene statuses of PD households in Mpanga and Bule villages due to continued interaction with the socio-cultural resources identified above. In summary, it appears the respectable and culturally appropriate childbirths and care practices, sanitary norms from the extended families, and traditional medicine men could have resulted in long-term improvements in the health practices of selected participants from the three villages.

5.8.0 Study Limitations

In this study, the researcher relied mainly on collecting primary data, which are subject to limitations from study participants. Such limitations ranged from interruptions, deviations from original questions asked, and the inability by some participants to share information with the research team. In this regard, the researcher's vast experience with community work helped in probing participants to share their experiences. Although the study attracted diverse participants, many of them were however first time respondents who did not know how to answer questions or freely express themselves. This left the researcher with more work especially, to repeat, rephrase and probe further, thus spending so much time on each participant.

As a researcher known in Butambala for my work with sanitation and hygiene campaigns especially the CLTS, the researcher may have influenced the responses of some participants who personally knew her. For example, instances when study participants came with various complaints regarding poor water sources, inadequate drugs at the health center, and other health challenges. As anticipated, the researcher could not maintain total neutrality on such issues so the researcher instead referred them to the health assistant at the sub-county.

From the ethical clearance process, the researcher learnt that research progress does not always go as planned. For instance, before the commencement of the study, the researcher had not foreseen that acquiring ethical clearances in study locations take long. This is what happened in Uganda and it reduced the data collection period. When the clearance was finally out, a lot of time had been lost so the researcher had no choice but to interview some participants at night to meet the target of 43 participants. Owing to the limited time, the researcher was unable to carry out observations in all the three villages visited. For example, the researcher failed to observe the households that were sparsely located and those whose owners preferred their farms more. The researcher also failed to observe two water sources in Mpanga due to the long distance and the heavy rain on the day of the planned visit.

There were incidences where the men refused to answer questions claiming they had no time and where they took part, they kept pushing the questions to the women. The researcher did not ask such men to stay since some were extremely rude. This affected the data quality because the researcher believes that capturing their views could richly inform the study.

The uniqueness of this study saw to an increase of the number of study participants from 22 to 43. Initially, the proposed plan was to interview 22 participants, but when the researcher made contact with the Butambala district, the number went to 43 for bigger representation. According to the district, the study was the first of its kind to evaluate a sanitation intervention especially CLTS. The district argued that increasing the number would give programme beneficiaries the opportunity to share their varied experiences. Honestly, this was a very big number and difficult to cover within the shortest period of three months but with the cooperation from the research assistant, study participants and the gatekeepers, all 43 participants were interviewed.

5.9.0 Conclusion

In the deprived villages studied, PD was effective in identifying particular instances of good household sanitation practices amongst the households that struggled less successfully to achieve good sanitation. Households that practiced better sanitation used mainly traditional sanitary/health practices accessible from within. The PDs exhibited behaviors such as visiting birth attendants and traditionalist's shrines to deal with infectious diseases such as diarrhoea and malaria. PDs also listened and learned various indigenous health ideas from their elders and extended families members. There is vivid evidence pointing to the PDs use of locally available resources present in all rural African communities. Interestingly, the behaviours

exhibited by the PDs are learnable; therefore, health practitioners when designing future intervention to improve sanitation in similar villages can target them.

The CLTS program holds much promise for improving household sanitary practices. From the study, participants revealed great testimonies concerning the programme. CLTS is viewed both as an empowering and cheap intervention that many can afford to sustain. Although some participants feel that, the approach uses coercive messages that create fear. The researcher also believes that the implementation methods used in CLTS are unethical, and need revisiting. For example the walk of shame/ shit mapping around the village by beneficiaries is mandatory not consensual. The researcher strongly believes that the CLTS is effective in improving sanitation yet the researcher thinks that an intervention like CLTS should not only empower and promote the well-being of beneficiaries but also prevent harm. Apparently, CLTS beneficiaries are criminals for failing to own toilets and other sanitary facilities. How then can beneficiaries fully accept and sustain the programme after the technical assistance pulls out? The study findings further indicate that a well-designed traditional sanitation programme could play a big part in promoting good health outcomes among villages.

Despite the various motivating CLTS testimonies across Uganda, this study further shows that non-governmental organizations are the main implementers of the CLTS in selected parts of the country. Its application is traceable to these hosts' areas, though due to poor documentation, the stories are poorly disseminated. Based on the results of this study, the researcher believes that there is sufficient evidence to conclude that using PD enhanced the discovery of incredibly unique household sanitary practices.

When applying PD to unearth the individual household sanitary practices, qualitative methods such as in-depth audiotaped interviews and observations were applied to identify positive deviants, discover their unique behaviors, and compare them to practices by non-positive deviants. There is noteworthy evidence based data pointing to the effectiveness of PD in areas such as child malnutrition and other behavior change, such as reproductive health and pregnancy outcomes. Although more research is needed before PD can be considered and disseminated as a standard approach, its effective application in these areas are a clear indication that PD can efficiently be adopted and promoted to shape sanitation practices in developing countries. This study is thus the first to demonstrate the value of the PD method in community sanitation research in the Global South. In addition, more research is needed to promote the application of the approach in sanitation and health fields in the south. In summary,

PD is an innovative approach that is naturally appealing and inspiring. Its effectiveness is not only evident in projects such as child malnutrition, but also in its potential to contribute to several areas of individual behavior change in low, middle and high income countries.

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APPENDICES:

Appendix (A): Written clearances/permission

- 1. NSD Letter**
- 2. NCST- NEC clearance**
- 3. TASO- REC clearance**
- 4. Introductory letter from supervisor/ University of Bergen**
- 5. Butambala District**



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Maurice Mittelmark
HEMIL-senteret Universitetet i Bergen
Christiesgt. 13
5015 BERGEN

Vår dato: 09.06.2015

Vår ref: 43406 / 3 / MHM

Deres dato:

Deres ref:

TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 09.05.2015. All nødvendig informasjon om prosjektet forelå i sin helhet 09.06.2015. Meldingen gjelder prosjektet:

43406	<i>To explore the health and sanitation experiences of three villages hosting the Community Led Total Sanitation (CLTS) program in Butambala (Uganda) using Positive Deviance method.</i>
Behandlingsansvarlig	Universitetet i Bergen, ved institusjonens øverste leder
Daglig ansvarlig	Maurice Mittelmark
Student	Jannette Abalo

Etter gjennomgang av opplysninger gitt i meldeskjemaet og øvrig dokumentasjon, finner vi at prosjektet ikke medfører meldeplikt eller konsesjonsplikt etter personopplysningslovens §§ 31 og 33.

Dersom prosjektopplegget endres i forhold til de opplysninger som ligger til grunn for vår vurdering, skal prosjektet meldes på nytt. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/meldeplikt/skjema.html>.

Vedlagt følger vår begrunnelse for hvorfor prosjektet ikke er meldepliktig.

Vennlig hilsen

Katrine Utaaker Segadal

Marianne Høgetveit Myhren

Kontaktperson: Marianne Høgetveit Myhren tlf: 55 58 25 29

Vedlegg: Prosjektvurdering

Kopi: Jannette Abalo lulujanette84@gmail.com

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

Avdelingskontorer / District Offices

OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no

TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. kyre.svarva@sv.ntnu.no

TROMSØ: NSD, SVF, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. nsdmaa@sv.uit.no

Personvernombudet for forskning



Prosjektvurdering - Kommentar

Prosjektnr: 43406

Based on the information we have received about the project, the Data Protection Official cannot see that the project will entail a processing of personal data by electronic means, or an establishment of a manual personal data filing system containing sensitive data. The project will therefore not be subject to notification according to the Personal Data Act.

The Data Protection Official presupposes that all information processed using electronic equipment in the project is anonymous.

Anonymous information is defined as information that cannot identify individuals in the data set in any of the following ways:

- directly, through uniquely identifiable characteristic (such as name, social security number, email address, etc.)
- indirectly, through a combination of background variables (such as residence/institution, gender, age, etc.)
- through a list of names referring to an encryption formula or code, or
- through recognizable faces on photographs or video recordings.

Furthermore, the Data Protection Official presupposes that names/consent forms are not linked to sensitive personal data.



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

Our Ref: HS 1865

16th May 2016

Jannette Abalo
Makerere University
Kampala

Re: Research Approval: A Positive Deviance Study of Sanitation Practices in Uganda: A Case Study of Community Led Sanitation Program in Three Villages in Butambala District

I am pleased to inform you that on **10/08/2015**, the Uganda National Council for Science and Technology (UNCST) approved the above referenced research project. The Approval of the research project is for the period **10/08/2015 to 10/08/2016**.

Your research registration number with the UNCST is **HS 1865**. Please, cite this number in all your future correspondences with UNCST in respect of the above research project.

As Principal Investigator of the research project, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the research protocol or the consent form (where applicable) must be submitted to the designated Research Ethics Committee (REC) or Lead Agency for re-review and approval prior to the activation of the changes. UNCST must be notified of the approved changes within five working days.
3. For clinical trials, all serious adverse events must be reported promptly to the designated local REC for review with copies to the National Drug Authority.
4. Unexpected events involving risks to research subjects/participants must be reported promptly to the UNCST. New information that becomes available which alters the risk/benefit ratio must be submitted promptly for UNCST review.
5. Only approved study procedures are to be implemented. The UNCST may conduct impromptu audits of all study records.
6. A progress report must be submitted electronically to UNCST within four weeks after every 12 months. Failure to do so may result in termination of the research project.

Below is a list of documents approved with this application:

	Document Title	Language	Version	Version Date
1.	Research proposal	English	N/A	May 2015
2.	Informed Consent	English, Luganda and Swahili	N/A	May 2015
3.	Observation Parameters	English	N/A	May 2015
4.	Interview Guide	English	N/A	May 2015
5.	Data Confidentiality Agreement	English	N/A	May 2015

Yours sincerely,


Hellen. N. Opolot
for: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

cc. Chair, The AIDS Support Organization, Research Ethics Committee

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28th July 2015

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GLOBAL FUND
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TASO-KARAMOJA PROJECT

Plot 10, Independence Avenue
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Our Ref: TASOREC/37/15-UG-REC-009

Abalo Jannette,
lulujanette84@gmail.com
University of Bergen

Re: RESEARCH APPROVAL "TO EXPLORE THE HEALTH AND SANITATION EXPERIENCES OF THREE VILLAGES HOSTING THE CLTS PROGRAMME IN BUTAMBALA (UGANDA) USING POSITIVE DEVIANCE METHOD"

Thank you for submitting your responses to queries raised by the reviewers dated 15th July 2015. This is to inform you that your responses dated 27th July 2015 met the requirements of the TASO REC. TASO REC annual approval has been granted for the above-referenced new study.

This approval is valid until 27th July 2016 after which you will be required to make a request for extension to the Chairperson, TASO REC in case of continuation with the research.

The review and approval includes the following:

1. The study protocol.
2. Informed consent form with translations.
3. Observational data collection instruments.
4. TASO REC Research Review Application and Declaration of Conflict of Interest form.
5. Cover letter and ethics approval from the University of Bergen.

Amendments: All proposed changes to the study (including personnel, procedures, or documents) must be approved by the REC in advance through the amendment process.

Adverse Events/Unanticipated Problems: You must inform the REC of all unanticipated problems and adverse events that occur during your research study – these include, but are not limited to, events and/or information that may have physical, psychological, social, legal, or economic impact on the research participants or others.

It is a requirement by the TASO REC that you submit the timely annual progress reports.

We recommend that you proceed with the registration of your study by the Uganda National Council of Science and Technology (UNCST).

Continuing Review application due date (60 days prior to expiration date).

Sincerely,

Mr. Bakanda Celestin,
Chairperson, TASO RESEARCH ETHICS COMMITTEE (REC)
CC: Executive Director, TASO (U) Limited





UNIVERSITY OF BERGEN



Department of Health Promotion and
Development
The Psychology Faculty

WHO Collaborating Centre
International Union for Health Promotion and Education

11/06/2015

Attention: The Uganda National Council of Science and Technology

Jannette Abalo is a student pursuing an M.Phil. degree in Health Promotion at the University of Bergen. I, as her academic supervisor, confirm that she will be travelling to Uganda, for collecting field data, from June to September 2015.

Any assistance rendered to her during this fieldwork exercise will be highly appreciated.

Thank you for your cooperation.

Maurice B. Mittelmark
(Academic Supervisor)

Maurice B. Mittelmark, Ph.D., Professor and Head, Department of Health Promotion and Development
Christiesgt. 13, N-5015 Bergen, Norway Phone: +47 55 58 28 08; Direct +47 55 58 32 51; mobile +47 95
13 92 25; fax: +47 55 58 98 87
maurice.mittelmark@uib.no, maurice.mittelmark@gmail.com

District Chairperson 0753492147
Chief Adm. Officer 0752 587295
Deputy C. A. O 0705577793
P.A. S 0772 451528



Butambala District Local Government
Office of the Chief Administrative Officer
P.O. Box 145,
Mpigi.

The Senior Assistant Secretary

Date: 15/07/2015

Bulo Sub-county

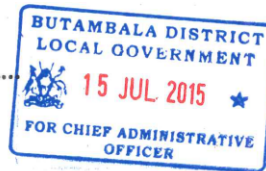
RE: DATA COLLECTION:

This is to introduce **Ms Jannette Abalo** from the University of Bergen in Norway, who will be carrying out research in Bulo sub-county. The data collection will take place between June and September 2015. The protocol is entitled "*Exploring the Sanitation and Health experiences of Mpanga, Bule and Nawango villages who hosted the Community Led Total Sanitation (CLTS) program in Butambala district in 2013/ 2014*"

Your usual cooperation will be highly appreciated.

Mabiya Joshua

For: Chief Administrative Officer



c.c Chairperson L.C III (Bulo)

c.c The District Health Inspector (DHI)-Butambala

c.c University of Bergen- Norway/ Jannette Abalo

APPENDIX B: Written Informed Consent Form

Informed consent form

Dear participant,

As a household, you have been purposively identified and recruited to participate in this research project entitled: *Sanitation and health practices: A Positive Deviance study of three Community Led Total Sanitation (CLTS) host villages (Nawango, Mpanga and Bule) in Butambala, Uganda.*

The purpose of the study is to understand how three villages hosting the same sanitation programme, and sharing similar resources could have three varying sanitation results.

You will be interviewed (audio recorded), which may take up to an hour. If you agree, follow-up interviews / a one-time observation visit may be conducted. If you agree to participate in this study, your name will not be recorded or in any way be connected to what you say during the interview. All information during interview and observational visit will be treated with utmost confidentiality. Recordings from the interview will be destroyed after its transcription. The findings from this study will be coded, anonymized and maybe shared with the District and project implementers. The findings from this study will be reported in my master's thesis and published in an international journal. If you agree to participate, please read and sign the statement below

Researcher: Jannette Abalo, Master student/ Contact mobile +256775416994

Written consent form

The purpose of the study has been explained to me. I know that participation will involve one or more individual interviews and I agree that the researcher visits my house on up to two separate occasions to carry out observational visit and for a one-time face-to-face interview. It has also been made clear that if I agree to participate in the study, my name will not be used in written reports nor will it be possible to trace what I said, how my household looks / sanitation facilities in my home. Whatever is said in interview will not be passed on to other people in the community. Recordings of the interview will be destroyed after they have been written down. I am free to withdraw at any time or may refuse to answer any of the questions asked of me.

Name ----- Signature ----- Date -----

SWAHILI CONSENT FORM

Deviance chanya utafiti wa mazoea Usafi nchini Uganda: Utafiti kesi ya Jumuiya Wakiongozwa Usafi mpango katika vijiji vitatu katika Butambala wilaya.

Chuo Kikuu cha Bergen, Idara ya Afya Kukuza na Maendeleo

Fomu ya ridhaa

Wewe ni walioalikwa kushiriki katika hapo juu-aitwaye mradi wa utafiti. Utafiti huu utakuwa kuchunguza uzoefu wa watu utekelezaji wa juhudi za usafi wa jamii katika Nawango, Mpanga na vijiji Bule, Uganda. Kama unakubali kushiriki katika utafiti huu, utakuwa waliohojiwa (redio kumbukumbu), ambayo inaweza kuchukua hadi saa moja. Ikiwa umekubali kufuata mahojiano inaweza kuwa uliofanywa.

Kama unakubali kushiriki katika utafiti huu, jina yako si kuwa kumbukumbu au kwa njia yoyote kushikamana na nini wanasema wakati wa mahojiano. Taarifa zote wakati wa mahojiano itakuwa kutibiwa na usiri mkubwa. Rekodi ya mahojiano wataangamizwa baada transcription wake. Matokeo ya utafiti huu itakuwa coded, anonymized na labda pamoja na Wilaya na implementors mradi huo. Matokeo itakuwa mwaka Thesis bwana wangu na kuchapishwa katika jarida la kimataifa.

Kama unakubali kushiriki, tafadhali kusoma na kusaini tamko chini.

Jannette Abalo, mwanafunzi (Kuwasiliana simu +256775416994)

Mwalimu: Profesa Maurice B. Mittelmark, Mradi mshauri

Chairman TASO Ethical Committee (+2567527742819)

Imeandikwa idhini

Madhumuni ya utafiti imekuwa alielezea kwangu. Ushiriki itahusisha moja au zaidi ya mahojiano ya mtu binafsi na mimi kukubali kwamba mtafiti ziara ya nyumba yangu katika matukio hadi mawili tofauti [ziara moja mahojiano na moja ya ziara za uchunguzi katika matukio tofauti.

Ni pia imekuwa wazi kwamba kama mimi kukubali kushiriki katika utafiti huo, jina langu hautakuwa kutumika katika kuandikwa ripoti wala itakavyokuwa inawezekana kuwaeleza kile alisema. Chochote ni alisema katika mahojiano si kufikishwa kwa watu wengine katika jamii. Rekodi ya mahojiano wataangamizwa baada ya wao wamekuwa kuandikwa.

Mimi ni bure ili kuondoa wakati wowote au kukataa kujibu yoyote ya maswali ya kuulizwa juu yangu.

Jina -----Signature ----- tarehe -----

LUGANDA TRANSLATION

Ekitongole kya Bulamu ne nkulakulana

Ssebo/ Nyabo,

oyitibwa okwetaba mukunonyereza kuno wagulu. Omuyizzi ono ayagala kutegera embera ya' bantu abe'tabye mu pulogulamu eya buyonjo eyitibwa Community Led Total Sanitation gwe mwekazako obwa kumansa obubi oba CLTS. Era enno pulogulamu ebadde mubyalo bya Nawango, Mpanga and Bule muno mu gombolola lye Bulu mu Butambala distulikiti. Wo'ba okirizza kubera omu kubantu abagenda okwenyigira mu kunonyereza gunu, ojjakubuzibwa ebibuzu ebikwatagana ne buyonjo/ obulamu ate nga' eddobozi lyo likwatibwa mu alicorder, nga ebibuuzobiyinza kutwala ebanga lya ssawa emu no'luvanyuma amaka'go gakyalibwe kulambula obuyonjo nga bweguyimiridde.

Ne'bwokirizza ku'kwenyigira mu pulogulamu eno, errinya lyo telijja'kwatibwa mu alicorder. Kino kitegezza ntinno tewali muntu no'mu asobola kutegera nti linno ddozi lya gundi. Buuli kyogeddwa mu kyama kyakusigala nga kyama. Ebikwatibwa mu alicorder bya'kusangulwama luvanyuma lwa ku tafutwamu. Ebivedde mukunonyereza kunu bya'kuwandikibwa mu aliporta nga teraga ani'yayogera ki. Kino kiraga nti aliporta eliwandikidwa lijjabatuka ko' nga liyise mu kitebbe kya distulikiti ye'Butambala eno nga essomero lya Univeristy ya Bergen elisangibwa muni Norway emazze kakasa'nti wa mutindo.

Wo'ba okirizza okwenyigira mu kunonyereza kuno, nkusaba okussa'omukono kuu kiwandiiko kino wamanga.

Jannette Abalo, Omuyizzi (Contact mobile +256775416994)

Okunonyereza kuno banyonyodde bulungi era ngitegedde. Mu'kwetabba kwange, nzikirizza kudammu ebibuzo ebinanbuuzibwa omulundi gumu era'omuyizi oliwadembe kulambula ebyo buyonjo ebisangibwa ewanga nayo omulundi gumu mulunaku lwa'bayagadde.

Nfunye okunyonyolwa okugambye nti' we netaaba mukunonyereza kuno, Errinya lyanga tejakuzesebwa mu ngeri yona. No'lwekyo, tewali muntu no'mu ajjakusobola ku tegera ani yayogera ki. Ntegedde ntino byenjogedde mu kyama bijija sigala bya kyama. Ebiri mu alicorder bijjakusangulwao luvanyuma'lwo kuwantikibwa.

Ndi'wadembe kuvayo mu kunonyereza kunu bulilwempulira nti' nkoye oba kugana'okuddamu ekibuzo ekimbuziddwa we'mba sagala kukidammu.

Errinya ----- Omukono ----- Enaku'zo mwezi -----

Appendix (C): Data Confidentiality Agreement

University of Bergen

District: Butambala-Uganda

Data Confidentiality / Non -Disclosure

Agreement

As a researcher from University of Bergen, Department of Health Promotion and Development, the researcher recognizes that all data collected during this study will be maintained for the purposes of writing my research thesis findings. The researcher will treat all data with utmost commitment to confidentiality and access the data only when required to achieve the study objectives.

The researcher will not transmit or otherwise share these data with any third parties,

Time: June –September 2015

Researcher: Jannette Abalo. Signature.....

Approved by participant.....Name.....

Appendix (D): Interview guide

In-depth interview questions for households and administrators

01. Sanitation and health experiences

- **Introduction:** How are you doing today? How is everything going around here? (...)
You look great and healthy, could you share your secret please?
- A lot has been reported about the health/sanitation status in this community. Do you have an idea? If yes, what can you tell me about that?
- How do you understand the concept of health? Please give examples to elaborate your answers.
- What do you do to stay healthy? Are there practices you know of that promote unhealthy living? If yes, what are they?
- When was the last time you fell sick and where did you get treatment from?(Probe: Hospital, clinics, traditional medicine)
- What are the most common diseases in this village, how is it transmitted and who are the most affected? (Probe: Children, pregnant mothers, girls)
- What support do you have in this village to help you stay healthy?(Probe: health education, drug distributors, Traditional birth attendants and village health teams)
- How do you understand the term sanitation? How important is the concept?
- What is the relationship/similarity between sanitation and health?

Key-informant interviews at village level

- How does the communities understand health? Tell me if there are any cultural practices people identify with to achieve good or bad health?
- Does health influence community development? If yes, how and what measures have been instituted to ensure healthy a community?
- What do you know about the CLTS? How beneficial/ detrimental was it?
- Compared to past sanitary programmes such as the Home improvement campaigns and prosecuting sanitation defaulters, how would you rate the effectiveness of the CLTS?
- What is the relationship between health and CLTS? What is it that makes some villages thrive while others decline?

At administrative level

- What is your understanding of CLTS?
- Tell me what it is that inspired Butambala to implement the CLTS program?

- How different is the CLTS from past sanitary programmes?
- Tell me the lessons you have learned as a district since you started implementing the CLTS?
- What health benefits have you registered from this program and how has contact with programme beneficiaries been established and maintained?
- What challenges have you faced since the implementation of the CLTS?
- Tell me what project beneficiaries say about the programme?

Thank you very much for your time.

Appendix (E): Observational parameters.

The researcher paid attention mainly to health and sanitation practices as well as infrastructure within the village.

Homestead no...

CodeTime...

Latrine:

- Does the house have a latrine?
- Is the latrine enclosed in a wall?
- Is the latrine covered (bowl)?
- Is the latrine clean and free from faeces?
- Does the latrine show signs of use (odor, soiled floor, cleaning materials, cracks on the floor)?

Handwashing and compound:

- Is there water for washing hands?
- Is there soap and ash for washing hands?
- Is the compound and yard clean and free of human and animal faeces?
- Is the ground littered/free of waste?
- Are there animal's shelters?

General appearances:

- Are the parents/caretakers hands and bodies visibly clean? What about their clothes?
- Are the children's hands and faces visibly clean?
- Are the villages generally free of garbage?
- How are the children's bellies? Do they look swollen? Do the children look emaciated?

Schools:

- Are there enough toilet stances for both boys and girls?
- Are the school toilets clean?
- Are there separate urinals for boys and washrooms for girls?
- Are there kitchens? How do they look?

Community level:

- Are the public toilets clean?
- Are the community meeting places clean?
- Are the water sources clean, drainages cleared, jerry cans scrubbed?
- Do the health centers have latrines? Are there hand-washing facilities?
- Are there enough admission spaces for patients?

Appendix (F): Attride sterling's thematic network analysis steps followed during this study.

ANALYSIS STAGE A: REDUCTION OR BREAKDOWN OF TEXT

Step 1. Code Material

- (a) Devise a coding framework
- (b) Dissect text into text segments using the coding framework

Step 2. Identify Themes

- (a) Abstract themes from coded text segments
- (b) Refine themes

Step 3. Construct Thematic Networks

- (a) Arrange themes
- (b) Select Basic Themes
- (c) Rearrange into Organizing Themes
- (d) Deduce Global Theme(s)
- (e) Illustrate as thematic network(s)
- (f) Verify and refine the network(s)

ANALYSIS STAGE B: EXPLORATION OF TEXT

Step 4. Describe and Explore Thematic Networks

- (a) Describe the network
- (b) Explore the network

Step 5. Summarize Thematic Networks

ANALYSIS STAGE C: INTEGRATION OF EXPLORATION

Step 6. Interpret Patterns

Data collection in pictures- signing consent forms.

