

**ROLE OF GENDER ON COMMUNITY LED TOTAL SANITATION
PROCESSES IN KANYINGOMBE COMMUNITY HEALTH UNIT, RONGO SUB
COUNTY, KENYA**

BY

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SCHOOL OF HEALTH SCIENCES

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TECHNOLOGY**

2016

Declaration and approval

This thesis is my original work and has not been presented for conferment of degree in any other university or institution.

Signature..........Date.....20.04.2016.....

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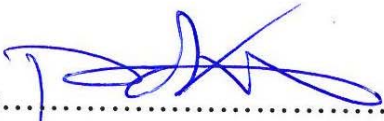
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DEDICATION.

This research project is dedicated to my parents Harrison Aranda and Callen Kwamboka for their relentless efforts and motivation to make sure I become the best I could ever be. They have spared no coin to make fees available and have diligently prayed for me to get this far. I equally dedicate this work to my beloved wife Everlyn Kerubo for encouraging me during the entire process of this study and always reminding me how important it was to complete this study within a stipulated time. I cannot forget our children; Shawn, Shirley and Shania who equally gave me an enabling environment during the entire process of proposal development and research work. May God bless them abundantly.

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ABSTRACT

Integrating a gender perspective into the sanitation sector does not only require addressing differences in gender relations but also uncovering and challenging uneven structures based on gender. Consequently, a gender-sensitive approach seeks to equalize the uneven distribution of sanitation roles and responsibilities and the access to safe and appropriate sanitation. Gender involvement and participation in CLTS activities is a challenge in Kanyingombe Community Health Unit as observed from the attendance and participation of gender during the Community Led Total Sanitation (CLTS) processes. The study achieved the following objectives; establishing the importance of gender integration in CLTS processes, examining the effects of power relations in CLTS process, identifying socio-economic factors affecting gender participation in CLTS processes and identifying the strategies to enhance gender participation in CLTS processes. The study was conducted through a cross-sectional descriptive survey design targeting 1014 households in 12 villages of Kanyingombe Community health unit. A sample size of 172 households was selected and a questionnaire used to collect data from the household heads. Using Statistical Package for Social Sciences (SPSS computer software) version 21.0. Data collected was analyzed using descriptive and was presented using tables, graphs and charts. The study revealed that 57.0% of the respondents did not participate in CLTS processes. More so men, 81.4% dominated in decision making regarding sanitation issues as majority of the CLTS meetings 76.16% were attended by women. Finally 91.3% of the respondents suggested joint implementation of CLTS processes as a strategy to ensure gender participation. The study concludes that effective CLTS implementation and sustainability of ODF villages can be brought about by effective and adequate involvement and participation of gender in CLTS processes. The study recommends for involvement and participation of gender during CLTS processes so as to create sense of ownership and sustain ODF status. The study also recommends for gender dialogues and analysis at community levels to raise gender awareness and inform the design of the CLTS programs. Consequently the study recommends that mobilization should be intensified to ensure gender participation during triggering sessions. Finally the study recommends that the County Government of Migori should hold gender awareness sessions so that they can appreciate gender relations and relevance of gender mainstreaming in CLTS processes.

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LIST OF ABBREVIATIONS

ADB	: Asian Development Bank
BCC	: Behavioural Change Communication
BMGF	: Bill and Melinda Gates Foundation
CARE	: Cooperate Assistance and Relief Everywhere
CDA	: Community Development Agency
CDO	: Community Development Officer
CECF	: Women in Europe for Common Future
CHEWs	: Community Health Extension Worker
CHU	: Community Health Unit.
CLTS	: Community Led Total Sanitation
COHRE	: Centre on Housing Rights and Eviction
DC	: District Commissioner
DHIS	: District Health Information System
FGD	: Focus Group Discussion
GB	: Great Britain
GWA	: Gender and Water Alliance
HHs	: Households
IDS	: Institute of Development Studies (Sussex University, UK)
IRC	: International Rescue Committee
IFAD	: International Funds for Agricultural development

JMP	: Joint Monitoring Plan
KII	: Key Informant Interview
MDG	: Millennium Development Goal
MWE	: Ministry of Water and Environment
MOH	: Ministry of Health
NEHP	: National Environmental Health Policy
NEMA	: National Environment Management Authority
NEHP	: National Environmental Hygiene Policy.
NHP	: National Health Policy
NGO	: Non-government Organization
NGP	: National Gender Policy
NETWAS	: Network for Water and Sanitation
OD	: Open Defecation
ODF	: Open Defecation Free
PHAST	: Participatory Hygiene and Sanitation Transformation
PTA	: Parents Teachers Association
PRA	: Participatory Rural Appraisal
PLHIV	: People Living With HIV
PPS	: Probability Proportional Sampling
PHOs	: Public Health Officers
PHTs	: Public Health Technicians

PWD	: People with Disabilities
RWASSA	: Rural Water Supply and Sanitation Agency
SLTS	: School Led Total Sanitation.
SMC	: School Management Committee
SSHE	: School Sanitation and Hygiene Education
SPSS	: Statistical Package for Social Scientists
UK	: United Kingdom
UN	: United Nations
UNICEF	: United Nations Children’s Fund
UNFPA	: United Nations Population Fund
VERC	: Village Education Resource Centre
VHT	: Village Health Team
VHP	: Volunteer Hygiene Promoter
WEDO	: Women’s Environment and Development Organization,
WASH	: Water Sanitation and Hygiene
WHO	: World Health Organization
WSP	: Water and Sanitation Program
WSSGS	: Water and Sanitation Sub-sector Gender Strategy

CHAPTER ONE: INTRODUCTION

1.1 Background Information

Gender describes the characteristics that a society or culture delineates as a masculine or feminine. While sex as a male or female is a biological fact that is the same in any culture, what that sex means in terms of gender role as a man or woman in society can be different cross culturally. These gender roles have an impact on health of the individual. In sociological terms gender role refers to the characteristics and behaviours that different cultures attributes to the sexes. What it means to be a real man in any culture requires male sex plus what our culture defines as masculine characteristics and behavior, like wise a real woman in any culture requires female sex plus what our culture defines as feminine characteristics and behavior (Kamal 2011).

Community-Led Total Sanitation (CLTS) is an innovative and integral approach that empowers communities to realize the detrimental effects of Open Defecation (OD). CLTS supports communities in eliminating OD and constructing latrines to attain Open Defecation Free (ODF) status. Total sanitation includes stopping all open defecation; ensuring that everyone uses a hygienic latrine; washing hands with soap after using the latrine, when preparing food and eating, and after contact with faeces. Although CLTS has succeeded in making many communities ODF, the approach has been criticized for not explicitly focusing on gender mainstreaming as CLTS projects are often designed without gender considerations. CLTS facilitators do not often ensure gender balance while facilitating triggering sessions, thus compromising the equal participation of men and women. By not explicitly focusing on gender relations, CLTS processes are more likely to overburden women, rather than making them agents of change (Kamal 2010).

Azadegan (2015), states that there is a global consensus on the importance of addressing gender in development. Yet this is often neglected when it comes to field project design and implementation. Gender equality and the empowerment of women are human rights that lie at the heart of development. When women and men have relative equality, economies grow faster, children's health improves and there is less corruption. Gender

equality helps reduce the root causes of poverty and vulnerability while contributing to sustainable growth and the achievement of the Millennium Development Goals (MDGs).

Integrating a gender perspective into the sanitation sector does not only require addressing differences in gender relations, it also means uncovering and challenging uneven hierarchical structures based on gender. Consequently, a gender-sensitive approach seeks to equalize the uneven distribution of sanitation roles and responsibilities and the access to safe and appropriate facilities by considering the basic needs of all men, women and children (UNICEF, 2010)

In many societies, women's views, in contrast to those of men, continue to be systematically under-represented in decision-making bodies. This lack of a participatory approach is closely related to the uneven power structures in decision-making processes that characterise these societies and the sanitation sector in particular. Where sincere efforts have been made to integrate gender perspectives into the water and sanitation sector, these have unfortunately often failed to address strategic gender needs (Belew 2010)

Bell (2010,Nepal) reiterates that CLTS has recognized the importance of women in creating sustainable sanitation and hygiene services. However, it is essential to take gender considerations on board in CLTS projects in order to avoid overburdening women. A conscious and systematic way of integrating gender equality and women's empowerment as in the Pan-Africa programme gives better results. Over time men and women will be working, discussing and cooperating on CLTS at an equal level. This way, women can assert their rights and improve their social position, obtaining gender transformative results in the process.

Faris and Rosenbaum (2011,Ethiopia) established that one of the most significant divides between women and men, especially in developing countries, is found in the sanitation and hygiene sector. The provision of water, hygiene and sanitation is often considered a woman's task. Women are promoters, educators and leaders of home and community based sanitation practices yet their own concerns are rarely addressed.

Mahbub A. (2009), in Bangladesh found out that women do not necessarily play a leading role in toilet construction, rather, village Development Committee members do and they are dominated by men from elite groups. According to Curtis et al. (2004), women are more strongly moved by emotions of shame and disgust than men, and disgust sensitivity tends to decline with age. These notions are supported by findings from the PLAN Bangladesh case study, which points to adolescent girls as being among the most enthusiastic promoters of improved sanitation (Mahta 2010).

Mehta (2009) India found out that Participation of women in CLTS processes and improved well being for women as a result of better sanitation do not equal empowerment .While it is true that there are extraordinary benefits to be derived for women in terms of their dignity, privacy, safety, comfort and wellbeing, it is not always clear whether women also end up taking on additional burdens. Unequal traditional divisions of labour may also be reinforced, with women being seen as responsible for sanitation and for the maintenance and cleaning of toilets. With CLTS making claims for community empowerment, it is crucial that gender and power relations are also taken under scrutiny.

Movik and Mehta (2010), Malawi established that men dominate the planning and decision making around water and sanitation investments. Construction of latrines is considered a man's job. They are the providers and hold the purse strings. In CLTS they see their role as supervisory, overseeing monitoring and hygiene and taking decisions. Hygiene and sanitation issues are considered the responsibility of women. They are usually staying at home and look after the family. They are not involved in decision-making processes and their views and wishes are often not addressed.

In a study by Musyoki (2007), Zambia it was found out that women tend to be less involved in latrine construction and seem more active and responsible in their maintenance and cleaning which has led to an increase in women's workload and hence reinforcing stereotypical gendered labour divisions and roles, such as women being responsible for household health.

Adenike A (2011), Nigeria, on the role “gender mainstreaming” plays in the progress of Ekiti State CLTS projects. It was found out that men are responsible for constructing latrines or hiring contractors to construct latrines. After the construction phase is completed, they are less involved in ongoing maintenance of the latrines and are not involved in household water management.

According to a study by Sanchez (2011), it was found out that women and girls in Uganda, as in other sub-Saharan African countries, are the major water collectors, users and managers in homes. They are also the major promoters of household and community sanitation activities. They therefore bear the impact of inadequate, deficient or inappropriate water and sanitation services. However, men still dominate the arena of planning and decision making regarding water and sanitation investments and women’s views are often under-represented, implying that women’s practical and strategic needs are not addressed.

A study by Kamal (2010) in Kenya, findings showed that, regarding the design, location and construction of sanitation facilities, inadequate attention is paid to the specific needs of women and men, boys and girls. Sanitation program, as with many other development programs, have often been built around assumptions of some gender-neutrality. This results in gender-specific failures, such as, latrines with doors facing the street in which women feel insecure, school urinals that are too high for boys, absence of disposal for sanitary materials by women, pour-flush toilets that require considerably more work for women in transporting water. Also, sanitation blocks are sometimes used for multiple functions, including washing and drying, shelter from rain etc., but are not designed for these purposes since they don’t involve both gender in the design and construction.

The gender perspectives of sustainable sanitation projects have not been fully explored yet. In Kanyingombe Community Health Unit, lack of political will or attention and inadequate legal structures have resulted in the negligence of women’s needs. There is lack of women involvement in sanitation development and planning which shows that

there is an urgent need to bring a gender perspective into the sanitation programs and to involve and address both women and men in these efforts as gender mainstreaming leads

to benefits that go beyond good sanitation performance, empowerment of women ,more gender equality and benefits to children.(UNICEF 2014) Despite the implementation of CLTS in Kanyingombe Community Health Unit (CHU) to reduce sanitation related diarrheal infections, the CHU has the highest cases (54%) of diarrheal infections. More so the cholera outbreak in Rongo in which 784 cases were reported, 46% of the cases were originating from Central Kamagambo Ward with seven CHUs, whereby Kanyingombe CHU was leading with 127 cholera cases (DHIS 2015).

1.2 Statement of the problem.

Integrating a gender perspective into the sanitation sector requires addressing differences in gender roles (UNICEF, 2010). Gender involvement and participation in CLTS activities is a challenge in Kanyingombe Community Health Unit, Central Kamagambo ward in Rongo Sub County. As pertains to CLTS processes, participation and inclusion of gender during CLTS activities is usually poor (UNICEF 2014). This has been observed from the attendance and participation of gender during the CLTS triggering sessions. More especially from the high cases of cholera that have been reported from the area. This has impacted negatively on the spirit of CLTS as entrenched in the Environmental Sanitation policy (WHO/UNICEF 2015). Moreover very few studies have been done to establish the roles of Gender on community Led Total Sanitation processes. There was therefore need to establish the roles of gender on Community Led Total Sanitation given that CLTS is a new sanitation concept in Kanyingombe Community Health Unit

1.3 Purpose of the study

The purpose of the of the study was to describe the roles of gender on Community Led Total Sanitation processes in Kanyingombe Community Health Unit in Rongo Sub County.

1.4.1 Main objective

To establish the importance of gender participation and involvement in Community Led Total sanitation in Kanyingombe Community Health Unit.

1.4.2 Specific Objectives

The study was to achieve the following specific objectives;

1. To establish the influence of gender integration in Community Led Total Sanitation processes in Kanyingombe Community Health Unit.
2. To establish the effects of power relations of gender in Community Led Total Sanitation process in Kanyingombe Community Health Unit.
3. To establish socio-economic factors affecting gender participation in Community Led Total Sanitation processes in Kanyingombe Community Health Unit.
4. To establish the strategies to be used to enhance gender participation in Community Led Total Sanitation processes in Kanyingombe Community Health Unit.

1.5 Research Questions

The study sought to answer the following research questions.

1. What is the influence of gender integration in CLTS process in Kanyingombe Community Health Unit?
2. What are the effects of power relations of gender in Community Led Total Sanitation process in Kanyingombe Community Health Unit?
3. What are the socio-economic factors affecting gender participation in Community Led Total Sanitation processes in Kanyingombe Community Health Unit?
4. What are the strategies to be used to enhance gender participation in Community Led Total Sanitation processes in Kanyingombe Community Health Unit?

1.6 Significance of the study

The findings of this study will be important in the following ways:

- The study will address Millennium Development Goal (MDG 3) which calls for the promotion of gender equality and women's empowerment so as to fully participate in sanitation activities.

- The study will promote equal opportunities for women and men on participation, benefits of CLTS and leadership in decision making at all levels of total sanitation as a collective responsibility towards control of sanitation related infections.
- The study will benefit other researchers in the same field with new insight to support their arguments and hence improve knowledge base as pertains sanitation.
- The study will help Migori County Government-Health and Social Services departments to develop a gender integration policy document so as to strengthen gender involvement in sanitation promotion activities.
- The study will inform the Public Health Department so as to intensify community sensitization strategies aimed at reducing diarrheal infections.
- The study will help the community to harmonize and clarify roles and responsibilities of different gender as pertains to CLTS activities so as to reduce diarrheal infections.

1.7 Scope of the study

This study on the roles of gender on community led total sanitation processes in Kanyingombe Community health unit was conducted between the month of November and December 2015, using a cross-sectional descriptive study design. The study was conducted in 172 selected households, data being collected by using questionnaires.

1.8 Limitations of the study

The following limitations influenced the findings of the study;

- The distances from one household to the other, accessibility and other logistics constrained the study in terms of time and finances during the data collection.
- The rain season made it difficult to access some of the villages due to poor road networks in the study area.
- Unavailability of sampled household members limited the findings of the study on those who were sampled at first instance at the time of data collection.

1.9 Delimitations of the study.

The study team started the work early enough to ensure that all the household are covered due to large distance from one household to the other and poor road network. The team was also equipped with the personal protective equipments such as umbrella, coats/sweater, caps and gum boots as it was a rainy season during data collection.

1.10 Assumptions of the study.

The study was carried out under the following assumptions:

- i. Gender roles and responsibilities were well defined in the community as regards to sanitation programs.
- ii. Respondents were to give accurate, truthful and honest responses to the items in the data collection tools.

1.11 Definitions of operational terms:

The study was guided by the following operational definitions.

Bottle experiment: This is a demonstration done to make people understand that faeces disposed off in the open ends up in their drinking water.

Community Health Unit: It is an area demarcated within the community as level one in the health structure and usually takes the area covered by a sub location as per the national government

Community-Led Total Sanitation (CLTS): An innovative and integral approach that empowers communities to realize the bad effects of Open Defecation (OD) so that they stop OD, construct and use latrines.

Community mapping: Drawing the map of the village and locating key physical features such as households, infrastructure, water sources, presence of latrines and the open defecation areas.

Empowerment: Implies people – both women and men – taking control over their lives: setting their own agenda, gaining skills (or having their own skills and knowledge recognized), increasing self-confidence, solving problems, and developing self-reliance.

Environmental health: comprising those aspects of human health including quality of life, those are determined by the physical, biological, social and psycho-social aspects of the environment.

Environmental sanitation: It is a subset of environmental health that refers to the safe management of human excreta and associated human hygiene; the safe collection, storage and use of drinking water; solid waste management; drainage; and protection against vermin and other diseases.

Food-faeces demonstration: Showing people how flies move back and forth between faeces and food.

Gender : refers to the social differences, as opposed to the biological ones, between women and men, that have been learned, are changeable over time and have wide variations both within and between cultures.

Gender analysis : The systematic attempt to identify key issues contributing to gender inequalities so that they can be properly addressed.

Gender discrimination: Is the unequal or unfair treatment of men and boys or women and girls based solely on their sex rather than on their individual skills, talents, and capabilities.

Gender Equity: The process of being fair to women and men, girls and boys. To ensure fairness, measures are put in place to address the social or historical disadvantages that prevent women and girls from operating on a level playing field.

Gender equality: Means equal visibility, opportunities and participation of women and men in all spheres of public and private life. Gender equity is often guided by a vision of human rights that incorporates acceptance of the equal and inalienable rights of women and men.

Gender mainstreaming: The process of thoroughly integrating gender concerns into institutional operations “the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels.

Gender roles : A set of prescriptions for action and behaviour allocated to women and men respectively due to widely shared ideas, beliefs and norms in a society about what are ‘typically’ feminine and masculine characteristics and abilities and key virtues.

Open defecation (OD): a situation where human excreta/fecal matter are disposed in the open (i.e. bush, backyard of the house, compound, garden, etc.)

Open defecation free (ODF) status: No fecal matter is disposed in the open.

Pre-triggering: Identification of the village for CLTS mobilization of community members creating/ building rapport with community.

Post-triggering: It is a process which is follow up by triggering session and it entails carrying out follow-ups to monitor the progress made during implementation till the village is open defecation free

Sanitation: Encompasses the isolation of excreta from the environment, maintenance of personal, domestic and food hygiene, safe disposal of solid and liquid wastes, maintaining a safe drinking – water chain and vector control).

Strategic gender interests refer to desired changes in existing relations, roles, tasks and responsibilities at the personal and institutional level.

Transect walk: Observing the physical features and sanitation situation of a village

Triggering: The process of facilitating participatory exercises using different CLTS tools so that a local community realizes the adverse effects of open defecation and decides to stop it.

Women's empowerment: Implies an expansion in women's ability to make strategic life choices in a context where this ability was previously denied to them.

CHAPTER TWO: LITERATURE REVIEW

2.1 Review of influence of gender integration in CLTS Process

Gender mainstreaming attempts to completely change the process of development by including a consideration of gender concerns and gender equity at all stages: project design, implementation, monitoring and evaluation (de Waal 2006). It also requires a radical rethinking of processes and policies from community-level implementation of a project all the way up to planning and visioning at the executive level. Gender mainstreaming can result in greater female participation in typically male-dominated development projects as well as greater collaboration between the genders when implementing development projects (De Waal 2006).

IFAD (2011), Italy established that women have accumulated knowledge about water resources, including location, quality and storage methods, as well as insights in common habits and problems within a community, which are important information for programming. Hence, women's active participation in water and sanitation solutions can improve health, improve status, increase women's safety, creating opportunities for income generation, as well as providing them with other public and influential roles.

Staveren and Odebode (2007), states that CLTS has recognized the importance of women in creating sustainable sanitation and hygiene services. However, it is essential to take gender considerations on board in CLTS projects in order to avoid overburdening women. A conscious and systematic way of integrating gender equality and women's empowerment as in the Pan-Africa programme gives better results. Over time men and women will be working, discussing and cooperating on CLTS at an equal level. This way, women can assert their rights and improve their social position, obtaining gender transformative results in the process.

A gender analysis helps in understanding the socioeconomic and cultural concerns in a project area. It equally builds understanding of demands and needs of women and men, their respective knowledge and expertise, attitudes and practices, and it draws light on the constraints for women's and men's participation in activities. In order to make such an

analysis, gender disaggregate data and involvement of women and men in sanitation planning, construction and maintenance are needed (UN Water 2006).

Karn (2007), in Indonesia established that children have influenced their parents through role play as feces police, an innovation that they came up with by themselves to deal with people who still defecate in the open. They have been keen on following up details and do not compromise with actions agreed on. Children move in the village at particular time to watch for any person defecating in the open. If they see anyone they write the persons names on a flag and put it on the feces for everyone to see whose feces it is.

Kamal (2011), in Bangladesh found out that children have acted as army of scorpions to watch on people who defecate in the open. They watch in areas where people always go for open defecation and if they find any person they shout with that person's name and go to his home and stop for some time and sing and shout that the person was defecating in the open. Parents have seen as this disgusting and a shaming and have taken up initiative to construct latrine in their home and stop defecating in the open.

The survey by Mahbub (2008), Bangladesh indicated that gender concerns and cultural practices affect the results of triggering. It also emphasized that female participation in triggering does not always lead to their empowerment. Plan Bangladesh reported that even if women participated in triggering, they did not often have control over toilet construction.

In a study by Halcrow *et al* (2010), Australia, it was established that the integration of gender using the principles delivered benefits for both agencies. This contribution includes increasing the momentum of the sanitation program (coverage has doubled in the past six months); achieving more equitable participation of women in activities; adoption of strategies that respond to the different needs and perspectives of women and men.

Howes *et al* (2009), found out that the idea of leadership by the children is not only to influence the actions of parents to construct latrines within homes but further seen as a movement that has influenced both persons in high offices to take actions to change. Children have influenced hygiene behaviors of their teachers, peers, juniors, parents, out

– of -school children, community, leaders, politicians, policy makers, and have acted as child ambassadors.

Gupta (2012, India), established that its essential that school going children are fully involved in sanitation programs through forming children clubs taking into account gender and inclusion issues, norms setting, forming plan of action and participation in SMC/PTA, community clean up exercise, promotional activities/campaigns, demonstrations and rallies through which children can be in a position to facilitate adults in understanding the importance of good hygiene practices and behavior change.

Piracel (2012), found out that children in India during triggering had to share their action plans with the head teacher who did not attend the triggering and requested her to visit the latrine they were using that was so filthy yet the teachers latrines were very clean. This triggered change in the school that the cleanliness was upheld and a permanent staff employed for cleaning of the latrine to avoid it becoming unusable latrines; these act as catalysts to persons without latrines to construct them in their homes.

Mehta (2010,India), reiterates that it is vital that those facilitating the triggering and follow-up activities ensure that gender-specific concerns are heard and that women are actively encouraged to participate. Women tend to be less involved in latrine construction and more active and responsible in their maintenance and cleaning, in establishing usage norms, and sustaining behaviour change .As Salter (2008), points out that this can increase women’s workload and reinforce stereotypical gendered labour divisions and roles, such as women being responsible for household health.

Karn (2007,Nepal) described how children monitored progress towards ODF in one village: “Child club members monitored open defecation places in the early morning. When they caught anyone red-handed, they whistled, clapped or shined their torch lights, forcing the offender to run away in shame. Afraid of being detected and humiliated, people stopped defecating in the open.

Mukosha *et al* (2011), In Ghana established that children educated parents to resolve disputes which had occurred due to misuse of funds for operation and maintenance of the borehole after they were triggered during CLTS in their community.

Bongartz *et al* (2010), in their recent study in south Africa, it depicts that the benefits of involving women in the planning, management and completion of a WATSAN project elevated their status and validated their importance in the community in which they lived, increased self confidence of many women, and adds to the woman's educational background in addition to allowing them an opportunity to identify and articulate community needs.

Sanchez (2011), Uganda established that women and girls as in other sub-Saharan African countries, are the major water collectors, users and managers in homes. They are also the major promoters of household and community sanitation activities. They therefore bear the impact of inadequate, deficient or inappropriate water and sanitation services. However, men still dominate the arena of planning and decision making regarding water and sanitation investments and women's views are often under-represented, implying that women's practical and strategic needs are not addressed."

A study carried out by Otieno (2009) in Kenya showed that gender equality and the empowerment of women are human rights that lie at the heart of development. When women and men have relative equality, economies grow faster, children's health improves and there is less corruption. Gender equality helps reduce the root causes of poverty and vulnerability while contributing to sustainable growth and the achievement of the Millennium Development Goals.

A case study by Harvey and Mukosha (2009), Zambia established that the fact that women are staying at home has benefits for the CLTS process. They not only experience the benefits of ODF first hand, they are also better placed to check the practices of their neighbours and other community members. This way they can pressure people to stop open defecation and so take on the role of natural leaders. The skills of women improve substantially in the CLTS process as they can take on different roles in improving both their own and the community's situation.

Adenike (2011) ,a study on Gender and Community-Led Total Sanitation in Nigeria found out that encouraging gender balance can empower women, since their involvement in a project is necessary to fulfill the goals established by WaterAid Nigeria and the

CLTS facilitators. The requirements can give women more power in the public sphere than they would have otherwise. Women and men have different roles and responsibilities within the visited communities and this gendered division of labor could be used to allow women and men to participate equally and meaningfully in CLTS.

Fawzi (2010), found out that In Nepal the members of child clubs are provided with training to enhance their knowledge and understanding on the issues revolving around sanitation and hygiene in their community. Empowered children serve as a catalyst to ignite the community for affirmative actions so that open defecation is totally eliminated. The children are also provided opportunities to participate in the national and international events/conferences to highlight the issues and share how they have made a difference

A study conducted by Godfrey (2009), in Mozambique showed that across the countries children have been responsibly involved and participated in overseeing and monitoring community activities. Children are also found to be a reliable source of information with their own innovative reporting and providing data. Involving children in the toilet design & construction including selection of sites for latrine construction exhibit self confidence in engaging their peers in debates. Children and youth participate in the situation analysis by documenting existing practice, and campaigns to clean up the community were organized with children to provide a platform for raising awareness about the appalling poor community conditions

Studies have shown that equal involvement of men and women is positively correlated with improved sustainability of water supplies. Willetts *et al* (2010) as well as improved transparency and governance in management. Sustainable management of water resources and sanitation provides great benefits to a society and the economy as a whole. Thus, it is crucial, first, to involve both women and men in water resource management and sanitation

Oko *et al* (2011), state that active participation of both men and women in the decision making of the type of water and sanitation service installed, as well as shared

responsibility of managing the water and sanitation services, are important due their different roles and needs.

Review of studies done shows that girls, particularly at and after puberty, do miss school or even drop out of their schools due to the lack of sanitary facilities, and/or the absence of separation of girls' and boys' toilets. In these situations, girls also stay away from school when they are menstruating (GWA 2006). In rural Pakistan for instance, more than 50% of girls drop out of school in grade 2-3 because the schools do not have latrines (UNICEF 2008). An assessment in 20 schools in rural Tajikistan revealed that all girls choose not to attend when they have their periods, as there are no facilities available (Nikam 2011), Lack of adequate toilets and hygiene in schools is a key critical barrier to girl school attendance and girls education. If sanitation facilities fail, women might not attend (vocational) training and meetings (GWA 2006). Simple measures, such as providing schools with water and safe toilets, and promoting hygiene education in the classroom, can enable girls school attendance, and reduce health-related risks for all (UN WATER 2006).

2.2 Review of effects of power relations of gender in CLTS processes.

Robinson, (2009) Women and men have deferent roles and responsibilities within the various communities and this gendered division of labor could be used to allow women and men to participate equally and meaningfully in CLTS. Women natural leaders tend to be less visible than their male counterparts in latrine construction but more active and responsible in their maintenance, establishing usage norms, and sustaining hygienic behavior change

In many societies, women's views, in contrast to those of men, continue to be systematically under-represented in decision-making bodies (Pedi *et al* (2012). This lack of a participatory approach is closely related to the uneven power structures in decision-making processes that characterize these societies and the sanitation sector in particular. Where sincere efforts have been made to integrate gender perspectives into the water and

sanitation sector, these have unfortunately often failed to address strategic gender needs (Chambers 2009)

Kumar and Shukla (2008), in a case study in India, noted that women were often excluded from full participation noting women field staff work with village women because village women cannot be approached by men and because female field workers have difficulty speaking in front of men. Often male program officers did not consider women for sanitation or water distribution management jobs despite a declared weakness of women's participation in the area.

IFAD (2011), depicts that despite the role of women in hygiene and sanitation at the household level, many programmes presume that it will be the men who will be more suited for such entrepreneurship. However, both women and men can benefit from income generation through sanitation related businesses if a sustainable sanitation chain system approach is implemented. A combination of unequal and uneven power and legal structures based on discrimination and a lack of political commitment often leads to the neglect of women's needs and hinders their involvement in sanitation development and planning.

Experiences with gender aspects in water and sanitation projects in Armenia, Bulgaria, Romania, Ukraine and Mexico showed that stronger involvement of civil society, women and minority groups in decision making on sanitation and wastewater systems is necessary to make a breakthrough and to enhance participation and capacity building (Milhailova and Diaz, 2007)

Haq and Bode (2009), noted that though women's roles are acknowledged and noted as important, there is less attention to the particular gendered perspectives on sanitation issues within the CLTS approach. Experience from Bangladesh points to the fact that women played an important role in the construction of latrines because they wanted to avoid public shame and maintain purdah in public places.

Adenike (2011), Gender and Community-Led Total Sanitation: A Case Study of Ekiti State, Nigeria Observations indicated that women do not have the same decision-making power as men, even if they hold the same leadership positions as men, more men than

women attend the meetings. Men were the only ones who spoke during the meeting and that meeting focused heavily on typically male activities, such as road construction, rather than typically female activities, such as water management and household hygiene and sanitation.

Coombes (2011). "Gender roles and relationships: Implications for water management." The study notes that there were no significant differences in the roles of men and women as heads of households, suggesting relative gender neutrality and gender neutral development initiatives will benefit equally women and men at the household level. In conjunction to water management

In a study done by Sigauke (2009), Plan Zimbabwe it was established that men considered themselves as the providers of resources needed for sanitation at household level. Women also looked to men to provide the funding for materials needed for sanitation. In female-headed households, however, women were the providers of such materials. Latrine construction was presumed to be the initiative of the man heading a household, though the study found that women equally participated in having the latrine in place alongside men. Some women mentioned that even when women were the providers, they attributed financial provision to men. Women considered themselves to be key leaders in CLTS and ensuring ODF while Men considered themselves more as supervisors of CLTS.

Whereas the cleaning of toilets is primarily the responsibility of women, construction and maintenance of pit latrines (digging, repairing and exhausting) is primarily done by men (Hannan and andersson 2010). However, in some regions, the task of emptying the latrines falls exclusively on the shoulders of poor women, and the labour-conditions under which they do this work are appalling. In many households, women are also responsible for making sure there is sufficient water for sanitation and there are many cases where women have to pay for water from limited household budgets. Despite the role of women in hygiene and sanitation at household level, toilet construction program that provide income-generation opportunities often presume that only men will be interested in or suited for those tasks. Cohre *et al.* (2008)

Susana (2009), In the design, location and construction of toilets and sanitation blocks, inadequate attention is paid to the specific needs of women and men, boys and girls. Sanitation program, as with many other development program, have often been built around assumptions of some gender-neutrality. This results in gender-specific failures, such as, toilets with doors facing the street in which women feel insecure, school urinals that are too high for boys, absence of disposal for sanitary materials by women, pour-flush toilets that require considerably more work for women in transporting water. Also, sanitation blocks are sometimes used for multiple functions, including washing and drying, shelter from rain etc., but are not designed for these purposes.

Redick (2011), states that a combination of discrimination, lack of political will or attention, and inadequate legal structures result in neglect of women's needs and lack of their involvement in sanitation development and planning.

Coombes and Mwakilama (2011), in Tanzania established that in many societies, women's views, in contrast to those of men, continue to be systematically under-represented in decision-making bodies. This lack of a participatory approach is closely related to the uneven power structures in decision-making processes that characterise these societies and the sanitation sector in particular. Where sincere efforts have been made to integrate gender perspectives into the water and sanitation sector, these have unfortunately often failed to address strategic gender needs

McIntosh (2009), reiterates that despite the role of women in hygiene and sanitation at the household level, many programmes presume that it will be the men who will be more suited for such entrepreneurship. A combination of unequal and uneven power and legal structures based on discrimination and a lack of political commitment often leads to the neglect of women's needs and hinders their involvement in sanitation development and planning

Susana (2009), established that one of the most observable divides between women and men, especially in developing countries, is in water, sanitation and hygiene. The provision of hygiene and sanitation are often considered women's tasks. Women are promoters, educators and leaders of home and community-based sanitation practices.

However, women's concerns are rarely addressed, as societal barriers often restrict women's involvement in decision-making processes regarding toilets, sanitation programs and projects. In many societies, women's views as opposed to those of men are systematically under-represented in decision-making bodies

Jamasy *et al* (2008), in Indonesia only had female natural leaders who visited each household to conduct triggering exercises instead of a collective community-level triggering process while in Uganda, it was reported that although men and women emerged as natural leaders, women were more effective natural leaders because open defecation reportedly played a more important role in their lives. In Kenya women were specifically empowered by Ministry of Public Health staff, leading to their prominent role in triggering and leading the CLTS process (Tiwari 2011).

Experiences with gender aspects in water and sanitation projects in Armenia, Bulgaria, Romania, Ukraine and Mexico showed that stronger involvement of civil society, women and minority groups in decision making on sanitation and wastewater systems is necessary to make a breakthrough and to enhance participation and capacity building (Milhailova and Diaz 2007)

Although gender mainstreaming is a requirement for all national, sector, district, plans, programs and budgets. A review of the Masaka Municipal Development Plan 2007/08-2009-10 Uganda shows limited commitment to the mainstreaming of gender in water and sanitation activities and programs.

2.3 Review of Socio-economic factors affecting gender participation in CLTS processes.

Robert and John (2007), Bangladesh established that the cost of building a latrine is high in relation to household income in many rural communities, requiring unaffordable technical and financial resources. People who cannot afford chemical fertilisers encourage defecation in their fields, as it is a ready and cheap source of fertiliser. Building latrines in these communities is perceived as depriving growers of a useful although hazardous resource.

Mukherjee (2009), Indonesia found out that the construction of latrines requires the participation of communities. However, the contribution requested is still considered as too high. People often say they cannot conceive sleeping in thatched-roof huts and on the other hand build latrines with cement and reinforcing steel just to defecate. Thus, they give less importance to the latrines than to other facilities and do not want to invest in latrines.

Phillips (2010), an evaluation of the community led total sanitation approach in Liberia, established that the geographical conditions in some locations make latrine construction more difficult, either because the ground is too hard or because it is too sandy and unstable. The survey covered areas where the ground is too rocky to dig pit latrines in the usual way. Construction in these areas requires technical and financial resources that people often cannot afford.

An economic study conducted in Nigeria has shown that impacts resulting from poor sanitation and hygiene, cost the economy about 445 billion Naira (US\$ 2,978 million) per year. Otieno (2011).

Rotowa *et al* (2015), carried out a study on Socioeconomic Factors Affecting Household's Sanitation Preferences in Akure, Nigeria. The outcome of the study revealed that all the socioeconomic factors except gender of household significantly affect the type of sanitation facilities used by households in the city. Planners and engineers working on sanitation projects should understand these socioeconomic and cultural factors, and utilize them for the benefit of good sanitation provision.

Occupation determines the economic well-being of residents and whether a sanitation technology is considered inexpensive or a least cost solution to the issues of open defecation, income level of head of household is also important because it determines affordability and sustainability of a toilet facility owned by respondents WHO & UNICEF (2014).

Burton (2007), It was established during an evaluation of the WaterAid's CLTS programme in Nigeria, that though there seems to be variations among various socio-economic classes in relation to waste household sanitation technique, the relationship is found not to be statistically significant. From the analyses carried out on chi square distribution it was observed that at 5% level of significant there is no significant relationship between socio economic factors and household sanitation because all variables compared shows that there is no significant relationship between them

A combination of unequal and uneven power and legal structures based on discrimination and a lack of political commitment often leads to the neglect of women's needs and hinders their involvement in sanitation development and planning. (Cohre et al.,2008).

Magala and Roberts,(2009),Ghana established that some dimensions of gender inequality continue to persist, regardless of progress in health and education, and of the positive impacts of growth and development. These include inequalities in economic opportunity and participation in decision-making in the household, the community and in politics. The overall situation for women and girls tends to be worst in fragile states and conflict-affected countries. Since more than half of the aid program is delivered to these countries, specific attention and responses to gender issues is needed in these situations.

Mbeki (2010), Kenya, identified income, household size, education, age, employment status, distance from existing sources, gender and incidence of waterborne diseases as key factors influencing patronage of essential services. It was established that household heads with some formal education are more likely to be aware of the health implications of services demanded for. It was further opined that older household heads who are used to the traditional methods may less willing to switch to new ones. In addition, the ability of household head to earn income makes him eligible for improved sources.

2.4 Review of strategies to used to enhance gender participation in CLTS processes.

Milhailova and Diaz (2007), Mexico showed that stronger involvement of civil society, women and minority groups in decision making on sanitation and wastewater systems is

necessary to make a breakthrough and to enhance participation and capacity building and Sound policy formulation is hampered by the lack of information about the gender-related realities of water and sanitation access as well as the need and use of sanitation in private and public sectors. Gender-disaggregated data is crucial when assessing the effects of policy measures on women and men.

Zombo (2009), *Breaking the silence around shit through community led total sanitation (CLTS) in Sierra Leone*. found out that through exercises such as transect walks, mapping of defecation, and the various routes of disease spread (e. g. through flies and animals), as well as calculation exercises aimed at drawing villagers' attention to the amount of faeces they are ingesting and by using local terms for 'shit', powerful emotions such as shame and disgust are generated. Such powerful emotions fuel a desire to actively do something to improve the current situation, and a process is ignited where residents draw on local resources and knowledge to construct sanitary facilities that fit their particular needs and desires, within the constraints of household priorities and resources

Wendland (2008), In India established that SIDA support for the empowerment of women focused on training and preparing women to become effective participants and decision makers in local government structures. Women took the initiative to solve community problems with local and state government. This resulted in improved accountability by government institutions, including the extension of basic services and programmes to the poorest people.

Yadav and Shrestha (2009), the programme of promoting collective action towards total sanitation .A USAID-funded programme in Nepal aimed to empower women by providing literacy and legal rights training and credit. The evaluation found increased decision making by women on household matters. More household resources are being spent on family well-being, including food, clothing, education and health care. This has a direct impact on poverty reduction. Indirect impacts on poverty are due to women taking individual or collective action with local authorities to improve various aspects of their lives - for example, on domestic violence, alcohol abuse, and property settlement

after divorce, polygamy, and community perceptions of women's work and appropriate behavior

Musyoki (2007), in Rwanda, found out that USAID provided funding to rural women's associations for agricultural, livestock and micro-enterprise activities and through this, women's associations were successful at targeting the most vulnerable, including female headed households. Through these small projects, women gained experience in decision making and in managing local development activities. As a result, women were more likely to participate in new political structures. This helped to reduce social tensions and promote unity.

Willets *et al* (2010) on a USAID's evaluation of a community development project in China found that women were poorly served by credit, training and "cash for work" inputs, with men dominating in all areas. However, employing female credit extension agents improved targeting both to the poor in general and women. Working with women's groups reinforced patterns of cohesiveness and social support. This resulted in better loan recovery performance, even where loan repayments placed exceptional demands on women's and children's labour.

Halcrow *et al* (2010), found out that Sensitization of men (including husbands and male leaders) is critical for securing increased participation by women in many contexts. Dialogue and involvement of men is also essential to achieve sustainable benefits for women and changes in gender relations.

Fisher (2010), reiterates that it is important to support women's organizations to work towards gender equality through activities which have been specifically designed to promote gender equality, through strengthening local women's organizations to set and carry out their own agenda for equality, show the strongest evidence of strategic and sustainable changes in gender relations. Effective strategies include support for women's analytical, networking and organizational capacity, and support for women's advocacy activities with men in local political and social institutions.

Agrawal (2007), Implementing CLTS : Some issues experiences and the ways in which the South African government and grassroots organizations envisage and implement

democracy achieved since 1994 in the field of water resources management. The author notes examples of using catchment management agencies, new policies allowing for water licensing, and water user associations to be created. These examples showcase bottom up movements not only directly empower poor women and men, but proven grassroots approaches can also be replicated at a much wider scale through government. Thus the top-down and bottom-up nexus provides an exciting opportunity for water to contribute to poverty eradication.

Hockin (2011) , during a cross-sectional study in its attempts to analyze the health effects of water on women in an expanding Malawi, results concluded that women who bear the burden of water fetching in the home suffer adverse health effects during water scarcity and identified income as the greatest factor influencing health of women during water scarcity. It calls for strong measure to ensure the judicious use of treated water, increased education of women and community involvement for water management.

Jha (2007), Nepal, on how Geographical and topographic limitations have hindered community efforts to get wholesome water for domestic purposes. In response to this expressed need of the people an educational intervention using women as unit of practice and solution as water purification and management in order to reduce water-borne infections was embarked upon. Health talks, motivation of the participants, seminar/workshop for professional health providers, and laboratory sessions for water purification methods and techniques were some of the components of the learning process to achieve the goal.

De Waal (2006), on Gender and Community-Led Total Sanitation in Nigeria found out that Participatory Rural Appraisal (PRA) tools are used to help the community understand the poor sanitation situation and the associated impacts. Motivated by a sense of disgust and shame communities themselves commit to improving the situation by whatever means are available

Sanchez (2011,Uganda), established the strategies for mainstreaming gender into CLTS: Ensure gender equality and equal participation. Organize community sensitization and encourage communities themselves to decide what they can do to change the status quo

and promote equality between women and men. Facilitating communities to identify their own gender issues and suggest solutions prevents communities from looking at gender equality as an imposition.

2.5 Conceptual framework

The study adapted the conceptual framework illustrated below.

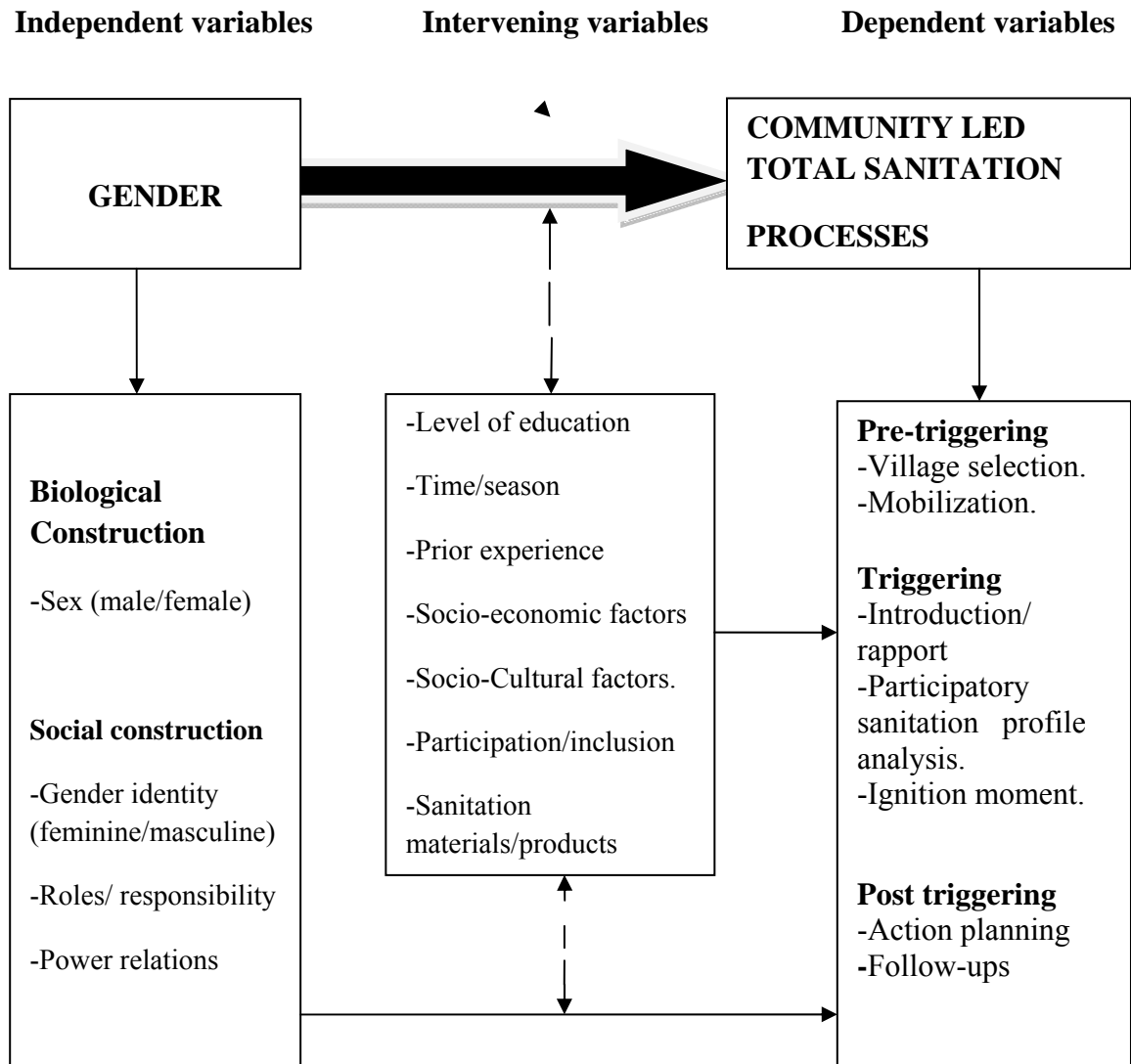


Figure 2.1 : A Model of Conceptual framework.

(Source, Aranda 2015)

The study was based on the understanding that various factors combine to influence the Community Led Total Sanitation processes. Gender is basically based on biological construction such as male and female and social construction such as gender identity

(feminine/masculine), roles and responsibility and Power relations which influences the CLTS processes. The CLTS process include; pre-triggering (village selection and mobilization), triggering (introduction and building rapport, participatory sanitation profile analysis and ignition moment) and post triggering (action planning and follow-ups). The process of CLTS which aims at behavior changes can also be influenced by other factors such as; level of education, time/season, prior experience, socio-economic factors, participation or inclusion and sanitation materials/products.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Location of the study

The study was located in Kanyingombe Community Health Unit, Central Kamagambo Ward in Rongo Sub County of Migori County in the western Kenya Region of the Republic of Kenya. Kanyingombe Community Health Unit is one of the seven CHUs in Central Kamagambo ward. There are a total of twenty three community health units which constitute Rongo Sub County-Health department.

The Kanyingombe Community Health Unit was purposively selected as it is the only CHU where CLTS approach is being implemented by development partners and Ministry of Health. Despite the implementation of CLTS in Kanyingombe Community Health Unit (CHU) to reduce sanitation related diarrheal infections, the CHU has the highest cases (54%) of diarrheal infections. More so the cholera outbreak in Rongo in which 784 cases were reported, 46% of the cases were originating from Central Kamagambo Ward with seven CHUs, whereby Kanyingombe CHU was leading with 127 cholera cases (DHIS 2015).

Rongo Sub County is bordered by Kisii South Sub County to the North East, Dhiwa Sub County to the North West, Gucha South Sub County to the South and Nyatike Sub County to the South West. Rongo Sub County is located about 350KM from Nairobi, the Capital City of the Republic of Kenya on Kisii-Migori highway approximately 24 KM from Kisii town and 26 KM from Migori Town, the Headquarter of Migori County.

The sub county is one of the eight sub counties which make up Migori county. It has a population of 120,408 people with a fertility rate of 4.2%, life expectancy of male 47 years, female 56 years and a large proportion being below twenty four years of age. The population distribution shows that the largest age cohort is under 15 years (42.3%) 2009 census while women of reproductive age 15-49 years comprises a proportion of 24%, adults (25-59) comprise 34% while elderly (above 60 years) make up 5.4%. The male female ratio stands at 48:52.

Rongo Sub County has high poverty levels with 43% (KDHS 2009) of the population living below poverty line; this has direct implications on nutritional status and access to health care. Moreover there is a high burden of communicable diseases including sanitation related infections. The Sub County has one Sub county referral hospital, one health centre and eleven dispensaries.

The economic activities in the sub county include agriculture and small scale mining. The road network in the Sub County is not fully developed. There are two major tarmac roads crossing the sub county viz: Kisii-Migori road and Rongo-Homa Bay road. Many of the earth and murrum surfaced roads are not well maintained which hinders access to health services. Modes of transportation in the sub county include motorbikes and motor vehicles.

3.2 Research design

The study was conducted through a cross-sectional descriptive survey design. The study was concerned with describing the roles of gender on community led total sanitation processes. It was specifically intended to investigate the relationship between the biological and social construction of gender and pre-triggering, triggering and post triggering processes of CLTS. Such issues were best investigated through a cross-sectional descriptive survey. The design enabled the researcher to study phenomena that do not allow for manipulation of variables. The design also enabled the researcher to collect data at one point in time and therefore cut costs that would have been spent following few cases over a long time.

3.3 Target population.

The study targeted 1014 households distributed within 12 villages in Kanyingombe Community health unit where the Ministry of Health and other development partners have implemented CLTS activities. The study population was selected through objective sampling techniques whereby the study population consisted of household heads. The table below shows the population distribution per village.

3.3.1 Inclusion criteria.

All the sampled household heads will be included in the study. Only adult headed household will be considered.

3.3.2 Exclusion criteria.

Non residents and children will not be included in the study

Table 3.2: Distribution of household population per village

S/NO	VILLAGE NAME	NUMBER OF HHs (frequency)	Percentage (%)
1	KOCHIER	78	8
2	KAGUDA	93	9
3	WAMEDA	84	8
4	KAWANYUMBA	103	10
5	KEMUNTO A	95	9
6	KEMUNTO B	61	6
7	NYASOTI A	86	8
8	NYASOTI B	77	8
9	KAWAHAYA A	88	9
10	KAWAHAYA B	66	7
11	KOMBURA	108	11
12	KAROA	75	7
	TOTAL	1014	100

3.4 Sampling procedures and Sample size

A sample is part of the target population procedurally selected to represent it.

3.4.1 Sample size determination.

In reference to Mugenda and Mugenda (2003), if the research design is a descriptive study then ten percent of the accessible population is enough to make a sample size. However, for the sake of this study, the following formula was used to calculate the sample size from the target population. Thus,

$$n = \frac{Nt^2 S^2}{Nd^2 + t^2 s^2}$$

$$n = \frac{1014 \times (1.96)^2 \times (0.867)^2}{1014 \times (0.118)^2 + (1.96)^2 \times (0.867)^2}$$

$$n = 172 \text{ Households}$$

Whereas:

n = samples size

N= Number of population.

t² =Trust of 95% (Confidence Interval)

s² = Pre-estimation of the variance

d² = Difference between the average of the sample and the population.

3.4.2 Sampling techniques.

The study employed probability and non probability sampling techniques. The study applied cluster sampling in selecting the household heads by grouping the villages into twelve clusters according to their names. To obtain the participants from each cluster, the names of the possible participants (household heads - from household registers managed by CHVs) were assigned random numbers and these numbers were written on small pieces of paper, folded and placed in twelve different containers each representing a village. The researcher then used simple random sampling by randomly handpicking the folded pieces of papers equivalent to the required proportional sample per cluster and those whose names coincided with the random numbers picked were included in the study. The sample from each village was selected using the proportions and formulae as shown below.

No. of HHs in each village x Sample size

Target population

The table below shows the distribution of the sample size per village.

Table 3.3: Distribution of samples size per village

S/NO	VILLAGE NAME	NUMBER of HHs (frequency)	Percentage (%)	Sample size
1	KOCHIER	78	8	13
2	KAGUDA	93	9	16
3	WAMEDA	84	8	14
4	KAWANYUMBA	103	10	18
5	KEMUNTO A	95	9	16
6	KEMUNTO B	61	6	10
7	NYASOTI A	86	8	15
8	NYASOTI B	77	8	13
9	KAWAHAYA A	88	9	15
10	KAWAHAYA B	66	7	11
11	KOMBURA	108	11	18
12	KAROA	75	7	13
	TOTAL	1014	100	172

3.5 Research Instruments

The study utilized a questionnaire to collect data from household heads. Kothari (2004) states that questionnaires offer considerable advantage in administration, present an even stimulus potentiality to large numbers of people simultaneously and provides the investigation with an easy accumulation of data and at a relatively low cost. It also collects factual information in order to classify people and their circumstances and gather straightforward information relating to people's behavior. It is on the basis of these strengths that the instrument was chosen.

3.6 Pre-testing

This involved checking for the suitability of the research instruments. The instruments were pre-tested by administering them to individuals who were not part of the sample but had identical characteristics to the sample. The researcher carried out the pre-test by using a community health unit in Awendo Sub County being the neighbouring Sub County within the same County with fairly similar characteristics and also implementing the CLTS activities. Selected individuals for pre-test were expected to respond to items in the instruments. Pre-testing served the following purposes:

- Establishing whether the instrument was able to measure what it is intended to measure.
- Establishing whether the respondents were easily responding to the items in the instrument.
- Establishing whether the instruments were comprehensive enough to illicit the intended information and level of the respondent.
- Establishing whether the time allocated for the data collection was adequate.

3.7.1 Reliability

According to Orodho (1998), reliability concerns the degree to which the particular measuring procedures give similar results over a number of repeated trials. To establish the reliability of the instruments, the researcher used the test-retest technique. The test-retest technique was done in a Community Health Unit in Awendo Sub County which involved administering the same instrument twice to the same group of subjects to establish whether the same results can be obtained with a repeated measure of the same concept. In this study, it was done by administering the instrument to 10% of the sample size in a Community Health Unit in Awendo Sub county. After the respondents made their responses, they were scored manually and then correlated using the Pearson moment product correlation coefficient to establish the extent to which the contents of the instrument will be consistent in eliciting the same respondents. According to Orodho (1998), a correlation coefficient of 0.8 was taken to be sufficient for the instruments to be accepted as reliable.

3.7.2 Validity

Mugenda and Mugenda (2003) define validity as the accuracy and meaningfulness of the inferences which are based on research results. In the other words validity is the degree to which results obtained from the data actually represents the phenomena under study. The research instruments for this study were validated through application of content validity, which was determined by expert judgment. Gay (1992) noted that content validity is a matter of judgment by the researcher and professionals, and has no specific formula for determination. The study established validity of the instruments by seeking the views of the colleagues, other lecturers who are not the researcher's supervisors as well as the expert advice by discussions with the researcher's supervisors.

3.8 Quality assurance

The researcher recruited and trained competent research assistants and supervisors to guarantee the study's high quality. Both the researcher and supervisors were in the field to support data collection. At the end of each day, the research team reviewed its work to fill in any gaps. The collected data was checked for completeness, before it was handed over for entry and analysis.

3.9 Data analysis.

The questionnaires were edited and coded to check that all responses were given and accuracy is ensured. Descriptive statistics was used to analyze the data as it allows for narration to be used to interpret the data on variables. Data from the household were entered using Statistical Package for Social Scientists version 21.0, an SPSS family module that tracks and triggers quality control designs in the SPSS builder, which ensures that clean data files will be produced. Pearson's Moment Product correlation was used to determine the relationship between variables. The researcher maintained a database for all the data collected.

3.10 Ethical Considerations

The study ensured that participants were well informed of the intentions of the study so that they participate from a point of information. The researcher also ensured that data

collected was analyzed professionally and that it was not fudged to conform to a predetermined opinion. More so, to protect the respondents' identities, data was reported as a block instead of highlighting individual cases. The researcher obtained all the necessary permits from the ethical committee, university and the Ministry of health as attached herein on appendix v, vi and vii respectively to ensure that the study does not contravene any ethical requirements. Further, the researcher ensured that all the information provided were treated with utmost privacy and confidentiality, and that no information would be released to a third party without a written permission from the source.

CHAPTER FOUR: RESULTS

4.1 Introduction

The objective of this chapter is to report the results of the data collected during the study. The chapter describes the outcomes of the questionnaires that were used to conduct the study. It shows the demographic information of the respondents and findings on the effects of gender on Community Led Total Sanitation processes in Kanyingombe Community Health Unit, Rongo Sub County.

4.2 Gender of the respondents.

Table: 4.1 Gender of respondents

	Type	Frequency (n)	Percentage (%)
Valid	Male	44	25.6
	Female	128	74.4
	Total	172	100.0

Table 4.1 above shows that the majority of the respondents were female 74.4% compared to that of male 25.6%. This is an indication that at household level females are mostly available except where the head of the household is a female. This is as a result of men leaving the house to look for daily bread for the rest of the family members.

4.3 Age of the respondents.

Table 4.2 Age of the respondents.

	Age	Frequency (n)	Percentage (%)
Valid	Below 25	35	20.3
	25 - 34	38	22.1
	35 - 44	75	43.6
	Over 44	24	14.0
	Total	172	100.0

Information in table 4.2 shows that most of the respondents 43.6% were aged between 35 and 44 years old followed by 25 to 34 (22.1%), below 25 (20.3%) and finally the least representing 14% aged over 44 years old. This points out that potential and active age to

implement the CLTS activities and ensuring its sustainability lies between 25 to 44 years accounting for 65.7% of the respondents.

4.4 Marital status of the respondents

Table 4.3 Marital status of the respondents

Type		Frequency (n)	Percentage (%)
Valid	Married	143	83.1
	Single	4	2.3
	Widower	15	8.7
	Widow	10	5.8
	Total	172	100.0

Table 4.3 shows the marital status of the respondents whereby the study revealed that married respondents representing 83.1% were the majority as compared with single respondents who accounted for 2.3% of the total respondents. Widower and widows were represented by 8.7 % and 5.8% respectively. This is an indication that majority are household members who are supposed to actively participate in CLTS processes and provide sanitary facilities at their household levels.

4.5 The level of education of respondents.

Figure 4.1 Level of education

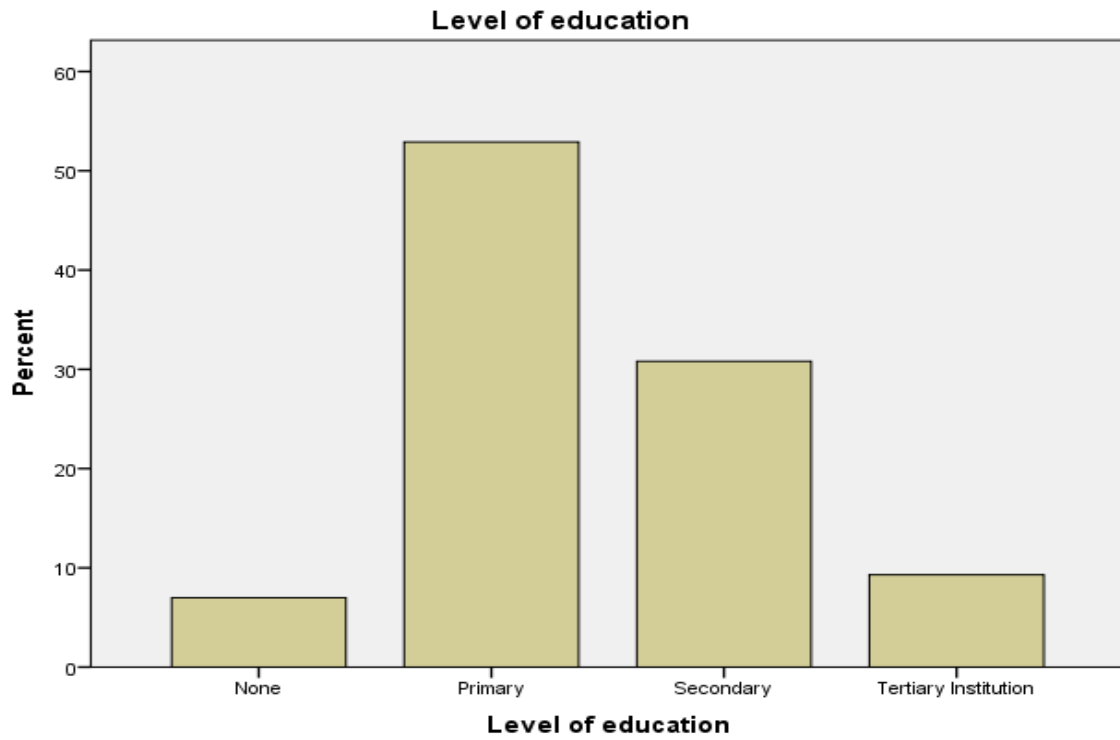


Figure 4.1 shows that there were more respondents 52.9% with primary education followed by secondary education represented by 30.8% .Some respondents 7.0% had no formal education as 9.3% of the respondent had gone past secondary school. The result indicates that at least 90% of the respondents were literate and thus have the potential to learn, internalize and implement the CLTS activities.

4.6 Religion of the respondents.

Table 4.5 Religion of the respondents.

Type		Frequency (n)	Percentage(%)
Valid	None	8	4.7
	Christian	161	93.6
	Islamic	3	1.7
	Total	172	100.0

Information in table 4.5 above shows that 93.6% of the respondents were Christians, although some of the respondents represented by 4.7% did not belong to any religion while 1.7% belonged to Islamic religion. This is an indication that from the biblical point of view they do understand that cleanliness (provision of sanitary facilities or proper waste management) is next to Godliness and the teachings should encourage them to provide and use sanitation facilities. Furthermore they don't require water for anal cleansing.

4.7 Participation of respondents on CLTS processes.

Table 4.6 Participation on CLTS process.

Response		Frequency (n)	Percentage (%)
Valid	Yes	74	43.0
	No	98	57.0
	Total	172	100.0

Table 4.6 shows that the majority of the respondents which were represented by 57.0% did not participate in Community Led Total Sanitation (CLTS) processes. Only 43.0% of the respondents confirmed to have participated in the Community Led Total Sanitation (CLTS) processes. This is indeed a clear indication as to why there is slow pace in implementing CLTS activities as there is low latrine coverage making it possible for open defecation and consequently resulting into diarrheal infections which are still experienced in the study area.

4.8 Level of participation of respondents on CLTS process.

Table 4.7 Level of participation on CLTS process

Level of participation		Frequency(n)	Percentage (%)
Valid	Pre triggering	2	1.2
	Triggering	23	13.4
	Pre triggering and triggering	9	5.2
	Pre triggering and post triggering	7	4.1
	Triggering and post triggering	26	15.1
	Pre triggering, triggering and post triggering	7	4.1
	Total	74	43.0
Missing	Not participated in CLTS process	98	57.0
Total		172	100.0

Although the study found out that approximately 43.0% of the respondents participated in the Community Led Total Sanitation (CLTS) processes, it was realized that majority of them 15.1% had participated in both triggering and post triggering. They were followed by those respondents who participated only during triggering session representing 13.4%. Pre triggering, triggering and post triggering sessions had the same number of respondents to that of pre triggering and post triggering representing 4.1% while the least participated session was pre triggering represented by 1.2%. The majority of the respondents were female perhaps because they are mostly affected from the detrimental effects of poor sanitation. It was also revealed that they participated in both triggering and post triggering which basically entails health education and provision of latrines.

4.9 Activities participated by respondents during triggering sessions.

4.9.1 Participation in Community Mapping

Table 4.8 Community mapping

Response		Frequency (n)	Percentage (%)
Valid	Yes	70	40.7
	No	102	59.3
	Total	172	100.0

Table 4.8 shows the response on the participation of the respondents on community mapping. The study found out that majority of the respondents represented by 59.3% did not participate on community mapping exercise. It was only 40.7% of the respondents who participated on community mapping exercise during triggering sessions. This indicates that the majority of the respondents doesn't understand the significance of the community mapping exercise in the CLTS process and could not connect the community mapping with sanitation scale-up.

4.9.2 Participation in walk of shame

Response		Frequency (n)	Percentage (%)
Valid	Yes	58	33.7
	No	114	66.3
	Total	172	100.0

Table 4.9 shows the response on the participation of the respondents on walk of shame. The study found out that majority of the respondents represented by 66.3% did not participate on the walk of shame exercise. It was only 33.7% of the respondents who participated on walk of shame exercise during triggering sessions. This indicates that majority of the respondents were not ready and felt a shamed to participate in the walk of shame as they did not want to be associated with participating in open defecation and more so did not want to come across OD sites.

4.9.3 Participation in Water in a bottle experiment.

Response		Frequency (n)	Percentage (%)
Valid	Yes	64	37.2
	No	108	62.8
	Total	172	100.0

Table 4.10 above shows the response on the participation of the respondents on water in the bottle experiment. The study found out that majority of the respondents represented by 62.8% did not participate on the water in the bottle experiment. It was only 37.2% of the respondents who participated on the water in the bottle experiment exercise during triggering sessions. This is an indication that the respondents were not able to connect the

experiment with the way in which open defecation contaminates water sources and result to diarrheal infection if water is not treated.

4.9.4 Participation in faeces calculation

Response		Frequency (n)	Percentage (%)
Valid	Yes	113	65.7
	No	59	34.3
	Total	172	100.0

Table 4.11 shows the response on the participation of the respondents on faeces calculation. The study found out that majority of the respondents represented by 65.7% participated on the faeces calculation exercise while 34.3% of the respondents did not participate on the same exercise during triggering sessions. This is an indication that the majority of the respondents were eager to learn the significance of the fecal calculation as pertains to the CLTS process.

4.9.5 Participation in Medical expenses calculation

Response		Frequency (n)	Percentage (%)
Valid	Yes	109	63.4
	No	63	36.6
	Total	172	100.0

Table 4.12 shows the response on the participation of the respondents on medical expenses calculation. The study found out that majority of the respondents represented by 63.4% participated on the medical expenses calculation exercise while 36.6% of the respondents never participated on the same exercise during triggering sessions. This is an indication that the majority of the respondents were willing to conceptualize and internalize the aim of the fecal calculation as pertains to the CLTS process and also they wanted to connect it to the fecal calculation.

4.9.6 Participation in fecal oral diagram.

Response		Frequency (n)	Percentage (%)
Valid	Yes	84	48.8
	No	88	51.2
	Total	172	100.0

Table 4.13 shows the response on the participation of the respondents on fecal oral diagram. The study found out that majority of the respondents represented by 51.2% did not participate on the fecal oral diagram exercise while 48.8% of the respondents participated on the same exercise during triggering sessions. This is an indication that some of the respondents did not proceed to participate in fecal oral diagram session perhaps because they were impatient or they got tired on the process and left before the completion of the entire process.

4.9.7 Participation in public recognition of natural leaders.

Response		Frequency (n)	Percentage (%)
Valid	Yes	71	41.3
	No	101	58.7
	Total	172	100.0

Table 4.14 shows the response on the participation of the respondents on public recognition of natural leaders. The study found out that majority of the respondents (58.7%) did not participate on public recognition of natural leaders exercise. Only 41.3% of the respondents participated on the same exercise during triggering sessions. This is an indication that some of the respondents did not proceed to participate in public recognition of natural leaders session. It further indicates that the respondents were possibly leaving the sessions pre maturely.

4.9.8 Participation in formation of CLTS Committee.

Response		Frequency (n)	Percentage (%)
Valid	Yes	64	37.2
	No	108	62.8
	Total	172	100.0

Table 4.15 shows the response on the participation of the respondents on formation of the CLTS committee. The study found out that majority of the respondents represented by 62.8% did not participate on the formation of the CLTS committee exercise while 37.2% of the respondents participated on the same exercise during triggering sessions. This is an indication that some of the respondents did not proceed to participate in formation of CLTS committee session. This further indicates that the respondents were possibly leaving the sessions pre maturely.

4.9.9 Participation in the development of action plan.

	Response	Frequency (n)	Percentage (%)
Valid	Yes	51	29.7
	No	121	70.3
	Total	172	100.0

Table 4.16 shows the response on the participation of the respondents on development of action plan. The study found out that majority of the respondents represented by 70.3% did not participate on the development of action plan exercise while 29.7% of the respondents participated on the same exercise during triggering sessions. This is an indication that some of the respondents did not proceed to participate in the development of action plan session. This further indicates that the respondents were possibly leaving the sessions as they progressed.

4.10 Barriers to Gender participation in CLTS processes.

Table 4.17 Barriers to gender participation.

Count		Barriers to gender participation in CLTS processes					Total
		Competing tasks	Inadequate knowledge and skills on sanitation	Lack of independent decision making	Poor mobilization for triggering sessions	Lack of prioritizing sanitation	
Gender of respondents	Male	13	7	11	8	5	44
	Female	27	18	44	24	15	128
Total		40	25	55	32	20	172

Table 4.17 shows the Cross tabulation of Gender of respondents versus the barriers to their participation in CLTS processes. The majority of female respondents which accounts for 44 out of 55 mentioned lack of independent decision making as a key challenge. Competing tasks was mentioned as the second major barrier which accounted for 27 females and 13 males, then followed by poor mobilization for triggering sessions accounting for 24 females and 8 males, inadequate knowledge and skills on sanitation accounting for 18 females and 7 males and finally lack of prioritizing sanitation accounting for 15 females and 5 males. This is an indication that the females are always not regarded when it comes to making decisions at the household level concerning to sanitation despite the fact that they are the ones who bear the greatest burden when it comes to detrimental effects of poor sanitation. Furthermore it is clearly revealed that the community doesn't always take sanitation as a priority among their routine tasks and thus continue experiencing the challenges associated with poor sanitation.

4.11. Benefits of participating on the implementation of CLTS activities

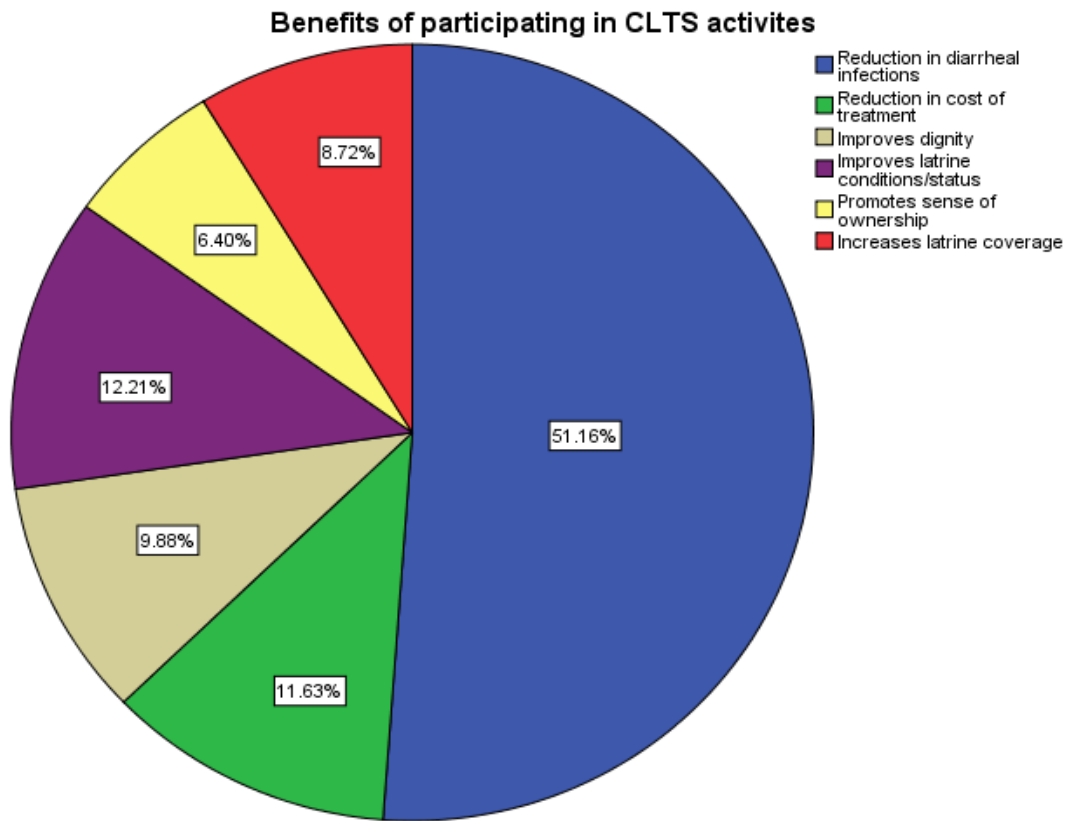


Figure 4.2 Benefits of participating on the implementation of CLTS activities

Figure 4.2 shows the benefits of participating on CLTS activities. The study realized that majority of the respondents represented by 51.16 % had reduction in diarrheal infections as their major benefit of participating in CLTS activities. This was followed by improvement of latrine conditions /status represented by 12.2%, reduction in cost of treatment represented by 11.63%, improvement of dignity represented by 9.88%, increasing latrine coverage represented by 8.72% and finally promoting sense of ownership represented by 6.40%. This is evidence based information as they have been facing challenges of diarrheal infections as reported in the nearest health facility and more so due to recent outbreak of cholera in the area.

4.12 Decision making by gender on sanitation matters at household level.

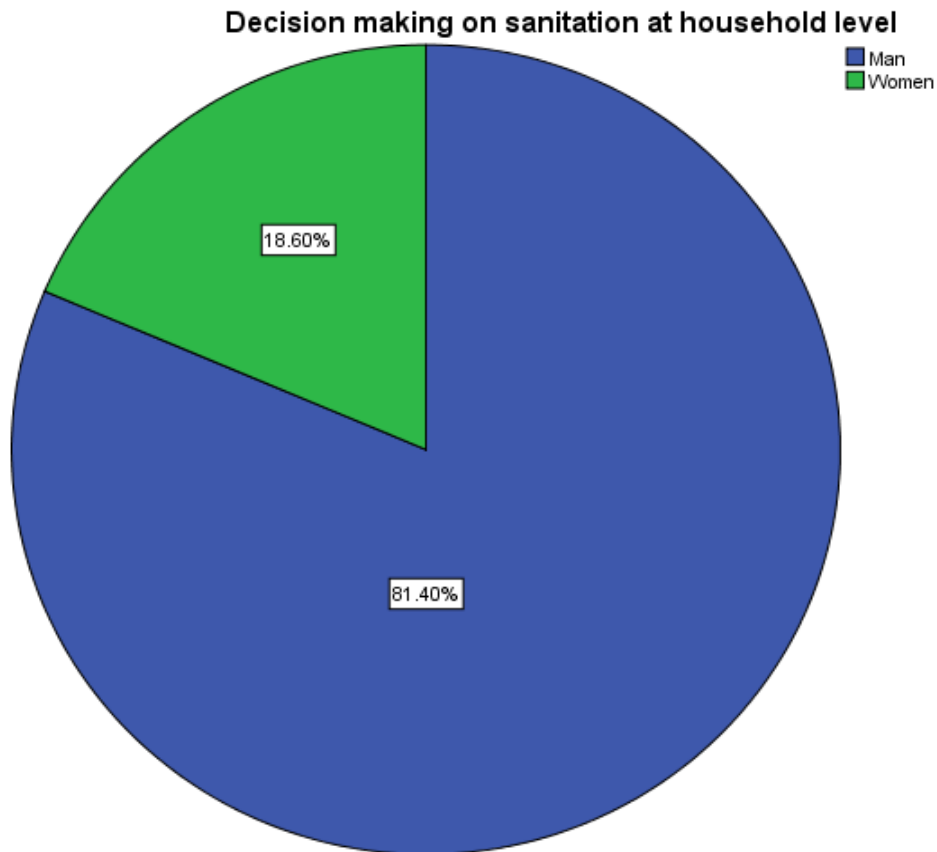


Figure 4.3 Decision making by gender on sanitation.

Figure 4.3 shows that men who were represented by 81.4% dominate in decision making at the household level when it comes to issues to do with sanitation compared to women who were represented by 18.6%. The study revealed that decision making on sanitation issues was dominated by men despite the fact that they are less affected by the consequences of poor sanitation and thus sanitation issues slow down and indeed it's the reason as to why the implementation of CLTS has not been fully done. More so the cases of diarrheal infections are still reported in this study area.

4.13 Attendance of the respondents on CLTS meetings.

Figure 4.4 Attendance on CLTS meetings.

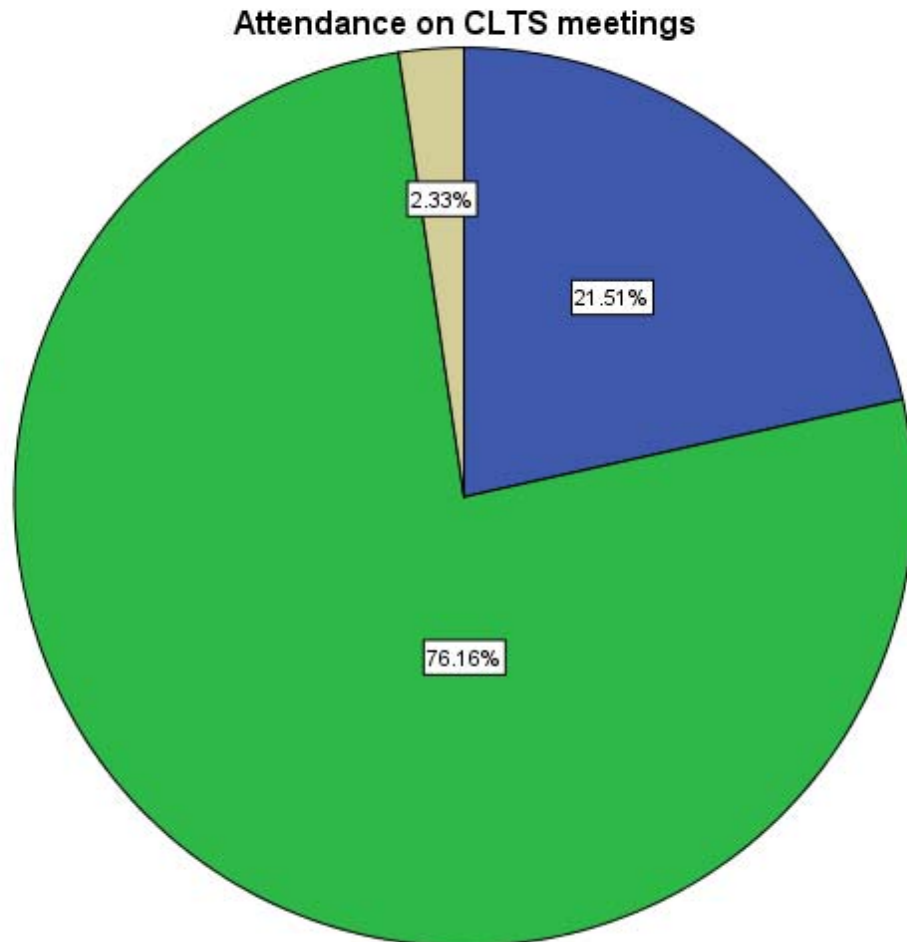


Figure 4.4 shows the attendance of respondents on Community Led Total Sanitation (CLTS) meetings. The study found out that the CLTS meetings are majorly attended by women 76.16% as opposed to men 21.51% though in rare cases 2.33% do others attend the same meetings. Majority of the female do attend the CLTS meeting which is an indication that men are less concerned with sanitation issues despite the fact that they are the ones who make decision on sanitation implementation processes. It is also a reflection that females are mostly affected from negative effects of poor sanitation within the household level.

4.14 Gender roles of the respondents on CLTS processes.

4.14.1 The role of attending triggering meetings

Table 4.18 Attending triggering meetings

Count		Attending triggering meetings		Total
		Yes	No	
Gender of respondents	Male	36	8	44
	Female	106	22	128
Total		142	30	172

Table 4.18 shows the cross tabulation of gender versus the role of attending triggering meetings. The study found out that only 36 out of 44 male and 106 out of 128 females mentioned attending triggering as one of their key roles. Results indicates that attendance for triggering was well represented by both gender as over 80% of either gender attended hence they both value the triggering meetings.

4.14.2 The role of labour provision.

Table 4.19 Provision of labour

Count		Provision of labour		Total
		Yes	No	
Gender of respondents	Male	31	13	44
	Female	73	55	128
Total		104	68	172

Table 4.19 shows the cross tabulation of gender versus the role of providing labour. The study found out that only 31 out of 44 male and 73 out of 128 females mentioned provision of labour as one of their key roles. This is an indication that the role of labour provision is majorly done by males despite the fact that both gender participate in labour provision at different categories of labour provision.

4.14.3 The role of resource mobilization.

Table 4.20 Resource mobilization

Count		Resource mobilization		Total
		Yes	No	
Gender of respondents	Male	30	14	44
	Female	62	66	128
Total		92	80	172

Table 4.20 shows the cross tabulation of gender versus the role of resource mobilization. The study found out that only 30 out of 44 male and 92 out of 128 females mentioned resource mobilization as one of their key roles. This is an indication that males mostly take lead in resource mobilization as they are regarded as the providers and more so being the head of the household. Also the females participate in resources mobilization and these resources are mainly locally available.

4.14.4 The role sensitization of the village members on sanitation.

Table 4.21 Sensitization of the village members on sanitation

Count		Sensitization of the village members on sanitation		Total
		Yes	No	
Gender of respondents	Male	16	28	44
	Female	40	88	128
Total		56	116	172

Table 4.21 shows the cross tabulation of gender versus the role of sensitization of the village members on sanitation. The study found out that only 16 out of 44 male and 56 out of 128 females mentioned sensitization of the village members on sanitation as one of their key roles. From the study it is revealed that the majority of the respondents were not so much concerned on sensitizing other members of the community on sanitation.

4.14.5 The role sitting the latrines.

Table 4.22 Sitting of latrine

Count		Sitting of latrine		Total
		Yes	No	
Gender of respondents	Male	41	3	44
	Female	23	105	128
Total		64	108	172

Table 4.22 shows the cross tabulation of gender versus the role of sitting of latrine. The study found out that 41 out of 44 male and 23 out of 128 females mentioned sitting of latrine as one of their key roles in CLTS process. This is an indication that the males are majorly responsible in deciding where the latrine should be constructed within the compound of the household.

4.14.6 The role of supervising latrine construction.

Table 4.23 Supervising latrine construction

Count		Supervising latrine construction		Total
		Yes	No	
Gender of respondents	Male	35	9	44
	Female	34	94	128
Total		69	103	172

Table 4.23 shows the cross tabulation of gender versus the role of supervising the latrine construction. The study found out that 35 out of 44 male and 34 out of 128 females mentioned supervising latrine construction as one of their key roles in CLTS process. It indicates that males are responsible for supervising the quality and progress of the latrine construction.

4.15 The importance of integrating gender in CLTS activities.

Figure 4.5 Importance of integrating gender in CLTS activities.

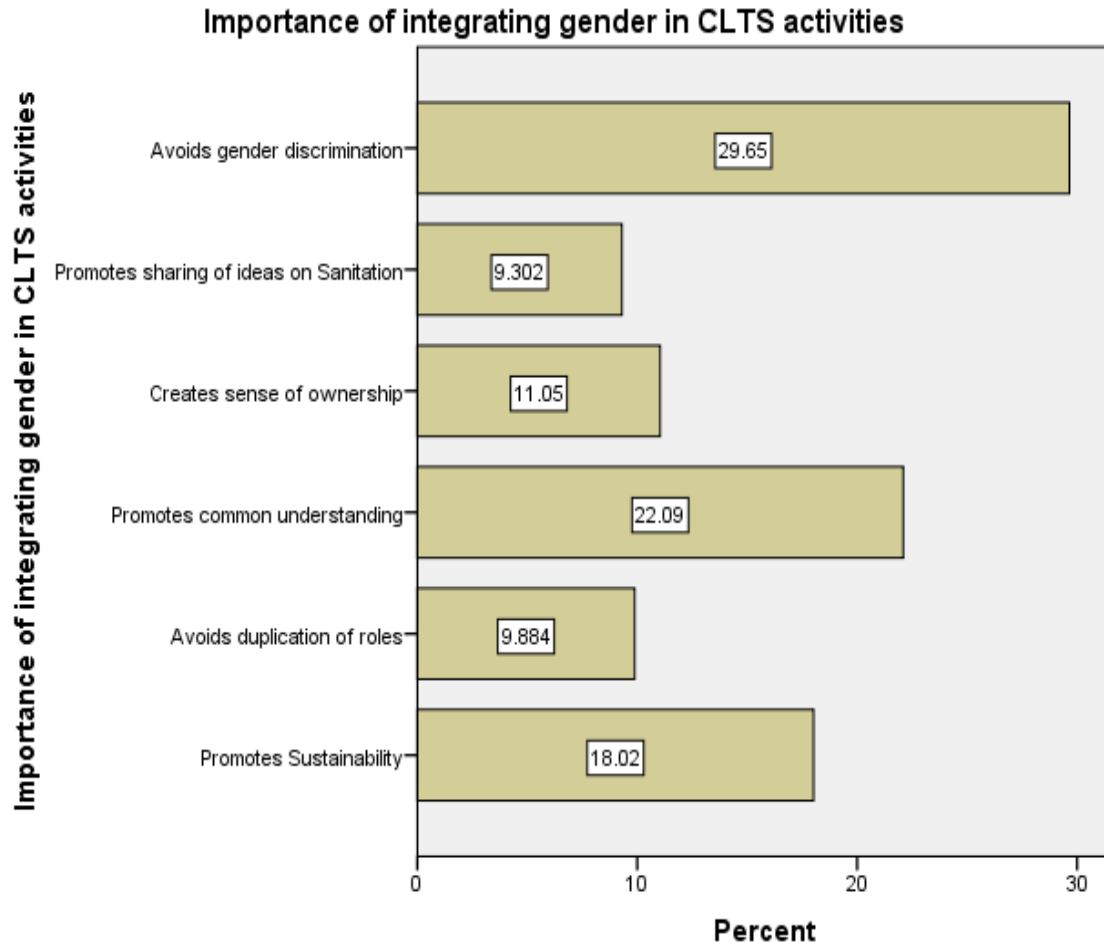


Figure 4.5 shows the importance of integrating gender on CLTS activities. The majority of the respondents (29.65%) mentioned that integration of gender on CLTS process avoids gender discrimination. 22.09% said it promotes common understanding. 18.02% mentioned that it promotes sustainability as 11.05% mentioned that it creates sense of ownership. 9.88% mentioned that it avoids duplication of roles while 9.3% mentioned that it promotes sharing of ideas on sanitation. The study indicates that there is poor gender integration during CLTS implementation processes which is due to one gender dominating in sanitation activities without recognizing the significance of the other gender.

4.16 The occupation of the respondents.

Type		Frequency (n)	Percentage (%)
Valid	Peasant farmers	138	80.2
	Teachers	5	2.9
	Clerks	5	2.9
	Administrators	5	2.9
	Technicians	3	1.7
	Accountants	2	1.2
	Salonists	2	1.2
	Health personnel	2	1.2
	Mason	4	2.3
	Carpenter	2	1.2
	Drivers	2	1.2
	Tailors	2	1.2
	Total	172	100.0

Table 4.24 shows different occupations of the respondents. Indeed it was realized from the study that most of the respondents 80.2% were peasant farmers, followed by teachers, clerks and administrators representing 2.9% each, masons (2.3%), technicians (1.7%) and finally accountants, saloonists, health personnel, carpenters, drivers and tailors who were represented by 1.2% each. Indeed over 80% of the respondents being peasant farmers is an indication that economically they are not stable enough to prioritize and invest in sanitation activities resulting into low latrine coverage and promoting open defecation which in turn results into episodes of diarrheal infections in the area. This is also a reason as to why majority of them use locally available materials which are not durable for latrine construction and hence result into frequent repairs and maintenance.

4.17 Average monthly income.

Amount (ksh)		Frequency (n)	Percentage (%)
Valid	Less 3000	14	8.1
	3001- 6000	113	65.7
	6001 - 9000	41	23.8
	Over 9000	4	2.3
	Total	172	100.0

Table 4.25 displays the average monthly income for the respondents for the study. The study indicates that the majority of the respondents (65.7%) earn between Kenya shillings 3,001 to 6,000 a month, followed by those respondents who earn between ksh. 6001.00 and 9,000.00 and those who earn less than 3,000.00 representing 23.8% and 8.1% respectively. The study realized that the least respondents (2.3%) earn over Kenya shillings 9,000.00. This is evident as to why majority of the community members construct temporary sanitary facilities and they do not give priorities to sanitation activities.

4.18 The status of the houses.

Response		Frequency (n)	Percentage (%)
Valid	Permanent	13	7.6
	Semi permanent	142	82.6
	Temporary	17	9.9
	Total	172	100.0

Table 4.26 shows the status of the houses occupied by the respondents. The study found out that the majority of the respondents (82.6%) stay in a semi-permanent house followed by those respondents who stay in temporary houses (9.9%) and finally those who stay in permanent houses (7.6%). This is an indication that majority of the community members are economically unstable and thus cannot afford a well constructed sanitary facilities. It is also an indication as to why majority of the latrines are constructed using locally available materials which require frequent repairs.

4.19 The approximate acreage of land.

Acreage		Frequency (n)	Percentage (%)
Valid	Less 1	13	7.6
	1 - 2	127	73.8
	2 - 3	18	10.5
	3 - 4	8	4.7
	Over 4	6	3.5
	Total	172	100.0

Table 4.27 shows the approximate acreage of land owned by the respondents who participated in the study. The study has shown that majority of the respondents (73.8%) had between 1 and 2 acres of land while the minority (3.5%) had over 4 acres of land. The study realized that majority of the people in the area of study own between 1 to 2 acres of land which is not adequate for commercial produce but only for domestic produce and hence no surplus which can be sold to supplement the provision of sanitary facilities.

4.20 The source of materials for latrine construction.

Figure 4.6 Source of materials for latrine construction.

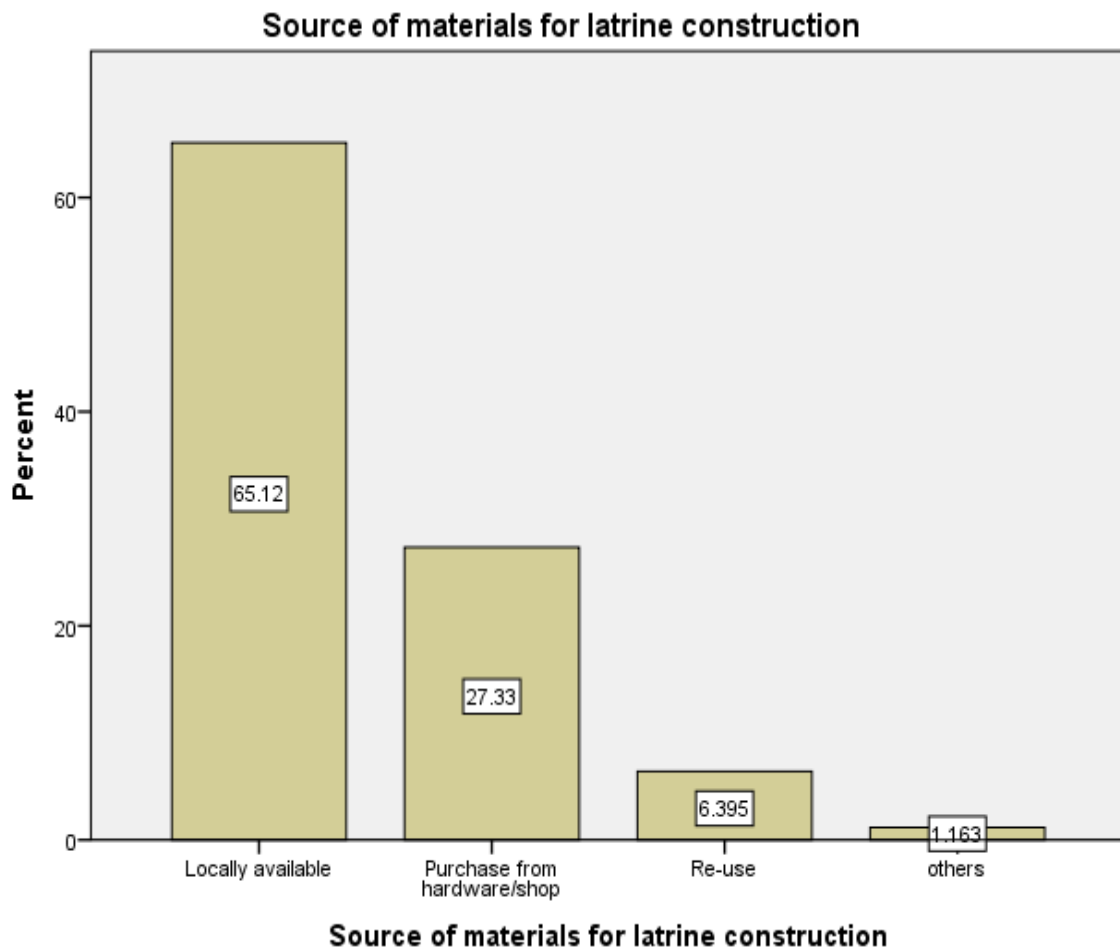


Figure 4.6 shows different sources where the respondents obtain the latrine construction materials from. The study found out that the majority of the respondents (65.1%) got their latrine construction materials locally, 27.3% purchase from the hardware or shop, 6.4% re-use the materials while 1.2% obtains the materials from other sources. This is an indication that the community is unstable economically and hence opt for alternative construction materials which are not durable.

4.21 The challenges experienced with latrine construction

Figure 4.7 Challenges experienced with latrine construction

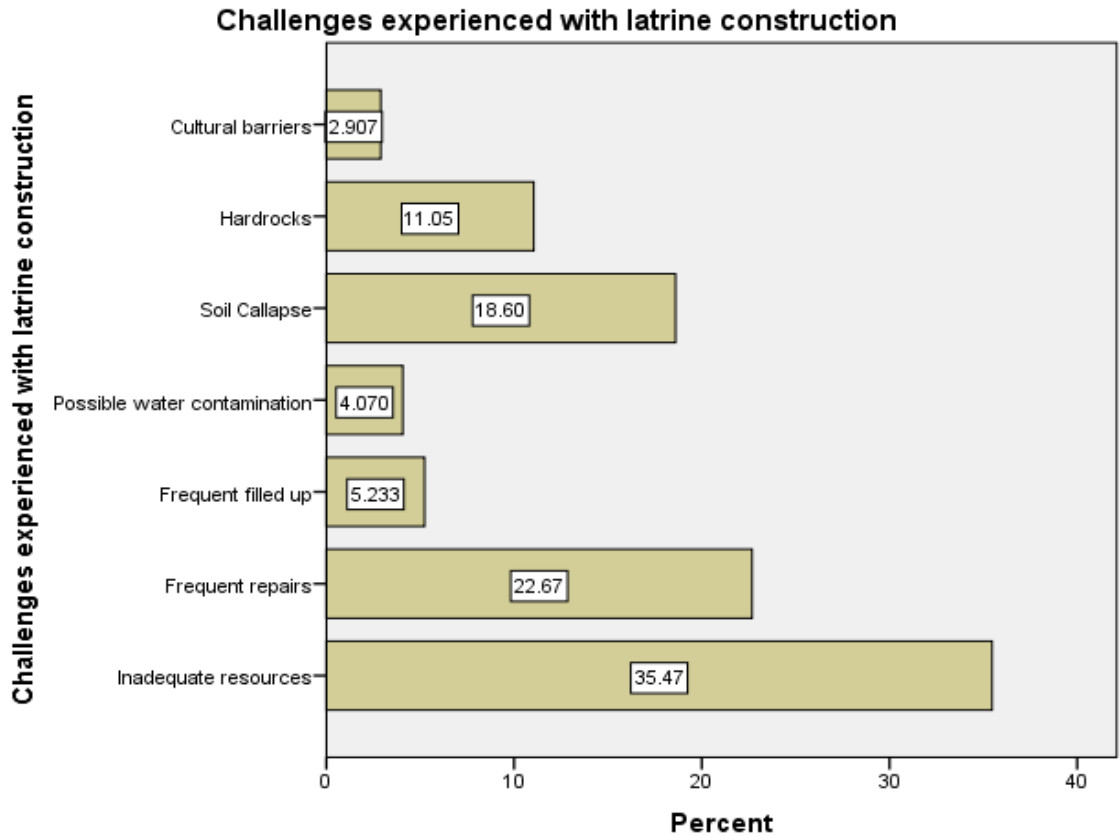


Figure 4.7 shows the challenges experienced during latrine construction. The study reveals that various challenges are experienced with latrine construction with the major challenge of resource inadequacy (34.47%) followed by frequent repairs (22.67%), soil collapse (18.60%), hardrocks (11.05%), frequent filled up (5.23%), possible water contamination (4.07%) and finally cultural barriers accounting for 2.91%. The study

reveals that various challenges are experienced with latrine provision and inadequate resources were noted as a major challenge. This is attributed to poor economic status which puts the community at a state of constructing temporary latrines which requires frequent repairs. The community is also not able to provide alternative sanitation technologies in areas with hard rocks, collapse soils and possibility of water contamination.

4.22 The types of hand washing facilities installed at household level

Type		Frequency (n)	Percentage (%)
Valid	None	49	28.5
	Tippy tap	21	12.2
	Leaky tins	85	49.4
	Hand washing basin	3	1.7
	Improvised container with tap	14	8.1
	Total	172	100.0

Table 4.28 shows the types of hand washing facilities installed and used at the household level. From the study it is indicated that 49.4% of the respondents use leaky tins for hand washing, 12.2% use tippy taps, 8.1% use improvised containers fixed with taps while 28.5% don't have any hand washing facility installed at their households. Majority of the households which were visited during data collection were found to be using leaky tins as a hand washing facility. This is simple, locally and cheaply made equipment using locally available materials. This reveals that the community cannot afford to purchase a modern hand washing facility due to their unstable economic status.

4.23 Type of detergent used for hand washing.

Type		Frequency (n)	Percentage (%)
Valid	None	85	49.4
	Bar soap	39	22.7
	Liquid soap	11	6.4
	Ash	33	19.2
	others	4	2.3
	Total	172	100.0

The table 4.29 above shows the types of detergents the household members use during hand washing at their households. The study realized that the majority of the respondents 49.4% don't use any detergent for hand washing, 22.7% use bar soaps, 19.2% use ash, 6.4% use liquid soap while 2.3% use other detergents to wash their hands. The majority of the household don't wash their hands using any detergent and a few either use a bar soap or ash. This indicates that most of the household don't afford a detergent specifically for hand washing and that is why they are prone to sanitation and hygiene related infections due to improper hand washing techniques which does not eliminate the disease causing micro-organisms.

4.24 The importance of gender mainstreaming in CLTS processes.

Table 4.30 Whether gender mainstreaming is important in CLTS processes

Count		Importance of gender mainstreaming in CLTS processes.			Total
		Neutral	Agree	Strongly agree	
Gender of respondents	Male	2	5	37	44
	Female	2	11	115	128
Total		4	16	152	172

Table 4.30 shows Cross tabulation of Gender of respondents versus significance of gender mainstreaming in CLTS processes. The males who strongly agreed accounted for 37 out of 44 while the female was 115 out of 128. Those who agreed accounted for 4 out of 44 males and 11 out of 128 females while the rest were neutral with 2 out of 44 and 2 out of 128 males and females respectively. This is an indication that gender concerns are not thoroughly integrated into CLTS activities and thus negatively affects sanitation activities.

4.25 The importance of gender equality in implementation of CLTS processes.

Table 4.31 Whether gender equality is important in implementation of CLTS processes.

Count		Importance of gender equality in implementation of CLTS processes.					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Gender of respondents	Male	1	1	4	15	23	44
	Female	1	3	8	36	80	128
Total		2	4	12	51	103	172

Table 4.31 shows Cross tabulation of Gender of respondents versus gender equality in implementation of CLTS processes. The males who strongly agreed accounted for 23 out of 44 while that of the females were 115 out of 128. Those who agreed accounted for 15 out of 44 males and 36 out of 128 females. The ones who were neutral accounted for 4 out of 44 for males and 8 out of 128 for females as those who disagreed and strongly disagreed accounted for 1 male and 3 females and 1 male and 1 female respectively. This is an indication that equal opportunities and participation of women and men in CLTS activities is not practiced hence poor acceptance of equal and inalienable sanitation rights of women and men.

4.26 Gender equity during implementation of CLTS process.

Table 4.32 Gender equity during implementation of CLTS process

Count		Gender equity during implementation of CLTS process.				Total
		Disagree	Neutral	Agree	Strongly agree	
Gender of respondents	Male	1	4	18	21	44
	Female	2	7	43	76	128
Total		3	11	61	97	172

Table 4.32 shows Cross tabulation of Gender of respondents versus gender equity in implementation of CLTS processes. The males who strongly agreed accounted for 21 out of 44 while the females accounted for 76 out of 128. Those who agreed accounted for 18

out of 44 males and 43 out of 128 females. The ones who were neutral accounted for 4 out of 44 for males and 7 out of 128 for females consequently those who disagreed accounted for 1 male and 2 females out of 44 and 128 respectively. This is an indication that there is unfair process to either gender in relation to participation and inclusion in sanitation activities.

4.27 Defined gender roles in CLTS processes.

Table 4.33 Whether gender roles in CLTS processes are well defined

Count		Defined gender roles in CLTS processes.				Total
		Disagree	Neutral	Agree	Strongly disagree	
Gender of respondents	Male	1	2	7	34	44
	Female	2	4	14	108	128
Total		3	6	21	142	172

Table 4.33 shows Cross tabulation of Gender of respondents versus defining gender roles in CLTS processes. The males who strongly agreed accounted for 34 out of 44 while the females accounted for 108 out of 128. Those who agreed accounted for 7 out of 44 males and 14 out of 128 females. The ones who were neutral accounted for 2 out of 44 for males and 4 out of 128 for females consequently those who disagreed accounted for 1 and 2 out of 44 males and 128 females respectively. This is an indication that gender roles are not well defined in the community as pertains to sanitation activities in the community. Prescriptions for action and behavior allocated to women and men respectively due to widely shared ideas, beliefs and norms in the society about what is ‘typically’ feminine and masculine characteristics, abilities and key virtues are not clear to either gender and requires a clear definition to avoid conflict of roles.

4.28 The value of gender analysis during CLTS implementation processes.

Table 4.34 Gender analysis during CLTS implementation process

Count		Gender analysis during CLTS implementation processes.				Total
		Disagree	Neutral	Agree	Strongly agree	
Gender of respondents	Male	1	6	7	30	44
	Female	1	13	17	97	128
Total		2	19	24	127	172

Table 4.34 shows Cross tabulation of Gender of respondents versus the value of gender analysis during CLTS implementation processes. The males who strongly agreed accounted for 30 out of 44 while the females accounted for 97 out of 128. Those who agreed accounted for 7 out of 44 males and 17 out of 128 females. The ones who were neutral accounted for 6 out of 44 for males and 13 out of 128 for females finally those who disagreed accounted for 1 and 1 out of 44 males and 128 females respectively. This is an indication that identification of key issues contributing to gender inequalities as pertains to sanitation are not properly addressed.

4.29 Discouraging gender discrimination during CLTS processes.

Table 4.35 Discouraging Gender discrimination during CLTS processes

Count		Discouraging Gender discrimination during CLTS processes		Total
		Agree	Strongly agree	
Gender of respondents	Male	30	14	44
	Female	6	122	128
Total		36	136	172

Table 4.35 above shows Cross tabulation of Gender of respondents versus the discouraging of gender discrimination during CLTS processes. The males who strongly agreed accounted for 14 out of 44 while the females accounted for 122 out of 128 as those who agreed accounted for 30 out of 44 males and 6 out of 128 females. This is an

indication that there is unequal or unfair treatment of either gender based on sex rather than on their individual skills, talents and capabilities.

4.30 The strategies to ensure gender participation in CLTS processes

Table 4.36 Strategies to ensure gender participation in CLTS processes.

	Case Processing Summary					
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percentage
Involvement of both men and women in decision making process	111	64.5%	61	35.5%	172	100.0%
Joint planning on CLTS activities	93	54.1%	79	45.9%	172	100.0%
Joint Implementation of CLTS activities.	157	91.3%	15	8.7%	172	100.0%
Joint resource mobilization and utilization.	50	29.1%	122	70.9%	172	100.0%
Awareness creation on Gender rights.	41	23.8%	131	76.2%	172	100.0%
Capacity Building on sanitation issues.	90	52.3%	82	47.7%	172	100.0%

Table 4.36 above shows the proposed strategies for ensuring gender participation on Community Led Total Sanitation (CLTS) activities. In response the study revealed that majority of the respondents represented by 91.3% suggested joint implementation of CLTS activities. It was followed by a strategy to involve both male and female in decision making at household level concerning sanitation issues which represented 64.5%

of the respondents. Joint planning strategy on CLTS activities was represented by 54.1%, capacity building on sanitation issues represented by 52.3%, joint resource mobilization was represented by 29.1% and finally awareness creation on gender rights which was represented by 23.8%. This is an indication that the community members have strengths which have not been fully utilized. It is also clear that joint implementation of sanitary facilities is lacking among the gender hence lack of ownership. It is revealed that men dominate in making decisions on sanitation issues but less participation in the implementation of CLTS activities. There is poor planning and lack of collective responsibilities in the implementation of the CLTS activities which hinders the reduction in infections associated with poor or inadequate sanitation. There are also inadequate skills and knowledge on CLTS activities among the household heads and it was noted that male and female were not combining their efforts in looking for resources for the latrine construction and most of them were not aware of their individual rights when it comes to sanitation activities.

CHAPTER FIVE: DISCUSSION

5.1 Discussion.

The study found out that 57% of the respondents did not participate in Community Led Total Sanitation (CLTS) processes. The findings are in harmony with a study by Oko *et al* (2011), which found out that active participation of both men and women in water and sanitation service, as well as shared responsibility of managing the water and sanitation services, are important due to their different roles and needs.

It was found out from the study that during the triggering sessions 40.7% of the respondents participated on community mapping exercise, 33.7% participated on walk of shame and 65.7% participated on the faeces calculation. This findings concur with a study by Zombo (2009), which found out that through exercises such as transect walks, mapping of defecation, and the various routes of disease spread, as well as shit calculation exercises aimed at drawing villagers' attention to the amount of faeces they are ingesting and by using local terms for 'shit', powerful emotions such as shame and disgust are generated.

The study found out that men (81%) dominated in decision making which concur with Pedi *et al* (2009) whose study indicates that in many societies, women's views, in contrast to those of men, continue to be systematically under-represented in decision-making bodies. This lack of a participatory approach is closely related to the uneven power structures in decision-making processes that characterize these societies and the sanitation sector in particular. A case study by Adenike (2011), further indicated that women do not have the same decision-making power as men, even if they hold the same leadership positions as men. Finally a study by Sanchez (2011), indicated that men still dominate the arena of planning and decision making regarding water and sanitation.

The study identified that 68% of the male respondents mentioned resource mobilization as one of their key activities in Community Led Total Sanitation. The findings concur with a study by Sigauke (2009), which established that men considered themselves as the providers of resources needed for sanitation at household level. The study further noted

that women also looked upon men to provide the funding for materials needed for sanitation.

The study shows that 72% of the respondents mentioned sensitization of the village members on sanitation as one of their key roles. This is in agreement with a study done by Halcrow (2010), which found out that Sensitization of men (including husbands and male leaders) is critical for securing increased participation by women in many contexts. Dialogue and involvement of men is also essential to achieve sustainable benefits for women and changes in gender relations.

The study found out that 65.7% of the respondents earn between three thousand and six thousand Kenya shillings a month which reveals that they cannot afford constructing a latrine based on their income in relation to the cost of constructing the latrine. This is in harmony with Robert and John (2007), whose study in Bangladesh established that the cost of building a latrine is high in relation to household income in many rural communities, requiring unaffordable technical and financial resources. Further the findings of this study agrees with a similar study by WHO/UNICEF (2004), which expressed the importance of income level of head of household in determining the affordability and sustainability of a toilet facility owned by respondents.

The findings of this study showed that 82.6% of the respondents stay in semi-permanent houses, an indication that they are economically unstable to afford latrine construction. This is indeed in line with a study in Indonesia by Mukherjee (2009), whose findings indicated that the construction of latrines requires the participation of communities and people often say they cannot conceive sleeping in thatched-roof huts and on the other hand build latrines with cement and reinforcing steel just to defecate. Thus, they give less importance to the latrines than to other facilities and do not want to invest in latrines.

In this study the majority of the respondents (65.1%) got their latrine construction materials locally due to their economic capability which does not allow them to purchase materials from the hardwares. These findings are in agreement with a study by WHO & UNICEF (2014), which states that occupation determines the economic well-being of

residents and whether a sanitation technology is considered inexpensive or at least cost solution to the issues of open defecation.

From this study, soil collapse (18.60%) and hard-rocks (11.05%) were found as one of the challenges experienced during latrine construction. This phenomenon too was established by Phillips (2010), during an evaluation of the community led total sanitation approach in Liberia ,which established that the geographical conditions in some locations make latrine construction more difficult, either because the ground is too hard or too sandy and unstable.

The study revealed that over 88% of the respondents strongly agreed that there is significance of gender mainstreaming in CLTS processes. This is in line with a study by De Waal (2006), which found out that Gender mainstreaming can result into greater female participation in typically male-dominated development projects as well as greater collaboration between the genders when implementing development projects. More so according to Masaka Municipal Development Plan (2007/08-2009-10), gender mainstreaming is a requirement for all national, sector, district, plans, programs and budgets. Contrary a review of the Masaka Municipal Development Plan (2007/08-2009-10) Uganda showed limited commitment to the mainstreaming of gender in water and sanitation activities and programs.

The study shows that 80% of the respondents strongly agreed on gender equality in implementation of CLTS processes. This findings are in harmony with a study by Otieno (2009), which indicates that gender equality make the economies grow faster, children's health improves and there is less corruption. Further the study indicates that gender equality helps reduce the root causes of poverty and vulnerability while contributing to sustainable growth and the achievement of the Millennium Development Goals. Further a study by Fisher (2010), reiterates that it is important to support women's organizations to work towards gender equality through activities which have been specifically designed to promote gender equality, through strengthening local women's organizations to set and carry out their own agenda for equality, show the strongest evidence of strategic and sustainable changes in gender relations.

The study found out that 64.5% of the respondents proposed involvement of both male and female in decision making at household level concerning sanitation issues as a strategy to ensure gender participation in CLTS. This is in line with a study by Milhailova and Diaz (2007), Mexico which showed that stronger involvement of civil society, women and minority groups in decision making on sanitation is necessary to make a breakthrough and to enhance participation and capacity building.

The study found out that 79% of the respondents strongly agreed that gender discrimination should be discouraged during CLTS activities. This concurs with a study by Cohre *et al* (2008) who found out that a combination of unequal and uneven power and legal structures based on discrimination and a lack of political commitment often leads to the neglect of women's needs and hinders their involvement in sanitation development and planning.

The study revealed that 74% of the respondents strongly agreed that gender analysis is important during CLTS activities. The findings are in agreement with a study by UN Water (2006) which found out that gender analysis builds understanding of demands and needs of gender, their respective knowledge and expertise, attitudes and practices and draws light on the constraints for gender's participation in sanitation activities.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion.

The gender integration in CLTS process is a challenge, since there was inadequate involvement and participation of both gender either in decision making process on CLTS and more so attending the CLTS triggering session.

As pertains to power relations in the area, the roles and responsibilities of each gender were not well defined when it comes to sanitation activities. This has brought about lack of clear understanding of roles and responsibilities of either gender in CLTS activities.

The majority of the respondents were economically unstable which greatly contributed to poor sanitation status of the villages and poor sanitation scale-up due to inadequate resources for latrine construction necessitating the community to use locally available materials which are not durable and sustainable.

Most of the respondents highly acknowledged the move to have new strategies to enhance gender participation in CLTS processes.

6.2 Recommendations.

The implementers and or facilitators should ensure involvement and participation of both gender during CLTS processes from planning, to implementation and finally to monitoring and evaluation. This will create sense of ownership and by all means they will sustain ODF status within their villages.

To embrace power relations in CLTS processes, the community should harmonize and clarify roles and responsibilities of different gender as pertains to CLTS activities.

The County government of Migori- health department should sensitize the community members on the existing sanitation technological options for specific areas with latrine provision challenges.

The county government of Migori under the department of social services should hold gender awareness sessions for all village members so that they can appreciate gender relations and relevance of gender mainstreaming in CLTS processes.

Social mobilization by health staff for triggering should be intensified to ensure all village members are reached and participate during triggering sessions.

Gender dialogues and gender analysis should be organized by CLTS implementers at community levels to raise gender awareness among community members and to inform the design of the CLTS programs respectively.

The County government of Migori should integrate gender concerns and issues on Community Led Total Sanitation by developing a gender integration policy document.

6.3 Suggestions for Further Studies.

Since the study was limited to Kanyingombe Community Health Unit in Rongo Sub county more studies can be done in other sub counties within the county of Migori and then the results can be compared.

Further studies can be carried out to determine the impact of CLTS on control of diarrheal infections

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APPENDIX I: WORK PLAN

ACTIVITY	OCT. - DEC. 2014	JAN.- MAR. 2015	APR. - MAY 2015	JUNE 2015	JULY 2015	AUG. 2015	SEPT. 2015	OCT. 2015	NOV. 2015	DEC. 2015	JAN. 2016
Developing Proposal Document											
Literature Review											
Proposal Submission and Defence (Departmental Level)											
Proposal Submission and Defence (School Level)											
Pilot Study											
Data Collection											
Data Analysis											
Thesis Writing											
Thesis Submission and defence											
Final Thesis Submission											

APPENDIX II: BUDGET

ACTIVITIES	QUANTITY	RATE	TOTAL
PROPOSAL WRITING			
i. Stationery-Notebooks	5 pieces	300.00	1,500.00
-Pens	10 pieces	20.00	200.00
-Flash disk	2GB	800.00	800.00
-Spring files	2 pieces	50.00	100.00
ii. Typesetting and printing	40 copies	30.00	1,200.00
iii. Photocopying	300 copies	3.00	900.00
iv. Binding (Loosely)	7	100.00	700.00
v. Transport (Local)	5 days (Bondo)	1500.00	7,500.00
vi. Daily Subsistence	5 days (Bondo)	1000.00	5,000.00
vii. Literature review-Transport	5 days (Kisumu)	1000.00	5,000.00
-Subsistence	5 days (Kisumu)	1,000.00	5,000.00
Subtotal			27,900.00
PILOT STUDY			
i. Producing data tools	6 copies	30.00	180.00
ii. Photocopying data tools	60 copies	3.00	180.00
Training of enumerators			
iii. Transport (local) 3 days	12 enumerators	500.00	18,000.00
iv. Subsistence (Local) 3 days	12 enumerators	1,000.00	36,000.00
Training of supervisors			
v. Transport (local) 3 day	3 supervisors	1,000.00	9,000.00
vi. Subsistence (Local) 3 day	3 supervisors	500.00	3,000.00
Subtotal			66,360.00
DATA COLLECTION			
i. Printing data tools	18 copies	30.00	360.00
ii. Photocopying data tools	700 copies	3.00	2100.00
iii. Subsistence (local) 5 days	12 enumerators	1,000.00	60,000.00
iv. Transport (Local) 5 days	12 enumerators	500.00	30,000.00
v. Subsistence (local) 7 days	3 supervisors	1,000.00	21,000.00
vi. Transport (Local) 7 days	3 supervisors	500.00	21,000.00
Subtotal			134,460.00
THESIS PREPARATION			
i. Typesetting and printing	70 copies	30.00	2,100.00
ii. Photocopying	490 copies	3.00	1,470.00
iii. Binding	7 copies	200.00	1,400.00
iv. Transport (Local)	6 days (Bondo)	1500.00	9,000.00
v. Subsistence (Local)	6 days (Bondo)	1000.00	6,000.00
Subtotal			19,970.00
CONTIGENCIES (10%)			24,869.00
GRAND TOTAL			273,559.00

APPENDIX III: INFORMED CONSENT:

Greetings, My name isI am a resident of Rongo Sub County and in this exercise I am a research assistant. During the past there has been implementation of Community Led Total Sanitation (CLTS) activities which your household may have participated in or benefited from. We are conducting a survey to get feedback from all stakeholders on the effects of gender on CLTS processes. The information that you and other people will provide will enable us to determine how to improve on the work the community has been involved.

We have selected your household randomly to participate in the study about the effects of gender on CLTS processes in your village. We are trying to learn about the extent to which gender is involved in CLTS. If you agree to participate it will take less than one hour.

Your participation is voluntary and there is no penalty for refusing to participate. The information you will provide will be treated with utmost confidentiality and your name will not appear anywhere in the report. Your responses cannot be tracked back to you because they will be combined with the responses of others to establish common trends.

Do you have any question about the research? Would you like to participate? (If yes ask the participant to sign or put their thumb print below)

I have read or been read to and understood the above and agreed to participate freely in this survey.

Signature (respondent).....Or thumb print if unable to sign.....

If respondent has refused to participate, thank him or her for their time and leave the household.

Thank you for accepting to participate in this survey.

(c) During triggering session which activities did you participate in?

(Tick all applicable)

	Activity	Yes	No
i	Community mapping.		
ii	Walk of shame.		
iii	Water in a bottle experiment.		
iv	Faeces calculation.		
v	Medical expenses calculation.		
vi	Fecal Oral Diagram.		
vii	Public recognition of Natural Leaders.		
viii	Formation of CLTS Committee.		
ix	Development of Action Plan.		

7. (a). What are the barriers to the participation of women in CLTS activities?

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(b) What are the barriers to the participation of men in CLTS activities?

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8. What are the benefits of participating in the implementation of CLTS activities?

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SECTION C: EFFECTS OF POWER RELATIONS IN CLTS PROCESS.

9. Who makes decision at household level on sanitation issues?

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

10. Who attends CLTS meetings?

Man Woman

Others (Specify).....

11. What are the roles of women in CLTS processes?

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12. What are the roles of men in CLTS processes?

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13. What is the importance of integrating gender in CLTS activities?

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SECTION D: SOCIO-ECONOMIC FACTORS AFFECTING GENDER PARTICIPATION.

14. Which is your occupation?.....

15. What is your average monthly income in Kenya shillings?

Less than 3000 3000 - 6000 6001 - 9000 over 9000

16. What is the state of your house?

Permanent Semi-permanent Temporary

17. What is the approximate acreage of your land?

Less than 1 1 - 2 2 - 3 3 - 4 over 4

18. What is the source of materials for latrine construction?

Locally available purchase from hardware/shop Re-use others....

19. What are the challenges you experience with latrine construction

Frequent repairs Frequent filled up Hardrocks Soil collapse

water contamination Oduor Inadequate resources cultural barriers Lack of sanitation knowledge and skills. Others.....

20. a) Which type of hand washing facility is installed at your household? (observe)

- None Tippy tabs Leaky tins Sink with running water
 Improvised container with a tap.

b) Which type of detergent do you use for hand washing at your household?

- None Bar soap Liquid soap Ash Others (Specify).....

SECTION E. STRATEGIES TO ENHANCE GENDER PARTICIPATION.

Please answer the following questions on a scale of 1-5 by placing a “tick’ (v) in the space provided. Please provide only one answer.

1	2	3	4	5
Strongly Disagree	Disagree	Partially Disagree	Agree	Strongly Agree

21. (a) Gender participation strategies.

	ITEM	SCALE				
		1	2	3	4	5
i	Gender mainstreaming is important in CLTS activities.					
ii	Gender equality is important in implementation of CLTS activities.					
iii	Gender equity should be taken into consideration during CLTS implementation					
v	Gender roles in CLTS processes should be well defined.					
v	Gender analysis during CLTS implementation is of great value.					
vi	Gender discrimination should be discouraged during CLTS activities					

(b.) What strategies can be put in place to ensure gender participation in CLTS processes?

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THANK YOU.

Appendix V : ETHICAL APPROVAL LETTER



MINISTRY OF HEALTH

Telegrams: "MEDICAL", Kisumu
Telephone: 057-2020801/2020803/2020321
Fax: 057-2024337
E-mail: ercjotr@gmail.com
When replying please quote

JARAMOGI OGINGA ODINGA TEACHING &
REFERRAL HOSPITAL
P.O. BOX 849
KISUMU

28th July, 2015

ERC.1B/VOL.I/206

Ref:

Date

Stanely Nyamato Aranda
JOOUST.

Dear Stanely,

**RE: FORMAL APPROVAL TO CONDUCT RESEARCH ENTITLED: "THE EFFECTS
OF GENDER ON COMMUNITY LED TOTAL SANITATION PROCESS IN
KANYINGOMBE COMMUNITY HEALTH UNIT, RONGO SUB-COUNTY"**

The JOOTRH ERC (ACCREDITATION NO. 01713) has reviewed your protocol and found it ethically satisfactory. You are therefore, permitted to commence your study immediately. Note that this approval is granted for a period of one year (28th July, 2015 to 29th July, 2016). If it is necessary to proceed with this research beyond the approved period, you will be required to apply for further extension to the committee.

Also note that you will be required to notify the committee of any protocol amendment(s), serious or unexpected outcomes related to the conduct of the study or termination for any reason.

Finally, note that you will also be required to share the findings of the study in both hard and soft copies upon completion.

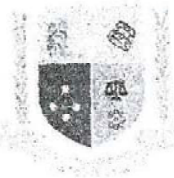
The JOOTRH ERC takes this opportunity to thank you for choosing the institution and wishes you the best in your endeavours.

Yours sincerely,

**DR. ALLAN OTIENO,
CHAIRMAN - ERC,
JOOTRH - KISUMU.**

JOOTRH ETHICS & REVIEW
COMMITTEE
P. O. Box 849 - 40100
KISUMU

Appendix VI: UNIVERSITY AUTHORITY LETTER



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
BOARD OF POSTGRADUATE STUDIES
Office of the Director

Tel. 057-2501804
Email: bps@joooust.ac.ke

P.O. BOX 210 - 40601
BONDO

Our Ref: **H151/4272/2013**

Date: Thursday, September 24, 2015

TO WHOM IT MAY CONCERN

RE: STANLEY NYAMATO ARANDA - H151/4272/2013

The above person is a bona fide postgraduate student of Jaramogi Oginga Odinga University of Science and Technology in the School of Health Science pursuing Masters of Public Health. He has been authorized by the University to undertake research on the topic: **"The Effects of Gender on Community Lead Total Sanitation Process in Kanyingombe Community Health Unit, Rongo Sub-County"**.

Any assistance accorded to him shall be appreciated.

Thank you.

A handwritten signature in black ink, appearing to be 'W. Ongati', is written over a faint rectangular stamp.

Prof. Omolo Ongati
Ag. DIRECTOR, BOARD OF POSTGRADUATE STUDIES

Appendix VII : MINISTRY OF HEALTH AUTHORITY LETTER

REPUBLIC OF KENYA

Telegram: "SCPHO" RONGO

EMAIL: dphorongo@yahoo.com
When replying please quote:



PUBLIC HEALTH OFFICE
RONGO SUB COUNTY
P.O. BOX 258
RONGO

COUNTY GOVERNMENT OF MIGORI

HEALTH DEPARTMENT

Ref: RNG/PHO/TR/VOL.1/2015/034
and date:

28TH SEPTEMBER 2015

TO WHOM IT MAY CONCERN.

RE: ACADEMIC RESEARCH IN RESPECT OF: STANLEY N. ARANDA.

This is to confirm that the above named person whose reg.No.is H151/4272/2013 is a Masters student (MPH) at Jaramogi Oginga Odinga University of Science and technology- School of Health Sciences undertaking a research on the topic. " Effects of Gender on Community Led Total Sanitation processes in Kanyingombe community health Unit, Rongo Sub County.

The purpose of this letter is to request you to accord the said student any assistance he may require during his research period.

Thank you.



MR. DANCUN Z. ARUNDA
SUB COUNTY PUBLIC HEALTH OFFICER
RONGO SUB COUNTY.

CC. MEDICAL OFFICER OF HEALTH- RONGO SUB COUNTY
DEPUTY DRECTOR, PUBLIC HEALTH-MIGORI COUNTY

Appendix VIII: MAP OF RONGO SUB COUNTY

