THE IMPACT OF POOR WASTE DISPOSAL ON THE HEALTH OF PEOPLE IN KAGADI SUB COUNTY

A CASE STUDY OF RUGANDO VILLAGE

BY:

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(BCBR, MPHL & SAVE THE MOTHERS)

A RESEARCH REPORT SUBMITTED TO THE FACULTY OF TECHNOLOGIES FOR RURAL TRANSFORMATION (TRT) OF AFRICAN RURAL UNIVERSITY FOR THE REQUIREMENT OF THE AWARD OF A BACHELORS' DEGREE IN

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In the same way, I acknowledge Dr. Mwalimu Musheshe, my beloved friend Mr. Alinaitwe Benson, the technical and political staff of Kagadi Sub County, LC1 Chairman, community members of Rugando village, and Households I worked with as well as African Rural University students.

My sincere thanks go to my Faculty supervisor Mr. Isingoma Sadayo Max and my Field Mentor Ms. Owampaire Macklin for their continuous support, mentorship and guidance throughout the study. Additionally, I acknowledge the financial and emotional support my parents contributed to the completion of the study.

Dedication

This report is dedicated to my beloved parents Mr. Nsenga Wilson and Mrs. Nyirabazungu Jolly, Vice Chancellor ARU, Mr. Isingoma Sadayo Max, Miss. Owampaire Macklin for the support offered towards the accomplishment of study.

Special dedication goes to the Almighty God the giver of life who protected me till the accomplishment of the study.

Declaration

I Musiimenta Annet, declare that the information presented herein is original and has never been presented and submitted to any institution of higher learning for award of degree. Therefore, this work is out of my intellect.

Signature MUSIIMENTA ANNET

19/ARU/BRD/008

Date…….

Approval

Study report by Musiimenta Annet titled “The Impact of Poor Waste Disposal on the Health of People in Rugando Village, Kagadi Sub-County, and Kagadi District.” has been done under my close supervision, mentorship and guidance. The report is thus being submitted for examination with my approval

Signed by ……

MR. ISINGOMA SADAYO MAX

Date ……

Abstract

The study (participatory Action Research) aimed at critically assessing the impact of poor waste disposal on the health of people in Rugando Village. The objectives were; to find out the current status of waste management in Rugando village, to identify how best waste management practices promote health in Rugando village, and to identify the strategies that can be adopted to achieve better waste management in Rugando Village.The exploratory research design was employed using quantitative and qualitative research techniques taking Rugando village as a case study. It mainly included the use of questionnaires, interview guide, community dialogue and focus group discussion.

The primary population of the study were the women, men, girls and boys under 18years of age, shop and dive bar attendants, sugarcane alcohol brewers, VHTs and Health Assistant Kagadi Sub County with a sample size of 235 respondents obtained from Slovenes' formula. The study found out that in Rugando village there was open dumping, compost and manure pits, selling waste and the diseases found were; malaria, typhoid, diarrhoea and cholera.it also found out that the waste management practices could promote health through preventing the spread of communicable diseases and reduce conditions for disease vector breeding sites. the strategies that could be adopted to achieve waste management were continuous sensitization, timely monitoring of the activities, follow ups, engagement of different stakeholders, law enforcement to mention but a few. Two sensitization meetings were held, 5 follow ups carried out and five stakeholders were engaged.

Chapter One
General Introduction

1.0. Introduction

This Chapter presents about the background to the study, vision statement, Objectives of the study, Study questions, Scope of the study, Significance of the study, Justification of the study, and delimitation to the study

1.2. Background to the study

Waste disposal is regarded as a social and political issue all around the globe. Waste is an inescapable by-product of most human activities (Hossein Farraji, 2015) improper disposal of wastes result into adverse health outcomes, for example, through water, soil and air contamination. Poor waste disposal can lead to the spread of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio which hinder the health of the people. UNICEF works in over 100 countries to help provide access to reliable sanitation to promote health in rural areas. This enables local communities improve their health and become more resilient to life challenges.

The study is a continuum of the One-Month Practicum that was conducted from 24th April to 27th May 2022 under the Supervision of Mr. Ndagije Varerious and Ms. Owampaire Macklin as a field mentor and community members in Rugando village, during that period, we engaged in assessing the Current Reality of the village through identifying the key challenges affecting the people. This was done using the visionary approach during Community Action Planning (C.A.P) meeting and interviewing was used as tool for guidance and we were able to identify a gap which is poor waste disposal that affects peoples' health and it was polished and that is where I generated a research topic for the study together with my current supervisor Mr. Isingoma Sadayo Max

1.3. Vision Statement

A Community where all people have waste management practices and good health by 2030

1.4. Purpose of the study

To assess the impact of poor waste disposal on the health of people in Rugando Village.

1.5. Objective of the study

1. To find out the current status of waste management in Rugando village
2. To identify how best waste management practices, promote health in Rugando village.
3. To identify the strategies that can be adopted to achieve better waste management in Rugando Village.

1.6. Study questions

- ✓ What is the current status of waste management in Rugando village?
- ✓ How can waste management practices promote health in Rugando village?
- ✓ What strategies can be adopted to achieve waste management Rugando village?

1.7.0. Scope of the study

1.7.1. Geographical scope

The study was carried out in Rugando village, Kenga Parish, Kagadi Sub County, Kagadi district.

1.7.2. Time scope

The study covered a period of two months for a successful study.

1.7.3. Demographic scope

This included the number of households, men, women and individuals such as the Village Health Teams (VHTs) and Sub County health assistant.

1.7.4. Content scope

The study helped the researcher and the community to understand the impact of poor waste disposal on the health of people in Rugando Village, Kenga Parish, Kagadi Sub-County, and Kagadi District.

1.8. Significance of the study

- It helped in the suggestion of strategies to adopt to achieve waste management.
- It helped people to prevent diseases/ infections which are acquired as result of poor waste disposal.
- It improved on the waste management and water supply.

1.9. Justification of the study

During the One- month Practicum carried out in April-May 2022, I with the people of Rugando conducted Participatory Action Study and found out that they aspired for health through proper waste management.

1.10. Limitations

- The committee the community members selected to collect data with did not turn up at all. But I moved with the chairperson LC1 in the whole village while collecting data from households.
- Materialism from some respondents, some requested for money before being interviewed and getting the required data was hard since there was not enough money.

1.11. Delimitations

- ✓ Financial support from African Rural University
- ✓ Guidance from my supervisor
- ✓ Collaboration with the community me

1.12. Definition of key terms

Poor waste disposal is the discarding of waste in a way that has negative consequences for the environment and on the health of people. For example, littering hazardous waste that is dumped into the ground and not recycling items that should be recycled.

Health; the current WHO definition of health, formulated in 1948, defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." It overcame the negative definition of health as absence of disease and included the physical, mental, and social domains.

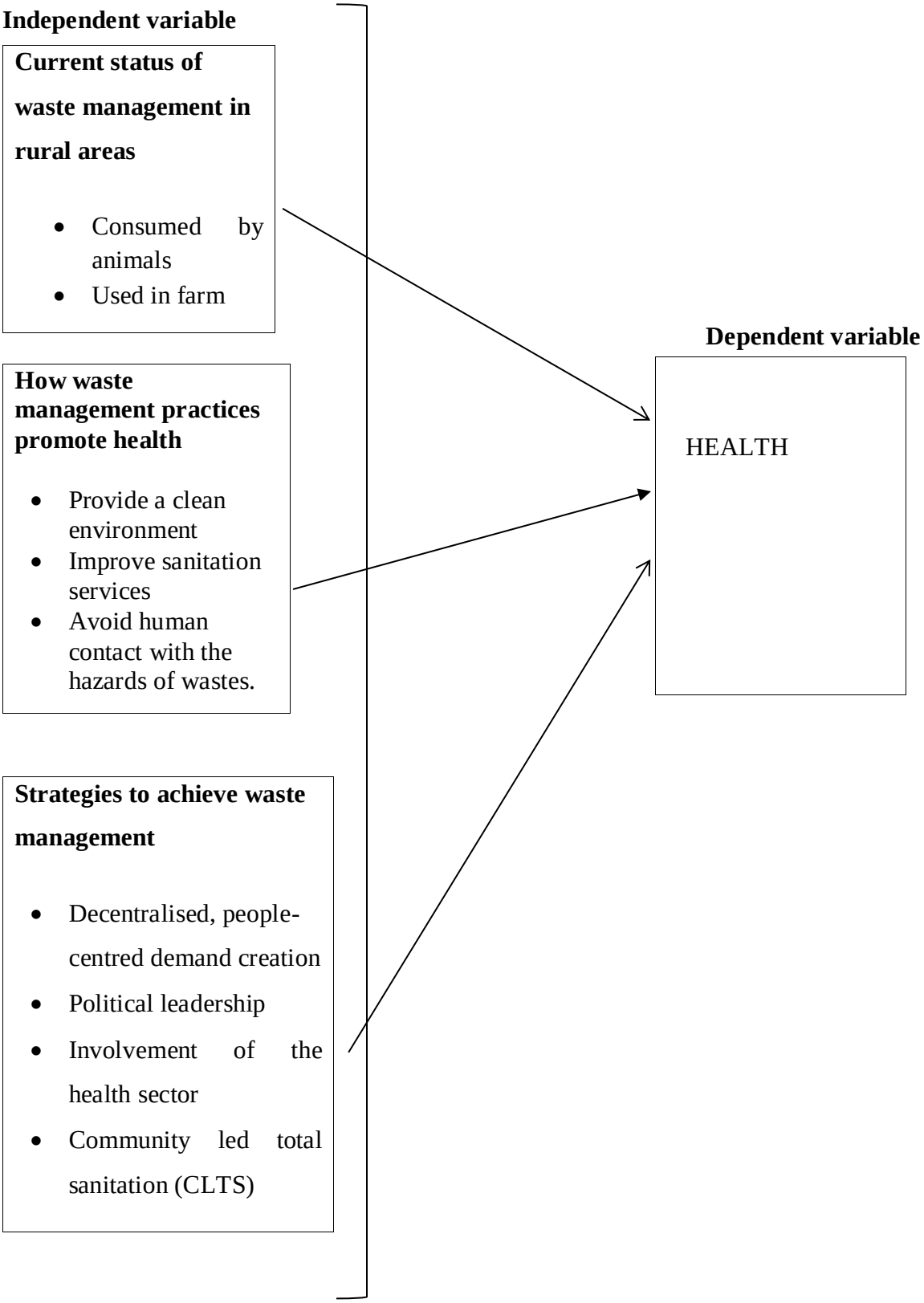
Chapter Two
Literature Review

2.0. Introduction

This Chapter reviews related literature on different aspects that impacted the study 2023. These aspects included concept conceptual framework, current status of waste disposal in rural areas, how waste management practices promote health, Strategies that can be adopted to achieve waste management, and the theoretical frameworks.

2.1. Conceptual framework

A conceptual framework is an illustration that shows the relationship between the different variables of the study. (Dickson Adom, 2018). The relationship between poor waste disposal and health in figure 1


Independent variable
Current status of waste management in rural areas
Consumed by animals
Used in farm
How waste management practices promote health
Provide a clean environment
Improve sanitation services
Avoid human contact with the hazards of wastes.
Strategies to achieve waste management
Decentralised, people-centred demand creation
Political leadership
Involvement of the health sector
Community led total sanitation (CLTS)
Dependent variable
HEALTH

2.2. The current status of waste management in rural areas

Wastes are materials which are discarded after use at the end of their intended life span. (MoEF, Report of the Committee to Evolve Road Map on Management of Wastes in India, 2010). Wastes can be categorised in different ways according to their source of generation, physical state and composition. Waste generated in rural areas is very organic and less in quantity as compared to urban areas. Thus handling of rural waste becomes much easier. The organic wastes in rural areas are consumed by livestock i.e. Cattle, goats, sheep and pigs and in farms.

Agricultural wastes (e.g., straws, stalks, husks, wood, and sawdust) are often disposed by burning in open fields with exposure to fire hazard. Household waste (biowaste, plastics, textiles, etc.) are also prone to open burning practices. Mixed wastes may contain hazardous items (e-waste, batteries, oils, solvents, paints, contaminated wood, and pharmaceutical products) which are released into the atmosphere, soil, and ground waters. The common hazardous substance used in the rural area includes insecticide, pesticide, fungicide, herbicide, chemical fertilizers, chemicals used for fumigation, cleaning agents used in animal husbandry, and medical waste. Such hazardous fraction must be separated, collected, and managed from common household waste. In worst-case scenario, rural households may have no access to basic utilities (improved drinking water source, sanitation, waste management services), and the near water bodies are polluted by waste dumping and open defecation but my study is mainly concerned about household refuse and hazardous wastes.

2.3. How waste management practices promote health

Wastes that cause health problems are human and animal faeces, solid wastes, domestic wastewater (sewage, sullage, greywater), industrial wastes and agricultural wastes. Inadequate sanitation is a major cause of disease in the whole world and improving sanitation has an important valuable impact on health both in households and across communities. (Dobe, 2011). Progresses for suitable sanitation promotes good health which in turn reduce the rates of morbidity and the severity of various diseases which promotes the quality of life of huge numbers of people, more especially the children, in developing countries

Waste management, together with good hygiene and safe water, are fundamental to good health and to social and economic development. That is why, in 2008, the Prime Minister of India quoted Mahatma Gandhi who said in 1923, "sanitation is more important than independence," (Duncan Mara, 2010) Therefore, waste management practices promote human health through providing a clean environment that stops the transmission of disease, especially through the oral route. For example, diarrhoea, a main cause of malnutrition and stunted growth in children, can be reduced through adequate sanitation. There are many other diseases which are easily transmitted in communities that have low levels of sanitation, such as ascariasis (a type of intestinal worm infection or helminthiasis), cholera, hepatitis, polio, schistosomiasis, malaria, diarrhoea, trachoma. Although linked, and often mutually supporting, these three components have different public health characteristics.

Improving waste management practices promotes health through enhancing access to improved sanitation services such as toilets and handwashing facilities which help to prevent malnutrition and stunted growth of children as well as sanitation related morbidity and mortality, (Jiseon You, Multidimensional Benefits of Improved Sanitation: Evaluating 'PEE POWER®' in Kisoro, Uganda, 2020)cleaning and disinfecting surfaces, especially hard, non-porous surfaces, as needed with appropriate products reduces the number of germs on surfaces and decreases risk of infection from surfaces,

2.3. Strategies that can be adopted to achieve better waste management

Sanitation is a complex topic which links to health. This impacts many however it is led by few. From the analysis conducted by Duncan Mara, Beth Scott, Jon Lane, David Trouba, they consider that there are three major strategies that could reduce poor sanitation. The most important of these strategies is political leadership, which is demonstrated by establishing clear institutional responsibility and specific budget lines for sanitation, and ensuring collaboration between the public sector agencies working in health, in water resources, and in utility services. The most significant step made forward was the regional sanitation conference declarations that was released during the International Year of Sanitation where many government ministers were personally involved.

Furthermore, other reports that contribute towards political leadership are the biennial global reports on sanitation and drinking water published by the World Health Organization and UNICEF which aid effectiveness by publicising the sanitation work of both developing country governments and support agencies.

The second strategy is the shift from centralised supply-led infrastructure pro- vision to decentralised, people-centred demand creation coupled with support to service providers to meet that demand. This strategy is changing sanitation from a petty grant-based more progress sector into a major area of human economic activity and inherently addresses the problem of affordability, since people install whatever sanitation systems they can afford and subsequently upgrade them as economic circumstances permit.

The last strategy is the full involvement of the health sector in sanitation. The health sector has a powerful motivation for improving sanitation, and much power to contribute to achieving this goal. The Declaration of Alma Ata in 1978 emphasised the importance of primary health care and included ‘‘an adequate supply of safe water and basic sanitation’’ as one of its eight key elements. Many years have passed since this Declaration, and the body of evidence about sanitation has increased substantially. The health sector now needs to reassert its commitment and leadership to help achieve a community in which everybody has access to adequate health through sanitation more especially in waste management (Mara, 2010)

According to (Jiseon You, 2020) 2.3 billion people around the world lacking adequate sanitation services, attention has turned to alternative service provision models. This study suggests an approach for meeting the sanitation challenge, especially as expressed in Sustainable Development Goal 6.2, using a toilet technology system, such as Pee Power that generates electricity using diverted urine as a fuel. The importance of social acceptance in sanitation has been proven by the success stories emerging from rural areas that have declared themselves ‘open defecation free’ after adopting an approach called community led total sanitation (CLTS) and its principles such as social capacity building and community engagement which was conducted in Kisoro, Uganda.

2.6. The theoretical frameworks

Frameworks are used to analyse sanitation determinants by identifying psychological and social factors affecting individual behaviour change based on behavioural theories such as, Theory of Planned Behaviour, and Maslow's hierarchy of needs (Devine 2009; Jenkins & Scott 2007; Mosler 2012; Rosenquist 2005). These frameworks are also commonly used to evaluate sanitation interventions (Genser et al. 2008; O'Connell 2014; Osumanu 2008). Frameworks that use behavioural theories mainly assist in identifying individual psychological and social factors that influence people's preferences to adopt hygienic sanitation practices. (oleh, 2017)

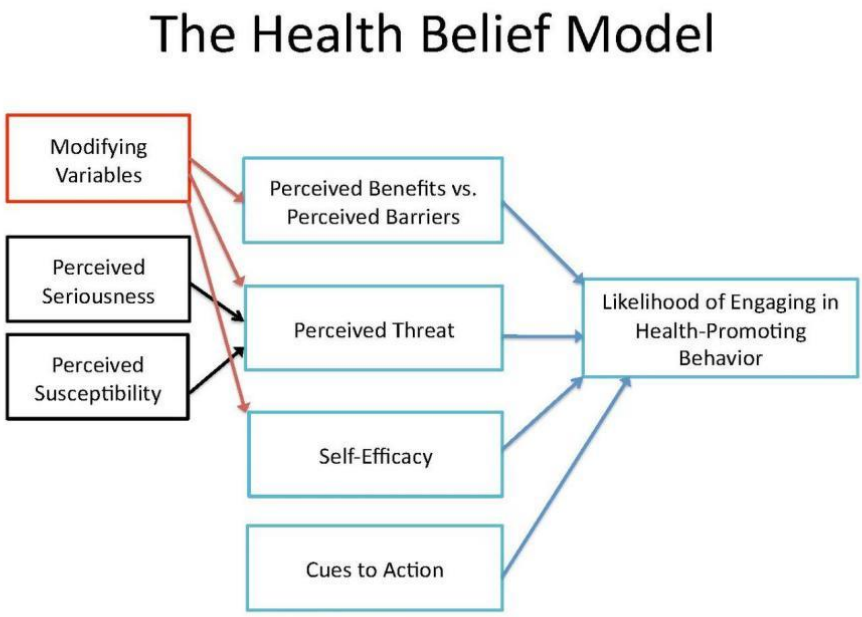
2.6.2. Public health ecological frameworks

The discipline of public health offers a different way of addressing these complex issues, the public health ecological approach. This approach systematically identifies determinants of complex public health issues (Glanz & Bishop 2010; Golden & Earp 2012). It suggests that an individual's health outcome results from the interactions of many other factors beyond the individual system, including both biophysical and socio-economic environments (Golden & Earp 2012; McLeroy et al. 1988; Stokols 1996; VanLeeuwen et al. 1999). Understanding the dynamic interactions of various individual factors and wider environment factors that may affect health and how people behave is the key in this approach (McLaren & Hawe 2005). Many ecological models such as Bronfenbrenner's ecological model (McLaren & Hawe 2005), Health Mandala model (Hancock 1993) and the Butterfly model (VanLeeuwen et al. 1999) suggest that an individual's outcome results from the interactions of many other factors beyond the individual system, including both biophysical and socio-economic environments. (oleh, Frameworks for understanding, 2017)

2.6.3. The Health Belief Model

The health belief model (HBM) is a psychological health behaviour change model developed to explain and predict health-related behaviors, particularly in regard to the uptake of health services. The health belief model was developed in the 1950s by social psychologists at the U.S. Public Health Service and remains one of the best known and most widely used theories in health behaviour research. (Edward C Green, 2020).

The health belief model suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behaviour. A stimulus, or cue to action, must also be present in order to trigger the health-promoting behaviour. This is shown in figure 3 below



The health belief model has been used to develop effective interventions to change health-related behaviours by targeting various aspects of the model's key constructs.

Chapter Three

Methodology

3.0. Introduction

The Chapter provides for the data collection methods, tools and techniques that were applied during the study of two months in Rugando village. These included the following; Area of study, Study design, Target population, Sample size, sampling technique, Study instruments, and Study procedure.

3.1. Area of study

Rugando village is located in Kenga Parish, Kagadi Sub County, Kagadi District, mid-western Uganda. The village is bordered by 3 villages in the East i.e. Kyamayanda LCI, Kyamukuma LCI, and Kenga A and other 3 villages in the West (Kigunda A and B, and Busirabo B).

3.2. Study design

This is the framework of study methods and techniques chosen by a researcher to conduct a study (Bhat). The design allowed the researcher to sharpen the study methods suitable for the study.

The study design used qualitative study techniques taking Rugando village as the case study. Qualitative study I.e. use of non-numerical data, such as words, images, and observations

3.2.1. Data analysis and Interpretation

This is a process of improving, transforming, and modelling data to discover useful information for decision-making. The study used qualitative analysis method to examine data collected. Data was entered, coded and analysed using Statistical Packages for Social Scientists (SPSS)

The study used correlation analysis to understand the relationship between the two variables in the study and understand how one leads to the other.

3.3. Target population

This is a group of individuals the intervention intends to conduct study in and draw conclusion from. The total population of Rugando is 569 the majority being farmers from the data.

The study dwelt on married women and men, alcohol brewers (sugarcane), girls and boys, shop and dive bar attendants, Village Health Teams (VHTs) and Sub County health Assistant.

3.4. Sample size

The sample size of the respondents was got from the Slovene's formula.

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

n = the required sample size

N = the known population size

e = the level of significance, which is fixed at 0.05

$$n = \frac{569}{1+569(0.05)^2}$$

$$n = \frac{569}{1+569(0.0025)}$$

$$n = \frac{569}{1+1.4225}$$

$$n = \frac{569}{2.4225}$$

$$2.4225n = \frac{569}{2.4225}$$

n= 235

Therefore, the sample size comprised 235 respondents. The respondent's categories included 100 women, 92 men, 10 alcohol brewers (sugarcane), 18 girls and boys, 12 shop and dive bar attendants, 2 Village Health Teams (VHTs) and 1 Sub County health assistant.

3.5. Sampling technique

The study used stratified sampling technique to collect data from women, men, girls and boys, alcohol brewers, shop and dive bar attendants, VHTs and the Health Assistant Kagadi Sub County.

3.6.0. Study instruments/ Tools for data collection

These are the tools for data collection for example, Interview, Observation, focus group discussion, Questionnaires and community dialogue.

3.6.1. Interview

An interview is a question-and-answer session where one person asks questions, and the other person answers those questions. It can be a one-on-one, two-way conversation, or there can be more than one interviewer and more than one participant.

3.6.1.1. Unstructured interviews

These are usually described as conversations held with a purpose in mind to gather data about the study. The study used unstructured interview while collecting data from the community, men, women, Village Health Team (VHTs) and the Sub County Healthy Assistant (SHA) to get detailed data.

3.6.1.2. Focus group interview

This interview is conducted with a group of participants to collect a variety of information. In this kind of interviews, it requires a small number of participants such as four participants and sometimes as large as ten. Therefore, it helped to collect data from different households.

3.6.2. Observation

The study used it to discern the current status of waste management of different households in the village.

3.6.3. Recording/ field notes

This was used by the study to rewrite down answers from respondents and take photos using a phone.

3.6.4. Community dialogue

The study used this method to engage community members in collecting the required data from the topic through simple random sampling.

3.7. Study procedure

The study got clearance through an introduction letter from the Supervisor at African Rural University to introduce her to the Chairperson of Rugando village, Kenga Parish, Kagadi sub-county, Kagadi District to enable her interview Rugando village members. The study got permission from respective study review committees who reviewed the proposal and allowed the study to proceed to access the village. Thereafter, the researcher assured the selected respondents of confidentiality in regard to their responses. Only participants eligible to participate in the study were given consent.

3.8. Ethical considerations

All participants provided informed consent to participate. Participants were informed of their right to end discussions at any time and agree when to meet again. Taking photos was from the respondents' consent. The study got approval from the chairman LC1 Rugando Village.

Chapter Four

Data Analysis, Discussion and Presentation of Findings

4.0 Introduction

This chapter presents data interpretations, analysis and presentation, on waste disposal and health in Rugando village Kagadi Sub County.

4.1. Return rate of the questionnaires

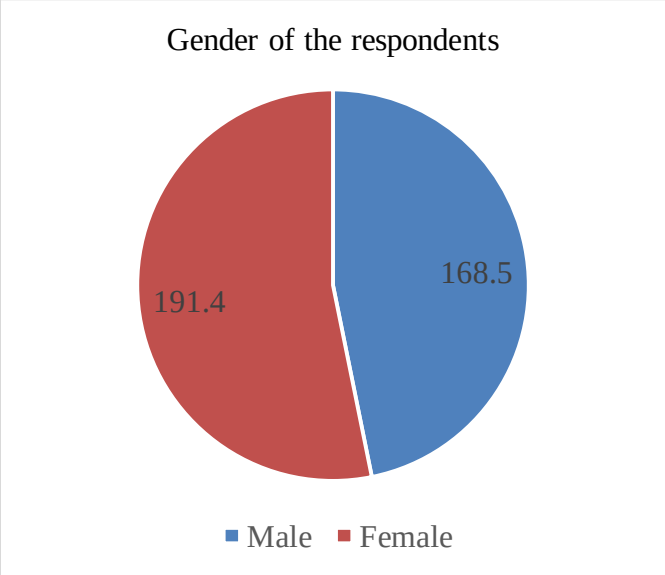
All the questionnaires distributed were returned giving a total percentage of 100%. This is because the respondents were guided by the researcher whereby she later collected them

4.2 Findings on the demographic information

Table 1:4.1 Gender of the respondents

Gender	Frequency	Percentage
Male	110	46.8
Female	125	53.2
Total	**235**	**100.0**

Source: Primary data



From the findings in table 4.1 above shows the majority of the respondents are female (53.2%), (46.8.5%) male among 100 respondents, this implies that the highest percentage is represented by female in Rugando village, Kagadi Sub County. Female being the highest percentage participate in waste disposal through carrying out house works and are capable of using more household waste.

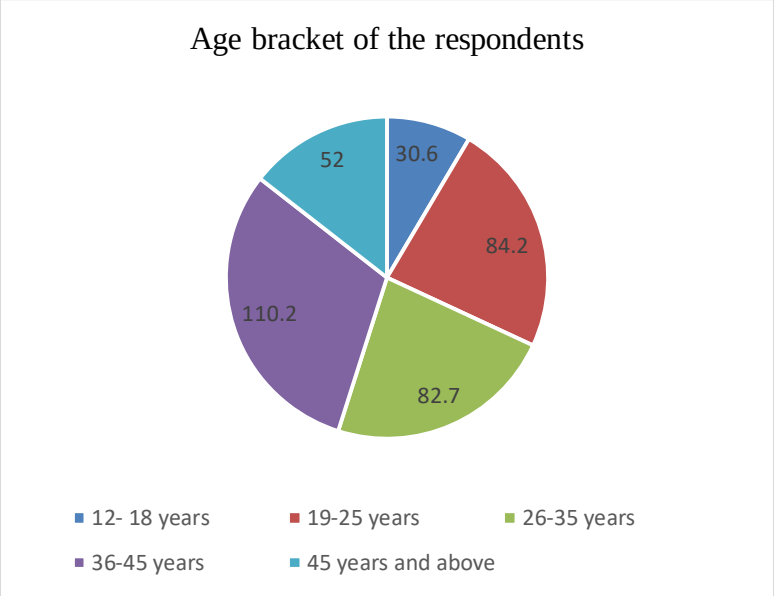
Furthermore, since women engage mostly in housework chores such as cooking and dispose agricultural produce more especially husks and peelings around the home thus being the right people to participate in the study.

4.2.2 Findings on the age bracket of respondents

Table 2:4.2 Age bracket of the respondents

Age	Frequency	Percentage
12- 18 years	20	8.5
19-25 years	55	23.4
26-35 years	54	23.0
36-45 years	72	30.6
45 years and above	34	14.5
Total	**235**	**100.0**

Source: Primary data



Findings in table 4.2 pointed out the majority of the respondents were 30.6% which were between the age bracket of 36 to 45 years followed by 23.4% with the age of 19-25 years, 23.0% between 26-35 years, 14.5% between the age of 45 years and above and 8.5% below 18 years of age. This shows that there were adequate representation of the study population and data provided represented the views of different age groups.

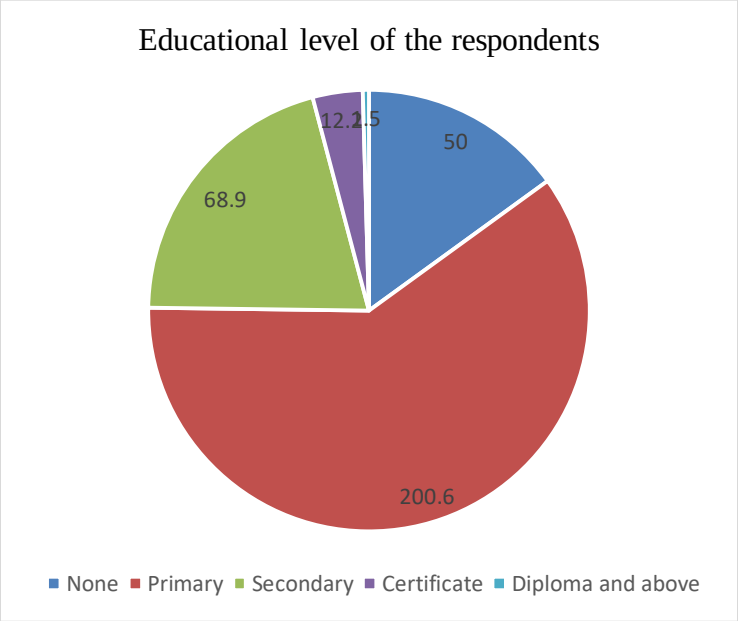
Therefore, waste disposal has been understood differently according to different age brackets and Rugando village is characterized with the areas of peasants. There are households where there are no compost and manure pits and private latrines.

4.2.3 Findings on the level of education

Table 3: 4.3 Education level of the respondents

Education level	Frequency	Percentage
None	50	21.3
Primary	131	55.7
Secondary	45	19.1
Certificate	8	3.4
Diploma and above	1	0.4
Total	**235**	**100.0**

Source: Primary data



From the table 4.3, and the pie chart the majority of the respondents 55.7% were primary level holders followed by 21.3% who are those people who are none in the category mentioned in the table above but some attended to functional adult learning (FAL), 19% were secondary holders, 3.4% certificate holders and 0.4% diploma and above holders. This indicates that people have the lowest level of Education which hinders development within Rugando-Kagadi Sub County despite the problem of poor waste disposal in rural areas of Uganda.

4.2.4 Findings on the marital status of the respondents

Table 4:4.4 marital status of the respondents

Marital status	Frequency	Percentage (%)
Single	20	8.5
Married	198	84.3
widow /widower	17	7.2
Total	**235**	**100.0**

Source: Primary data

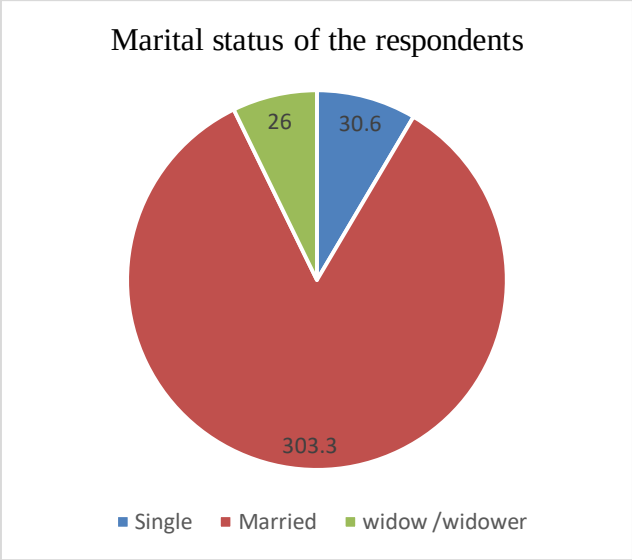


Table 4 shows that the highest number of respondents are married represented by 84.3%, followed by 8.5% those who are single and 7.2% widow and widowers. 84.3% represents both men and women who are 18 years and above and 8.5% both girls and boys under 18years of age.

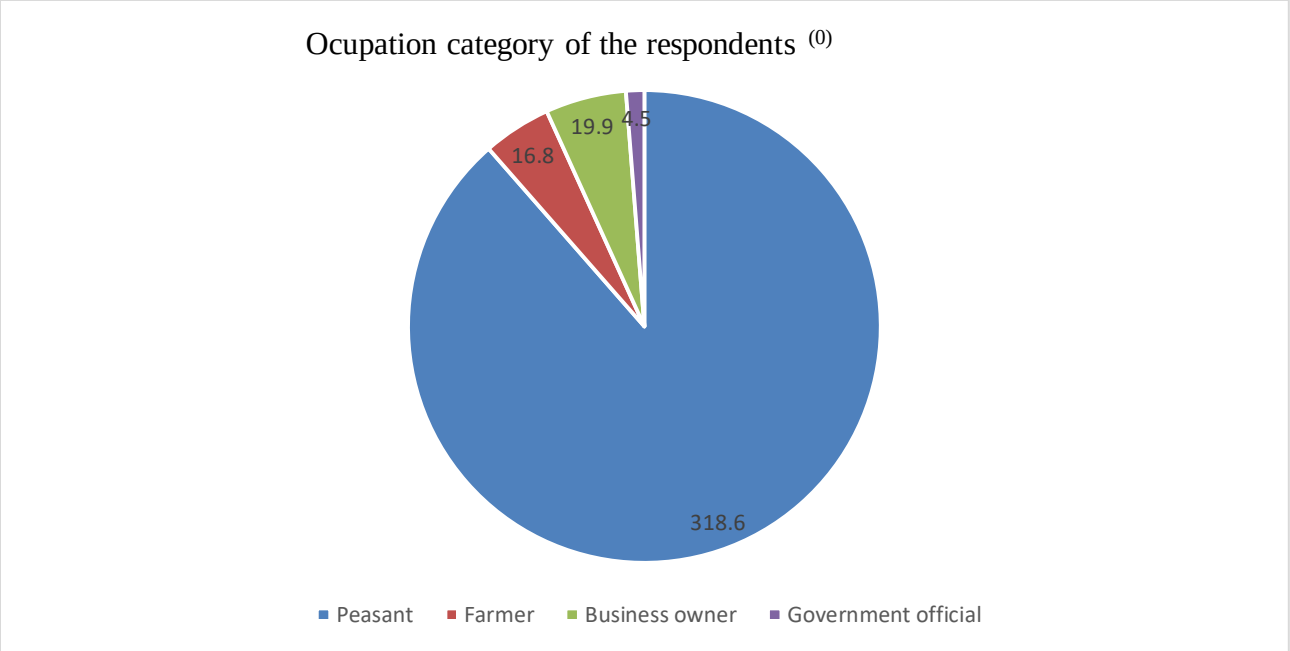
This therefore, explains that married people more especially the women receive the discarded materials by other members of the household and generally participate in ordinary home activities and played a vital role in this study.

4.2.5. Findings on the Occupation category of the respondents

Table 5:4.5 Occupation category of the respondents

Occupation category	Frequency	Percentage (%)
Peasant	208	88.5
Farmer	11	4.7
Business owner	13	5.5
Government official	3	1.3
Total	**235**	**100.0**

Source: primary data



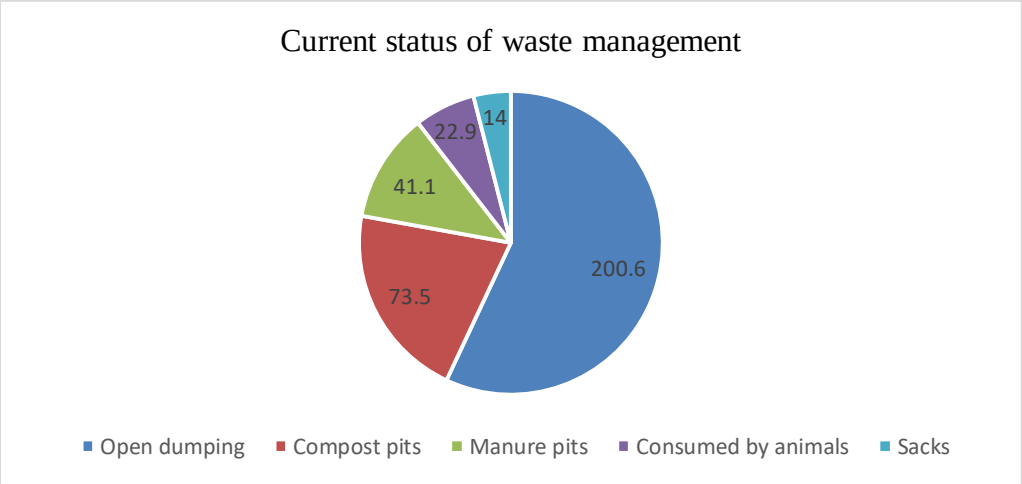
From table 5, the highest were peasants represented by 88.5%, 5.5% represents business owners that constitutes both shop and dive bar attendants.4.7% farmers that involved sugarcane alcohol brewers and lastly government officials where there are VHTs and Sub County Health Assistant of Kagadi Sub County. The peasants are taking the highest percentage because they engage in small scale agriculture such as growing food crops and small animals such as goats, pigs, and kitchen therefore they discard the wastes anywhere and contributing to poor waste disposal and provide eligible answers.

4.3. Findings on the current status of waste management in Rugando village

Table 6:4.3.1. Current status of waste management

Current status of waste management	Frequency	Percentage (%)
Open dumping	131	55.7
Compost pits	48	20.4
Manure pits	27	11.5
Consumed by animals	15	6.4
Sacks	14	6.0
Total	**235**	**100.0**

Source: primary data



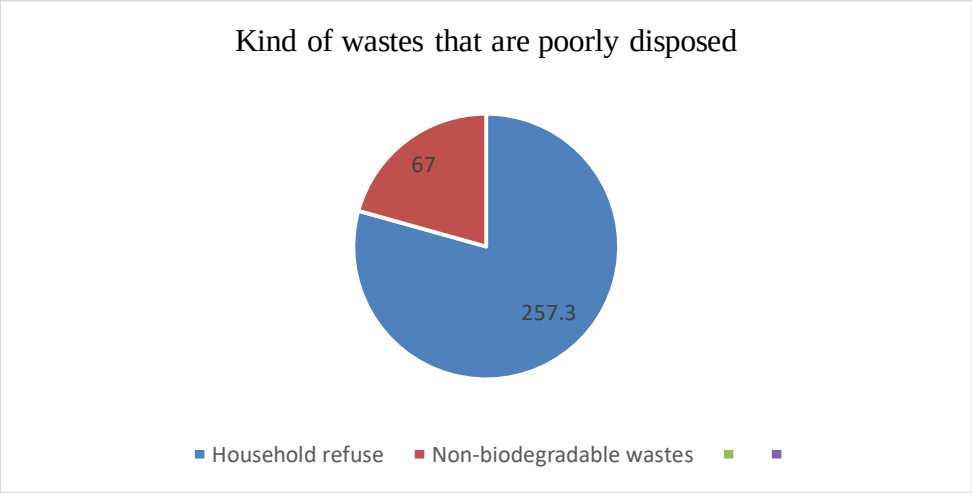
According to table 6 and pie chart above, it shows that the majority of the population dispose wastes in open areas represented by 55.7%, 200.6^0 respectively, followed by 20.4% in compost pits, 11.5% manure pits, 6.4% consumed by animals and last but not least 6.0% representing those who dispose in sacks by separating household refuse from non-biodegradable wastes. 55.7% representing disposal in open areas depicts that, there are high levels of poor sanitation as people discard wastes in any place such as road sites, compound, plantations around their homes, bushes and in water sources due to their ignorance (26.8%) and peoples' poor hygiene and sanitation represented by 28.9% greatly impacting their health negatively. This is in line the public health ecological framework that says an individuals' interaction with the different factors in the wider environment and how people behave is the key.

4.3.2. Findings on the kind of wastes poorly disposed in Rugando village

Table 7:4.3.2. Kind of wastes that are poorly disposed

Response	Frequency	Percentage (%)
Household refuse	168	71.4
Non-biodegradable wastes	67	28.5
Total	**235**	**100**

Source: Primary data



The table above shows that 71.4% dispose household refuse which includes peelings, husks, left overs, and leaves, and 28.5% dispose non bio degradable wastes (polythene papers, plastics, and old clothes) and this is a result of few shops and shops in the village.

4.3.3. Findings on the diseases affecting people due to poor waste disposal in Rugando

Table 8: 4.3.3. Diseases and infections

Response	Frequency	Percentage (%)
Malaria	107	45.5
Typhoid	30	12.7
Diarrhea	72	30.6
cholera	26	11.0
Total	**235**	**100.0**

Source: Primary data

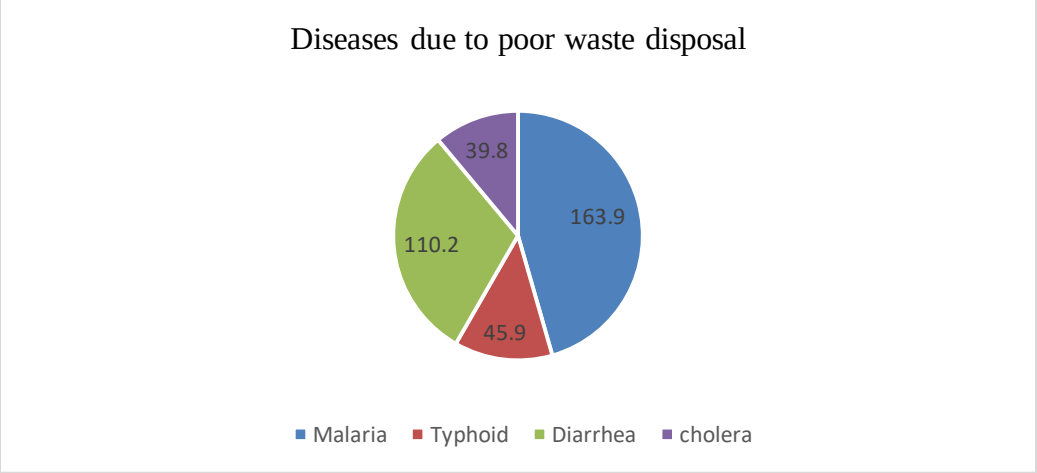


Table 8 and pie chart 8 show the list of diseases caused by poor waste disposal. Relevant diseases and conditions caused by poor waste disposal include water borne diseases, which can contaminate drinking water. According to the few respondents 11.0%, people are infected with water borne diseases in Rugando. According to the respondents the result of poor waste disposal is usually open dumping with the associated serious public health issues. Children under five years of age are associated with repeated diarrhea as a result of unsafe water and inadequate waste management.

According to the respondents 45.5% malaria, 12.7% typhoid and 30.6% diarrhea are other diseases which are related to poor waste disposal which come as a result of accumulation of wastes in the environment and drinking unboiled water.

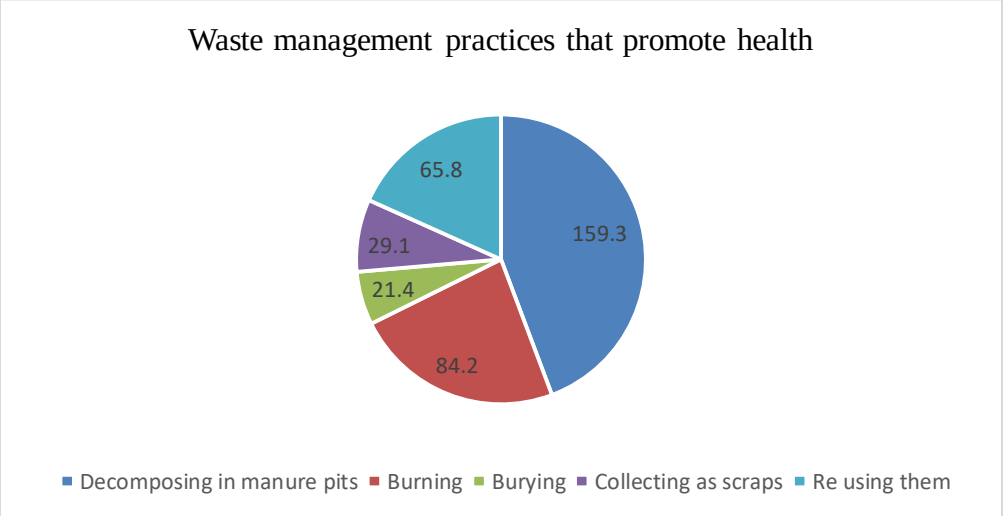
From the public health point of view, improper waste disposal often attracts insect and rodent vectors which facilitate the spread of diseases such as cholera and dengue fever. Thus, it confirms the present study which identified cholera 26 (11.0%), malaria 107 (45.5%) and diarrhea 72 (30.6%) as diseases associated with poor waste disposal in the study area.

4.4. Findings on waste management practices that can be practiced to promote health in Rugando village

Table 9: 4.4.1. Waste management practices

Responses	Frequency	Percentage (%)
Decomposing in manure pits	104	44.2
Burning	55	23.4
Burying	14	5.9
Collecting as scraps	19	8.0
Re using them	43	18.2
Total	**235**	**100.0**

Source: Primary data



From the table and pie chart above, the majority of the respondents (44.2%), 159.3^0 respectively gave decomposing in manure pits, 23.4%, 84.2^0 gave burning respectively (polythene bags, old clothes), 18.2% and 65.8^0 gave reusing them more especially plastic bottles for other purposes by local brewers, 8.0% and 29.1^0gave collecting them as scraps more specifically the non-

biodegradable wastes (metals, bottles, old batteries) and the least respondents 5.9% and 21.4^0 gave burying. They were few respondents because land in Rugando is fragmented and not enough to be burying most wastes more so non –biodegradable. Therefore, decomposing in manure pits is taking the biggest percentage because residents in Rugando village mainly engage in agricultural production more especially crop growing and some few live stocks. They require manure to put in their gardens to increase crop yields and boost production thus taking the highest percentage and degree to reduce poor waste disposal.

4.4.1. Findings on how waste management practices promote health in Rugando village

Table 10:4.4.2. How waste management practices promote health

Waste management practices promote health	Frequency	Percentage (%)
Prevent the spread of communicable diseases	110	46.8
Reduce conditions for disease vector breeding sites	72	30.6
Reduce the accumulation of wastes in the environment	31	13.2
Promote sanitation in the community	22	9.4
Total	**235**	**100.0**

Source: Primary data

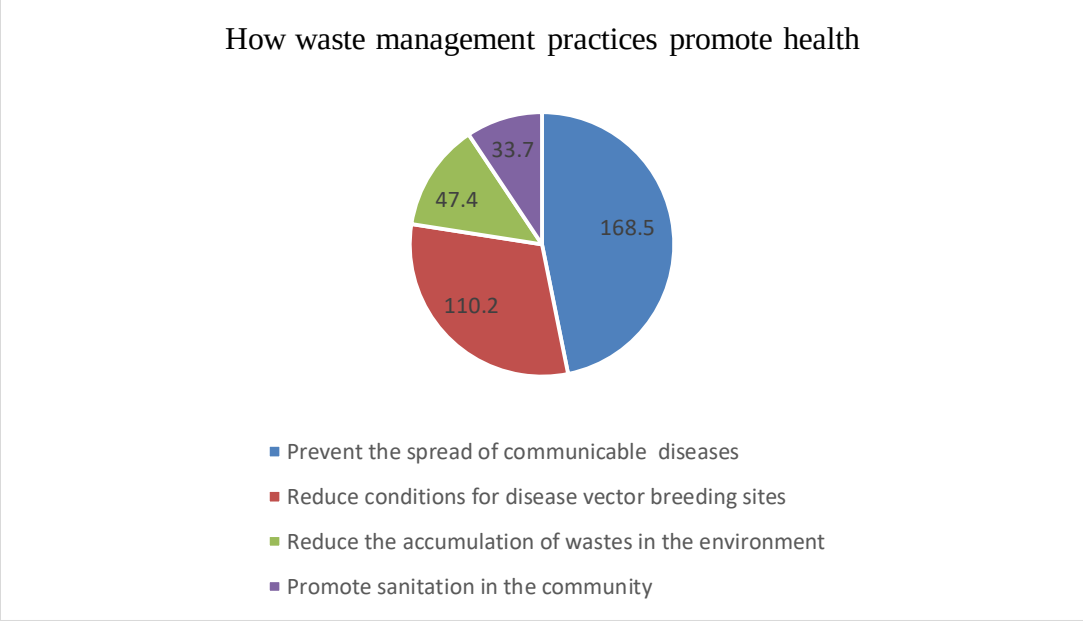


Table 4.3 above shows that waste management practices promote health

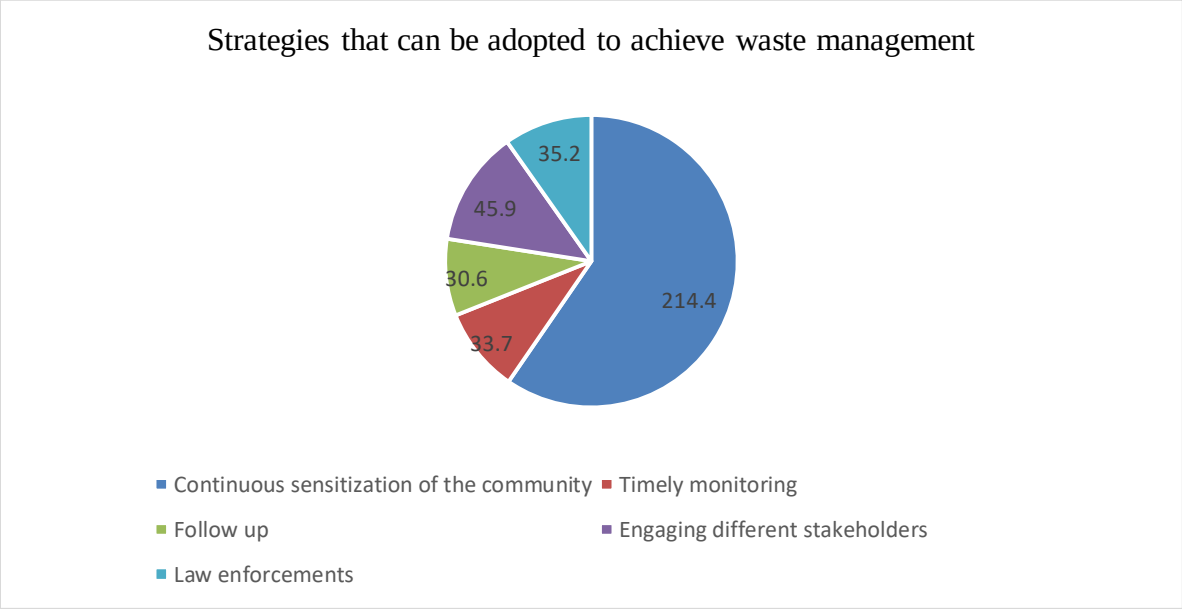
According to the respondents 46.8% gave that they prevent the spread of communicable diseases. That through decomposing in manure and compost pits, burning and reusing wastes peoples' health can be enhanced. Every member gets involved in any waste management practice brought in the community. According to the respondents 30.6% also said that waste management practices reduce conditions for disease vector breeding sites, (13.2%) reduce the accumulation of wastes in the environment and (9.4%) promote sanitation in the community through feeding them to animal (10.6%), burying (8.1%) and collecting wastes as scraps (6. 0%).therefore, according to the majority, waste management practices can promote human health in Rugando village

4.5. Findings on the strategies that can be adopted to achieve waste management in Rugando village

Table 11:4.5.1. Strategies that can be adopted to achieve waste management

Response	Frequency	Percentage (%)
Continuous sensitization of the community	140	59.6
Timely monitoring	22	9.4
Follow up	20	8.5
Engaging different stakeholders	30	12.8
Law enforcement	23	9.8
Total	**235**	**100.0**

Source: Primary data



From table 7 above, the majority of the respondents said that continuous sensitization of the community members (59.6%) is one of the strategies that can be adopted to achieve waste management in Rugando village and this can be done through conducting community meetings and visiting household per household. It was found out that 26.8% of the population are ignorant on the value of managing wastes in their village and around their homes.

According to the respondents, 12.8% engaging different stake holders is another strategy to achieve waste management such as political leaders, health institutions, community development officials, opinion, religious and cultural leaders to foster waste management. According to the respondents 9.8% came up with law enforcement to be done by the security team in collaboration with health workers, 9.4% timely monitoring and 8.5% follow ups to be carried out by VHTs and health workers from the Sub County and NGOs partnering with the Sub County staff. Therefore, this is in position to create lasting change and achieve waste management. This is line with the health belief model that recommends that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behaviour and that a stimulus, or cue to action, must also be present in order to trigger the health-promoting behaviour.

According to the respondents 37.4% said that there should be continuous sensitization of the community so that there can be effective waste management in Rugando village.

Chapter Five

Summary of the Findings, Conclusions and Recommendations

5.0 Introduction

This chapter presents a summary of the findings, recommendations, and conclusions based on the study objectives.

5.1 Summary of the findings

5.1.2. Findings on the social demographic of the respondents

From the findings in table 4.1 above shows the majority of the respondents are female (53.2%), (46.8.5%) male among 100 respondents, this implies that the highest percentage is represented by female in Rugando village, Kagadi Sub County. Female being the highest percentage participate in waste disposal through carrying out house works and are capable of using more household waste. Findings in table 4.2 pointed out the majority of the respondents were 30.6% which were between the age bracket of 36 to 45 years followed by 23.4% with the age of 19-25 years, 23.0% between 26-35 years, 14.5% between the age of 45 years and above and 8.5% below 18 years of age.

From the table 4.3, the majority of the respondents 55.7% were primary level holders followed by 21.3% who are those people who are none in the category mentioned in the table above but some attended to functional adult learning (FAL), 19% were secondary holders, 3.4% certificate holders and 0.4% diploma and above holders. Table 4 shows that the highest number of respondents are married represented by 84.3%, followed by 8.5% those who are single and 7.2% widow and widowers. 84.3% represents both men and women who are 18 years and above and 8.5% both girls and boys under 18years of age.

Table 4 shows that the highest number of respondents are married represented by 84.3%, followed by 8.5% those who are single and 7.2% widow and widowers. 84.3% represents both men and women who are 18 years and above and 8.5% both girls and boys under 18years of age. From table 5, the highest were peasants represented by 88.5%, 5.5% represents business owners that constitutes both shop and dive bar attendants.4.7% farmers that involved sugarcane alcohol brewers and lastly government officials where there are VHTs and Sub County Health Assistant of Kagadi Sub County.

5.1.3 The current status of waste management

According to table 6 the current status of waste management included discarding in open areas, dump in compost and manure pits, consumed by animals, keep in sacks and sell them later most especially plastic bottles to local brewers who make local alcoholic drinks. According to the respondents the result of poor waste disposal is usually poor sanitation and hygiene of an individual, laziness, ignorance and illiteracy with the associated serious public health issues. It implied that open area disposal is the most current status of waste disposal in Rugando village making them more vulnerable to health threats such as diseases and infections. According to the respondents, the majority of the people in Rugando dispose wastes in open areas taking the highest percentage (55. 7%).This implies that disposing wastes in open areas is the major current status of waste management in Rugando village. This has caused a number of diseases such as 45.5% malaria, 12.7% typhoid and 30.6% diarrhea affecting peoples' health in Rugando village.

5.1.4. How waste management practices promote health

The study found out that decomposing in manure pits, burning, collecting waste as scrap, re using wastes and burying them are the practices that can be adopted to achieve waste management in Rugando Village. According to the respondents, waste management practices promote health through preventing the spread of communicable diseases 46.8%, 30.6% reduce conditions for disease vector breeding sites, (13.2%) reduce accumulation of wastes in the environment and (9.4%) promote sanitation in the community. This implies that health in Rugando village can be promoted through carrying out proper waste management practices.

5.1.5. Strategies that can be adopted to achieve better waste management

According to the residents, continuous sensitization of the community and households about better waste management practices by changing people' behavior about personal hygiene and sanitation practices for example, working with communities and other stakeholders to change beliefs, expectations and habits around sanitation and hygiene, cleaning of the shared latrines and improvements in house hold garbage increases waste management and promotes health. This is because it calls for every one's involvement because they are the very ones facing the problem and they know its outcomes.

Furthermore, timely monitoring, follow ups, engaging different stakeholders, and law enforcement according to the respondents are strategies to achieve better waste management and promote health of the community members. According to the respondents, 8.5% there have not been effective follow ups by the government officials in Rugando village reported except the NGOs more especially the Epicenter Managers working with URDT who are deliberately in the field and in partnership with the local government.

5.2. Conclusion

The study found out that people in Rugando village dump wastes in open areas, compost and manure pits, consumed by livestock and others separated and later disposed in sacks which are sold. Dumping in open areas took the highest percentage and has caused a number of diseases such as malaria, typhoid, cholera and diarrhea which has affected their health more especially the children of five years.

The study found out that waste management practices can promote health through various ways such as preventing the spread of communicable diseases, reducing conditions for disease vector breeding sites, reducing the accumulation of wastes in the environment and promoting sanitation in the community.

The study found out that the strategies that could be adopted to achieve waste management were continuous sensitization of the community, timely monitoring, follow up, engaging different stake holders and Law enforcement

5.3. Recommendations

The following are recommendations to the agencies involved as a way forward for any intervention policy information in order to find a sustainable solution to the problem.

- Promote community participation; an effective sanitation improvement intervention program must be implemented as soon as possible by the local area council to help solve the problem.

- Mass health education; the Sub County and NGOs operating in the area must collaborate and give more attention to educating the people of the community regarding the need to keep their environment clean and cultivate good sanitation and hygiene practices into them.

- Sanitation facilities; The Sub County, community, water and sanitation agencies and NGOs should all help the communities to institute better mechanisms of rubbish disposal systems through grants.

- Environmental health inspection; the sanitation and health inspectors should inspect the communities to ensure different people behave appropriately with regards to community hygiene and sanitation. They can also be agents of information flow for health education messages in the communities.

5.4. Areas of further research

Basing on the findings of the study the researcher suggested the following areas for further study.

a) Unhygienic living conditions and health issues in Rugando.

b) Effects of poor sanitation in Rugando

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Appendices

Appendix i

Interview Guide

1. What is your name?

2. How old are you?

3. What is your marital status?

4. What is your Level of education?

5. What is your religion?

6. What is your occupation?

7. What is waste disposal and health?

8. Where do you dispose wastes in Rugando village?

9. What kind of wastes are poorly disposed in Rugando village?

10. Which of these wastes is most common in Rugando village?

11. What are the causes of poor waste disposal in Rugando village?

12. Which among the causes is most common in Rugando village?

13. Which diseases affect people due to poor waste disposal in Rugando village?

14. Which among the diseases is most common that affects people of Rugando village?

15. What waste management practices can be adopted to promote health in Rugando village?

16. Which is the most effective practice of waste management in Rugando village?

17. What waste management practices have promoted health in Rugando village?

18 Which of the practices can be effective in promoting health in Rugando village?

19. How have waste management practices promoted health in Rugando village?

20. What strategies can be adopted to achieve waste management practices in Rugando village?

21. Which of them do you think is most effective in achieving waste management practices in Rugando village?

Appendix ii

Questionnaire

Dear respondents, I am a student of the above mentioned institution conducting a research study on the topic "The Impact of Poor Waste Disposal on the Health of People in Rugando Village." This is part of the requirement for the award of a Bachelor's degree of Rural Development. Kindly give an appropriate answer to the question. The answers you provide will be used for academic purposes and they shall be kept confidential.

SECTION A: Social Demographic Data of the Respondents

A. Sex 1. male 2. female	**B. Age** 1. Below 18 years 3. 26-35 years 2. 19-25 years 4.36-45 years 5. 45 years and above
C: Level of Education 1. None 4. Certificate 2. Primary 5. diploma and above 3. Secondary	**D. Marital status** 1. Single 2. married 3. widow/ widower
E. Religion 1. Anglican 3. Muslim 2. Catholic 4. Faith of Unity	**F. Occupation** 1. Peasant 3. Business owner 2. Farmer 4. Government Official

SECTION B

G). What is waste disposal and health?

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G). Where do you dispose wastes in Rugando village?

1…….....

2……

4…….

5…….

H). what kind of wastes is poorly disposed in Rugando village?

1…….

2……

3……...

4…….....

I). what are causes of poor waste disposal in Rugando village?

1…….

2……

3…….

4……

5…….

6……

J). which diseases affect people due to poor waste disposal in Rugando Village?

1……

2……

3……

4…….

K). what waste management practices can be practiced to promote health in Rugando village?

1…….

2…….

3…….

4……

5……

6…….

L). How can waste management practices promote health in Rugando village?

1. ……

2. …….

3. …….

4…….

M). what strategies can be adopted to achieve waste management in Rugando Village?

1. …….

2……

3……

4……

5…….

N. Which of the above strategies is most effective in achieving waste management?

1…….

2…….

3……

THANKS