

**THE IMPACT OF ACCESS TO CLEAN WATER ON THE HEALTH OF THE
PEOPLE IN KABAMBA SUB COUNTY.**

BY:

SASIRA BLESS

REGISTRATION NUMBER: 19/ARU/BRD/012

SUPERVISOR:

Mr. ISINGOMA SADAYO MAX

(BCBR, MPHL, SAVE THE MOTHERS)

**A RESEARCH PREPORT SUBMITTED TO AFRICAN RURAL UNIVERSITY
UNDER THE FACULTY OF TECHNOLOGIES FOR RURAL TRANSFORMATION
(TRT) IN FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A
BACHELOR OF RURAL DEVELOPMENT**

APRIL- MAY

Table of Contents

Acknowledgement	vi
Dedication	vii
Declaration	viii
Approval	ix
Abstract.....	x
Chapter One	xi
General Introduction.....	xi
1.0 Introduction.....	xi
1.1 Background of the Study.....	xi
1.2 Vision Statement.....	xi
1.3 Purpose of the Study.....	xi
1.4 Objectives of the Study	xi
1.5 Research Questions	xii
1.6 Scope of the Study.....	xii
1.6.1 Content Scope	xii
1.6.2 Geographical Scope.....	xii
1.6.3 Demographic Scope	xii
1.6.4 Time Scope	xii
1.7 Significance of the Study	xii
Chapter Two.....	xiv
Review of Related Literature	xiv
2.0 Introduction.....	xiv
2.1 Theoretical Framework	xiv
2.2 Conceptual Framework	xv
Figure 2.1	xvi
2.3 Related Literature	xvi

2.3.1 Current status of the water sources in Rural areas	xvi
2.3.2 Practices of cleaning water in Rural areas	xvii
2.3.3 Strategies for improving access to water in a Rural area	xvii
Chapter Three.....	xix
Methods	xix
3.0 Introduction	xix
3.1 Area of Study	xix
3.2 Research Design	xix
3.2.1 Methods of Data Collection	xix
3.2.1.1 Interviewing	xix
3.2.1.2 Observation.....	xx
3.2.1.3 Community Dialogue	xx
3.3 Sample Design	xx
3.3.1 Sampling Techniques	xx
3.3.2 Sample size	xx
3.4 Tools of Data collection	xxi
3.5 Research Procedures.....	xxi
3.6 Ethical Issues	xxii
Chapter Four	xxiii
Presentation, Analysis, Interpretation and Discussion of the Research Results.	xxiii
4.0 Introduction.....	xxiii
4.1.1 Gender of the Respondents	xxiii
Table 1: Distribution of gender of the respondents	xxiii
4.1.2 Age of the Respondents	xxiv
Table 2: Distribution of age of the respondents.....	xxiv
4.1.3 Marital Status of the Respondents.....	xxiv
Table 3: Distribution of marital status of the respondents	xxv

4.1.4 Educational Level of the Respondents	xxv
Table 4: Distribution of the educational level of the respondents	xxvi
4.1.5 Occupation of the Respondents	xxvi
Table 5: Distribution of the occupation of the respondents	xxvi
4.2. EMPIRICAL INFORMATION.....	xxvii
4.2.1 What do you understand by clean and safe water?	xxvii
Table 6: Distribution of response based on their understanding of the term clean and safe water	xxvii
4.2.2 How many water sources are in Rugarambiro Village?.....	xxviii
Table 7: Distribution of the response based on the number of water sources are in Rugarambiro village	xxviii
4.2.3 What are the water borne diseases affecting the community members?	xxix
Table 8: Distribution of the response based on the water borne diseases affecting the community members	xxx
4.2.4 What are the practices done to clean the water and which one is more effective?	xxxi
Table 9: Practices done to clean the water and the more effective	xxxi
4.2.5 What are the strategies for improving access to clean water in Rugarambiro Village?	xxxii
Table 10: Strategies for improving access to clean water in Rugarambiro Village	xxxii
4.2.6 What challenges are faced in implementing the strategies?	xxxii
Table 11: Challenges are faced in implementing the strategies.....	xxxiii
Chapter Five.....	xxxiv
Summary of the findings, conclusions and recommendations of the findings	xxxiv
5.0 Introduction.....	xxxiv
5.1 Summary of the findings	xxxiv
5.2 Conclusions.....	xxxiv
5.3 Recommendations	xxxv
5.3.1 Area of further research	xxxv

References	xxxvi
Appendix	xxxviii
Appendix i: Interview Guide.....	xxxviii
Appendix ii Time frame	xxxviii
Appendix iii Questionnaire	xxxix

Acknowledgement

This work would not have been possible without the financial support of African Rural University. I am especially indebted to Dr. Mwalimu Musheshe the vice chancellor ARU, Mr. Lwanga Anthony the Academic Registrar, Dr. Ssengonzi Jerome the Faculty Dean, and Mr. Tusiime John who have been supportive of my career goals and who worked actively to provide me with the protected academic time to pursue those goals.

I am grateful to all technical staff and political body of Kabamba Sub County, the community members of Rugarambiro Village, especially the host family for the plentiful support and guidance they provided during the One-year internship and members of Buhumuriro village.

Grate appreciation go to my field Supervisor Mr. Isingoma Sadayo Max, Mr. Twesiime Paulino and Ms. Birungi Gatrude my Field Mentor for each of them provided me extensive personal and professional guidance and taught me a great deal about both Visionary approach, Participatory Action Research, Community Action Plan and how to be creative, persistent and flexible when dealing will rural communities.

I would like to appreciate my academic sponsor for the financial support and backup she has been providing me throughout my career development for without you I wouldn't be here.

Nobody has been more important to me in the pursuit of this course than the members of my family. I would like to thank my parents Mr. Turyatemba James and Mrs. Kobusingye Jackline . I wish to thank my loving and supportive brother and sister Mwebesa Elton Jim and Katushabe Gift respectively; whose love and guidance are with me in whatever I pursue. They are the vital role models.

Dedication

I dedicate this report to my academic sponsors who has supported me throughout this course, my lovely parents Mr. Turyatamba James and Mrs. Kobusingye Jackline whose gentle and hopeful words kept me moving and energized each day, my brother and sister for being there for me throughout the process of this One-year Internship. Special dedication also goes to my team mates especially all fourth year students academic year (2022- 2023) for they encouraged, guided and gave me strength during the One-year internship.

Declaration

I, Sasira Bless, declare that the production of this report is entirely of my efforts and commitment to the best of my knowledge and no report of this kind has ever been developed and submitted for award of academic qualification in any academic institution. Truly I highly valued and acknowledged information from other sources to use in support.

Signed by

Date

Approval

The one-year Internship report by Sasira Bless in Rugarambiro and Buhumuriro Villages, Rusekere Parish, Kabamba Sub County, Kagadi district has been done under my close supervision and it is being submitted for examination with my approval.

MR. ISINGOMA SADAYO MAX (SUPERVISOR)

Signature-----

Date.....

Abstract

The research about “The Impact of Access to Clean Water on the Health of the People in Kabamba Sub County” was carried out in Rugarambiro village, Rusekere Parish, Kabamba Sub-County in Kagadi district with a purpose of finding out why the residents of Rugarambiro Village do not have access to clean water.

The research design was employed using both qualitative and quantitative research techniques taking Rugarambiro as a case study. With a sample of 319 people from 48 households, Qualitative research was used to collect data using an interview guide and a questionnaire. Data was analyzed using Excel. Quantitative research method was used to represent the information using statistics in table and pie chart format. This helped the research team identify the sources of water in the village, methods used in cleaning water sources, diseases affecting the community members and strategies for improving access to clean water.

The research found out that Rugarambiro village has one borehole, 6 open wells and rain water harvesting as the main sources of water, these water sources are cleaned through slashing around and draining the wells for clean water. Flu and cough are the most common disease in Rugarambiro village followed by Malaria Typhoid, Brucellosis and Cholera.

Lobbying for water sources by the local, technical and political leaders at all levels of intervention and holding community meetings for planning on how to improve the water sources through working together are the strategies for attaining clean water according to the respondents.

The study recommends conducting more research in other parts of Kagadi districts because Rugarambiro’s population is less to represent the whole of Kabamba Sub County and Kagadi District as a whole.

Chapter One

General Introduction

1.0 Introduction

This Chapter presents the Background of the Study, Vision Statement, Purpose of the Study, Objectives, Research Questions, Scope, Significance and Delimitations.

1.1 Background of the Study

The Intern conducted a one-month practicum in the month of April- May 2022 in Rugarambiro Village, Rusekere Parish, Kabamba Sub County, Kagadi District through conducting Community Action Plan (CAP) with the community members. They came up with several issues and the impact of water on their health was more pressing because the whole village of 1,860 people depends on one bore hall with clean water that is far from most of the people and seven open wells that have dirty water in most cases. I was able to attain a Research topic for conducting Participatory Action Research which is “The Impact of Access to Clean Water on the Health of the People. A Case Study of Kabamba Sub County”.

The way of life of all individuals depends on water which is an essential basic need in a community because it is used in our day-to-day chores to promote good health and productivity. A healthy community is a strong and productive community. Access to clean water has an effect on an individual’s health and productivity since they spend a lot of time looking for clean water. There is limited access to clean water leading to an increase in the spread of diseases like Typhoid, Malaria and Diarrhea.

1.2 Vision Statement

A transformed Rugarambiro Village with well-established water sources and good health by 2030

1.3 Purpose of the Study

To find out why the residents of Rugarambiro Village do not have access to clean water.

1.4 Objectives of the Study

1. To find out the current status of water sources in Rugarambiro village
2. To find out the methods used in cleaning the water sources in Rugarambiro Village
3. To identify the strategies for improving access to clean water in Rugarambiro Village

1.5 Research Questions

1. What is the current status of the water sources in Rugarambiro Village?
2. What methods are carried out to clean the water in Rugarambiro Village?
3. What are the strategies for improving access to clean water in Rugarambiro Village?

1.6 Scope of the Study

This Chapter presents the Content, Geographical, Demographic and Time Scope of the Research as shown below;

1.6.1 Content Scope

The study examined the impacts of access to clean water on the health of people in Kabamba Sub-County.

1.6.2 Geographical Scope

The study was conducted in Rugarambiro Village which is located in Rusekere parish, Kabamba sub-county, Buyaga East County, Kagadi District in Bunyoro Sub-Region of Western Uganda. The Village is bordered by Buhumulilo, Mugoija, Rusekere, Kazizi and Nchumbira Villages. The people staying in this area are Bakiga and Bafumbira by tribe and mainly speak Rukiga which is the most dominant language used for communication and their main occupation is farming.

1.6.3 Demographic Scope

The Study included all people in the community (men, women, boys and girls). According to the VHT's report that was carried out in 2022, Rugarambiro Village consists of 173 households with a total population of 1,860, 442 are men, 525 are women and 893 are children in 2022.

1.6.4 Time Scope

The research was conducted for a period of two months.

1.7 Significance of the Study

The Research findings will help the community members reduce on the spread of diseases like Typhoid which will boost their health and wellbeing. The community members will also reduce on health costs (money spent on treatment) and invest it in Agriculture because they mainly grow maize, beans and coffee and other businesses.

The Research findings will create a good relationship between the local government and the community members but also among the community members themselves who will work hand in hand to draw clean water close to the people for easy access.

Chapter Two

Review of Related Literature

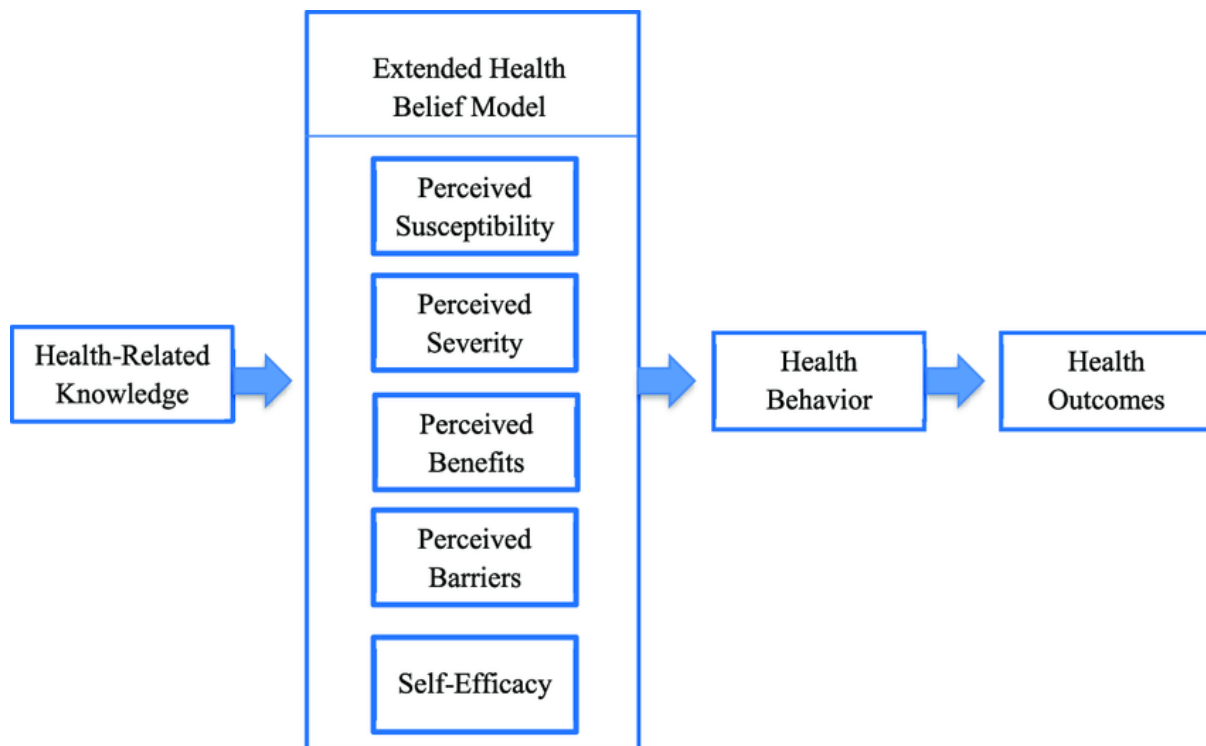
2.0 Introduction

This Chapter presents the Theoretical Framework, Conceptual Framework and reviews related literature as shown below;

2.1 Theoretical Framework

The Health Belief Model. This theory explains the failure of people to adopt disease prevention strategies or screening tests for the early detection of disease. Health-related behaviour patterns could be changed through educational interventions, and thus shift health behaviour patterns at population levels, (Abraham, 2015). This theory well explains the way people get diseases from the unclean water that causes typhoid and harbors mosquitoes that causes malaria. The theory has components which include; perceived severity, perceived susceptibility, perceived benefits, perceived barriers and self- efficacy. Perceived Severity argues that the probability that a person will change their health behaviours to avoid a consequence depends on how serious they believe the consequences will be. Perceived Susceptibility explains how people will not change their health behaviors unless they believe that they are at risk. Perceived Benefits shows that it's difficult to convince people to change a behavior if there isn't something in it for them. People don't want to give up something they enjoy if they don't also get something in return. Perceived Barriers shows that one of the major reasons people don't change their health behaviors is that they think doing so is going to be hard. Changing health behaviors can require effort, money, and time. Commonly perceived barriers include: amount of effort needed, danger, discomfort, expense, inconvenience social consequence. Self-efficacy, it wasn't added to the model until 1988. Self-efficacy looks at a person's belief in their ability to make a health-related change. It may seem trivial, but faith in your ability to do something has an enormous impact on your actual ability to do it. (Boskey, 2023)

Below is an illustration of the Health Belief Model.



2.2 Conceptual Framework

Figure 2.1 reflects a frame work relating the dependent and independent variables. The dependent variable which is health is affected by the independent variable of clean water. The independent variables have been listed in a way that the current status of the water sources includes; protected springs, hand pump, bore halls, open wells, rain water harvest, hand dug wells. Practices of cleaning water sources in Rural areas have been listed as; boiling, filtration solar Radiation and sieving. The strategies for improving access to water in a Rural area have been listed as Collaboration, Sustainable Development Goals, Community Participation and mini-water schemes. The dependent variable is the health of the community members which is affected by the independent variables.

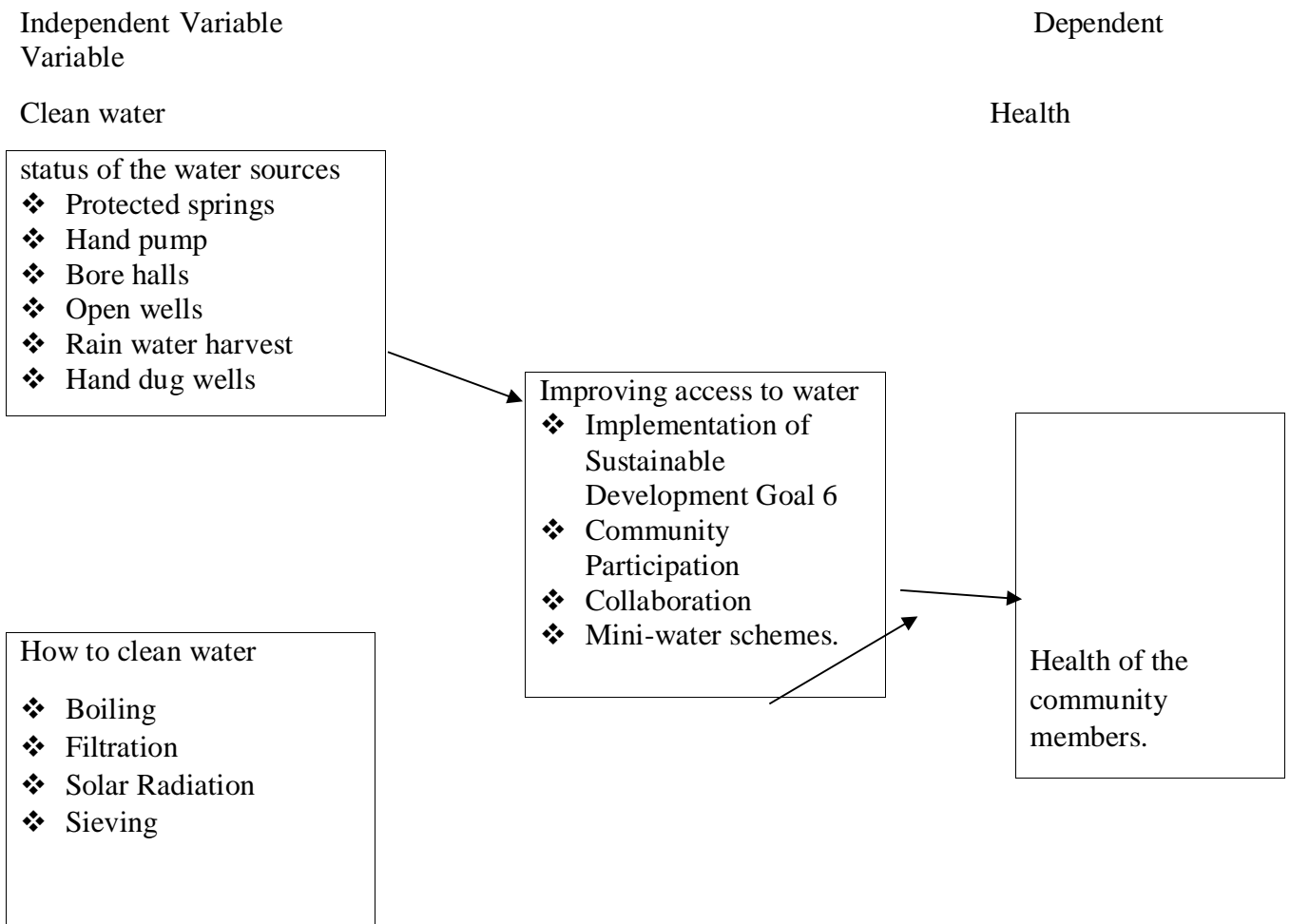


Figure 2.1 Conceptual frame work relating the clean water to the health of the people.

2.3 Related Literature

Related literature includes the Current status of the water sources in Rural areas, Practices of cleaning water sources in Rural areas and Strategies for improving access to water in a Rural area.

2.3.1 Current status of the water sources in Rural areas

The choice of technology for improved water supplies, dependent on environmental, socio-economic and political conditions, includes Protected springs, Hand pump equipped boreholes and wells, Rainwater harvesting, Hand-dug wells, Gravity-fed systems; and Small-scale pumped systems, (Reed, 2004). Most farming and pastoral communities in sub-Saharan Africa lack a piped water service and are reliant on hand pumps for their water supply. In fact, 30 percent of Uganda’s rural population does not even have a hand pump to access safe drinking water. Although the Government of Uganda and some aid agencies prioritize piped

water supply, rising population rates, financial constraints, and hydrogeological limits for piped supply means that the majority of the population will remain dependent on hand pumps many decades into the future, (Harvey, 2021).

A source of water supply can be identified at any of the above stages of water cycle, provided it can supply in sufficient quantities for most periods of the time in a year. Thus, water supply for rural communities can be organized with use of rainwater, groundwater, and, spring and surface water, (Sundaravadivel, 2014). The main sources of water in Rugarambiro village include, a borehole, rain water harvesting and open wells. Only one borehole with clean water is used by over 1,860 people and 6 open wells with unclean water.

2.3.2 Practices of cleaning water in Rural areas

Traditional water purification methods include boiling, filtration, sedimentation and solar radiation. Water borne diseases are more common in rural community where potable water supply coverage is very low. The research found out that boiling method was the most efficient. (Chaurasia, 2016)

All over the world, these rural communities have adopted some simple and rudimentary water treatment techniques that can serve either a community or individual households. Basically, all such techniques aim to remove visible impurities such as leaves, twigs, or large suspended particles from water collected from unprotected local sources. These traditional water treatment techniques range from simple filtration using a sieve or cloth to clarification and filtration using naturally available stone filters and plant materials. Attempts have also been made to develop simple treatment techniques that can serve households of isolated communities either at household level or at community level. Coarse media filters, gravel filters, coconut fiber filters, etc., are examples of such developments. There are also household techniques available to remove even some specific water pollutants such as fluorides that can greatly enhance the safety of usage of water for drinking purposes in water scarce regions where there is no other appropriate water source, (Vigneswaran, 2016).

The community members do clean the water through draining the open wells, washing water containers and slashing around the water sources.

2.3.3 Strategies for improving access to water in a Rural area

The increased demand for water in areas with reduced water availability or high competition for water calls for an increased diversification of water sources, such as low yielding wells and springs, rainwater or storm water harvesting, urban runoff, and wastewater recycling.

Water is next to air in importance. The World Bank declared water as an economic good while endorsing the international demand for water supply. Human health depends on having access to safe, adequate and reliable water supply. Statistics show that Africa has the highest occurrence of cholera and typhoid epidemics as well as child diarrhea. The paper attempts to look into the appropriateness of the use of the technology of integrated mini water scheme and infiltration gallery as a means of providing safe and adequate domestic water to rural community people to serve as the best preventive medicine against the prevalent water diseases. (Strategies and techniques of providing adequate and affordable potable water in rural areas of Nigeria, 2014)

The people of the community must be given some understanding of the need for safe and wholesome water and of the part which the water- supply project will play towards filling that need. The enlistment of the support of the local government and community leaders will help to attain this end. In general, health education techniques, applied at the earliest planning stages and preferably under the guidance of a professional health educator, will be of great value in marshalling public support for the rural water-supply programme, (WAGENER, 1959).

The 17 Sustainable Development Goals were adopted by the United Nations in 2015 to work toward a sustainable and poverty-free world by 2030 with an aim of “leaving no one behind”. Sustainable Development Goal 6 with 6 targets focuses on ensuring a clean and stable water supply and effective water sanitation for all people by the year 2030. The goal is a reaction to the fact that many people throughout the world lack these basic services. In regions where safe drinking water is scarce. Only a portion of the world’s population has access to clean water which is vital to maintaining public health and preventing outbreaks of disease. (UN, 2021)

Chapter Three

Methods

3.0 Introduction

Chapter Three presents various Methods that were used during the Research, it entails of the Area of Study, Research Design, Purpose of the Study, Methods of the Study, Target Population, Sample Design and Tools of Data Collection

3.1 Area of Study

The study was conducted in Rugarambiro Village which is located in Rusekere parish, Kabamba sub-county, Buyaga East County, Kagadi District in Bunyoro Sub-Region of Western Uganda. The Village is bordered by Buhumulilo, Mugoija, Rusekere, Kazizi and Nchumbira Villages. The Study will include all people in the community (men, women, boys and girls). According to the VHT's report that was carried out in 2022, Rugarambiro Village consists of 173 households with a total population of 1,860, 442 are men, 525 are women and 893 are children.

3.2 Research Design

Research design presents; Methods of Data Collection, Sample Design, Tools of Data collection.

I used qualitative research. Qualitative research is important in answering the whys and how of the phenomenon in question by the community members, (Ahmad, 2019). This provided theoretical information for the findings that are easy to present.

I also used Correlational type of research design which examines the relationship between two or more variables without the researcher controlling or manipulating any of them, (Bhandari, 2021). This type of research helped in understanding the extent to which the two variables are associated with each other.

3.2.1 Methods of Data Collection

The methods that were used in collecting data for all the objectives included; Interviewing, Observation and Community Dialogue.

3.2.1.1 Interviewing

This method was used in data collection of this study whereby, an interview guide was used to interview the people on how their health is being affected by the limited access to clean

water. An unstructured interview which is a flexible approach and has more freedom was used. It was vital in guiding the interviewer in interviewing the community members of Rugarambiro by using the guiding questions.

3.2.1.2 Observation

Using the observation method, I looked at the different places where the community members fetch their water, how they use it, how water looks like and the distances between the community members and the sources of water. This helped me compare and contrast the information from the community members and what I observed.

3.2.1.3 Community Dialogue

The research team conducted a community dialogue and we had a conversation about the status quo and the possible strategies for addressing the issue. This method was important in identifying possible collaborations and partnerships within and outside the community for execution of actions for results to be realized.

3.3 Sample Design

This Chapter presents the Sampling Techniques and Sample Size.

3.3.1 Sampling Techniques

The sample for this research was selected by using simple random sampling. Simple Random sampling involves probability sampling in which the researcher randomly selects a subset of participants from a population, (Golzar, 2022). The community members suggested that we collect data from different households, interviewing one and skipping the other till the sample size is covered with no bias.

3.3.2 Sample size

The sample size was obtained from the 1860 people according to the VHT's report that was carried out in 2022 in which an appropriate sample will be obtained through using Krejcie and Morgan formula which is important in determining the number of people to sample as shown below;

$$\text{Formula; } n = \frac{x^2 NP (1-P)}{e^2(N-1) + x^2 P(1-P)}$$

Whereby; n= sample size, x^2 = the table value of chi square for one degree of freedom at the desired confidence level (3.841), N=the population size, e= precision (0.05), 1= constant and P= the population portion (assumed to be 0.5)

$$n = \frac{3.841 * 1860 * 0.05(1-0.5)}{0.05^2 (1860-1) + 3.841 * 0.5 (1-0.5)}$$

$$n = \frac{3,572.13(1-0.5)}{0.0025 (1860-1) + 1.92059(1-0.5)}$$

$$n = \frac{3,572.13 - 1786.065}{4.65 - 0.0025 + 1.9205 - 0.96025}$$

$$n = \frac{1,786.065}{5.60775}$$

$$n = 319$$

The study involved 319 people who presented results of the contribution of the community towards the impact of access to clean water on health, (Bukhari, 2021).

3.4 Tools of Data collection

The Study used an Interview guide. This is simply a list of the high-level topics that one plans on covering in the interview with the high-level questions that one wants to answer under each topic, (Smulowitz, 2017). The guide is usually limited to one page and few easy questions, it should be flexible with the interviewers to permit participants to expand on their initial answers.

The study used a questionnaire that consisted of specific questions in line with the objectives. The questions were open ended and easy to answer for respondents of all levels of education.

The study used a camera which is a device for recording an image of an object. These images produce information and evidence since it is easily interpreted.

The researcher also used pen and paper for recording down what the community members think and say during the interviews and community dialogues.

3.5 Research Procedures

Before proceeding to the field to interact with community members and collect data, African Rural University provided me with a letter describing the intention of my deployment in the field that was presented to the local government I worked with. The Epicenter Manager of Kabamba Sub County introduced me to the Chairman LC1 who helped mobilize the

community members for a community dialogue where the community members were enrolled into the research and other stakeholders were identified.

3.6 Ethical Issues

Ethical issues in research are some of the fields that researchers follow to protect the rights in developing research strategies and building a trusted relationship between the study participants and investigator. Ethical considerations in research have always been challenging, including ethical concerns vis-a-vis time, funding, accessibility, and proper implementation of these concerns. These considerations need to apply throughout the study rather than at any specific time of the process, (Dilshad, 2021). During the data collection, the research team sought for consent from the respondents after explaining the dignity, privacy and the well fare behind answering the few questions I asked or after having the conversations. The respect of the respondent was ensured during data collection which promoted a good relationship between the interviewer and interviewee.

Chapter Four

Presentation, Analysis, Interpretation and Discussion of the Research Results.

4.0 Introduction

This chapter introduces Data Presentation, Analysis, Interpretation and Discussion of the research results in Rugarambiro Village, Rusekere Parish, Kabamba Sub County in Kagadi District.

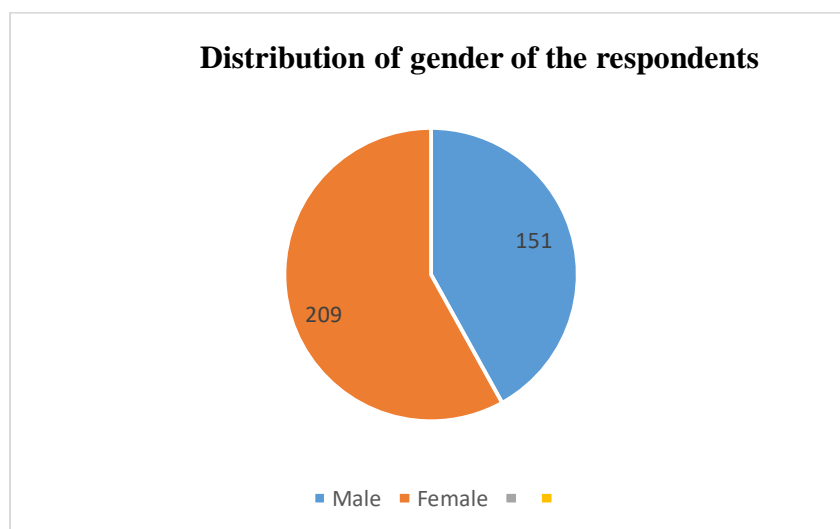
4.1.1 Gender of the Respondents

The results of the findings show that out of 319 respondents, 185 (42%) were male and 184 (58%) were female as shown in Table 1 below. This implies that women participate more in developmental issues and domestic work like fetching water but also it indicates that the research was not biased.

Table 1: Distribution of gender of the respondents

Gender	Frequency	Percentage (%)
Male	134	42
Female	185	58
Total	319	100

Source: Ordinary Data, 2023



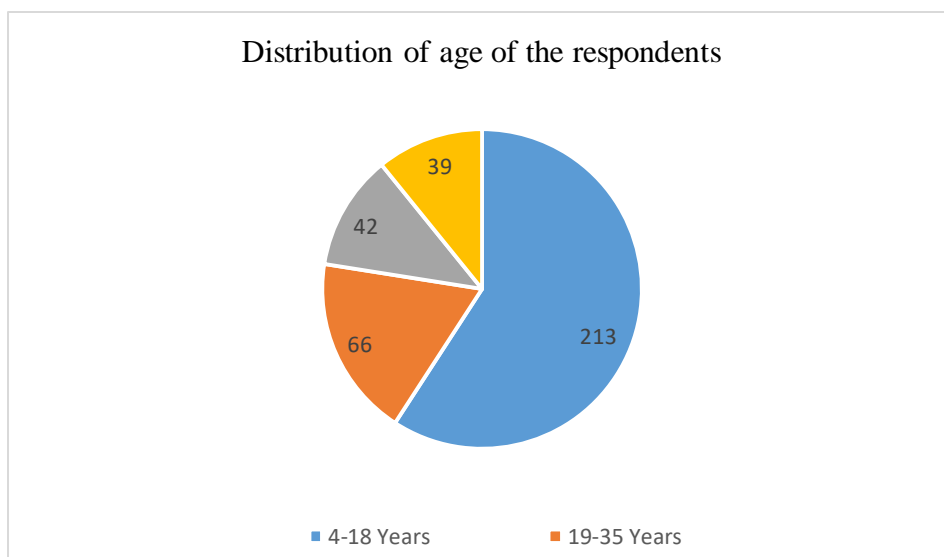
4.1.2 Age of the Respondents

The results show that out of a sample of 319 respondents, 189 (59%) range from 10-18 years, 58(18%) range from 19-35 years, 37(12%) range from 36-45 years and 35(11) are above 46 years as shown in Table 2. This implies that children have the highest population in Rugarambiro village and are more concerned with the activity of fetching water at home. Most of the teenagers marry below the age of 18.

Table 2: Distribution of age of the respondents

Age	Frequency	Percentage (%)
10-18 Years	189	59
19-35 Years	58	18
36-45 Years	37	12
Above 46	35	11
Total	319	100

Source: Ordinary Data, 2023



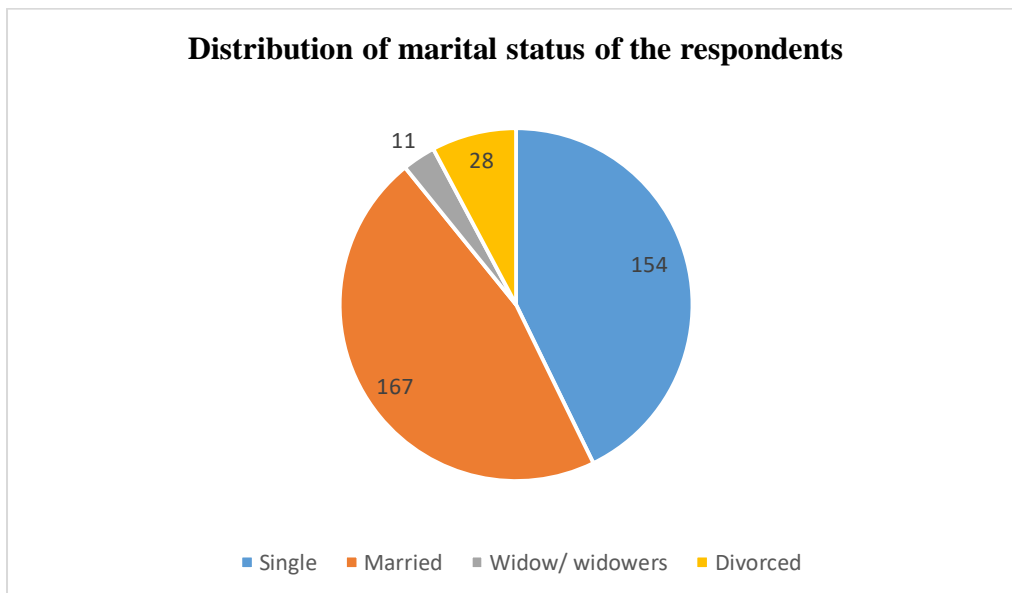
4.1.3 Marital Status of the Respondents

The results of the findings show that, out of 319 respondents, 136 (43%) are single, 148 (46%) are married, 10 (3%) are widows /widowers and 25 (8%) are divorced. This implies that most of the respondents are married because the children in Rugarambiro village marry young and produce more children as they age.

Table 3: Distribution of marital status of the respondents

Marital Status	Frequency	Percentage (%)
Single	136	43
Married	148	46
Widow/ widowers	10	3
Divorced	25	8
Total	319	100

Source: Ordinary Data, 2023



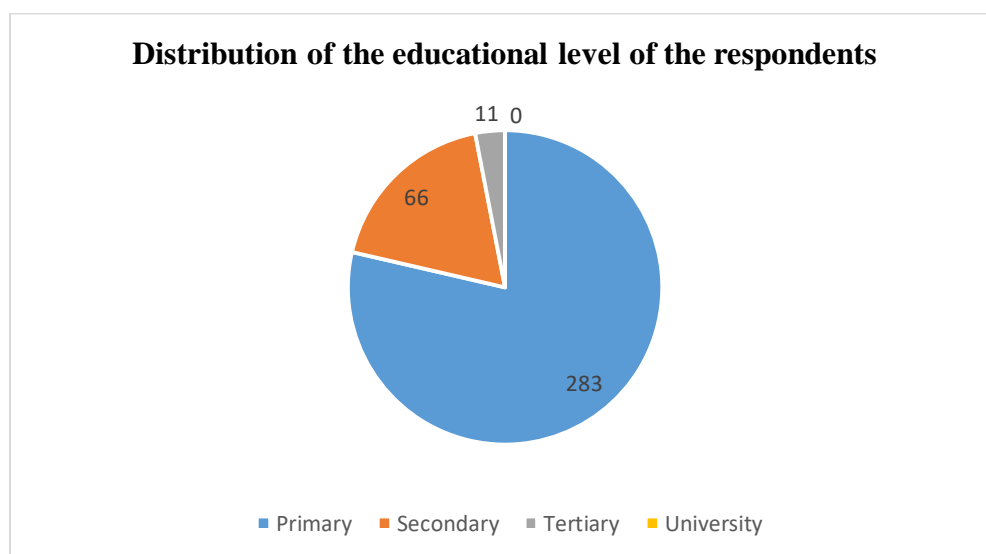
4.1.4 Educational Level of the Respondents

About the educational levels, the results show that out of 319 respondents, 251 (79%) ended in primary and others are still in primary school, 58 (18%) ended in secondary, 10 (3%) ended in tertiary institutions and none of them attained university education as indicated in Table 4. Most of the respondents' level of education is primary because the children drop out of school before it is accomplished due to the peer pressure to make money at a tender age, long distances to school and poor mindset towards education. None of them have attained higher education because their lower levels of education do not qualify them to join University.

Table 4: Distribution of the educational level of the respondents

Educational Level	Frequency	Percentage (%)
Primary	251	79
Secondary	58	18
Tertiary	10	3
University	0	0
Total	319	100

Source: Ordinary Data, 2023



4.1.5 Occupation of the Respondents

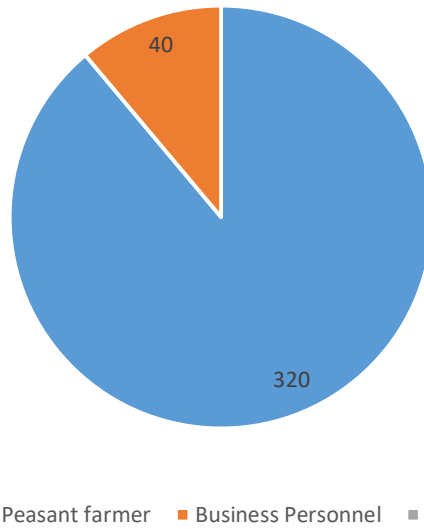
The results of the findings show that out of 319 respondents, 284 (89%) are peasant farmers and 35 (11%) are business personnel dealing in produce, shops and bars as shown in Table 5. This implies that the main economic activity in Rugarambiro Village is farming

Table 5: Distribution of the occupation of the respondents

Occupation	Frequency	Percentage (%)
Peasant farmer	284	89
Business Personnel	35	11
Total	319	100

Source: Ordinary Data, 2023

Distribution of the occupation of the respondents



4.2. EMPIRICAL INFORMATION

One of the objective was to determine the current status of the water sources in Rugarambiro Village, Rusekere Parish, and Kabamba Sub-County in Kagadi District.

4.2.1 What do you understand by clean and safe water?

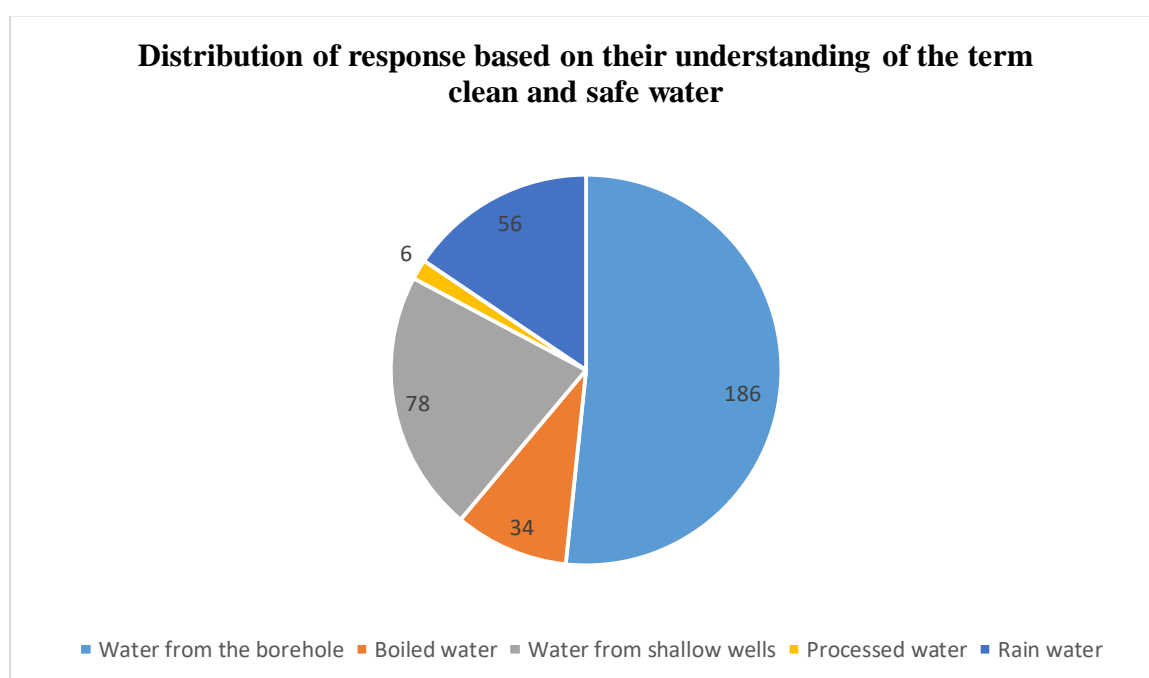
The results of the findings show 165 (51%), water from the borehole is clean and safe because it is in an enclosed place where no dirt enters it, 30 (9%) of the respondents show that boiled water is clean water, out of 319 respondents 69 (22%) shows that water from shallow wells is clean, 5 (2%) show that processed water is safe and 50 (16%) show that rain water is clean when harvested in clean containers like jerrycans and drums. This implies that water from the borehole is clean and safe for domestic work, drinking and cooking which reduces on the increase in the spread of diseases and spending more money on attaining treatment.

Table 6: Distribution of response based on their understanding of the term clean and safe water

Response	Frequency	Percentage (%)
Water from the borehole	165	51

Boiled water	30	9
Water from shallow wells	69	22
Processed water	5	2
Rain water	50	16
Total	319	100

Source: Ordinary Data, 2023



4.2.2 How many water sources are in Rugarambiro Village?

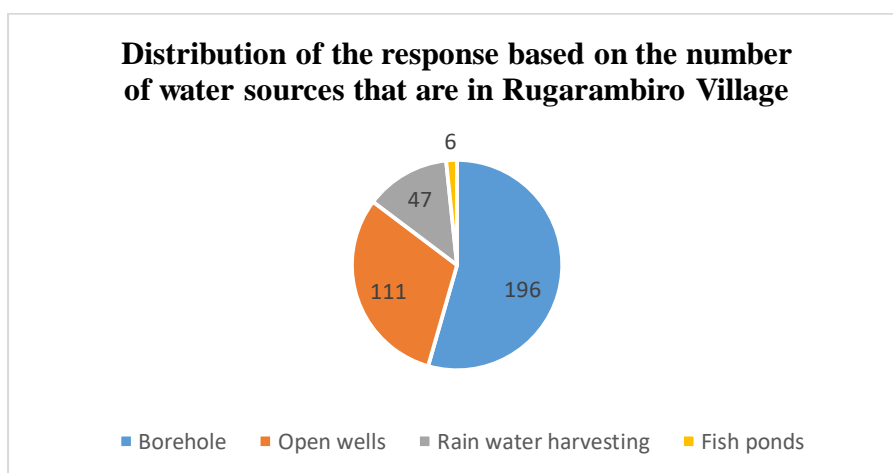
The results of the findings show that 174 (54%), boreholes are a source of water and the whole village uses only one borehole, 98 (31%) open wells are also another source of water, the village has 6 open wells that are used by the people. 42 (13%) show that rain water harvesting is another source of water and also 5 (2%) collect water from fish ponds since the open wells and borehole are far away from their places of residence. This implies that there are 4 sources of water in Rugarambiro village with borehole being the main one.

Table 7: Distribution of the response based on the number of water sources are in Rugarambiro village

Response	Frequency	Percentage (%)
----------	-----------	----------------

Borehole	174	54
Open wells	98	31
Rain water harvesting	42	13
Fish ponds	5	2
Total	319	100

Source: Ordinary Data, 2023



4.2.3 What are the water borne diseases affecting the community members?

The results of the findings show the list of diseases caused by contaminated water. According to the respondents 23%, people are affected with malaria which comes as a result of mosquito laying their eggs in stagnant water of the open wells which bite people who fetch the water. 20% say that Typhoid affects the community members since they drink the water from the open wells and borehole without boiling it, also there is open defecation near the open wells and when it rains, running water flows all the dirt which includes, polythen bags and plastic bottles in the well. 28 (9%), emphasize that Brucellosis is one of the diseases affecting the people because they share the water from the open wells with animals like cows which are already affected, 40 (13%) say that Cholera affects the people since they drink un clean, untreated and contaminated water from the open wells.

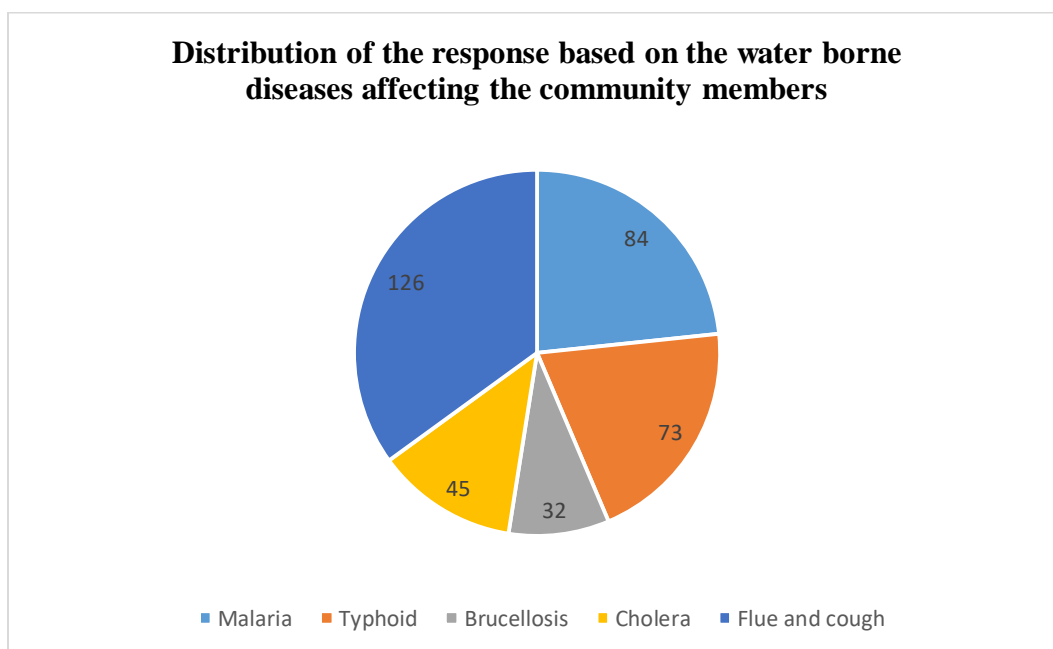
112 (35%) of the respondents highly emphasize that flue and cough also affect the people daily from drinking dirty water and also it's an air borne disease that spreads fast to an extend

that they hold it normal amongst them. According to the respondents, the people spend more money on treatment because medication is expensive. This implies that flue and cough are the most common diseases in Rugarambiro that affect the community members of all ages (from young –old) and Brucellosis is the least.

Table 8: Distribution of the response based on the water borne diseases affecting the community members

Response	Frequency	Percentage (%)
Malaria	74	23
Typhoid	65	20
Brucellosis	28	9
Cholera	40	13
Flue and cough	112	35
Total	319	100

Source: Ordinary Data, 2023



Another objective was to determine the methods carried out to clean the water in Rugarambiro Village, Rusekere Parish, Kabamba Sub-County, and Kagadi District

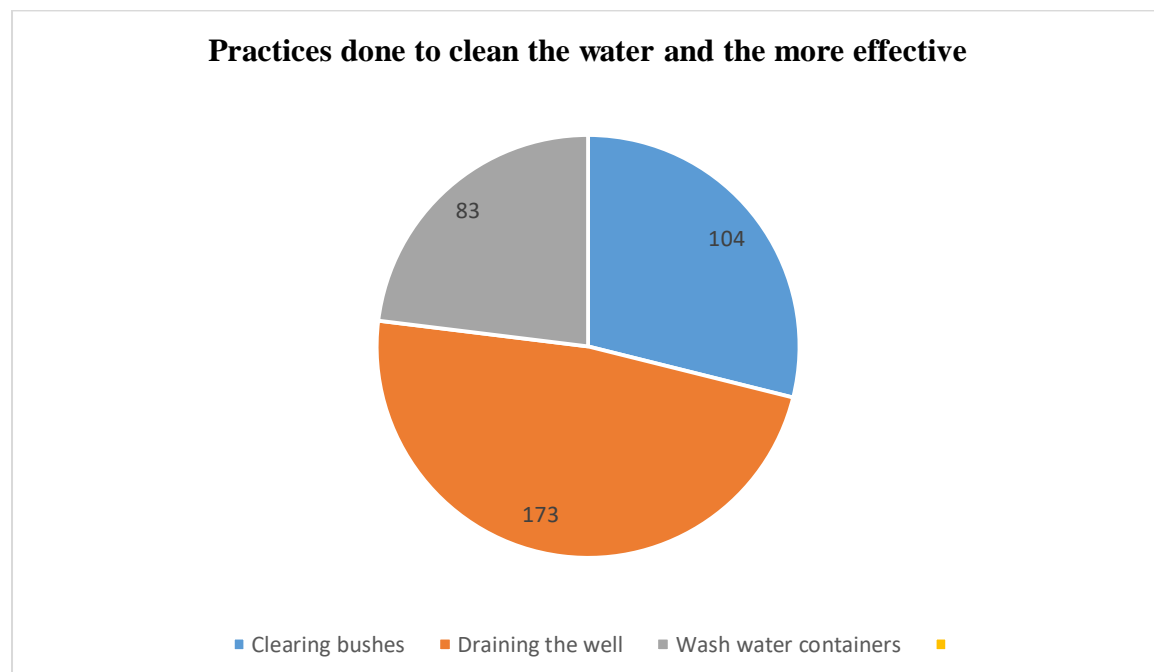
4.2.4 What are the practices done to clean the water and which one is more effective?

According to the respondents 92 (29%), clearing the bushes around and the paths the wells and borehole is done to keep the water clean, 153 (48%), draining the wells is another way and this is done through removing the dirty water from the open wells and new clean water from the springs fills the well and the process continues. The drains are only drained during the dry season without hindrances from the running water. 74 (23%), washing water containers is important to keep the water clean. This implies that the most effective practice done to clean water is draining the well according to the majority respondents.

Table 9: Practices done to clean the water and the more effective

Response	Frequency	Percentage (%)
Clearing bushes	92	29
Draining the well	153	48
Wash water containers	74	23
Total	319	100

Source: Ordinary Data, 2023



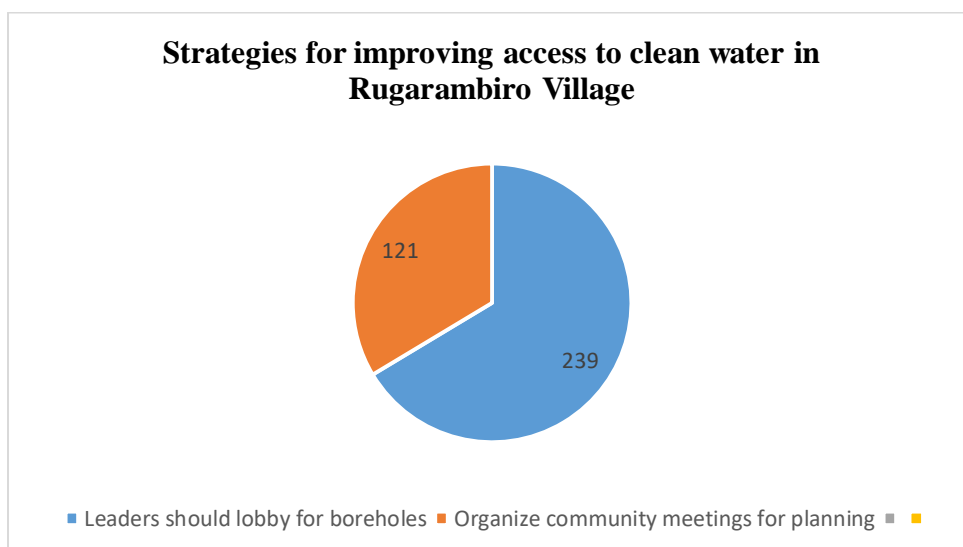
4.2.5 What are the strategies for improving access to clean water in Rugarambiro Village?

The results of the findings show that out of a sample of 319, 212 (66%) respondents indicate that leaders should lobby for boreholes, these leaders include; political and technical leaders who represent the community members at the Sub County, District and National levels for them to attain more boreholes. 107 (34%) of the respondents say that organizing community meetings for planning as a village will create a difference, when they come together, they can discuss matters arising on water and get a way forward, for example, formulating bye-laws for the farmers who take their cows to drink water from the open wells. This implies that clean water can be accessed by the community members through leaders lobbying for boreholes at all levels of intervention.

Table 10: Strategies for improving access to clean water in Rugarambiro Village

Response	Frequency	Percentage (%)
Leaders should lobby for boreholes	212	66
Organize community meetings for planning	107	34
Total	319	100

Source: Ordinary Data, 2023



4.2.6 What challenges are faced in implementing the strategies?

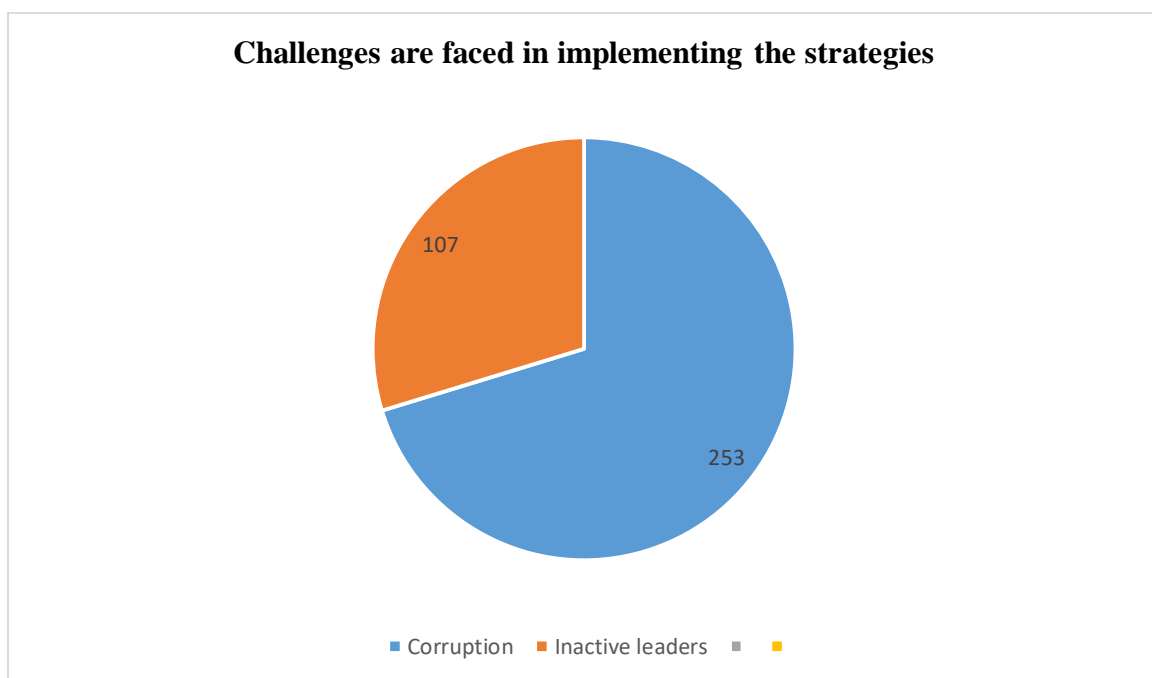
The results of the findings show that according to the respondents 224 (70%), corruption is one of the challenges faced in implementing the strategies, when the boreholes are lobbied,

they are diverted to other places due to corruption. 95 (30%), inactive leaders fail the process of development since they do not represent them as they should at the Sub County, District and National level. This implies that the biggest challenge faced in implementing the strategies is corruption.

Table 11: Challenges are faced in implementing the strategies

Response	Frequency	Percentage (%)
Corruption	224	70
Inactive leaders	95	30
Total	319	100

Source: Ordinary Data, 2023



Chapter Five

Summary of the findings, conclusions and recommendations of the findings

5.0 Introduction

This Chapter presents; summary of the findings, conclusions and recommendations of the findings.

5.1 Summary of the findings

The diseases affecting the community **members as a result of unclean water.**

According to Table 4.2.3, diseases and conditions are caused by running water containing fecal matter, mosquito laying their eggs in stagnant water, drinking un boiled water, contaminated water and sharing water with animals (cows).

According to the respondents, the use of dirty water from the open wells leads to the multiple diseases which affect people's health and production.

This implies that flu and cough are the most common disease in Rugarambiro village followed by **Malaria and Typhoid. It makes the community members to spend more on medication than** other crucial activities like farming and education. These diseases also include; Brucellosis and Cholera.

According to the respondents, hardworking local and political leaders who lobby boreholes for the community members and increased community participation in planning and working together can reduce on the dirty water and spread of disease in Rugarambiro village. This is a good strategy because it brings all the different stakeholders on board and mainly the community members who are facing the problem.

5.2 Conclusions

In conclusion, the study found out that Rugarambiro village, rain water harvesting, borehole and open wells are the main sources of water. The open wells are the main source of water

that spreads diseases like Typhoid, Brucellosis, Malaria, flu and cough since it harbors mosquito eggs, running water with fecal matter and sharing the water with sick animals.

The study found out that the water sources are cleaned through slashing around the water sources and draining water from the open wells. The water in the open wells is drained during the sunny season.

The study found out that hardworking local and political leaders who lobby boreholes for the community members and increased community participation in planning and working together can reduce on the dirty water and spread of disease in Rugarambiro village. This is a good strategy because it brings all the different stakeholders on board and mainly the community members who are facing the problem.

5.3 Recommendations

The following are recommended as shown below;

- More research should be conducted in other parts of Kagadi districts because Rugarambiro's population is less to represent the whole of Kabamba Sub County and Kagadi District as a whole.
- Community participation for planning should be carried out frequently. The community members should work in hand and work on the water sources as the other stakeholders join hands with them.
- The students should be taught how to analyze data practically before they go to the field.

5.3.1 Area of further research

Basing on the findings of the study, the following areas are for further study;

- Problems associated with unclean water.
- Effects of unclean water on household income.

References

- Abraham, C. (2015). Chapter. University of Exeter.
- Ahmad, S. (2019, October). *Qualitative v/s Quantitative Research*. Retrieved from https://www.researchgate.net/publication/337101789_Qualitative_vs_Quantitative_Research
- Bhandari, P. (2021, July 7). *Correlational Research*. Retrieved from <https://www.scribbr.com/methodology/correlational-research/>
- Boskey, E. (2023, February 22). *What Is the Health Belief Model?* Retrieved from <https://www.verywellmind.com/health-belief-model-3132721>
- Bukhari, S. A. (2021). *Sample Size Determination Using Krejcie and Morgan Table*. Mohammad Ali Jinnah University.
- Chaurasia, S. (2016). *A review on traditional water purification methods used in Rural Area*. *Indian Journal of Environmental Protection*.
- Harvey, A. (2021, July). *Ten Factors for Viable Rural Water Services*. Retrieved from https://www.globalwaters.org/sites/default/files/whave-_ten_factors_final.pdf
- Organization, W. H. (2008, June 25). *How does safe water impact global health?* Retrieved from World Health Organization: <https://www.who.int/news-room/questions-and-answers/item/how-does-safe-water-impact-global-health>
- Reed, P. H. (2004). Retrieved from *Rural Water Supply in Africa*: https://wedc-knowledge.lboro.ac.uk/resources/books/Rural_Water_Supply_in_Africa_-_Complete.pdf
- Strategies and techniques of providing adequate and affordable potable water in rural areas of Nigeria*. (2014). *International Journal of Water Resources and Environmental Engineering*, Sunday Adesogan.
- Sundaravadivel, M. (2014, March). *RURAL WATER SUPPLY SYSTEMS*. Retrieved from <https://www.eolss.net/sample-chapters/c07/E2-14-03-03.pdf>

UN. (2021). Sustainable Development Goal 6: Clean Water and Sanitation. United Nations Water.

Vigneswaran, S. (2016). TRADITIONAL AND HOUSEHOLD WATER PURIFICATION .

WAGENER, E. (1959). Water Supply for Rural Areas and Small Communities. Retrieved from file:///C:/Users/student/Downloads/9241400420-3.pdf

Appendix

Appendix i: Interview Guide

Below are the guiding interview questions that will be used in the study;

1. What do you understand by clean and safe water?
2. What are the sources of water in Rugarambiro Village?
3. How many water sources are in Rugarambiro Village?
4. What is the distance between the homes and the sources of water?
5. What are the water borne diseases affecting the community members?
6. What are the practices done to clean the water and which one is more effective?
7. What are the strategies of improving access to clean water in the Village?
8. What challenges are faced in implementing the strategies?
9. How have they impacted on the health of the people of Rugarambiro Village?

Appendix ii Time frame

Activity	April 2022	March 2023	April 2023	May 2023	November 2023	November 2023
Identifying the issue						
proposal writing and submission						
Enrolling the community members in the research proposal						

Collection of Data						
Writing research report						
Submission of the report						

Appendix iii Questionnaire

QUESTIONNAIRE FOR THE RESPONDENTS

My name is Sasira Bless a fourth year student at African Rural University pursuing a Bachelor of Rural Development. You have been chosen as the right person with the required knowledge and skills to participate in the study on “The Impact of Access to Clean Water on the Health of the people in Kabamba Sub County”. The information received will be held confidential and only used for academic purposes.

SECTION A

BACKGROUND INFORMATION

GENDER:

Male

Female

AGE:

4-18 Years 19-35 Years 36-45 Years Above 46

MARITAL STATUS:

Single: Married: Widow/ Widower: Divorced:

EDUCATION LEVEL:

Primary: Secondary: Tertiary: University:

OCCUPATION:

Peasant farmer: Business Personnel:

SECTION B

IMPIRICAL INFORMATION

To determine the current status of the water sources in Rugarambiro Village?	Response
4. What do you understand by clean and safe water?	
5. How many water sources are in Rugarambiro Village?	
6. What are the water borne diseases affecting the community members?	

SECTION C

To determine the methods carried out to clean the water in Rugarambiro Village?	Response
7. What are the practices done to clean the water and which one is more effective?	
8. What are the strategies for improving access to clean water in Rugarambiro Village?	
8. What challenges are faced in implementing the strategies?	

Thank you

