

**PREVALENCE OF DIARRHOEA AND ASSOCIATED FACTORS AMONG  
CHILDREN BELOW FIVE YEARS AT ISHAKA ADVENTIST HOSPITAL –  
BUSHENYI DISTRICT.**

**BY**

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REQUIREMENT FOR THE AWARD OF A DIPLOMA IN CLINICAL MEDICINE  
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**DECLARATION**

**I SUATHA MOHAMUD SIGAT** declare that this report is my own work and has never been presented anywhere for any academic award and that I have acknowledged all results and quotations from the published and unpublished work of other people.

**Signature:.....Date.....**

### **SUPERVISOR'S APPROVAL**

I do recommend that the report be presented to the faculty board for examination as a student has conducted this research under my guidance and supervision.

Signature:.....

Date:.....

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## **ACKNOWLEDGEMENT**

Sincerely, I want to thank ALMIGHTY ALLAH for this far He has brought through the entire 3 year Diploma programme at KIU-WC. I would like to extend my sincere thanks to my beloved parents for giving me future, my beloved brothers and my sisters' thank you so much for the financial and spiritual support .

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## **DEDICATION**

I dedicate this research work to my beloved mum Mrs. Luul Salah Abdullah who made a visible child today, my dears brothers; Mr. Mohamed M. Sigat and Mr. Feisal M. Sigat and my beloved sisters Miss Aminazahra M. Sigat, Miss Ubah M. Sigat, Miss Zamzam M. Sigat and Miss Fatma Abdikadir, who supported me morally, spiritually and financially.

**LIST OF ABBREVIATIONS.**

|        |                                             |
|--------|---------------------------------------------|
| AMREF: | Africa Medical and Research Foundations     |
| CCD:   | Control of Diarrhoea Diseases               |
| CHD:   | Child Health Dialogue                       |
| DHO:   | District Health Officer                     |
| LC:    | Local Council                               |
| ORS:   | Oral Rehydration Solution                   |
| PMTCT: | Prevention of Mother To Child Transmission. |
| WHO:   | World Health Organization                   |

## TABLE OF CONTENTS

|                                                       |    |
|-------------------------------------------------------|----|
| DECLARATION.....                                      | 1  |
| SUPERVISOR’S APPROVAL .....                           | 2  |
| DEDICATION .....                                      | 4  |
| LIST OF ABBREVIATIONS.....                            | 5  |
| ABSTRACT.....                                         | 8  |
| 1.0 Introduction .....                                | 9  |
| Background .....                                      | 9  |
| 1.2 Problem statement .....                           | 10 |
| 1.3 Study Justification .....                         | 10 |
| 1.4.0 Broad objective.....                            | 11 |
| 1.4.1 Specific Objectives .....                       | 11 |
| 1.5 Research questions.....                           | 11 |
| 1.6 Conceptual framework.....                         | 12 |
| CHAPTER TWO: LITERATURE REVIEW .....                  | 13 |
| 2.0 Introduction: .....                               | 13 |
| 2.1 Background: .....                                 | 13 |
| 2.2 Knowledge on diarrhea diseases.....               | 14 |
| 2.3 Predisposing factors to diarrhoeal diseases ..... | 14 |
| 2.4 Prevalence of diarrhea diseases. ....             | 15 |
| CHAPTER THREE: METHODOLOGY .....                      | 16 |
| 3.0 Introduction. ....                                | 16 |
| 3.1 Study area.....                                   | 16 |
| 3.2 Study population.....                             | 16 |
| 3.3 Study design .....                                | 16 |
| 3.4 Sample size determination .....                   | 17 |
| 3.5 Sampling procedure .....                          | 17 |
| 3.6 Study Variables.....                              | 18 |
| 3.6.1 Dependent variable.....                         | 18 |
| 3.6.2 Independent variable. ....                      | 18 |
| 3.8 Data collection techniques.....                   | 18 |
| 3.9 Data Quality control.....                         | 18 |
| 3.10 Ethical Consideration .....                      | 18 |
| 3.11 Study analysis. ....                             | 18 |

|                                                                                      |    |
|--------------------------------------------------------------------------------------|----|
| 3.10 Study limitations.....                                                          | 18 |
| CHAPTER FOUR: FINDINGS .....                                                         | 19 |
| 4.0 INTRODUCTION .....                                                               | 19 |
| 4.1 SOCIODEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS.....                         | 19 |
| CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS .....                       | 27 |
| 5.0 DISCUSSION.....                                                                  | 27 |
| 5.3 RECOMMENDATIONS .....                                                            | 30 |
| References .....                                                                     | 32 |
| APPENDICES .....                                                                     | 34 |
| Appendix I: Consent form.....                                                        | 34 |
| APPENDIX II: QUESTIONNAIRE.....                                                      | 35 |
| APPENDIX V: THE MAP OF BUSHENYI AND THE SURROUNDING AREAS OF THE<br>STUDY SITE. .... | 42 |
| APPENDIX VI: MAP OF UGANDA .....                                                     | 43 |

## **ABSTRACT**

**Introduction:** The aim of the study is to assess the prevalence of diarrhea and associated factors among children below five years at Ishaka Adventist hospital – Bushenyi district.

**Specific Objectives:** The study specifically aimed at determining the prevalence of diarrhea disease among the under-five, assessing the factors predisposing to diarrheal diseases and establishing the knowledge of mothers and attendants on diarrheal diseases in children below 5 years at Ishaka Adventist hospital-Bushenyi District.

**Methodology:** A descriptive cross sectional study was used and 100 respondents were sampled and assessed.

**Results and conclusion:** From the study, it was revealed that breast feeding is discontinued at an early age of one year or even before among the majority (50%) so long as the mother becomes pregnant, 25% of the respondents introduce supplementary feeds to their children at an early age which contributes to the occurrence of diarrhoea diseases in the community. A significant number of mothers use water from protected sources (60%) but some numbers of these do not treat their water before drinking it (54%). A significant number of respondents take their children with diarrhoea to health facilities (40%) while others use local made fluids (20%), herbs (32%) the rest buy drugs from local shops (8%).

**Recommendations:** To minimize the problem of diarrhoea diseases in the areas served by Ishaka Adventist hospital the researcher therefore recommends that the DHO's office should send health inspectors to revisit where water sources are protected and advise the community on further treatment of water, also increase on the number of protected water sources and launch campaigns for latrine construction and use such that every family has its own latrine, Health Education about family planning (at health facility), both early weaning and late weaning should be discouraged and also organize seminars educating on causes, prevention and management of diarrhoea.

## **CHAPTER ONE**

### **1.0 Introduction**

This chapter includes Background to the study, Problem statement, research Objective, Research questions and study justification.

#### **Background**

Diarrhoea is passing of loose stool (watery) more than three times a day. It commonly follows infections of gastro intestinal tract infection by bacteria organisms. Common bacterial infections are salmonella, shigella and vibrio cholera. Diarrhoea continues to be a leading cause of child morbidity and mortality in the developing countries according to Kopek (2003) and Lopez (2006).

According to Kasek (2003), in developing countries, children suffer an average of three episodes per year during the first few years of life and an estimated four million diarrhea associated death occur annually among young children throughout the world. According to the Kabarole district profile (2007), diarrhea ranks number three killer diseases in under five in the whole district. Every day, more than 4000 children lose their life due to diarrhea (Path, 2016) and yearly 1.5 million deaths occur (UNICEF, 2016).

It was discovered by Van Derslice (2004) that all pathogens known to be major causes of diarrhoea are transmitted primarily or exclusively by fecal oral route either directly or indirectly via water or food. Hygiene practices clearly have the potential to influence the nature and extent of such transmission. Special emphasis is put on hand washing to control diarrhoea. Several studies by Ejemot (2008) have demonstrated the Feasibility of hands acting as Vehicles of transmission and have documented positive correlation between contamination of hands and incidence of diarrhea.

Diarrhea is major cause of mortality in children; therefore there is a need for early management of this ailment. Uganda health bulletin 1994 reports that through Oral Rehydration Salts (ORS) use we can save 1 million of the 2.5 million children every year. The control diarrhea disease (CDD) programmes in Uganda launched massive campaigns on Oral Rehydration salts use and it has funded seminars in order to train people on the control of diarrhoea. According to the International News letter (2006), the discovery of Oral Rehydration Therapy which is a simple solution of water 3.3g sodium chloride, 1.5g potassium chloride, 2.9g sodium citrate and 20g of anhydrous glucose is reported to have saved many lives by replacing fluids lost during diarrhoea. Therefore the study is meant to

determine the prevalence of diarrhea in the under-five to check how far we are in attaining the MDG-4 in the area of study.

## **1.2 Problem statement**

Diarrheal disease is an important public health problem among under- five children in developing countries. Global estimates of the mortality due to diarrhea have shown a steady decline since 1980s. However, diarrheal diseases still continue to be an important cause of morbidity and mortality worldwide in spite of all advances in health technology, improved management, and increased use of oral rehydration therapy in the past decades. Morbidity due to diarrhoea has not shown a parallel decline in comparison to mortality trends, and global estimates remain between two and three episodes of diarrhoea per under five year child per year.

Millennium Development Goal - 4 aims to reduce childhood mortality by 2/3 by the year 2015 and previous studies, however, show minimal progress in this regard.

According to MOH HMIS reports diarrhoea diseases is the second cause of disease morbidity and mortality in children below five years according to UDHS Dec 2016 report more than 0.8 million children in Uganda below the age five years were treated within a period of 12 months.

This research is meant to determine the prevalence of diarrhea in the under-five to check how far we are in attaining the millennium development goal-4 in the area of study.

## **1.3 Study Justification**

According to Bushenyi district profile (2007), Diarrhea ranks number three killer disease in under five in the whole district. According to the World Health Organization / Control of Diarrhoea Diseases (2007-2009), Diarrhoea and Malnutrition cause almost three quarters of deaths in children under five years and continue to be the leading cause of most preventable diseases in children globally. Also Clayden and Hawkins (2008), mentions that among the 300 million children under the age of five years, 100 millions attacks of diarrhea occur every year resulting in five million deaths from dehydration. Diarrheal disease is the second leading cause of death among under-five children in low-income countries in after pneumonia and it kills 1.5 million children every year and diarrhoea has shown to be a risk factor of pneumonia according to Schmidti (2009). In developing countries, children under three years old experience on average three episodes of diarrhea every year. This is commonly results into severe dehydration complicated with malnutrition

that results in long term hospitalization. This results in reduction in production of mothers and total income of families. The prevalence of diarrhea in the area of study is not well documented and there for this merits a research to document data on this for better planning and management.

The study will provide baseline information on the prevalence of diarrhea in the under-five in this region for future researchers.

It will also help the stake holders in planning and budgeting for the region and health education.

#### **1.4.0 Broad objective**

To assess the prevalence of diarrhea and associated factors among children below five years at Ishaka Adventist hospital – Bushenyi district.

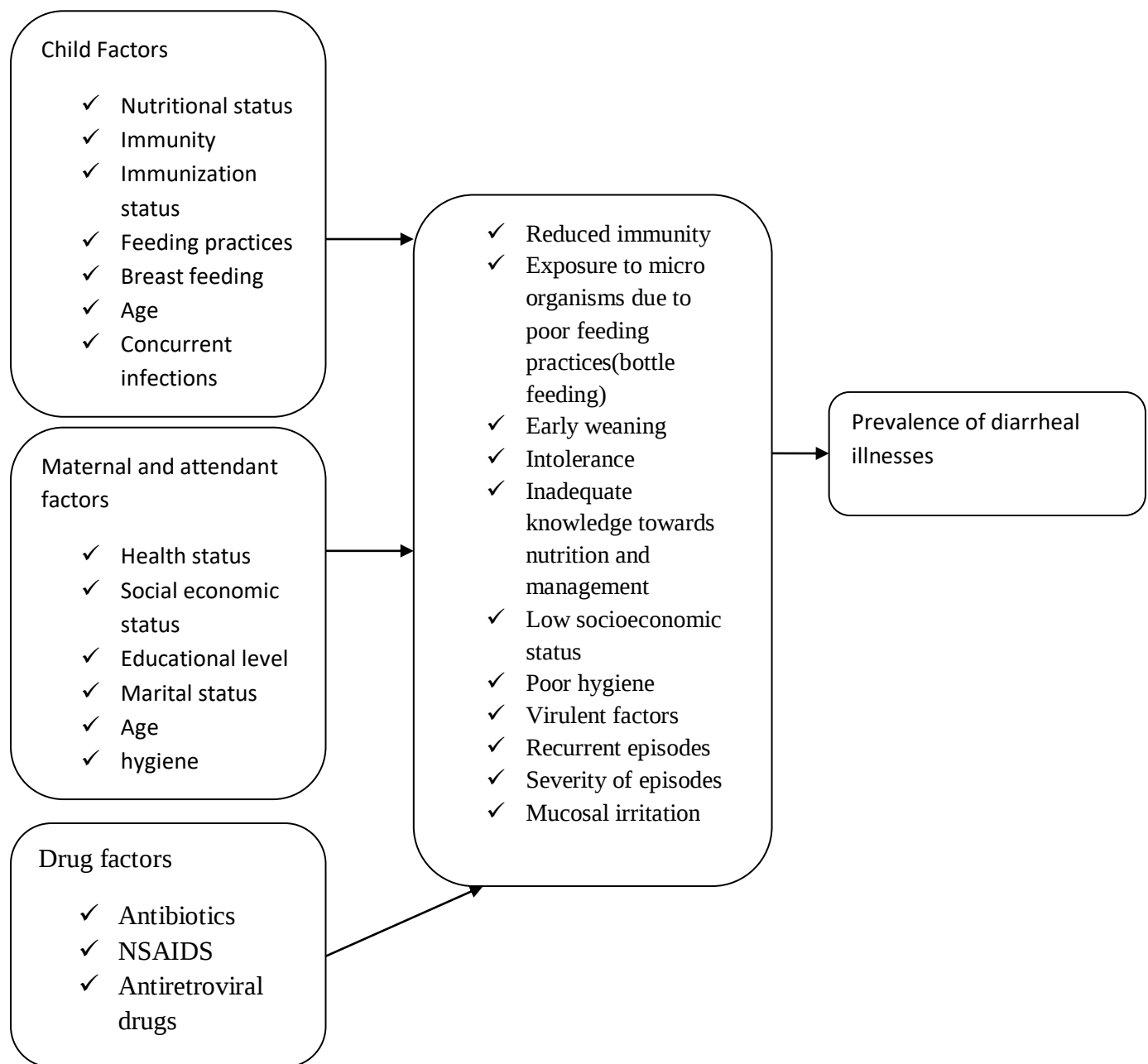
#### **1.4.1 Specific Objectives**

1. To determine the prevalence of diarrhea disease among the under-five at Ishaka Adventist hospital – Bushenyi district.
2. To assess the factors predisposing to diarrheal diseases in Ishaka Adventist Hospital.
3. To establish the knowledge of mothers and attendants on diarrheal diseases in children below 5 years.

#### **1.5 Research questions**

1. What is the prevalence of diarrhea disease among children below five years at Ishaka Adventist Hospital Bushenyi district?
2. What are the predisposing factors to diarrhoeal diseases in Ishaka Adventist Hospital?
3. How knowledgeable are mothers and attendants on diarrheal diseases in children below 5 year?

## 1.6 Conceptual framework.



## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction:**

This chapter includes background, prevalence of diarrhoea diseases, predisposing factors and knowledge of mothers and attendants on diarrhoea diseases.

### **2.1 Background:**

Diarrhoea is a serious public health problem in the world. All children in the world suffer from diarrhea followed by spontaneous and complete recovery. Some of these children have repeated serious attacks resulting in death.

Nutritional state is very important; children who are poorly fed get severe diarrhoea infections as compared with properly fed children. Bottle feeding is another very important hazard which occurs during weaning period. The bottle is usually not cleaned properly, and contamination with bacteria or other organisms is almost inevitable. Many children have died from diarrhoea due to bottle feeding.

Often the mother, not knowing about risks, stops safe breast feeding and introduces the dangerous bottle, just for prestige reasons. The bottle can be a killer (AMREF – Revised report 2005).

Diarrhoea is almost prevalent in under five and is still the leading cause of mortality in children. According to the world Bank report (2002-2003), 2.5 million die of diarrhoea in developing countries.

According to Stanfield-Balldin, Zierversluys (2007), diarrhoea is a very common illness in children and the majority of the admitted children in pediatric wards have diarrhoea.

A recurring diarrhea during the weaning stage is a term known as weaning diarrhoea. The entirely breastfed child has a source of food which is clean and easily digested. When additions to the diet are made, the food may not be properly prepared or may contain pathogens which may predispose the child to gastro intestinal infections. This is supported by Spatz(2006), saying that during the weaning period, sub clinical malnutrition will reduce the child's resistance so that various bacteria which may be harmless in health children produce low grade diarrhoea during weaning.

## **2.2 Knowledge on diarrhea diseases.**

It seems that most communities in Africa hold the idea that some degree of “starvation” is an essential part in management of diarrhoea for example in Bangladesh refugee camps mothers were of the opinion that starvation made children healthy (Moley 2003).

There are various reasons why many dehydrated children particularly those in rural areas never reach hospital; first a mother may not be able to take a decision to take a child, second the mother might need the father's consent and third there is a cultural belief that whenever the child is developing teeth, he /she usually develops malaria. Unfortunately this is still so despite the efforts being put by the government and ministry of health in giving mothers health talks on causes, dangers and management of diarrhoea.

In Uganda today about (67%) live below the poverty line (AUSPICE- NGO 2003) and therefore nutrition in children and infants is very poor.

WHO Stressed that over population and poor sanitation are the leading cause of diarrhea diseases in addition to HIV related infections. A study in Peru shows persistent diarrhoea causes 3% compared to the 23% in Bangladesh (World Health Organization / Control of Diarrhoea Diseases 9<sup>th</sup> Report 2002-2003).

## **2.3 Predisposing factors to diarrhoeal diseases**

According to Brooks (2003), inadequate personal and domestic hygiene, poor sanitary conditions, inadequate breast feeding, inappropriate weaning foods and bottle feeding predispose children to diarrhoea.

Among the predisposing factors to diarrhea is the quality of water distribution system from the source. As found out in Borakhpur, India, bacteriological pollution of drinking water supplies due to the infiltration of contaminated water through cross connection, leakage points, and back siphoning caused diarrheal illness.

(Ministry of Health health management information system, 2016)The significant water risk factors as identified were the mode of water transportation, and the poor handling of water at the household level, including lack of or inappropriate water treatment methods. These, combined with the low education level further predispose the under five children to diarrhoea.

Also, washing and purifying fruit and vegetables; presence of wastewater in the street; refuse storage, collection and disposal; domestic water reservoir conditions; faeces disposal from swaddles; presence of vectors in the house and flooding in the lot were found to be associated

with diarrhea. Amongst households storing municipal water proven to be safe at source, adhering to the best storage practices did not translate into lower incidence rates as compared to those with relatively unsafe practices. The explanation lay in factors which were external to the home and beyond the control of the affected household. Thus, household level behavioral factors such as storage practices should not be analyzed in isolation as determinants of diarrheal illness particularly.

It has also been found that breast fed infants have lower diarrhoea disease mortality and morbidity than others. Breast milk is important and should be the only or main source of water and food during early infancy from birth to six months. According to Jelliffe and Jelliff (2007), Breast feeding should also be an additional food during weaning period, as breast milk prevents diarrhoea disease, it is clean and contains anti bodies.

Gibbons and Griffith (2004) found out that both early and late weaning predisposes young children to diarrhoea diseases. Weaning begins when the child is introduced to foods other than breast milk or food substitutes and is complete when a child is used to regular family diet.

#### **2.4 Prevalence of diarrhea diseases.**

According to Ebrahim (2003), in some countries children under the age of five may suffer as many as 10 episodes of diarrhea per year and spend most of the time with diarrhoea illness.

Diarrhoea is major cause of mortality in children; therefore there is a need for early management of this ailment. Uganda health bulletin 1994 reports that through Oral Rehydration Salts (ORS) use we can save 1 million of the 2.5 million children every year. The control diarrhoea disease (CDD) programmes in Uganda launched massive campaigns on Oral Rehydration salts use and it has funded seminars in order to train people on the control of diarrhoea. According to the International News letter (2006), the discovery of Oral Rehydration Therapy which is a simple solution of water 3.3g sodium chloride, 1.5g potassium chloride, 2.9g trisodium citrate and 20g of anhydrous glucose is reported to have saved many lives by replacing fluids lost during diarrhoea

In bloody diarrhoea, some antibiotics can be used to save the situation though some resistance against antibiotics by bacteria (*Shigella*-species) has been reported. According to child health dialogue (2004), drugs to reduce the frequency of stool should never be used to treat bloody diarrhoea as they can increase its severity.

## **CHAPTER THREE: METHODOLOGY**

### **3.0 Introduction.**

This chapter includes the study area, study population, study design, sample size determination, sampling procedure, data collection techniques, data quality control, ethical consideration, study analysis, study variables and study limitations.

### **3.1 Study area.**

This study was carried out in Ishaka Adventist Hospital in Bushenyi district, with an estimated catchment population of about 52,000 people (spread over an area of 5396 km<sup>2</sup> from the neighboring districts of Mitooma, Buhweju, Rubirizi and Sheema).

The main source of income is subsistence agriculture. The population of Bushenyi is about 95% rural-based. About 60% of the population is within one and half hour's walk of a public health facility. Administratively, Bushenyi district is divided into 3 counties 9 sub-counties, 3 divisions and one town council. The district is served by 38 health facilities registered on the district reporting systems, 3 hospitals all of which are non-governmental organizations (NGOs), 2 health center IVs, 11 Health centre IIIs, and 22 health centre IIs

Ishaka Adventist hospital is located in Ishaka town 4 kilometers from Bushenyi town which is located in western part of Uganda covering an area of about 339km by road west of capital Kampala, which lies on the altitude of 1,300m above sea level. It is found to be 65km south west of Mbarara municipality along Mbarara-kasese road. Bushenyi has equatorial type of climate with heavy rainfall which is interfered with a bit of dry seasons in April, May and July.

### **3.2 Study population**

The study included all the children below five years who were at the hospital during the period of study. Mothers and attendants above the age of eighteen years will also be interviewed. The hospital has a catchment population of about 50,000 people district facility population estimates 2013.

### **3.3 Study design**

A cross sectional study was carried out in Ishaka Adventist hospital. The study aimed at establishing prevalence OF diarrhoea and associated factors among children below five years in Ishaka Adventist hospital.

### 3.4 Sample size determination

The sample size was obtained directly from Krejcie and Morgan table for determining sample size for Finite Population, as illustrated below basing on the known value of the total number of diarrhea cases of children in the area of study..

| N                                                   | S  | N   | S   | N   | S                                         | N    | S   | N      | S   |
|-----------------------------------------------------|----|-----|-----|-----|-------------------------------------------|------|-----|--------|-----|
| 10                                                  | 10 | 100 | 80  | 280 | 162                                       | 800  | 260 | 2800   | 338 |
| 15                                                  | 14 | 110 | 86  | 290 | 165                                       | 850  | 265 | 3000   | 341 |
| 20                                                  | 19 | 120 | 92  | 300 | 169                                       | 900  | 269 | 3500   | 346 |
| 25                                                  | 24 | 130 | 97  | 320 | 175                                       | 950  | 274 | 4000   | 351 |
| 30                                                  | 28 | 140 | 103 | 340 | 181                                       | 1000 | 278 | 4500   | 354 |
| 35                                                  | 32 | 150 | 108 | 360 | 186                                       | 1100 | 285 | 5000   | 357 |
| 40                                                  | 36 | 160 | 113 | 380 | 191                                       | 1200 | 291 | 6000   | 361 |
| 45                                                  | 40 | 170 | 118 | 400 | 196                                       | 1300 | 297 | 7000   | 364 |
| 50                                                  | 44 | 180 | 123 | 420 | 201                                       | 1400 | 302 | 8000   | 367 |
| 55                                                  | 48 | 190 | 127 | 440 | 205                                       | 1500 | 306 | 9000   | 368 |
| 60                                                  | 52 | 200 | 132 | 460 | 210                                       | 1600 | 310 | 10000  | 370 |
| 65                                                  | 56 | 210 | 136 | 480 | 214                                       | 1700 | 313 | 15000  | 375 |
| 70                                                  | 59 | 220 | 140 | 500 | 217                                       | 1800 | 317 | 20000  | 377 |
| 75                                                  | 63 | 230 | 144 | 550 | 226                                       | 1900 | 320 | 30000  | 379 |
| 80                                                  | 66 | 240 | 148 | 600 | 234                                       | 2000 | 322 | 40000  | 380 |
| 85                                                  | 70 | 250 | 152 | 650 | 242                                       | 2200 | 327 | 50000  | 381 |
| 90                                                  | 73 | 260 | 155 | 700 | 248                                       | 2400 | 331 | 75000  | 382 |
| 95                                                  | 76 | 270 | 159 | 750 | 254                                       | 2600 | 335 | 100000 | 384 |
| <i>Note: N is Population Size; S is Sample Size</i> |    |     |     |     | <i>Source: Krejcie &amp; Morgan, 1970</i> |      |     |        |     |

The known value of the total number of clients who present diarrhea cases was approximately 290, therefore using Morgan tables; a total number of 165 participants were taken as the sample size for the study but because of limited resources a sample of 100 respondents was used.

### 3.5 Sampling procedure

All the children below five years who came to the outpatient department during the period of study were selected to take part in the study using random sampling until the required number (100) was achieved and those on the ward stratified sampling was used.

### **3.6 Study Variables.**

#### **3.6.1 Dependent variable.**

Prevalence of diarrhoeal illnesses.

#### **3.6.2 Independent variable.**

These include prevalence of diarrhoeal disease among children below five years, predisposing factors to diarrhoeal diseases and the knowledge of mothers and attendants on diarrhoeal diseases.

### **3.8 Data collection techniques**

Data was collected concerning the diarrhea prevalence among the children under five years from mothers. The main instruments used were questionnaires. These questionnaires were administered to mothers and attendants who had children less than five years.

### **3.9 Data Quality control**

The pre– test questions were given to few clients from Comboni Hospital to assess the acceptability of data collection tool used and necessary adjustments were made to ensure adequate data quality.

### **3.10 Ethical Consideration**

The study was approved by the ethical review committee of Allied health Kampala International University Western Campus. Individual informed consent was obtained before the interview. The consent form were read in the local language and a copy was given to the women upon request. Participants were informed of the general purpose, possible risks, and benefits of the study. To ensure confidentiality, participants' data was linked to a code number.

### **3.11 Study analysis.**

Data analysis was done manually using a calculator and a micro soft excel from a computer and then presented in form of tables, Charts, and graphs.

### **3.10 Study limitations**

Limitations to this study like time and financial resources hindered the smooth progress. This was overcome by having research assistants to assist in data collection.

## CHAPTER FOUR: FINDINGS

### 4.0 INTRODUCTION

The table below shows mothers of child bearing age 15-45 with at least one or more children under five years.

### 4.1 SOCIODEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS.

Table 1: Sociodemographic characteristics of the respondents

| DEMOGRAPHICS       | CATEGORY            | N=100 | PERCENTAGE(%) |
|--------------------|---------------------|-------|---------------|
| AGE                | 15-19               | 20    | 20            |
|                    | 20-24               | 36    | 36            |
|                    | 25-29               | 24    | 24            |
|                    | 30-34               | 12    | 12            |
|                    | 35-39               | 8     | 8             |
| EDUCATION<br>LEVEL | Primary             | 58    | 58            |
|                    | Secondary           | 4     | 4             |
|                    | Never went          | 36    | 36            |
|                    | Tertiary/university | 2     | 2             |
| MARITAL STATUS     | Married             | 75    | 75            |
|                    | Single              | 16    | 16            |
|                    | Divorced            | 6     | 6             |
|                    | Widowed             | 3     | 3             |
| RELIGION           | Catholic            | 48    | 48            |
|                    | Muslims             | 4     | 4             |
|                    | Protestants         | 36    | 36            |
|                    | Others              | 12    | 12            |
| OCCUPATION         | Peasant farmers     | 76    | 76            |
|                    | House wife          | 12    | 12            |
|                    | Self employed       | 8     | 8             |
|                    | Civil servant       | 4     | 4             |

## **4.2 PREVALENCE OF DIARRHOEA UNDER FIVE YEARS**

### **Children under five years who have had diarrhea in the last 2 months**

Fifty two (52) children under five had had diarrhea of the hundred (100) interviewed mothers during the interviewing time.

## **4.3 FACTORS PREDISPOSING CHILDREN UNDER FIVE TO DIARRHOEA**

### **Causes of diarrhea under five**

Table 2: Mothers information on causes of Diarrhoea under five (N=100)

| Causes       | Number of respondents | Percentage (%) |
|--------------|-----------------------|----------------|
| Poor hygiene | 20                    | 20             |
| False teeth  | 44                    | 44             |
| I don't know | 32                    | 32             |
| Witch craft  | 4                     | 4              |
| Total        | 100                   | 100            |

Nearly half of the mothers 44/100 (44%) attributed diarrhea under five to be caused by “false teeth” while 32/100 (32%) didn't know the cause.

## **4.4 KNOWLEDGE OF MOTHERS ON DIARRHOEA**

Majority of respondents (60%) think diarrhoea is any watery stool.

#### 4.5 Respondents with number of children under five years.

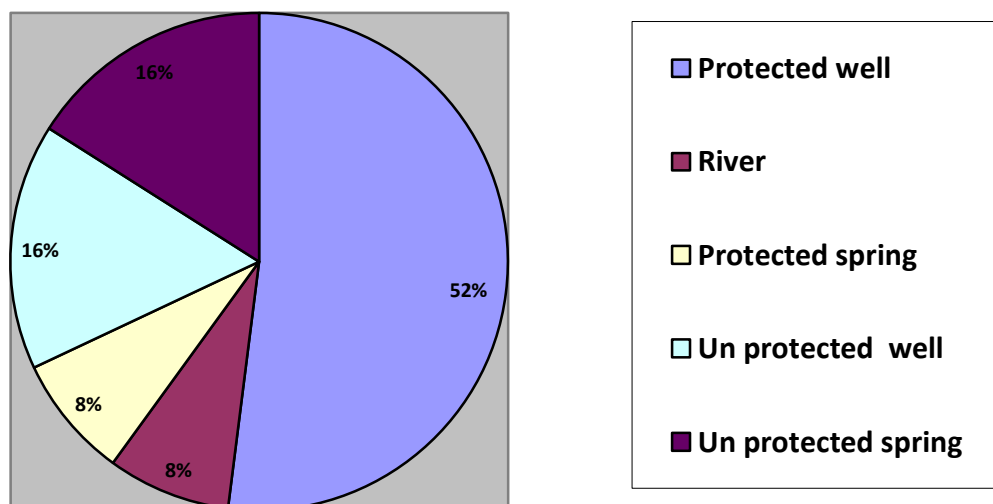
Table 3: Respondents with number of children under five years (N=100)

| Number of children | Respondents | Percentage (%) | Total number of children |
|--------------------|-------------|----------------|--------------------------|
| 1                  | 56          | 56             | 56                       |
| 2                  | 40          | 40             | 80                       |
| 3                  | 4           | 4              | 12                       |
| 4                  | 0           | 0              | 0                        |
| Total              | 100         | 100            | 148                      |

More than half of the respondents 56/100 (56%) have a child each and only 4/100 (4%) have three children each under five..

#### 4.6 Sources of water.

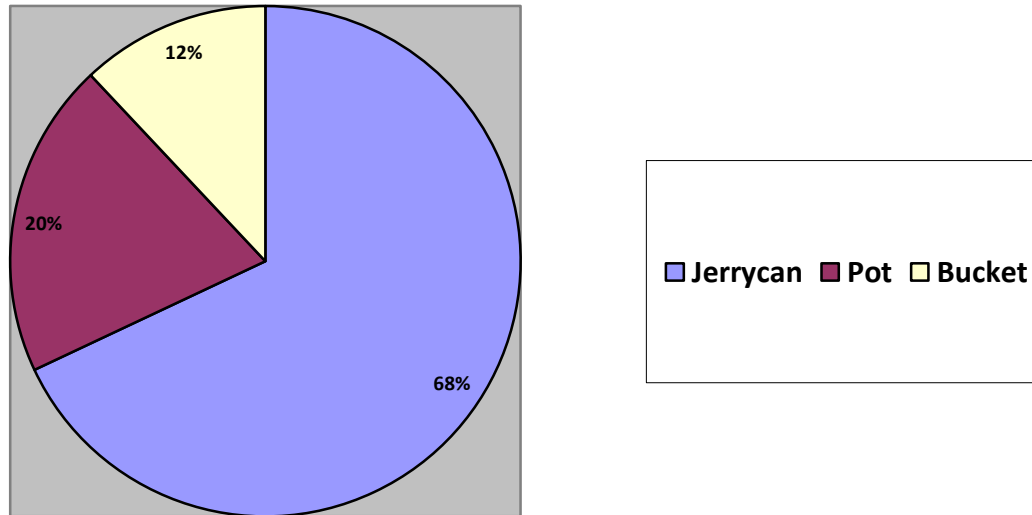
Figure 2: Sources of Water (N=100)



The majority of the respondents 52/100 (52%) use protected well.

#### 4.7 Water storage.

Figure 3: Water storage in house hold (N=100)



Nearly three quarters of respondents 68/100 (68%) use jerry cans while 20(20%) use pots.

#### 4.8 Water treatment

Table 4: Various Method of water treatment (N=100)

| Treatment method | Response | Percentage (%) |
|------------------|----------|----------------|
| Boil             | 46       | 46             |
| Filtering        | 04       | 04             |
| Don't treat      | 50       | 50             |
| Total            | 100      | 100            |

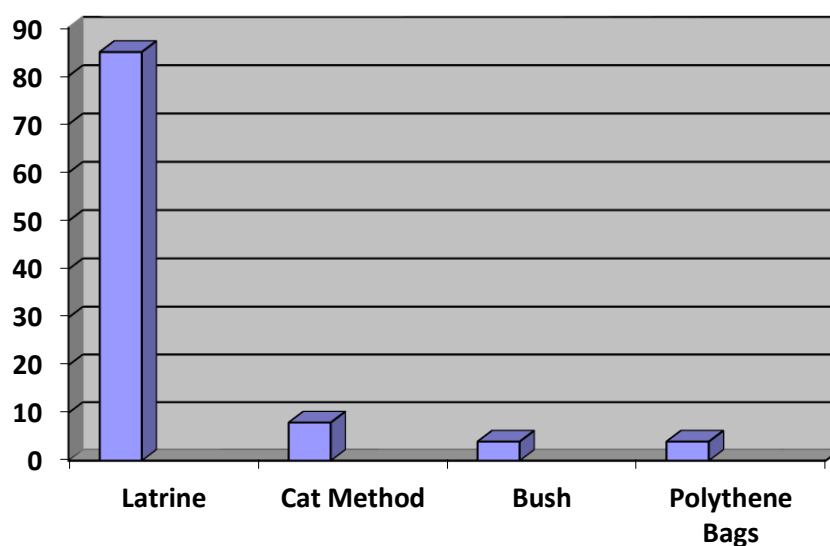
A half of the respondents 50/100 (50%) don't treat their water while 46/100 (46%) use boiling method.

#### 4.9 Excreta disposal by respondents

Nearly all people (respondents) use pit latrines 96%) while the remaining percentage 4/100 (4%) is shared equally between cat method and Bush method.

#### 4.10 Excrete Disposal

Figure 4: Children excrete disposal



More than three quarters of the respondents 84/100(84%) dispose children excreta in pit latrine while 4/100(4%) use bush method.

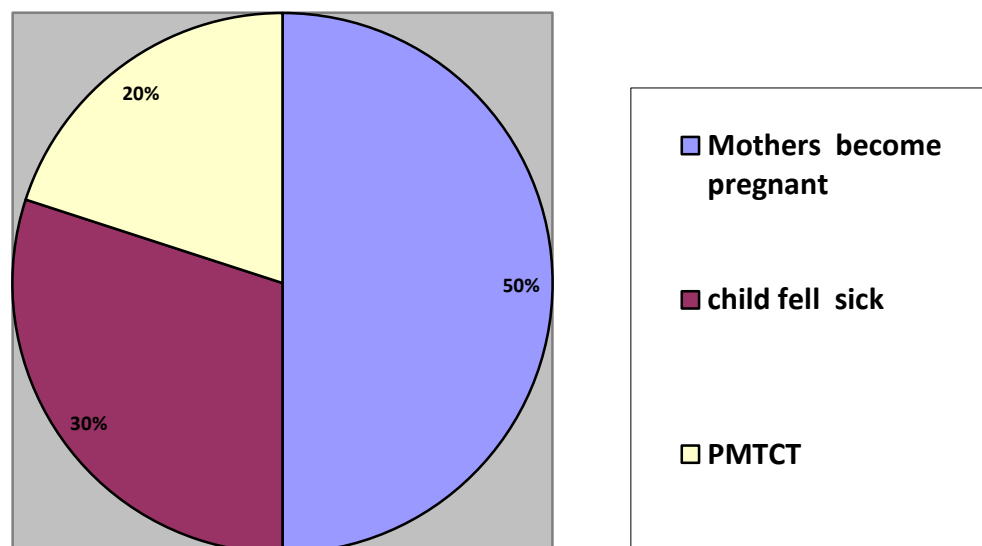
#### 4.11 Breastfeeding in children

Table 5: Frequency of breast feeding in children (N=60)

| Frequency of breast feeding | Number of respondents | Percentages (%) |
|-----------------------------|-----------------------|-----------------|
| More than 10times in 24hrs  | 12                    | 20              |
| During day only             | 03                    | 5               |
| When she/he cries           | 36                    | 60              |
| 3 times a day in 24hrs      | 09                    | 15              |
| Total                       | 60                    | 100             |

Among the 60 respondents, equal numbers 36(60%) breast fed when the child cried and very few 12 (20%) breastfed more 10times a day.

**Figure 5: Reasons for stopping breast feeding (N=100)**



Half of the respondents 20/40 (50%) stopped breast feeding because they were pregnant.

While 12/40 (30%) stopped because the child fell sick and 6/40 respondents stopped breastfeeding because they were on PMTCT.

#### 4.12 Weaning age

Table 6: shows weaning age.

| Weaning ages in months | Number of respondents | Percentages (%) |
|------------------------|-----------------------|-----------------|
| 0-1                    | 08                    | 10              |
| 2-3                    | 12                    | 15              |
| 4-5                    | 20                    | 25              |
| 6-7                    | 28                    | 45              |
| 8-9                    | 04                    | 5               |
| TOTAL                  | 80                    | 100             |

The commonest age group ( in month) for introducing supplementary feeds in 6-7 which contributes 45% followed by 4-5 which has 25%.

#### 4.13 Supplementary foods

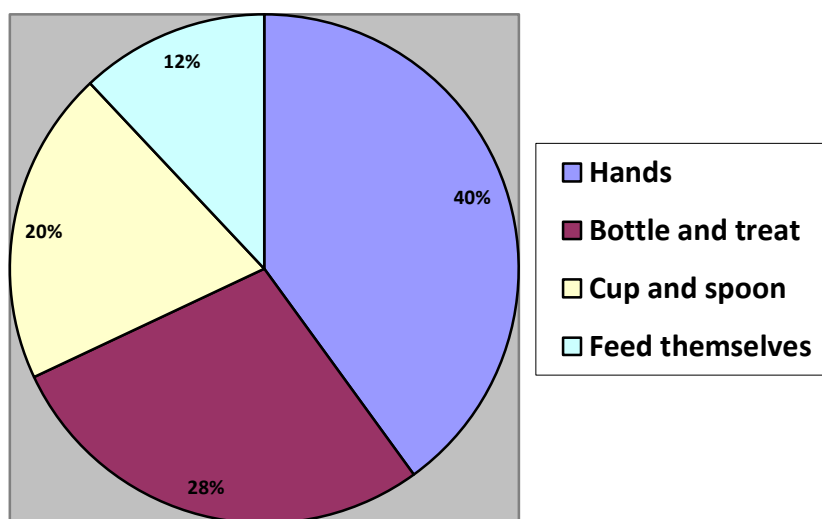
Table 7: The supplements given to the child weaning age (N=100)

| Type of food     | Respondents | Percentages (%) |
|------------------|-------------|-----------------|
| Cow milk         | 49          | 35              |
| Porridge         | 21          | 15              |
| Irish potatoes   | 21          | 15              |
| Beans            | 14          | 10              |
| All foods we eat | 35          | 25              |
| TOTAL            | 140         | 100             |

The majority of the mothers use cow milk 49/140 (35%) as their weaning food followed Non -specified foods (daily menu of family) 35/140 (25%).

#### 4.14 Feeding methods

Figure 6: Feeding methods (N=100)



The majority 40(40%) of the respondents use Hands to feed babies, followed by bottle and teat 28(28%).

#### **4.15 Health seeking behavior**

The majority of the mothers take their children to the health facility when their children contract diarrhea (40%), 32% use herbs, 20% use homemade fluids and 08% buy drugs.

#### **4.16 Knowledge on whether diarrhea is preventable.**

Of the 100 respondents 52(52%) say that diarrhea can't be prevented, 32 (32%) knew that diarrhea is preventable and 16(16%) didn't know whether diarrhea is preventable or not.

#### **4.17 Methods of prevention**

Table 8: Respondents knowledge on methods of prevention (more than one correct response given)

| Methods of diarrhea prevention  | Frequency | Percentage |
|---------------------------------|-----------|------------|
| Hand washing before meals       | 24        | 40         |
| Hand washing after using toilet | 9         | 15         |
| Use of clean drinking water     | 24        | 40         |
| Proper refusal disposal         | 3         | 5          |

The most frequent methods of prevention are hand washing before meals and use of clean drinking water 24/60 (40%)

## **CHAPTER FIVE:DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

### **5.0 DISCUSSION**

#### **5.1 Social Demographic Characteristics**

The research population was mothers of child bearing age 15-49 years with at least one or more children under five years.

The majority of mothers in the community are still young 92/100 (92%) showed in table 1 and able to produce more children, most probably this is due to early marriage therefore a need for education on diarrhea disease so as to enable them prevent and treat diarrhea effectively.

Most mothers 58(58%) attained primary education level, 36% never went to school and only a very small percentage 4% and 2% attained secondary and tertiary levels respectively ( table 1). This might be due to low social economic level of the people and it shows that the community still has a problem because the literacy level goes hand in hand with general health status preventive measures on diarrhoea disease and other sickness.

Most of the mothers 80(80%) were married and peasant farmers 76(76%), 16(16%) were single and where some of them were self-employed (table 1). The economic capacity of an individual determines the nutritional status, hygiene and treatment in every family. Seemingly, according to the occupation of the mothers it shows that their children are more susceptible to getting diarrhoea since it's associated with poor nutrition, poor hygiene and poor sanitary environment.

#### **5.2 PREVALENCE OF DIARRHEA IN CHILDREN UNDER 5 YEARS**

According to section 4.4, fifty two children 52/100 (52%) were found to have had diarrhea during the interviewing time. This is quite a reasonable percentage that requires attention as it is well known that diarrhea can result into malnutrition , and other complications like dehydration which easily lead to death. This percentage shows that diarrhea disease is still prevalent in our community which is in line with the World Bank report 1993 which stated that diarrhea is almost prevalent in less than five.

### 5.3 PREDISPOSING FACTORS OF DIARRHOEA IN CHILDREN UNDER FIVE

According to table 3, 44(44%) of mothers attributed “False teeth” as being the cause of diarrhoea which answers my research question No.2. 32(32%) didn’t know the cause of diarrhea. This shows almost three quarters of the interviewed mothers seem not to know the real cause of diarrhoea. This may be attributed to the low level of education.

The majority of respondents 52(52%) use water from protected sources while the minority gets water from unprotected sources (Figure 2), this percentage put the community on a good health status.

As far as treatment of water is concerned, 50(50%) don’t treat their water, 46(46%) boil water- (Table 4). This figure 50% put the community on a risk of contracting diarrhoea diseases.

A good number of respondents store their drinking water in jerrycans most likely because of their availability and durability though difficulty to clean while others store in pots or buckets. The majority of the respondents 96(96%) were using latrines as a method of excreta disposal while very few were using cat method and bush (Figure 4). This latrine coverage puts the community on a good health status. However, those who don’t use might be ignorant or with low social economic status this still promote infection and infestation level.

A great number of mother breast feed their children when they cried 66(66%) and very few breastfed more than 10times in 24hours (Table 5), this shows inadequate knowledge about breast feeding. Most children were stopped from breast feeding before two years because mothers became pregnant, 20(20%) stopped breastfeeding when their children were still very young (less than 4 months) because they had HIV/AIDS (figure 5).

We also notice that we have a good percentage of mothers 20/80 (25%) who introduce weaning food when their children are three months below. A child need to be breastfeed for a long time otherwise he/she would be at risk of getting infections and malnutrition as it is well known that breast milk contains protective anti bodies. This is in line with jelliffe and jelliff 1989 who said that breast milk prevents diarrhoea diseases; it is clean and contains antibodies.

Surprisingly still a reasonable percentage of the respondents (figure 6) whose children are still using bottle and teat 28(28%) to feed them and those feeding themselves 20(20%).

These methods of feeding predispose children to infections as bottle and teat and children's hands are usually dirty. This is in line with AMREF-1975 who said bottle can be a killer.

While section 4.15 shows us that out of 100 respondents 40(40%) took their children to the health facility, 32(32%) gave herbs. This practice is done by most African cultures, could be because government of Uganda is trying to integrate native medicine to modern one under Uganda Herbalist association but the alarming part is the purity, dosage and toxic effects is not considered.

#### **5.4 KNOWLEDGE OF MOTHERS ON DIARRHOEA**

Majority of the respondents (60%) say that diarrhoea is watery stool, 34% did not about diarrhoea, 5% say that it is an abdominal pain and 1% say it is a mucoid stool. This shows that the majority have knowledge about diarrhoea in the community.

According to section 4.16 reveal that most of the respondents 52(52%) say that diarrhea can't be prevented and 16(16%) didn't know whether diarrhoea is preventable or not. Lack of knowledge on prevention would lead to continued occurrences of the disease in the community since no precaution would be taken. Most likely due to lack of health education more so at the grass root.

The methods of prevention that are mostly mentioned in table 8 include; hand washing before meals 24(40%), proper refusal disposal 09(15%) and Hand washing after using toilet 03 (5%). This is a good practice it should be up hold but lack of knowledge on prevention would lead to continuous occurrence.

#### **5.5 CONCLUSION**

From the findings of the study the following are the conclusions

On prevalence, the study concludes that the prevalence of diarrhoea is high at 52% at the time of the study.

A good number of respondents were married, house wives and peasant farmers who had no other source of income for economic stand.

The majority of the respondents had attained primary education

The most predisposing factors cited according to the study were; breast feeding is discontinued at an early age of one year or even before among the majority so long as the mother becomes pregnant.

The majority of the respondents introduce supplementary food to their children at an early age. These contribute to the occurrence of diarrhoea diseases in the community.

A significant number of mothers use water from protected sources but some number of these does not treat their water before drinking it.

The mothers had moderate knowledge on the cause of diarrhoea and the majority of the respondents knew that diarrhea is not preventable.

A significant number of respondents take their children with diarrhoea to health facilities while other use local made fluids, the rest buy drugs from local shops.

### **5.3 RECOMMENDATIONS**

According to the study findings, the following recommendations are put forward to minimize the problem of diarrhoea diseases in the areas served by Ishaka Adventist hospital.

The district health education officer in conjunction with the local council leaders in the respective districts should organize seminars educating on causes, prevention and management of diarrhoea.

The DHO's office should initiate community based health care to train village health committees and community health workers that would assist the community in carrying out regular home visits to educate the community on diarrhoea and use of ORS and discourage of impure traditional herbs and drugs from local shops which they claim that can cure diarrhoea other than ORS.

The DHO's office should send health inspectors to revisit where water sources are protected and advise the community on further treatment of water and also increase on the number of protected water sources.

The Health Assistant should in collaboration with LCIII, LCII, and LCI launch campaigns for latrine construction and use such that every family has its own latrine.

Health Education about family planning (at health facility) should be emphasized for mothers of child bearing age to avoid early pregnancies.

Both early weaning and late weaning should be discouraged this information can be delivered to the respondents using different media for example Radio through the Office of the DHO.

Mothers visiting the Health facilities with a child who is under five years should be given a health talk and at the end be supplied with packets of ORS.

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## **APPENDICES**

### **Appendix I: Consent form**

#### **PATIENT INFORMATION AND CONSENT FORM**

I am **SuathaMohamudSigat**, carrying out a study on prevalence of diarrhea and associated factors among children below five years at Ishaka Adventist Hospital – Bushenyi district. I kindly request for your voluntary participation. If you do accept please read through and sign to accept to participate in the study.

#### **Participants Statement**

I voluntarily agree to participate in the study on prevalence of diarrhea and associated factors among children below five years at Ishaka Adventist Hospital – Bushenyi district.

I have been informed that the information obtained will be treated with at most confidentiality and any treatment will not be compromised if I decline participation or withdraw from the study.

I have a chance to ask questions, If I have questions later I can ask the researcher.

Signature of participant\_\_\_\_\_

Date\_\_\_\_\_

## **APPENDIX II: QUESTIONNAIRE**

Your participation is voluntary and the information you give is confidential. You may also stop the interview at any time you wish hoping that this information will be used in improving the welfare of our children.

**NB:** Tick the correct answer and answer where necessary.

### **SECTION A: SOCIAL DEMOGRAPHIC CHARACTERISTICS.**

1. Age of the mother .....
2. Education level of the mother.
  - (a) None [    ]
  - (b) Primary [    ]
  - (c) Secondary [    ]
  - (d) Tertiary/University [    ]
3. Marital status of the mother
  - (a) Single [    ]
  - (b) Married [    ]
  - (c) Widowed [    ]
  - (d) Separated/divorced [    ]
4. Occupation of the mother
  - (a) House wife [    ]
  - (b) Civil Servant [    ]
  - (c) Self employed [    ]
  - (d) Peasant/farmers [    ]
5. Tribe of the mother.
  - (a) Mutooro [    ]

(b) Munyankore [   ]

(c) Muganda [   ]

(d) Mukonjo [   ]

(e) Others [   ]

6. Religion of the mother.

(a) Catholic [   ]

(b) Protestant [   ]

(c) Muslim [   ]

(d) Others [   ]

## **SECTION B: KNOWLEDGE AND PREVALENCE OF DIARRHOEA DISEASES**

6. What is diarrhea?

a) Watery stools 3 or more times in a day (24 hrs)

b) Don't know

c) Abdominal pain

d) Any watery stool.

7. How can you tell the child under five has diarrhea?

a) By passing watery stools in more than 3 times a day

b) I don't know

c) Uncontrolled passage of stool

d) Others (specify)

8. How many children under five do you have?

a) 3

b) 2

c) 1

d) None

9. How many of your children under five years have had diarrhea in the last two months?

a) 1

b) 2

c) 3

d) None

10. What do you think is the cause of this diarrhea?

a) Poor hygiene

b) False teeth

c) I don't know

d) Witchcraft

## **SECTION C: SOCIAL PRACTICE THAT MAY LEAD TO DIARRHOEA IN**

### **UNDER FIVE.**

#### **i) ASSESSEMENT OF WATER HYGIENE**

11. What is your water source?

- a) River
- b) Un protected spring
- c) Un protected shallow well
- d) Protected spring
- e) Protected shallow well

12. How do you store your water?

- a) Bucket
- b) Pot
- c) Jerrycan
- d) Others (specify)

13. How do you ensure that your water is safe for drinking?

- a) Filter
- b) Sediment
- c) Chemicals
- d) Boil
- e) Don't treat

#### **ii) EXCRETA DISPOSAL**

14. Excreta disposal by adults / respondents

- a) Latrine
- b) Bush method
- c) Cat method

15. Excreta disposal by children

- a) Latrine
- b) Cat method
- c) Bush method
- d) Polythene bags

iii) BREAST FEEDING AND WEANING

16. Do you have a breastfeeding child

- a) Yes ( )
- b) No ( )

17. If yes, how often do you breast him /her

- a) Whenever he/she wakes up
- b) During night
- c) During day only
- d) Others (specify)

18. What were the reason of stopping breastfeeding if your child is less than 2 years

- a) No breast milk
- b) Mother became pregnant
- c) Child feel sick
- d) Baby rejected breast milk
- e) Am on PMTCT

19. Is the baby getting supplements

- a) Yes ( )                      No( )

20. At what age did you start the supplements

- a) Two Months
- b) Four months
- c) Six months
- d) Others (specify)

21. What supplements do you give a child?

- a) Cow milk
- b) Porridge
- c) Irish potatoes
- d) Beans
- e) Others (specify)

22. What do you use in feeding the child?

- a) Bottle and teat
- b) Cup and spoon
- c) Hands
- d) Feed themselves

**SECTION D: HEALTH SEEKING BEHAVIORS AND PREVENTION OF DIARRHOEA**

23. What do you do if your child get diarrhea.

- a) Go to the health facility
- b) Use homemade ORS
- c) Use herbs

d) Buy drugs

25. Can diarrhea be prevented?

a) Yes ( )

b) No ( )

c) I don't know ( )

26. If yes, how do you prevent it?

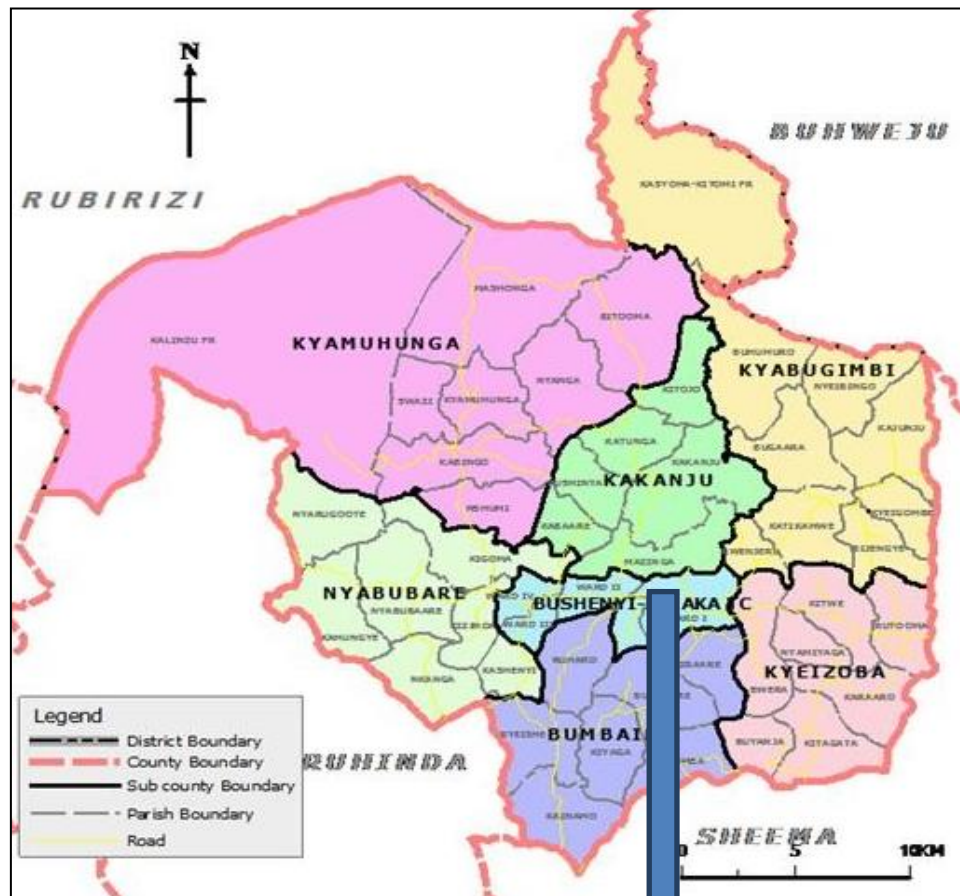
a) Hand washing before meals

b) Hand washing after using toilet

c) Use of clean drinking water

d) Proper refuse disposal

**APPENDIX V: THE MAP OF BUSHENYI AND THE SURROUNDING AREAS OF THE STUDY SITE.**



**BUSHENYI ISHAKA**

## APPENDIX VI: MAP OF UGANDA

