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# KNOWLEDGE, ATITTUDE AND PRACTICES TOWARDS PREVENTION AND CONTROL OF DIARRHEA DISEASES AMONG CHILDREN UNDER 5 YEARS AT PEADIATRIC WARD RAKAI GENERAL HOSPITAL RAKAI DISTRICT. A CROSS SECTIONAL STUDY.

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## Abstract

### Background

The broad objective was to examine the knowledge attitude and practices of caretakers towards the prevention and control of diarrhea among children under five years at the pediatric ward of Rakai Hospital in Rakai district.

### Methodology

The cross-sectional study was carried out on all caretakers of children less than five years at Rakai General Hospital. The Questionnaire was used to collect data and was analyzed using a tally; the sample size of 62 respondents also was analyzed using tables and pie charts.

### Results

The study revealed that majority 48.3% of the respondents had good knowledge on contaminated food/water as the cause of diarrhea in children under five years, 87.1% had good knowledge on general weakness, failure to feed, irritability, vomiting everything as the consideration to their children for treatment, 18% of the respondents had poor knowledge on treatment of diarrhea at home, 20% respondents had poor knowledge on what is needed to make ORS, 18% respondents had poor knowledge on how to prevent diarrhea in their children, 61.8% respondents poor attitude on exclusive breastfeeding.

### Conclusion

The study concluded that mothers had good knowledge of the causes of diarrhea among children under five years and identified the danger signs. 18.0% had poor knowledge of how to treat diarrhea at home, the requirements to make ORS and how to prevent diarrhea in their children.

### Recommendation

Consequently, the study suggests that caregivers should get ongoing health education on how to treat diarrhea at home, what's needed to create ORS, how to stop diarrhea in children, and how to breastfeed children who have diarrhea.

***Keywords**: Diarrhea, Children, Under 5 years, Prevention, Control*
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## Background

According to the World Health Organization (WHO), diarrheal disease is any disease by which a person experiences the passage of loose or watery stool at least three times a day characterized by an increase in volume, fluidity or frequency of bowel movements relative to the usual alternative for a particular person (WHO, 2017). It kills more than HIV/AIDS, malaria, neonatal diseases and pneumonia. Diarrhea is a leading killer of children accounting for approximately 9 percent of all deaths among children U5 worldwide (UNICEF, 2019). It has three mainly three clinical types i. e; acute westerly diarrhea (lasts several hours to days) acute bloody diarrhea (also known as dysentery), and persistent diarrhea (lasts fourteen days or longer) (WHO, 2017). Dehydration is the worst risk that diarrhea poses (Ernstmeyer & Christman, 2023). During a diarrhea episode, water and electrolytes (sodium, chloride, potassium, and bicarbonate) are lost through liquid stools, vomiting, urine, and breathing. Dehydration occurs when these electrolytes are not replaced. The degree of dehydration is related on a scale of three i.e. severe dehydration (at least two of the following) lethargy, sunken eyes, unable to drink or drinking poorly. Some dehydration (two or more of the following); restlessness, sunken eyes, drinks eagerly, thirsty. Severe dehydration (not enough signs to classify as some or severe dehydration) (WHO 2017). The incidence of diarrhea is higher among low-income countries (LICs), followed by middle-income countries (MICs) and then least in high-

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income countries (HICs). Even though the variation is not that substantial, the case fertility ratios are; the top killers among the U5 are infectious diseases especially pneumonia, diarrhea, and malaria. In the year 2010, there were about 1.73 billion cases of diarrheal diseases and 2% of the episodes progressed to severe diseases (Walker et al., 2013). Worldwide diarrhea accounts for an estimated 3.6% of the global burden of disease, expressed in disability-adjusted life years. It is the leading killer accounting for approximately 8% of all deaths among children under 5 years despite the availability of simple effective treatments (Omona et al., 2020). The majority of morbidity and mortality occurred in South Asia and sub-Saharan African countries i.e. 88% were attributable to unsafe water, inadequate sanitation and insufficient hygiene (WHO, 2017). In Tanzania, diarrhea remains one of the major public health problems, community-based studies in different parts of Tanzania reported that the prevalence of diarrhea is in the range of 6% to 33% (Edwin, P., & Azage, M. 2019) In Uganda diarrhea is amongst the five leading causes of under-5 mortality, contributing to more than 140,000 deaths every year and this accounts for 7.1% of all under-five mortalities (Nantege et. al., 2022). Rakai is among the most burdened districts in Uganda approximately 178 deaths per 1000 live births.

## Study Objectives

## General Objective

To examine the knowledge, attitude and practice of caretakers towards the prevention and control of diarrheal diseases among children under five at the pediatric ward of Rakai General Hospital, Rakai district

## Specific Objectives

- To assess the knowledge of caretakers toward prevention and control of diarrheal diseases among children Under 5 at the pediatric ward of Rakai General Hospital, Rakai district
- To establish the attitude of caretakers towards the prevention and control of diarrheal diseases among children under 5 years at pediatric Rakai General Hospital, Rakai district
- To determine the practices of caretakers towards the prevention and control of diarrheal diseases among children under 5 years at the pediatric ward of Rakai General Hospital, Rakai district.

## Methodology

## Study design

The study is a descriptive cross-sectional study that focused on caretakers with children under five years suffering from diarrhea attending to pediatric ward at Rakai General Hospital. A cross-sectional study design was used because it was cheap and less time-consuming as it was a one-time activity. The quantitative study design is best for data collection from a large number of respondents.

## Study area

The study was conducted at Rakai general hospital in Rakai district which is a government health facility. The hospital is located in Rakai Hospital in the central region of Uganda about 66 kilometers (41mil) southwest of ward Rakai general hospital and about 122 kilometers (76mil) southwest of Mbarara regional referral hospital It is strategically located in the greater Masaka region on a latitude of 0 42 47 S and longitude of 31 24 12 E. It offers services to several villages such as Kibona, Lwakagala Kibaale Isingiro, Lwamagwa Lwanda Lwentulege Kasozi among others. It had a capacity of 100 beds. The construction of a 104-bed hospital in Rakai was not carried out, instead, it was downgraded to the rehabilitation of five health centers, the hospital-based offering general services including emergency services and nutrition support to both children and adults.

## Study population

The study population was the caretakers of children under five years admitted with diarrhea at the pediatric ward of Rakai General Hospital, Rakai District

## Inclusion criteria

All the mothers of children under five years of age admitted at Rakai General Hospital were eligible for the study.

Caretakers of children under five suffering from diarrhea who gave consent were included.

## Exclusion criteria

Caretakers whose children were above five years of age

Caretakers of children under five suffering from diarrhea who didn't consent

## Sample size determination

The sample size was determined using the Kish Leslie formula.

$$N=\frac{Z^2PQ}{d^2}$$

Where;

N is the desired sample size

Z is the standard normal deviation (1.96) corresponding to 95% confidence level

P is the proportion in the population estimated to have particular characteristics, which is the percentage of children aged 0-5 years who have diarrhea (20%).

Q = 1 – P

d is the degree of accuracy desired (0.1)

Therefore; $N = \frac{1.96\times1.96\times0.2(1-0.2)}{0.1\times0.1}$

$=\frac{3.8416X0.2X(1-0.2)}{0.01}$, =62

N=62 respondents

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## Sampling technique

A simple random probability sampling technique was used to select caretakers to participate in the study; this gave all the caretakers with children under five admitted with diarrhea equal chances of being selected to participate in the study.

## Sampling procedure

The researcher identified all the caretakers with children below five years admitted with diarrhea. Here simple random sampling was used, it involved selecting respondents from the study population by chance, and the lottery technique was used where yes and no were written separately on small papers, folded, put and mixed in a small box. Then caretakers picked one at a time, whoever picked yes participated in the study. The procedure was done until 62 respondents were achieved.

## Study variables

These included dependent and independent variables

## Dependent variables

The dependent variables of this study included the knowledge, attitude and health-seeking habits of the caretakers toward diarrhea and the management of diarrhea among children under five years.

## Independent variables

The independent variables of this study included age, occupational, marital status, tribe and religion together with the education levels of caretakers of children under five years.

## Piloting the study

A pilot study was carried out a week before the start of actual data collection at the pediatric ward of Rakai General Hospital. This involved selecting sample caretakers of children under five years with diarrhea who were given questionnaires to answer accordingly to check the effectiveness of the questionnaires and to rectify any errors before actual data collection.

## Data collection tool

The tool to be used was questionnaires which included questions about the caretakers' attitude, knowledge and health-seeking habits about diarrhea among children under five years. It also includes questions about the demographic data of the respondents, questions were simplified to the easiest language so that caretakers could easily understand and interpret the questions very well.

## Data collection method

Data was collected from the respondents using the questionnaire. Here the sample of caretakers with children suffering from diarrhea was given questionnaires which they answered and the questionnaires were collected back from them for those who were unable to read or write, I helped to translate and write down the answers of respondents. This method is simple and cheap as many questionnaires were administered to many respondents simultaneously. Also record keeping and retrieval was easy.

## Data collection procedure

Data was collected from a sample of caretakers of children who were admitted with diarrhea at ward Rakai General Hospital Rakai District. The caretakers were explained to and their consent was sought using both informed and oral consent after which they were allowed to fill out the questionnaires and for the respondents who were unable to read or write, they were helped by the researcher to help them understand better the questions and write down their answers.

Data was collected from 62 samples of caretakers. Five caretakers were interviewed a day. Data was collected from Monday to Friday. The answered questions were collected, counted and prepared for analysis and interpretation.

## Data analysis and presentation

Hand sorting and tallying according to the themes developed from the objectives and literature review were used to analyze the information in the questionnaires. Charts and/or graphs were used to present the analyzed results and this was done by the researcher. Data was also recorded, categorized and analyzed manually. Data was statistically analyzed and presented in frequency tables, pie charts and bar graphs. This method gave time for the researcher to look at mistakes of different data collection tools present data in frequency tables pie charts and bar graphs statistically review the distribution of different variables.

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## Quality control

Questionnaires will be pre-tested and reversed by the researcher. The collected data was analyzed and interpreted by the researche

## Ethical Consideration

An introductory letter allowing the researcher to collect data from the respondents was issued to the researcher from Medicare Health Professionals College which had to be approved by the school, then to the director of Rakai General Hospital and/or the in charge of the health facility where the research was conducted. Participants were given details about the ongoing program to help them easily analyze and know what they were answering. The use of consent forms was done to attain respondents' consent and only the respondents who consented were the only ones to participate in the study. This helped to prevent bias in the responses given. Ethical issues like confidentiality, clients' and caretakers' privacy, autonomy, and no harm was followed during the research by not sharing their information, names, and other things with other people without their permission, seeking both oral and informed consent from the respondents and using screens or private rooms to talk to the respondents and explain to them the aims of the study so that they were aware that it didn't cause no harm to them.

**ResultTable 1: Showing characteristics of respondents by demographic data (n=62)**

| Characteristic | Variables | Frequency | Percentages (%) |
|---|---|---|---|
| AGE | <20 | 9 | 14.5 |
| | 20-24 | 29 | 46.8 |
| | 25-29 | 10 | 16.1 |
| | 30-34 | 8 | 13 |
| | 35-39 | 2 | 3.2 |
| | 40-44 | 1 | 1.6 |
| | >45 | 3 | 4.8 |
| MARITAL STATUS | Married | 51 | 82.3 |
| | Widowed | 3 | 4.8 |
| | Separated/divorced | 7 | 11.3 |
| | Never married | 1 | 1.2 |
| EDUCATION LEVEL | Primary | 29 | 46.8 |
| | Secondary | 24 | 39.2 |
| | tertiary | 9 | 14 |
| TRIBE | Baganda | 28 | 43.2 |
| | Basoga | 12 | 19.4 |
| | Batooro | 6 | 9.7 |
| | Banyankolle/bakiga | 14 | 22.5 |
| | others | 2 | 3.2 |
| RELIGION | Catholics | 26 | 41.9 |
| | Anglicans | 11 | 17.7 |
| | Muslims | 9 | 14.5 |
| | Seventh day Adventist | 3 | 4.9 |
| | Pentecostal | 13 | 21 |

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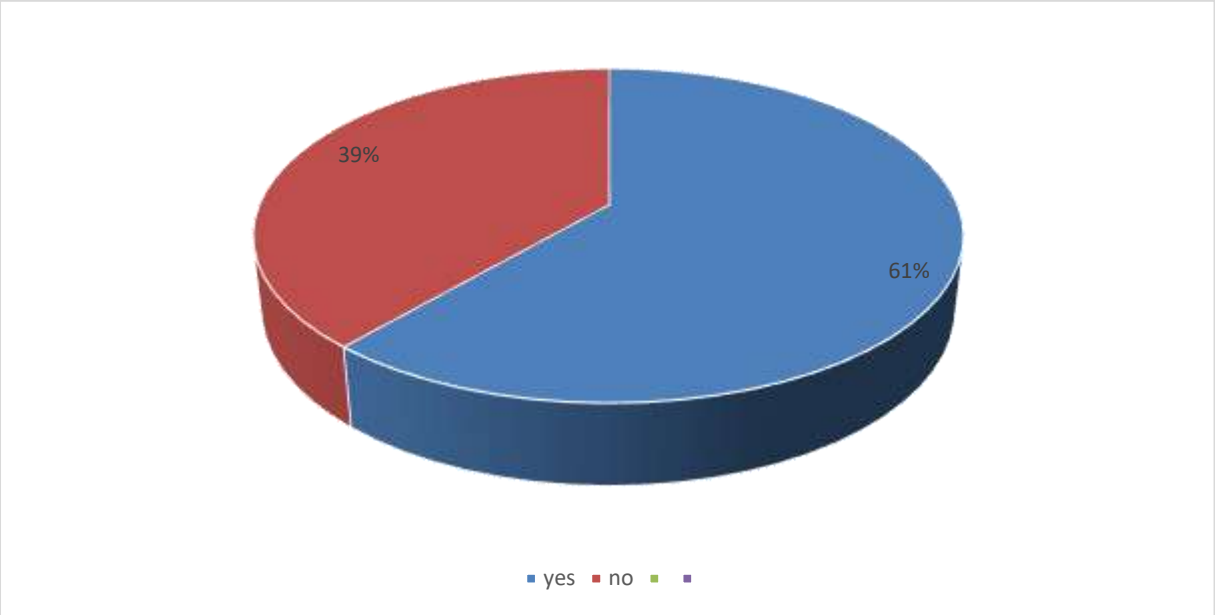
## Demographic data of the respondents

Majority of the respondents 29(46.8%) were aged between 20-24years and the least respondents 1(1.6%) were aged between 40-44years, majority 51 (82.3%) of the respondents were living in a marital relationship, almost half 29 (46.8%)of the respondents had primary education level as their minimum attained level and the least 9(14%) had tertiary level, majority 28(43.2%) of the respondents were Baganda and majority 26 (41.9%) of the respondents were Catholics.

**Figure 1: distribution of respondents by knowledge on how to prevent diarrhea (n=62)**




## Knowledge of caretakers towards the prevention and control of diarrhea among children under 5 years

Majority 38 (61.3%) had knowledge on how to prevent while 14(38.7%) didn't know how to prevent diarrhea.

The majority of respondents 38(100%) said that the Major method of prevention of diarrhea among children under 5 years was practicing hand washing using soap after visiting toilet and when cleaning the child's buttock while the least ,8(21.1%) said that family planning can also prevent diarrhea

**Table 2: Distribution of respondents by knowledge on the methods of prevention of diarrhea (n=38)**

| VARIABLE | FREQUENCY | PERCENTAGE % |
|---|---|---|
| By practicing hand washing using soap after visiting toilet and cleaning child's buttock | 16 | 42.1 |
| Proper use of toilet | 10 | 26.3 |
| Use of ORS | 8 | 21.1 |
| Family planning | 4 | 10.5 |
| **TOTAL** | **38** | **100** |

**Table 3: Distribution of respondents by knowledge on the cause of diarrhea (n=62)**

| VARIABLE | FREQUENCY | PERCENTAGE (%) |
|---|---|---|
| Eating/drinking contaminated water or food | 30 | 48.3 |
| Lack of pit latrine | 10 | 16.1 |
| Improper toilet use | 9 | 14.5 |
| Lack of hand washing by caretakers | 7 | 11.3 |
| Improper cleaning of child's utensils | 5 | 8.1 |
| Teething | 1 | 1.6 |
| **TOTAL** | **62** | **100** |

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Most of the respondents 30(48.3%) replied that the cause of diarrhea among children under 5 years was eating contaminated food or water while the least 1(1.6%) said that diarrhea is caused by teething.

Most of the respondents 54(87.1%) said that they know the signs and symptoms of diarrheal under 5 years while the least 8(12.9%) didn't know any sign.p

**Table 4: Distribution of respondents by knowledge on ability to identify diarrhea according to signs and symptoms.(n=62)**

| VARIABLE | FREQUENCY | PERCENTAGE % |
|---|---|---|
| Yes | 54 | 87.1 |
| No | 8 | 12.9 |
| **Total** | **62** | **100** |

**Table 5: Distribution of respondents by knowledge on the identification of signs and symptoms of diarrhea (n=54).**

| Characteristics | Frequency | Percentage (%) |
|---|---|---|
| Sunken eyes and fontanel | 8 | 14.8 |
| Irritability | 14 | 25.9 |
| General weakness | 10 | 18.5 |
| Failure to feed | 15 | 27.8 |
| Vomiting everything | 7 | 13 |
| **Total** | **54** | **100** |

Majority of respondents 15(27.8%) responded that failure to feed was the major signs and symptoms of diarrhea among children under 5year while the least 7(13%) said that vomiting everything was the sign.

Majority of the respondent 51(82%) knew how to prevent diarrhea while the least 11(18%) didn't know any way.

**Table 6: Distribution of respondents regarding the knowledge if they know anyway of treating diarrhea (n=62).**

| VARIABLE | FREQUENCY | PERCENTAGE % |
|---|---|---|
| Yes | 51 | 82 |
| No | 11 | 18 |
| **Total** | **62** | **100** |

**Table 7: Distribution of respondents by knowledge on how to they treat diarrhea.(n=62)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Continuous breastfeeding | 20 | 39.2 |
| Giving oral fluids like juice, splash, ribena | 2 | 3.9 |
| Giving Ors | 15 | 29.4 |
| Medication like flagyl | 14 | 27.5 |
| **Total** | **62** | **100** |

Majority 20(39.2%) of the respondents replied that continuous breastfeeding is the major treatment of diarrheal under 5 years children while the least 2( 3.9%) replied that diarrhea is treated by giving oral fluids like juice splash ribenna . Majority of respondents 50(80%) said yes and the least 12(20%) said no.

**Table 8: Distribution of respondents by knowledge on whether they know how to make ORS therapy (n=62).**

| VARIABLE | | FREQUENCY | PERCENTAGE % |
|---|---|---|---|
| Yes | | 50 | 80 |
| No | | 12 | 20 |
| **Total** | | **62** | **100** |

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**Table 9: Distribution of respondents by knowledge on what is needed to make ORS. (n=50)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| One teaspoon of salt | 3 | 6 |
| 8teaspoon of sugar | 3 | 6 |
| 1 passion fruit | 0 | 0 |
| One liter of clean boiled water | 4 | 8 |
| All the above | 40 | 80 |
| **Total** | **50** | **100** |

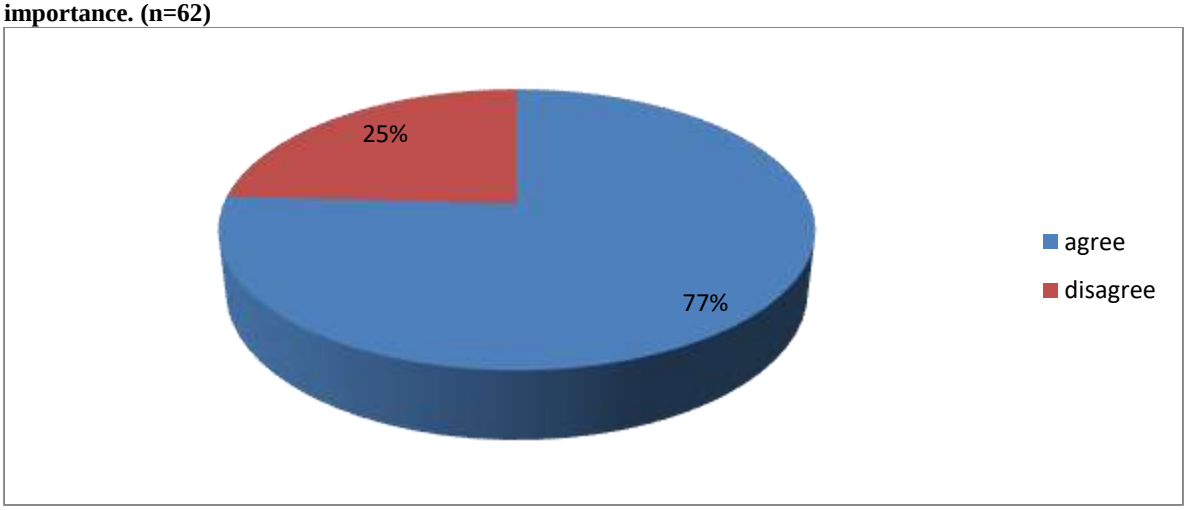
Most of the respondents 40(80%) knew what was needed to make ORS and every one had knowledge on what is needed to make ORS.

Majority of the respondents 40(64.5%) knew the right time when to give ORS to a child with diarrhea while the least 10(16.1%) didn't know the right time when to give.

**Table 10: Distribution of respondent by knowledge on when ORS is given to a child with diarrhea (n=62).**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Anytime child wants to drink | 10 | 16.1 |
| Every after passing loose stool and when child wants to drink | 40 | 64.5 |
| I don't know | 12 | 19.4 |
| **Total** | **62** | **100** |

**Figure 2: Distribution of respondents by attitude on taking children at health facility with diarrhea is of great importance. (n=62)**




## Attitude of caretakers towards the prevention and control of diarrhea among children under 5 years

Most of the respondents 48(77.4%) agreed and had good attitude on taking child with diarrhea at health facility while the least 14(22.6%) didn't agree and had a bad attitude towards it. Most of the respondents 49(79.0%) agreed on the importance of exclusive breastfeeding while the least 13(21%) disagreed about it.

**Table 11: Distribution of respondents by attitude on the kind of medical intervention better for a child with diarrhea (n=62)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Goes to medical clinics or pharmacy | 46 | 74.2 |
| Using homecare to manage diarrhea | 10 | 16.1 |
| Use traditional help | 5 | 8.1 |
| Not seeking any treatment | 1 | 1.6 |
| Total | 62 | 100 |

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**Figure 3: Distribution of respondents by attitude on importance of exclusive breast feeding. (n=62)**

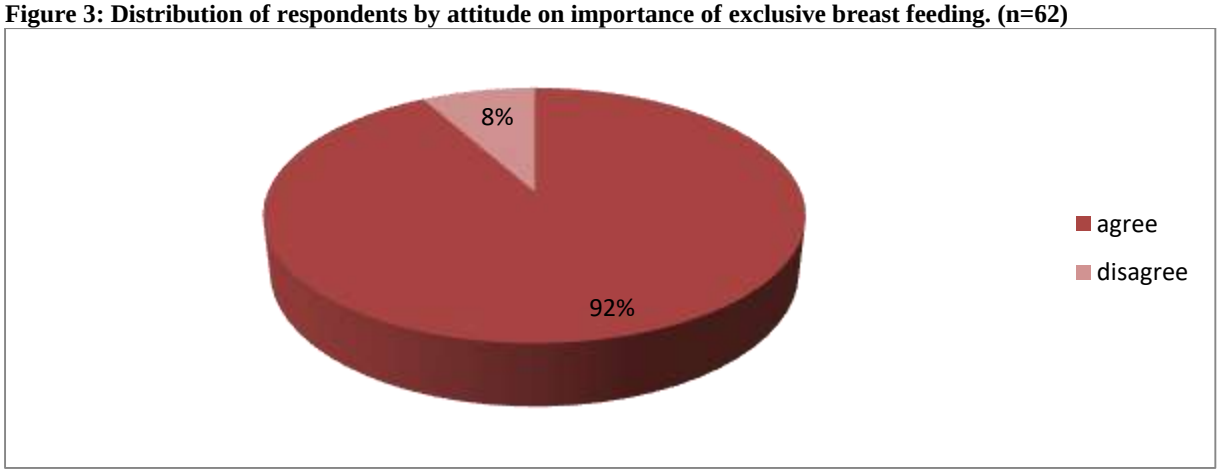


**Table 12: distribution of respondents by attitude if diarrhea can kill child under 5 years. (n=62)**

| Variable | Frequency | Percentage % |
|---|---|---|
| Agree | 37 | 60 |
| Disagreed | 25 | 40 |
| **Total** | **62** | **100** |

Majority of the respondents 37(;60%) agreed that diarrhea can kill and the least respondents 25(40%)disagreed about it. Most of the respondents 57(91.9%) agreed that vaccination can prevent diarrhea and the least 5(8.1%) disagreed about it.

More than half 40(64.5%) of the respondents sought health care for their children after >6 episodes while none of them sought health care after 3 days of episodes of diarrhea.

**Table 13: Distribution of respondents by attitude on prevention of diarrhea by vaccination.(n=62)**

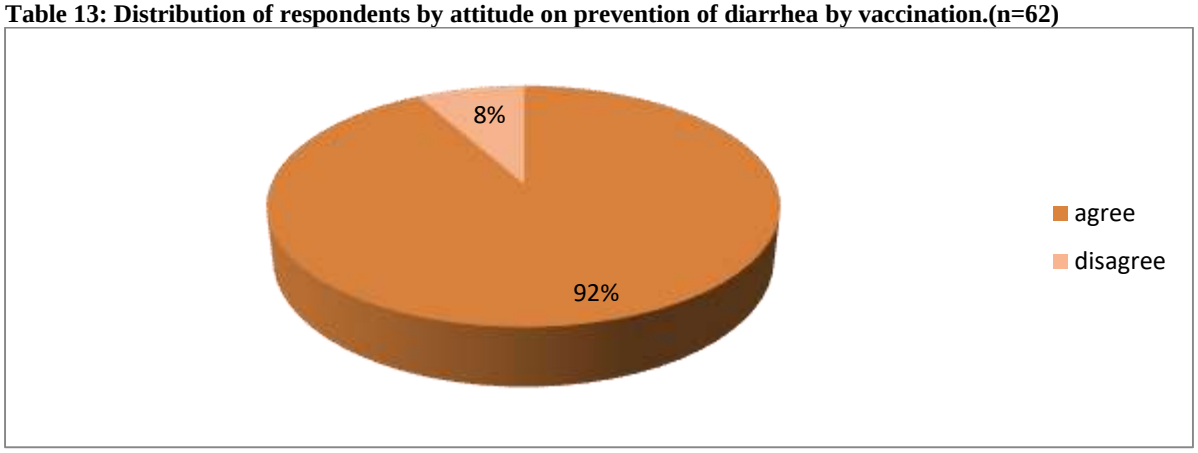


**Table 14: Distribution of respondents by attitude on when they seek health care for their children with diarrhea (n=62)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Immediately (1st episode) | 8 | 12.9 |
| 3-6 episodes a day | 4 | 6.5 |
| >6 episodes a day | 40 | 64.5 |
| After one day | 8 | 12.9 |
| After 2 days | 2 | 3.2 |
| After 3 days | 0 | 0.0 |
| **Total** | **62** | **100** |

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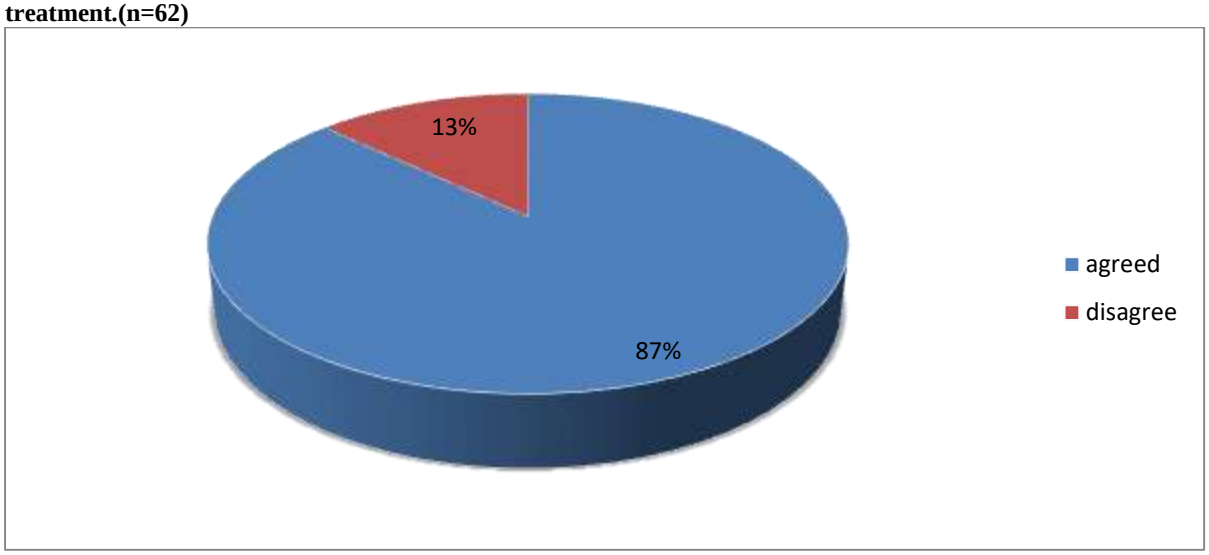
**Figure 4: Distribution of respondents by practices if they take their children with diarrhea at health facility for treatment.(n=62)**




Majority of respondents 50 (80%) said they take their children with diarrhea at healthy facility for treatment

## Practices of caretakers towards the prevention and control of diarrhea among children under 5 years

While the least 12(20%) they don't take them to healthy facility. Majority of the respondents 32 (51.6%) took their children with diarrhea to clinics while the least 2 (3.2%) took their diarrheating children to traditional healers

**Table 15: Distribution of respondents by practices about where they usually take their children first for the health care before coming or going to health clinic or pharmacy. (n=62)**

| **Variable** | **Frequency** | **Percentage** |
|---|---|---|
| Clinic | 32 | 51.6 |
| Traditional healers | 2 | 3.2 |
| Pharmacy | 4 | 6.5 |
| Stay and do home management | 24 | 38.7 |
| **Total** | **62** | **100** |

**Table 16: Distribution of respondents by practice on how they treat their children with diarrhea. (n=62)**

| Variable | frequency | Percentage (%) |
|---|---|---|
| ORS | 21 | 34 |
| Restor | 5 | 8.1 |
| ORS and restor | 17 | 27.4 |
| Zinc | 18 | 30.0 |
| **Total** | **62** | **100** |

Majority of the respondents 21(34%) said that they treat their children with ORS 19 (30%) treat with zinc and 5(8.1%) treated with restor. Most of the respondents 30(48.4%) breast fed their children in more than 8 times a day while the least 7 (11.3%) breastfed for about only 3 times a day.

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**Table 17: distribution of respondents by practice on how many times they breastfeed their child with diarrhea in a day. (n=62)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| 3 times | 7 | 11.3 |
| 4-5 times | 10 | 16.1 |
| 6-8 times | 15 | 24.2 |
| >8times | 30 | 48.4 |
| **Total** | **62** | **100** |

**Table 18: Distribution of respondents by practice if they know any socio-economic factors related to diarrhea. (n=62)**

| Variable | Frequency | Percentage % |
|---|---|---|
| Yes | 56 | 90 |
| No | 6 | 10 |
| **Total** | **62** | **100** |

Most of the respondents 56(90%) replied that they know any socio-economic factors related to diarrhea while the least respondents 6(10%) said that they didn't know any socio-economic factors associated with diarrhea. The majority of respondents 30 (53.6%) suggested that insufficient safe drinking as the most common socio-economic factor related to diarrhea under 5 years while the least 2 (3.6%) suggested that its due to crowded condition.

**Table 19: Distribution of respondents by practice on suggest any socio-economic factor related to diarrhea among children under 5 years. (n=62)**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Insufficient safe drinking water | 30 | 53.6 |
| Inadequate sanitation | 20 | 35.7 |
| Crowded conditions | 2 | 3.6 |
| Poor housing and low income | 4 | 7.1 |

## Discussion

### Knowledge regarding the prevention and control of diarrhea among children under 5 years.

The study showed that the majority (61.3%) of the respondents had good knowledge of how to prevent diarrhea among children under 5 years while (38.7%) didn't know how to prevent diarrhea. This is in agreement with a study conducted by Merali et.al. (2018), though with lower percentage values which showed that 85.1% of the respondents had good knowledge with a high knowledge score being among older age while 14.9% of caretakers had poor knowledge. The difference in the results is due to the different education levels and high sensitization among the respondents.

The study also showed that the majority of the respondents (42.1%) agreed that the major method of prevention of diarrhea among children under 5 years was practicing hand washing with soap after visiting the toilet and cleaning the child's buttock. The great difference between the results from my study is due to high sensitization among the respondents.

This study also showed that most respondents (48.3%) agreed that the cause of diarrhea among children under 5 years was eating or drinking contaminated food or water and the least (1.6%) suggested that diarrhea is caused by teething. This is slightly low though in line with a study carried out by Charles et.al. (2018), that revealed that the majority 85.5% agreed on drinking contaminated water also 68.1% identified teething as a cause. This difference in results from my study was due to the geographical location of the respondents.

This study also showed that the majority (87.1%) knew the identification of diarrhea according to signs and symptoms and at least (12.9%) didn't know, with the majority (27.8%) suggesting that failure breastfeeds as one of the signs which are not in line with higher percentage difference with a study carried out by Ayalew et.al. (2018), that suggested that 17.7% of the respondents could list at least three signs and symptoms. The deviations are associated with the respondents from my study giving more than one answer as the danger signs of diarrhea are due to their level of awareness.

The study also said that the majority (82%) of the respondents knew how to treat diarrhea and at least (18%)

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didn't know any way of treating. The majority (38.7%) suggested that they treat it with exclusive breastfeeding while others (4.8%) treat by giving fluids like juice, splash. This study is not in line with the one conducted by Thiam et.al. (2017), due to a great difference in percentages where the majority 34.9% knew ORS should be used after every loose stool. This may be attributed to marital status where the married rarely breastfeed their children about 8 times a day.

The study also showed that 87.1% of the respondents knew how to identify diarrhea according to danger signs and symptoms with the majority (25.9%) suggesting irritability as a danger sign. This study is similar to the one carried out by Thiam et.al. (2017), where 51.2% of the respondents identified weakness or lethargy as a dangerous sign of diarrhea in under 5-year children. This may be due to differences in education levels and age groups of my respondents.

## The attitude of caretakers towards the prevention and control of diarrhea among children under 5 years

According to this study, the majority (77.4%) of the respondents had a good attitude towards taking children with diarrhea at a health clinic or pharmacy was of great importance while the least (22.6%) disagreed. The difference in the results is due to inadequate health facility sensitization, and expensive medical facilities.

This study showed that the majority (79.0%) of the respondents agreed on the importance of exclusive breastfeeding while (21%) disagreed. This is in line though slightly low with results from the study conducted by Mbwele 2012 where the majority 80.6% of caretakers agreed that exclusive breastfeeding was of great importance in the prevention of diarrhea. The difference in the results because that respondents are not sensitized about the importance of breastfeeding in a child with diarrhea.

This study also showed that the majority (91.9%) of the respondents agreed that vaccination /immunization can prevent diarrhea while the least (8.1%) of the respondents disagreed. This may be due to differences in education levels among the respondents.

This study also showed that more than half of the respondents (64.5%) sought health care after the child had more than 6 episodes and none sought health care after the child had episodes for more than 3 days. This study is similar with a big percentage difference from a study conducted by Merali et.al.(2018). Where 52.5% reported after the first episode, around 33.6% went in the second episode and 66.4% sought nonprofessional care. This is probably due to the availability of traditional attendants and the strong cultural believers among the people of Rakai.

## Practices of caretakers towards prevention and control of diarrhea among children under 5 years

According to this study, the majority (80%) agreed that a child with diarrhea should be taken to a health facility for treatment with the majority (51.6%) taking their children to a clinic and the least (3.2%) taking their children to traditional healers. This is an agreement with great percentage values with a study conducted by Guillaume et.al (2020), where 58.9% of the children were taken to health facilities by their caretakers while 41.1%were not taken to hospital for treatment This is probably due to the availability of traditional attendants and the strong cultural believers among people of Rakai.

This study showed that the majority (34.0%) agreed that they treat their children with ORS (30.0%) treated with zinc while the least (8.1%) treated with Restor. This may be due to differences in education levels and age groups of my respondents.

The results also showed that the majority (48.4%) suggested that they breastfeed their children with diarrhea greater than (>) 8 times a day, (24.2%) breastfeed between 6-8times a day, (16.1%) breastfeed 4-5times a day and (11.3%) breastfeed about 3 times. This is probably due to respondents are not sensitized about the importance of breastfeeding in a child with diarrhea and also the marital status of respondents.

The study also revealed that the majority of the respondents (90%) agreed that they know any socio-economic factor that leads to diarrhea among children under 5 years with the majority (53.2%) suggesting that insufficient safe home drinking water is one of the socio-economic factors while (3.2%) suggested that it's due to overcrowded area.

## Conclusion

The study rated knowledge of the respondents was generally above the average in hand washing with soap after visiting the toilet/latrine and after the child's buttock as a preventive measure, and eating /drinking contaminated food /water as a cause of diarrhea this could be due to great sensitization of caretakers about diarrhea among children below fives; the respondents attitude about diarrhea in children below five years as being good despite the poor attitude from a few respondents about exclusive breastfeeding, vaccination as a preventative measure, treatment of diarrhea with ORS, and diarrhea as a cause of death. The practices were found to be relatively poor as a majority sought health care for their children after 6 episodes of diarrhea and went to health centers/hospitals which could be associated with low levels of education, presence of traditional health attendants and lack of awareness.

## Recommendation

According to the results from this study, there's a need for more studies to be conducted to establish the practices of these caretakers with children below five years in Rakai district so that a clear relationship between this prevalence in children and these factors is established for proper preventive measures to be established.

The government together with the Ministry of Health should work hand in hand to ensure that the caretakers of children below five years are well-sensitized about diarrhea that is what diarrhea, its causes, the preventive measures and curative measures since caretakers are the first doctors for their children and this will help them know what is expected of them and how to keep their children healthy. This finding emphasizes the need for continuous strengthening of interventions on factors associated with diarrhea. Based on the result the following are recommended during the child's visit to health institutions during checkups, management and follow-up.

Awareness creation should be promoted through strengthened health education on risk factors like promoting good sanitation and avoiding the use of dirty materials to collect water to catch infections.

Similarly, it would be better if concerned stakeholders worked on increasing the knowledge of women and caretakers about diarrhea and its consequences as well as preventive methods which might be a stepping stone to reduce the prevalence of diarrhea among children under five years.

Furthermore, research can be done on risk factors of diarrhea which include micronutrient deficiencies and minerals as well and laboratory studies, should be conducted to identify the root cause of the underlying problems in healthcare providers to alleviate the existing problem.

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## List of Abbreviations

**AIDS :** Acquired immunodeficiency syndrome

**CDC:** Center for disease control

**HICs:** High income countries

**HIV:** Human immunodeficiency virus

**LICs:** Low income countries

**MDG:** Millennium development goals

**MICs:** Middle income countries

**MOH:** Ministry of health

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