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# **Factors Affecting the Occurrence of Diarrhea in Children under the Age of Five at Western Uganda's Fort Portal Regional Referral Hospital**

**Namisi David**

**Faculty of Clinical Medicine and Dentistry Kampala International University Western Campus Uganda.**

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## **ABSTRACT**

Although there has been a considerable global decline in diarrhea-related mortality, the number of children still losing their lives to these illnesses is still high, especially in low-income nations. According to a research done at Fort Portal Regional Referral Hospital in Fort Portal City, 18.3% of children under the age of five have diarrhea. Caretakers who were 18 to 19 years old, those who had just completed their primary education, and those who drank water from unsafe sources were among the sociodemographic characteristics linked to diarrheal illnesses. Mothers using public faucets and never washing their hands after using the restroom were examples of environmental influences. Children who had diarrhea were 20 times more likely to have mothers who never washed their hands after using the restroom. According to the study's findings, there is a moderately high incidence of diarrhea in children under five who are treated at Fort Portal Regional Referral Hospital. While caregivers provide accurate information about prevention strategies, they lack knowledge about the proper management of acute diarrhea, especially in relation to dehydration. The government ought to promote safe water access and teach mothers to wash their hands after using the restroom.

**Keywords:** Diarrhoea, treated drinking water, intestinal tract infection, Rotavirus.

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## **INTRODUCTION**

Diarrhoea is the passing of three or more loose stools per day or more frequent passage than is normal for an individual. This does not apply in babies that pass semisolid stools when breastfed [1]. Diarrhea is usually a symptom of infection in the intestinal tract which can be caused by a variety of bacterial, viral and parasitic organisms [2, 3]. The most common pathogen causing diarrhoea in infants and children is Rotavirus [4]. Infections are spread through contaminated food or drinking water or from person to person as a result of poor hygiene. The three clinical types of diarrhoea are acute watery diarrhoea lasts several hours and days and includes cholera, acute bloody diarrhoea or dysentery and persistent or chronic diarrhoea which lasts longer than 14 days [1, 5]. Diarrhoea diseases have been identified as causes of death as far as the times of Hippocrates [6]. It was believed then that weather, weaning and teething were the causes of diarrhoea but as years went by, different beliefs as to what the associated factors with diarrhoea kept changing [7]. By the 16<sup>th</sup> century diarrhoea was attributed to a sudden change in someone's diet to fats and in the 17<sup>th</sup> century diarrhoea was attributed to abundant flies. By the 19<sup>th</sup> century, the popular miasma theory which suggested that disease was due to bad air was in Europe and Asia but by 1885, John Snow incriminated water from broad street pumps as the vehicle of transmission of cholera in London Soho and by the end of 19<sup>th</sup> century scientists worldwide had come to accept the

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germ theory that attributed disease to microorganisms [8]. Diarrhea causes dehydration in the shortest time possible and can have a detrimental impact on childhood growth and cognitive development [9]. Mortality resulting from diarrhea results from dehydration as children lose more water rapidly since they have a large surface area but can also cause long term effects like malnutrition [10]. Most diarrheal microorganisms are spread from one person's stool to another person's mouth. These infectious agents are usually spread through contaminated water, food, or objects [11]. Some other factors have been implicated in diarrhea in children under 5 like presence of other infections like HIV, duration of breastfeeding, quality of house, availability of latrine facility in homestead, maternal education, and source and storage of water [12–14]. Globally, approximately 1.7 billion children under the age of 5 still suffer from diarrhea, despite the knowledge people have regarding the causes of diarrhea every year, making it an urgent public health matter. 1,300 children die every day and an estimated half a million children die per year in the world, making it the second leading cause of death worldwide in children under the age of 5 after diarrhea and these numbers are unacceptably high considering diarrhea has simple preventive measures and effective treatment to prevent mortality [15, 16]. In developing countries, there is high prevalence of diarrhea which is largely attributed to poor hygiene, lack of clean water and sanitation accounting for 88% of all the diarrheal diseases, yet worldwide an estimated 780 million people lack access to safe available clean water, 2.5 billion lack safely managed sanitation and 1 billion people still practice open defecation [9, 17]. A huge difference exists in coverage of improved sanitation between urban (80%) and rural areas (50%) and people without access to improved sanitation services are concentrated in sub-Saharan Africa and southeast Asia [9, 18, 19]. Children under the age of three in low-income countries experience an episode of diarrhea on average three times a year. Each episode deprives the child of nutrients necessary for growth and as a result diarrhea is a major cause of malnutrition and malnourished children are more likely to suffer from diarrhea. It causes death by depleting body fluids resulting in profound dehydration in a short period of time [2].

Diarrhea is both preventable and treatable [20]. However, it comes second as the leading cause of morbidity and mortality, after diarrhea in children below 5 and is the major cause of malnutrition causing detrimental effect on child growth and cognitive development in the long term [9]. Approximately 540,000 children die from diarrhea related complications especially dehydration accounting for 9% of all deaths. Most of the cases of diarrhea occur in sub-Saharan Africa and south East Asia accounting for more than 80% of all deaths due to diarrhea worldwide. In sub-Saharan Africa alone, 300,000 children die every year due to diarrhea complications [21]. In east Africa, the prevalence of diarrhea in Kenya is 11.2%, Burundi is 24.8%, Rwanda is 23.2%, Tanzania is 23.9% [3] while that of Uganda is 20.0% [5]. The South Western region of Uganda where Kabarole district is, had a lowest prevalence of 14.0% second to Eastern Uganda at 26.9% with northern which had the highest prevalence at 29.3% [22]. Considerably, Uganda ranks 27<sup>th</sup> in the whole world in prevalence of diarrheal diseases which accounts for 6.41% of all deaths in children under the age of 5 [22]. The probability of dying between the first and fifth birthday for rural children is 45% in Uganda [23]. Despite the global reductions in diarrhea deaths from 4.6 million in 1980 to 540,000 deaths in 2018, the number of children who still die from diarrhea diseases is unacceptably high each year especially in low income countries because of lack of access to clean water, sanitation, and urgent medical care [24]. Nonetheless, no studies have been published regarding prevalence of diarrhea in children under 5 attending Fort Portal Regional Referral Hospital. This study, therefore, will assess the factors contributing to diarrheal diseases in children below five years attending Fort Portal Regional Referral Hospital-Kabarole District-Fort Portal City.

### **Methodology**

#### **Study Design**

This study was a descriptive, cross sectional in nature. It used both qualitative and quantitative research methods of data collection and analysis. The design allowed for collection of data within a period of 6 months.

#### **Area of Study**

This study was done at Fort Portal Regional Referral Hospital in Fort Portal city. Fort Portal regional referral Hospital is located in western Uganda in Fort Portal city. The coordinates of the hospital are, latitude 0.65509° or 0°39'18" and longitude 30.28129° or 30°16'53". The hospital is located approximately 294 km west of Mulago national referral hospital. Fort portal city is located in the western region of Uganda and is bordered by Kagadi district to the North, Kabarole district to the East, Bunyangabu district to the South, Kamwenge district to the South-East and Bundibugyo district to the West. It is a regional referral for Kabarole, Kagadi, Kyenjojo, Kamwenge, Bunyangabo, Ntoroko Kyegegwa, Kasese and Bundibugyo districts. Fort portal regional referral hospital has Accident and Emergency Department; four major wards (paediatric, medical, surgical and obstetrics & gynaecology wards); special clinics (dental, CHAI clinic, orthopaedic clinic, ENT, ophthalmology clinic, mental health clinic, ICU and radiology departments) and administrative units.

#### **Target Population**

Children below 5 years and their care takers attending Fort Portal Regional Referral Hospital-Fort Portal City

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### Study Population

Children below five years that have or had diarrhea in the last 6 months before the survey and their care takers who have consented and are attending Fort Portal Regional Referral Hospital.

### Inclusion Criteria

Children who are between 0 and 59 months have or had diarrhea in the last 6 months attending Fort Portal Regional Referral Hospital and whose caretakers have consented. Care givers that are above 18 years of age and have consented

### Exclusion Criteria

Children below 5 years with diarrhea but whose mothers and caretakers haven't consented.  
Caretakers that are mentally challenged and or below 18 years

### Sample Size Determination

Using Kish Leislle (1965) formula [25];

$$n = Z^2 P (1-P) / E^2$$

Where n is the estimated minimum sample size required

P is the proportion of a characteristic in a sample, 20.0% (UDH,2016)

Z is a constant 1.96(for a confidence interval of 95%)

E is the margin of error at 5%

$$n = \frac{1.96^2 \times 0.20(1-0.20)}{0.05^2}$$

$$n (\text{sample size}) = 246$$

### Sampling Procedure

Consecutive sampling method was used to enroll counseled and educated participants who met inclusion criteria and consent to join the study until the calculated sample size was achieved.

### Data Collection

The first section was used to collect data about socio-demographic data. The second explored general understanding of diarrhea, the third section was probe environmental factors, the fourth examined knowledge, and practice on prevention and management of diarrhea, and the fifth will be community based nutritional assessment. Questionnaires were both open and close ended questions. Information was collected using interview methods. The information was quantitative and qualitative. Two pre-trained research assistants were used and these were enrolled nurses employed at the hospital. They were trained on communication skills and interview techniques. Principle investigator checked the data daily.

### Quality Control

Two research assistants (enrolled nurses employed at Fort Portal regional referral hospital) were used to collect data and handed in to the principal researcher who compiled the results for data analysis.

## RESULTS

### House Hold Information

Table 1 Shows that majority 194(78.9%) of the study participants' primary caregivers were fathers. Approximately 84.6% (208/246) came from families with < 5 members, many 43.5% of the children under five years were aged 1-3 years and majority 52.4% were females.

**Table 1: House hold information of families where children under five attending Fort portal Regional Referral Hospital**

Variable	Frequency (n=246)	Percentage (%)
Primary caregiver		
<b>Father</b>	194	78.9
<b>Mother</b>	11	4.5
<b>Others</b>	41	16.7
Number of households		
<b>&lt; 5 members</b>	208	84.6
<b>≥ 5 members</b>	35	15.4
Age of children selected for interview		
<b>&lt; 1 year</b>	51	20.7
<b>1-3 years</b>	107	43.5
<b>4-5 years</b>	88	35.8
Gender of children selected for interview		
<b>Male</b>	117	47.6
<b>Female</b>	129	52.4

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### Mothers/Caregivers Information

Table 2 shows that majority 191(77.6%) of the caregivers were aged 20-30 years and many 105(42.6%) of our caregivers had attained secondary level of education. Approximately 41.9% of the caregivers were farmers and Christians formed the majority, 61%. Over 80.5% of the caregivers were married and 87.4% of the study participants were earning less than 100,000 Uganda shillings a month.

**Table 2: Caregivers of children under five attending Fort Portal Regional Referral Hospital**

Variable	Frequency (n=246)	Percentage (%)
Age in years		
<b>18-19</b>	15	6.1
<b>20-30</b>	191	77.6
<b>31-40</b>	40	16.3
Education		
<b>None</b>	27	11
<b>Primary</b>	58	23.6
<b>Secondary</b>	105	42.6
<b>Tertiary</b>	56	22.8
Occupation		
<b>Unemployed</b>	8	3.3
<b>Business</b>	41	16.7
<b>Civil servant</b>	35	14.2
<b>Farmer</b>	103	41.9
<b>House wife</b>	57	23.2
<b>Student</b>	2	0.8
Religion		
<b>Christian</b>	150	61
<b>Muslim</b>	96	39
Marital status		
<b>Married</b>	198	80.5
<b>Single</b>	42	17.1
<b>Widow</b>	6	2.4
Monthly income in Uganda shillings		
<b>&lt;100,000</b>	215	87.4
<b>≥100,000</b>	31	12.6

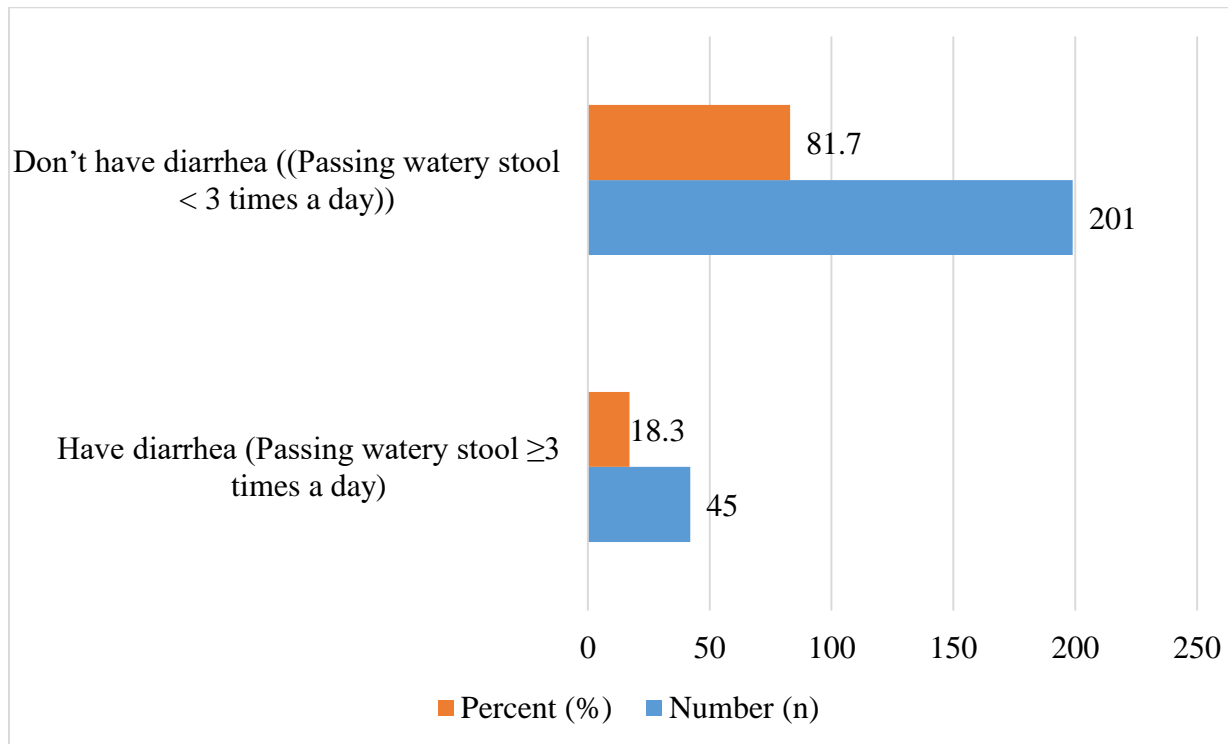
### Occurrence of Diarrhea in Children under Five Attending Fort Portal Regional Referral Hospital

Table 3 and figure 1 below show the rate of occurrence diarrhea in children under five attending Fort Portal Regional Referral Hospital was 18.3%

**Table 3: Rate of diarrhea in children under five attending Fort Portal Regional Referral Hospital**

Diarrhea in children under five	Number (n)	Percent (%)
<b>Have diarrhea (Passing watery stool ≥3 times a day)</b>	45	18.3
<b>Don't have diarrhea ((Passing watery stool &lt; 3 times a day))</b>	201	81.7

Figure 1: A graph showing rate of having diarrhea in 6 months among children under five attending Fort Portal Regional Referral Hospital



Socio-demographic and socio-economic factors affecting occurrence of diarrhea in children under five attending Fort Portal Regional Referral Hospital.

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**Table 4: Bivariate binary logistic regression: Socio-demographic and socio-economic factors affecting occurrence of diarrhea in children under five attending Fort Portal regional referral Hospital**

Variable	Rate of diarrhea		Chi square value (X <sup>2</sup> )	Degree of freedom (Df)	P-Value
	Had diarrhea (45)	Never had diarrhea (201)			
Caregivers' Age in years			7.7921	2	0.020322
<b>18-19</b>	4	11			
<b>20-30</b>	28	163			
<b>31-40</b>	13	27			
Caregivers' Education level			17.0631	3	0.0000
<b>None</b>	5	22			
<b>Primary</b>	21	37			
<b>Secondary</b>	13	92			
<b>Tertiary</b>	6	50			
Caregivers' Occupation			8.7087	5	0.121263
<b>Unemployed</b>	3	5			
<b>Business</b>	11	30			
<b>Civil servant</b>	6	29			
<b>Farmer</b>	19	84			
<b>House wife</b>	5	52			
<b>Student</b>	1	1			
Family income			4.6283	1	0.031449
<b>&lt; 100000 Ugshs</b>	35	180			
<b>≥100000 Ugshs</b>	10	21			
Child's sex			0.6295	1	0.427539
<b>Male</b>	19	98			
<b>Female</b>	26	103			
Child's age			5.8387	2	0.053969
<b>&lt; 1 year</b>	14	37			
<b>1-3 years</b>	13	94			
<b>4-5 years</b>	18	70			

According to table 4, education level, family income and caregiver's age had P-value less than 0.05 thus proceeded for multivariate stage since they had P-values less than 0.05.

**Multivariate binary logistic regression: Socio-demographic and socio-economic factors affecting occurrence of diarrhea in children under five attending Fort Portal Regional Referral Hospital**

**Table 5: Multivariate binary logistic regression: Socio-demographic and socio-economic factors affecting occurrence of diarrhea in children under five attending Fort Portal regional referral Hospital**

Variable	aOR	95%CI	p-value
<b>Education level</b>			
None	1.81	-1.34-0.88	0.1600000
Primary	<b>13.70</b>	<b>-0.19-2.2.02</b>	<b>0.0000128</b>
Secondary	1.19	-1.61-0.66	0.2851400
Tertiary	1.03	-1.93-0.63	0.4299000
<b>Family income</b>			
< 100000 Ugshs	0.33	-0.06-12.08	0.343560
≥ 100000 Ugshs	<b>22.22</b>	<b>0.06-1.73</b>	<b>0.00000002</b>
<b>Caregivers age in years</b>			
18-19	<b>9.14</b>	<b>-0.46-1.96</b>	<b>0.00066</b>
20-30	0.81	-1.96-0.46	0.4538
31-40	4.12	-1.04-1.60	0.0492

Table 5 shows that children whose caretakers education level in primary was 13times significantly associated with diarrhea compared to others, aOR=13.70, 95%CI -0.19-2.02. And family income 22 times that is great or equal to ugsh.100,000 were found to be more likely to have diarrhea as compared to those less than ugsh.100,000 aOR=22.22, 95%CI 0.06-1.73.and finally children whose caretakers age 18-19years were 9times likely to develop diarrhea compared to the rest, aOR=9.14,95%CI= -0.46-1.964.5. Environmental factors (water sanitation and hygiene factors) contributing to diarrhea in children under five attending Fort Portal regional referral Hospital. Table 6 shows that “source of drinking water” and “where garbage is thrown” had p-values less than 0.05 thus proceeded for the multivariate analysis.

**Table 6: Bivariate binary logistic regression: Environmental factors (water sanitation and hygiene factors) contributing to diarrhea in children under five attending Fort Portal regional referral hospital**

Variable	Rate of diarrhea		Chi square value (X <sup>2</sup> )	Degree of freedom (Df)	P-Value
	Had diarrhea (n=45)	Never had diarrhea (n=201)			
<b>Source of water for drinking</b>			51.8266	3	<b>0.00000</b>
Public tap	17	166			
Protected dug well/spring	11	22			
Bole hole	8	11			
Unprotected dug well/spring	9	2			
<b>Storage of drinking water</b>			21.845	2	0.00001
Jerricans	31	185			
Tank	8	13			
Pots	6	3			
<b>Storage of drinking water different from other domestic purpose</b>			30.3986	2	0.00000
Always	8	126			
Sometimes	29	55			
Never	8	20			
<b>Is water always available all times</b>			0.9868	1	0.32052
No	22	82			
Yes	23	119			
<b>Type of toilet used at your household</b>			7.0357	2	0.02966
Flush toilet	8	29			

VIP latrine	11	49			
Ordinary toilet	26	123			
<b>What do you use hand wash after using toilet or after helping your child use a toilet</b>			10.5997	2	<b>0.00499</b>
Hand washing with water only	11	80			
Hand washing with water and soap	4	28			
Never wash hands	30	93			
<b>Where do you throw you garbage for your household</b>			5.4748	2	0.06475
Open surrounding	12	51			
You burn it	8	32			
Taken away by your community utility service	25	118			

### Multivariate binary logistic regression: Environmental factors (water sanitation and hygiene factors) contributing to diarrhea in children under five attending Fort Portal regional referral Hospital

The study participants who used unprotected dug well/spring as source of drinking water were 165 times more likely to have children with diarrhea as compared to Mothers/care givers who used public taps as source of drinking water, aOR=165.32,95%CI1.77-4.99. In this mothers/caregiver who never wash hands after using toilet and helping the child were 20 times more likely to have children with diarrhea as compared to those who always and never aOR=20.23 95%CI -0.37-2.08.

### Table 7: Multivariate binary logistic regression: Environmental factors (water sanitation and hygiene factors) contributing to diarrhea in children under five attending Fort Portal regional referral Hospital

Variable	aOR	95%CI	p-value
<b>Source of drinking water</b>			
Public tap	0.08	-2.46_-0.71	0.66092
Protected dug well/spring	93.21	0.71-2.46	0.00000
Bore hole	3109.91	0.92-3.00	0.00000
Unprotected dug well/spring	<b>165.32</b>	1.77-4.99	<b>0.00000</b>
<b>What do you use hand wash after using toilet or after helping your child use a toilet</b>			
Hand washing with water only	2.56	-1.27-1.18	0.12286
Hand washing with water and soap	2.89	-1.18-1.26	0.0955
Never wash hands	<b>20.23</b>	-0.37-2.08	<b>0.000059</b>

### Caregivers' knowledge and practices on prevention and management of diarrhea in children under the age of 5 attending Fort Portal Regional Referral Hospital

Table 8 below showed that 69.1% of the participants had appropriate answers regarding first signs of diarrhea and the importance to give the child plenty of fluids than take her to the hospital, 91.9% had appropriate answers regarding breastfeeding a child during the first 6 months of life to help prevent diarrhea, 80.9% had appropriate answers regarding vaccinating the child against other diseases to prevent diarrhea, 69.5% had appropriate answers regarding statement 'main reason why you give a child oral rehydration solution is to replace what was lost in stools and vomiting', 65.0% had appropriate answers regarding bottle-feeding your child as safe as using a cup and spoon and 85.4% had appropriate answers regarding a child having diarrhea, and stopping breastfeeding.



**Table 8: Distribution of appropriate answers on knowledge about prevention and management of diarrhea in children under the age of 5 attending Fort Portal Regional Referral Hospital**

Question or statement	Appropriate answers	Percent (%)
<b>True statements</b>		
At the first signs of diarrhea, it is more important to give the child plenty of fluids than take her to the hospital.	170/246	69.1
Does breastfeeding a child during the first 6 months of life help prevent diarrhea?	226/246	91.9
Should you vaccinate your child against rotavirus infection to prevent diarrhea?	113/246	45.9
Should you vaccinate your child against other diseases to prevent diarrhea?	199/246	80.9
The main reason why you give a child oral rehydration solution is to replace what was lost in stools and vomiting.	171/246	69.5
<b>False statements</b>		
Is bottle-feeding your child as safe as using a cup and spoon?	160/246	65.0
When your child has diarrhea, you should give her medication to stop the diarrhea.	80/246	32.5
When your child has diarrhea, you should not offer solid food	88/246	35.5
Oral rehydration solution is supposed to stop diarrhea/ vomiting.	49/246	19.9
When your child has diarrhea, you should stop breastfeeding	210/246	85.4

## DISCUSSION

### Occurrence of diarrhea in children under five

In this study, the occurrence of diarrhea in children under five attending Fort Portal regional referral Hospital was 18.3%. This is high when compared with results by CDC [26, 27] which showed that the global prevalence of diarrhea was 10.4% for children under the age of five. The reason from this high rate/occurrence in this is that this study was limited to one specific area, other than averaging rates from different parts/area like the way global rate are obtained. However, it was low when compared to the prevalence of diarrhea in Burundi which was 24.8%, 23.2% in Rwanda, 23.9% in Tanzania [3]. The reason for low rate can be related to the fact this study was done in Uganda whose problem are quite different from those of Rwanda, Burundi, and Tanzania [28]. Also, since this is current, many prevention ways such as extension of water services must have been put in place that have reduced the rate diarrhea. Nevertheless, DHS, [22] reflected that overall prevalence of diarrhea in children below 5 in Uganda was 20.0%, in south western region prevalence of diarrhea was 14.0%, northern regions it was 29.3% and eastern regions it was 26.9%. Therefore, geographical differences play a great role in determining the rates of diarrhea.

### Socio-demographic and socioeconomic factors affecting occurrence of diarrhea in children under the age of 5

#### Caregiver/mothers education status

In this study, caregiver/mother's educational status was significantly associated with diarrhea in children below 5 years in primary were found to be 13 times more likely to have diarrhea as compared to those who attended secondary and tertiary institution. This finding is consistent with results in numerous studies in Africa [29]. The reason for consistent results were probably because mothers with lower educational status are likely to have less knowledge on exclusively breastfeeding and breastfeeding practices like early introduction of complimentary feeds which may not be prepared using good sanitary conditions which might have led to increase in diarrheal cases.

### Environmental factors (water, sanitation and hygiene) contributing to diarrhea in children under the age of five attending Fort Portal regional referral Hospital.

#### Source of drinking water

In this study, the study participants who used unprotected dug well/spring as source of drinking water were 165 times more likely to have children with diarrhea as compared to Mothers/care givers who used public taps as source of drinking water. This is in line with findings in Uganda which show that 33% of children in Uganda lack access to clean water and 60% of children live more than 30 minutes away from a water source [30]. The study

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findings were also consistent with result in study done by Kamara et al., which showed that sanitation ultimately remains one of the biggest health challenge and people living in rural area seem to suffer more having no access safe water and improved sanitation. Thus, having no access to safe water in rural places surrounding Fort Portal city is a reason for high rate of diarrhea.

#### **Hand washing after using toilet or after helping your child use a toilet**

In this mothers/caregiver who would never wash their hands after toilet and caring for children were 20 times more likely to have children with diarrhea as compared to those who always washed their hands with soap after visiting toilet. Several studies reported that hand washing with soap reduced between 25% and 53% of diarrheal diseases incidence and prevalence in children under the age of 5 years [31].

#### **Caregivers' knowledge and practices on prevention and management of diarrhea in children under the age of 5 attending Fort Portal Regional Referral Hospital**

Most caregivers provided adequate answers to questions about prevention of diarrhea, such as the importance of breastfeeding. They also agreed that bottle-feeding is not a safe child feeding practice. Therefore, we believe that the health guidance currently provided, especially in the primary healthcare setting, has been effective in terms of imparting knowledge about preventive measures. Regarding disease management, most caregivers reported taking their child to the hospital at the slightest sign of diarrhea, rather than initially increasing the supply of fluids [15]. This is an essential practice in early-stage diarrhea to prevent dehydration, which is the leading cause of death. Furthermore, caregivers were unable to identify the signs of dehydration and may thus either take their children to hospital too early (and unnecessarily) or delay seeking medical care, thus resulting in additional complications or even in the death of the child [32]. Most caregivers correctly named the purpose of oral rehydration therapy (ORT), although most also reported that it 'cures' diarrhea. This belief may lead to frustration and limit the use of ORT. Caregivers exhibited a disturbing lack of knowledge about the preparation of ORT. As in other countries, this may be due to the existence of other forms of oral rehydration salts, including homemade solutions and different commercially available presentations, which may cause confusion. Another possible reason may be the lack or low quality of information provided by healthcare professionals. Despite making changes to the child's diet, most caregivers acknowledged the importance of breast milk and continued breastfeeding during diarrhea. Although this knowledge does not prove that breastfeeding is being provided as recommended, it can be considered an advance from a public health standpoint, as studies have proven the effectiveness of breastfeeding as a practice that prevents diarrhea and diarrhea related deaths. Most caregivers reported the use of medications to stop diarrhea, a practice also mentioned by caregivers in studies evaluating the treatment of diarrhea in children aged under 5 years in other countries. However, anti-diarrheal drugs have no role in the management of diarrhea in children, and antibiotics should not be given routinely. On the other hand, zinc supplementation has shown to be an effective treatment in that it reduces disease duration and severity, and may be an acceptable option in the community setting. If given as combination therapy, as an adjunct to ORT to reduce the use of inappropriate drugs such as antibiotics and anti-diarrheal agents by mothers.

#### **CONCLUSION**

In conclusion, the occurrence of diarrhea in children under five attending Fort Portal regional referral Hospital is moderately high. The occurrence of diarrhea was seen to increase with having unprotected spring/well as source of water, caregiver/mothers' educational status and storage of drinking water different from other domestic purpose. Although caregivers were able to provide correct information about prevention measures, they had limited knowledge of appropriate management of acute diarrhea, especially in relation to dehydration.

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