

Diarrhea Disease Management in Under Five Children at Jinja Regional Referral Hospital: Knowledge and Practices of Caregivers

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ABSTRACT

In Uganda, diarrheal disease causes 17% of all baby and under-five child mortality, which contributes to high IMRs of 53 and 80 fatalities per 1000 live births, respectively. According to the Jinja Regional Referral Hospital, diarrhea affects 23% of children under the age of five, placing them at risk for malnutrition and weakened immune systems that make them more susceptible to other illnesses. Data from kids aged five and under were gathered using a straightforward, standardized questionnaire for the cross-sectional investigation. A calculator and an Excel spreadsheet were used to assess the data. Tables and pie charts were used to display the results. Results revealed that 49.6% of caregivers and mothers were unaware of what diarrheal disease was, while 53.9% were unaware of the symptoms of dehydration and only 54.4% were aware of how to prevent diarrhea. Lack of funds was cited by 44% of respondents as a deterrent to taking sick children to the hospital as soon as possible. Additionally, the population investigated in this community lacks basic caregiver knowledge and engages in harmful behaviors when it comes to managing diarrheal disease and preventing it. Enhanced access to ORS, which is utilized in the management of diarrhoea, and enhanced health education of caregivers, particularly mothers, are also necessary.

Keywords: Diarrhoeal disease, Children deaths, 1000 live births, Malnutrition, Caregivers/mothers

INTRODUCTION

Diarrhoeal disease is any disease by which a person experiences the passage of loose or watery stools at least three times a day, characterized by an increase in volume, fluidity or frequency of bowel movement relative to the usual pattern for a particular person [1]. A wide variety of bacterial, viral and protozoan pathogens excreted in the faeces of humans and animals are known to cause diarrhoea [2]; [3]. The diarrhoeal disease remains one of the major causes of child morbidity and mortality in the world. Globally, diarrhoea kills an estimated 2.5 million people each year, with about 60-70% of them being under-five children [3]. Diarrhoea is the second leading killer of children as nearly one in five children under the age of five dies as a result of dehydration, weakened immunity or malnutrition associated with diarrhoea [4]. Most recently, it was reported that about 10% of children with diarrhoeal illness become severely dehydrated and 0.5% of them end up dying [3]. Most of these deaths occur in developing countries where an estimated 25% of under-five mortality is directly attributed to diarrhoeal disease [2]. In India, diarrhoea is the third most common cause of death in under-five children being responsible for 13% of deaths in this age group as it kills an estimated 300,000 children each year [5]; [6]. In the United States and Brazil, 200,000 (per year) and 2.5% of hospitalizations of children under 5 years of age due to diarrhoea still occur with an estimated 7.2% fatality rate in Brazil [2]. Unsafe water used for drinking and domestic purposes and poor sanitation account for over 90% of deaths from diarrhoea of under-five children [4]. Lack of access to safe water and adequate sanitation facilities is a serious problem

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worldwide. Approximately 884 million people lack access to improved water sources and 2.6 billion people do not have access to improved sanitation facilities which leads to open defecation and the poor disposal of faeces, especially in developing countries, where 25% of people defecate in the open [7]; [8]. In Sub-Saharan Africa, pediatric deaths due to diarrhoea exceed that of malaria, HIV/AIDS and Measles combined accounting for 37% [1]; [9]. In Ethiopia where diarrhoeal illness prevalence is about 37%, an estimated 95,000 childhood deaths thought to be due to diarrheal illness occur every year [3]. In East Africa, diarrhoea is the third leading cause of morbidity among children under five and it is the fourth leading cause of mortality in Burundi [10]. In Uganda, diarrhea is among the top four leading direct causes of morbidity and mortality in infants and under five children following malaria, neonatal diseases and pneumonia [11]; [12]. It (Diarrhoea) accounts for 17% of infant and under-five deaths fourth to malaria accounting for (25%), neonatal diseases (23%) and pneumonia (19%) Over 90% of deaths from diarrhoeal diseases that occur in children under five years in the developing world, Uganda inclusive, are attributed to severe dehydration, weakened immunity or malnutrition associated with diarrhoea [4]. Most diarrhoeal episodes are treated at home, and mothers are the key caregivers to under-five children. Caregivers decide about the type of food to give to the child and the overall management of the disease. This makes their knowledge about this common disease and household practices to prevent and/or manage the disease critically important to reduce diarrhoea-related morbidities and mortalities. On the other hand, mothers' poor knowledge and attitude about the cause of diarrhoea might limit them from taking appropriate timely actions [13].

Statement of Problem

In Uganda, diarrhoeal disease accounts for 17% of all infant and under-five children deaths hence contributing to a high IMR, 53 deaths/1000 live births and UMR, 80 deaths/1000 live births [14]; [12]. Child healthcare practices have been recognized as a significant factor behind mortality rates among under-five age group children [15]. The majority of diarrhoeal deaths can be avoided by timely intervention with recommended oral rehydration therapy and continued appropriate feeding practices [15]. From Kasese to Bushenyi district, according to Save the Children – Kasese Project (2016), diarrhea prevalence among under-five children is estimated at 23% and is one of the direct causes of morbidity among vulnerable children as it results into malnutrition and deficient immunity against other infections. In Bushenyi to Kasese district, according to HMIS105 received from health facilities across the district for 2015/2016 FYs, 570 (26%) of children under five received in OPD at HC II had diarrhoea making it the highest diarrhea prevalence in the district. Caretakers play a key role in managing childhood illness and their failure to recognize early signs of dehydration and inappropriate management results in excessive fluid loss and electrolyte imbalance, which contribute to critical outcomes. Several studies have been done on factors which predispose children to diarrhea ignoring the knowledge and practice of caretakers. This study aims at determining the knowledge and practices of care-givers on diarrheal disease management in under-five children in Jinja regional referral hospital.

Aim

To assess the knowledge and practices of care-givers on diarrheal disease management in under-five children at Jinja Regional Referral Hospital.

Specific objective

- To assess the knowledge of caregivers on the management and prevention of diarrhoeal disease in under-five children at Jinja Regional Referral Hospital.
- To find out the practices of caregivers on diarrhoeal disease management and prevention of under-five children at Jinja Regional Referral Hospital.
- To determine the Challenges faced by caregivers in the management of diarrheal disease of under-five children at Jinja Regional Referral Hospital.

Research questions

- i. What is the level of knowledge of caregivers on the management of diarrhoeal disease among under-five children at Jinja Regional Referral Hospital?
- ii. What are the practices of caregivers in the management and prevention of diarrhoea disease in under-five children at Jinja Regional Referral Hospital?
- iii. What are the challenges faced by caregivers of under-five children in diarrheal disease management at Jinja Regional Referral Hospital?

METHODOLOGY

This chapter is set to describe the methods that were used in the study to assess the knowledge and practices of caregivers on diarrheal disease management in under-five children at Jinja Regional Referral Hospital. It consists of the study design, study setting, study population, sample size determination, sampling procedure, inclusion criteria, and definition of variables and research instruments. It further contains; the data collection method/procedure, data

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management, ethical considerations, limitations of the study and dissemination of study results.

Study design

The study was a community-based cross-sectional study that employed a quantitative research approach to collect data. It was cross-sectional because there was a single interaction with participants and so it was easy to get respondents to participate in the study. It was quantitative because the data that was collected was presented in numerical figures and tables. This design was chosen in order to provide adequate data about the subject within a short time frame.

Area of Study

The study was carried out in Jinja Regional Referral Hospital.

Study population

The study targeted Mothers/caregivers of children of 5 years attending Jinja Regional referral hospital during the study period.

Sample size determination

This was determined by using Kish's formula (Li, Su, & Shyr, 2013) which states that,

n = Where;

n = the required sample size

p = estimated prevalence of diarrhoea, which is 19.5% of national prevalence as per [14].
ε = margin of error
on p (set at 5)

z = standard normal deviate corresponding to 95% confidence level (=1.96)

$$n = \frac{(1.96)^2 \times 0.19 \times (1 - 0.19)}{0.5^2} = 241$$

Therefore, the sample size (n) was equal to 241 respondents.

Sampling procedure

Convenience sampling was employed to recruit mothers and caregivers attending Jinja Regional Referral Hospital during the period of the study. This was chosen because people come to the hospital at different times which makes the researcher make it open for everyone's convenience.

Inclusion criteria

Households mothers/caregivers (at least 15 years and older) having a child 1 month to 5 years who gave consent to voluntarily participate in the study after an explanation to them of the purpose of the study were included in the study. In cases where there were more than one under-five children in the same household, only one child preferably the oldest was selected.

Exclusion Criteria

Women whose children are above five years old were excepted

Research instruments

The researcher designed questionnaires into which data collected from respondents was entered.

Questionnaire

A semi-structured questionnaire was designed to collect quantitative data. It was simple, straightforward and did not include the use of medical terminologies. It contained three sections in regard to the research questions and possessed both open and closed-ended questions to allow respondents to clearly understand every question.

Quality control

The research tool accurately reflected and assessed the specific concept that the researcher was attempting to measure. The operational definitions of the variables showed the true theoretical meaning of the research concept. The questionnaire contained variables for all questions of the study. The research instrument to collect data was designed to maintain all information in order to cater for all objectives of the study and was accurate in order to produce stable and consistently similar results each time it was used. Quality of data was achieved by pre-testing the research instrument.

Pretesting

Pre-testing of the research instrument was done to construct the validity of the interview schedule. This helped to determine the content validity of the instruments and identified changes required prior to their administration. The questionnaire was tested from Ishaka Adventist Hospital Ishaka which had almost similar settings as that of the study area on ten randomly selected participants. Test results obtained from a test group of the target population were used to predict the future results of the study.

Data collection procedure

Data was collected by using a semi-structured questionnaire written in English, translated by the researcher to the

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local language which respondents were able to understand easily at the time of data collection.

Data management

The data that was collected was coded, edited and stored.

Data analysis

At the time of analysis, data was entered into a computer database and was analyzed using EPI info (exe) version 7 computer statistical package in order to give a statistical meaning to the data. Analyzed data was presented in the form of numerical figures and tables. The purpose of analyzing data by use of this statistical package was to maximize accuracy and minimize human errors.

Ethical considerations

The researcher sought approval and obtained written permission from Jinja Regional Referral Hospital. The researcher explained to the respondents the subject under study, its purpose and objectives. The researcher requested respondents to give their formal consent to voluntarily participate in the study. The researcher also provided assurance of confidentiality to the respondents and made a declaration that the results of the study were to be used only for the purpose of research.

RESULTS

Table 1: Show the demographic characteristic of the respondents

Variable	Frequency (n = 241)	Percentage (%)
Age		
18-28 years	45	18.7
29 – 38 years	70	29.0
39 – 48	126	52.3
Tribe		
Busoga	189	78.4
Luganda	30	12.4
Others	22	9.1
Religion		
Muslims	88	36.5
Catholic	102	42.3
Seventh Day	40	16.6
Others	11	4.6
Marital status		
Married	184	76.3
Single	26	10.9
Divorced	31	12.9
Education level		
No education	55	22.8
Primary	89	36.9
Secondary	67	27.8
Tertiary	30	12.4

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Occupation		
Peasant farmer	128	53.1
Business	77	32.0
House wife	30	12.4
Others	6	2.5

Results indicate that 52.3% of the respondents were age 30 years and above, 29% were 29-38 years, 18.7% were 18-28 years respectively. Majority of participants were Busoga 78.4%, Luganda 12.4% and others 9.1%; Religion were catholic 42.3%, Muslims 36.5%, seventh day Adventist 16.6% and others 4.6%; 76.3% were married, divorced 12.9% and 10.9% were single mothers. On education, 36.9% attended primary, 27.8% secondary, 22.8% no formal education and 12.4% tertiary level; occupation of participants indicated about 53.1% were peasant farmers, 32.0%, business, 12.4% housewives and 2.5% others; On locally-made treatment at home, 54.8% use herbs; and 26.1% rice water as a locally-made treatment for diarrhoea. 57.31% feed their children during diarrhoea episodes and only 42.7% do not. Results show that among those who feed their children, the most preferred food was rice 46.9%, cassava 33.6%, porridge 11.2% and 8.3% gave their children soup. About 59.8% had no knowledge of making ORS while 40.2% knew how to make ORS. On obtaining ORS Sachets, health centres 52.3%, 27.4% private clinics, local drug shops 16.6% and VHTS 3.7%. Knowledge on signs of dehydration, 46.9% were knowledgeable while 53.9% lacked knowledge on signs of dehydration. This study indicates that about 51.9% of the caregivers intervene immediately on recognition of signs of dehydration whereas 31.5% intervene after 2 days and 16.6% intervene when a child develops signs of severe dehydration. On causes of diarrhoea, 52.3% said eating dirt food and water, 22.8% eating cold food, 14.5% said during the developmental stage and 10.4% said other diseases. Knowledge of prevention indicates that 54.4% have knowledge about the prevention of diarrhoea while 45.6% have no knowledge.

Table 2: Caregivers on the management of diarrhoeal disease among under-five children

Variables	Frequency	Percentages
Locally made treatment for diarrhoea at home		
Herbs	132	54.8
Rice water	63	26.1
Don't know	46	19.1
Child being fed on any food during diarrhoea Episode		
Yes	138	57.3
No	103	42.7
Preferred food given		
Rice	113	46.9

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Cassava	81	33.6
Porridge	27	11.2
Soup	20	8.3
Knowledge of making local ORS		
Knowledgeable	97	40.2
Not knowledgeable	144	59.8
Quick source of ORS Sachets		
Health Centre (GoU)	126	52.3

Table 3: Shows responses on challenges faced by caregivers when managing under-five children

The above table indicates about 56% of caregivers do not encounter any obstacle when deciding to take the child for treatment, 44% lack money; 54% mentioned medicine stockouts, the early departure of health workers 23.2%; on cultural belief, 53% had no any cultural belief associated with diarrhoea, 46.9% mentioned teething as probable cause. On transportation means to the health facility, 19.5% used foot, 8.7% bicycle and 71.8% motorcycle; on distance to health facility <30 minutes 22.4%, 30 minutes to 1 hour 56.9% and >2 hours 20.7%; on responsibility of taking the sick child for treatment, 60% female parent and only 24.9% male parent and 14.1% family members; on decision making about the child treatment, 68.9% mother, 24.9% father and 6.2% both parents.

Variable	Frequency	Percentage
A common obstacle when the decision to take the child for treatment is made		
None	135	56.0
Lack of money for transport and treatment	106	44.0
Problems experienced at the nearby health facility		
None	55	22.8
Early departure of health workers	56	23.2
Medicine stock outs	130	54.0
Cultural beliefs linked to the cause of diarrhoea		
Unknown	128	53.0
Teething	113	46.9

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Private clinic	66	27.4
Local drug shop	40	16.6
VHT	9	3.7
Knowledge on signs of dehydration		
Knowledgeable	111	46.1
Not knowledgeable	130	53.9
When to intervene		
Immediately	125	51.9
After 2 days	76	31.5
When child develops serious signs	40	16.6
Causes of diarrhoea in under five children		
Taking dirt (food and water)	126	52.3
Cold foods	55	22.8
Developmental stage	35	14.5
Other disease	25	10.4
Knowledge on prevention of Diarrhoea		
Knowledge	131	54.4
Not Knowledgeable	110	45.6
Transport means to a health facility		
Foot	47	19.5

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Bicycle	21	8.7
Motorcycle	173	71.8
Time spent on the way to the facility		
< 30 minutes	54	22.4
30 minutes – 1 hour	137	56.9
2 + hours	50	20.7
Responsibility of taking a sick child to the health Facility		
Female parent	147	61.0
Male parent	60	24.9
Any other family member	34	14.1
Decision-making on when and where to take the child for treatment		
The mother	166	68.9
The father	60	24.9
Both parents	15	6.2

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DISCUSSION

Caregivers' knowledge of the management of diarrhoeal disease

Study findings show a low number of caregivers did not have knowledge of what diarrhoea disease means and most likely, they could not take their children to the health facilities for treatment immediately although the source of information on diarrhoea among most caregivers was health workers. However, most of the caregivers gave a combination of right and wrong information in their definition of diarrhoea, but they would more likely take appropriate measures about the treatment of their children. Inadequate knowledge of diarrhoea was a result of undereducation among caregivers showing most had primary-level education less had no formal education and were more likely to use inappropriate treatment remedies like herbs. Education enables an individual to understand any information written or read to him/ her including information pertaining to health. These findings do not contradict [9] findings that improper knowledge of mothers on diarrhoea and their misdirected approach towards its management leads to a high degree of mismanagement and resultant severe dehydration. It is always quite challenging among caregivers when it comes to the decision to feed a child with diarrhoea, choice and amount of food to be given to a child with diarrhoea. From the study findings, more than of the caregivers had no knowledge of making local ORS implying that most likely they cannot act very quickly to prevent dehydration in a diarrhetic child. These findings are not consistent with [15] who in their study found that knowledge about Salt sugar solution as rehydration fluid was also high. Study findings showed that half of caregivers obtain ORS Sackets from Government health centres, 21.2% from local drug shops and 17.3% from VHTS. This implies that government health facilities are the most preferred sources of ORS compared to drug shops. Regarding knowledge about the place to obtain and prepare ORS, current study results disagree with study findings by [13] in western Ethiopia where a maximum number of mothers/ caretakers. Responded in favour of Private Hospitals/clinics, Pharmacies, Primary Health Centers and Public Hospitals/clinics and 18.3% did not have any knowledge about places to obtain ORS. The knowledge of warning signs of dehydration is important in deciding on when to attain care and treatment for a child suffering from diarrhoea disease. A caretaker who is capable of identifying warning signs of dehydration will tend to make a treatment intervention late compared to one who has the ability to recognize such signs early. Study findings indicated that more than half (56.9%) of the caregivers were not knowledgeable about signs of dehydration which perhaps delayed their decision to take the sick child for treatment leading to poor prognosis. This corresponded to less than half of the caregivers not being able to intervene immediately on recognition of signs of dehydration as well as a significant number of them intervening after 2 days or when a child develops signs of severe dehydration like lethargy. The findings concur with research study findings where one-fourth of mothers/caretakers identify symptoms and signs of "dehydration" and the need for consultation. Only supports contacting a doctor in all cases of diarrhoea from the beginning and 2.8% in no case of diarrhoea. mothers/caretakers considered a duration of 3 days or more as the deciding factor to contact the doctor whereas only considered Frequency (>3 or 4 times/day) as the most deciding factor [15]. Study results indicate that causes of diarrhoea in under-five children according to the caregivers interviewed were; eating dirt (food and water), eating cold food, being part of the child's development and other diseases. This type of knowledge lays a foundation for either good, wrong or non-intervention by a caregiver when their children develop diarrhoea with sometimes disastrous consequences. This understanding could give rise to higher mortality and morbidity rates in the community since the necessary early and accurate intervention for the proper management of childhood diarrhoea may not be applied. According to the study findings, though, more than half of the caregivers were knowledgeable about how to prevent diarrhoea in under-five children as 40.4% of them were not knowledgeable. This revelation is in contrast with [13] who found the overall knowledge about the cause and transmission of diarrhoea at where of the respondents reported that diarrhoea can be caused/ transmitted by drinking unclean/unsafe water, however, findings are in agreement with [9] Pediatrics ward and OPD based study findings at Civil Hospital Karachi where mothers knew various preventive methods like washing hands, keeping the environment and the child clean.

Practices of caregivers on diarrhoeal disease management of under-five children

From the current study findings, it was noted that around feed their children during diarrhoea episodes. Results show that the most preferred food among caregivers who feed their children was porridge followed by rice. Very few caregivers gave their children soup and only fed their children in adequate amounts. Child feeding during diarrhoea episodes helps to prevent or treat weakness from loss of energy sources, intolerance, fluids and electrolytes. In addition, results indicated that during a diarrhoea episode, most caregivers give more drinks than food which means that their worries are directed towards body fluid loss which is more characteristic of diarrhoea than not feeding the child. These findings are in agreement with [15] study findings where it was found that fewer amounts of food and fluid were given by mothers/caretakers and that feeding pattern changes showed a reverse trend in the case of fluid and food where during diarrheal episodes, most caretakers offer more drinks and less food. Results show that more than half of the caretakers discontinue breastfeeding their children. This is a bad practice because it deprives breastfed children of the necessary nutrients obtained from breast milk which can result

in malnutrition problems. This is in contrast to studies which disclosed that fewer than 10 % of mothers stopped breastfeeding during the episode [16]. Results indicate that the majority of the caregivers did not currently have ORS packets in their houses whereas only of them had ORS packets in the house. Lack of ORS at home can lead use of inappropriate treatment remedies that may be readily available at home which can result in treatment failures and the development of severe dehydration. These findings do not contradict [16] discovery where availability of ORS packets at home is believed to be very low (10.4%) and ORT practices, in general, were poor. Most, (41%) caregivers take their children to the government health facility when they suffer from diarrhoea, 27% of them stay at home and use herbs, 17% take children to private clinics and 15% of them to the VHTs. Proper management of a child with diarrhoea at a government health facility is guaranteed if the service provider is well-skilled to treat childhood diarrhoea. In a remote community, private clinics not licensed to operate have a tendency to employ under skilled staff which leads to mismanagement of sick children. The findings of this study are consistent with research findings that sub center and primary health center were most preferred (15.7% and 27.2% respectively), and 21.4% went to quacks for treatment [15]. Wrong use of drugs to treat diarrhoea in children under five is very rampant where self-medication is a common practice. In this study, 29% of caregivers give Fragyl while 8% of them septrin which drugs are antibiotic drug that was not recommended for the treatment of diarrhoea in under five children. From a systematic review of harmful practices in the management of childhood diarrhoea in low- and middle-income countries, most studies reported inappropriate use of drugs to treat diarrhoea in children under five [16].

Challenges faced by caregivers of under-five children in diarrheal disease management

Several challenges can disrupt the treatment process of children suffering from diarrhoea which may range from domestic to facility challenges. Study findings showed that 32.7% of caregivers lack money for transport and payment for treatment. This can result in failure to seek appropriate medical help from qualified health staff and use non recommended remedies that may be easily accessible at home which poses risks to children such as unnecessary use of antibiotics. These findings are also in agreement with [6] findings where substantial delays in seeking care occur at home and during transit due to financial and transport issues and in line with study results in Kenya which showed that child caretakers undertook direct transactions such as selling livestock or firewood to generate money for treatment while others borrowed money from relatives or neighbours, although this was often seen as a last resort [17]. Most caregivers also pointed out that medicine stockouts and the early departure of health workers were the main problems faced at the facility. Findings also indicated that a significant number of caregivers culturally believed that teething causes diarrhoea in children under five although most of the caregivers interviewed did not know any cultural belief linked to the cause of diarrhoea in children. Such kind of beliefs direct caregivers to relevant treatment choices like traditional healers that are thought to extract the teeth, hence poor treatment approach. These study findings are consistent with [18-24] who found out that diarrhoea was said to be caused by teething in babies, getting pregnant while breastfeeding, and having too much sex while breastfeeding. Lack of sufficient transport means to the health facilities causes substantial delays in obtaining immediate treatment. The transport means to the health facility used by 90.2% of the caregivers is foot [25-30]. The majority of the caregivers spend 30 minutes to 1 hour on the way to the health facility which is quite tiresome. The lack of money and long distance to the health facility hinders a caregiver's decision to move for care of her child, therefore is forced to use the resources within her reach. The findings of this study are closely similar to study findings elsewhere which showed that geographic inaccessibility to healthcare posts is another obstacle that hinders caregivers from acquiring effective and appropriate treatment of diarrhoea in under-five children [19]; [30-32]. The female gender in low-income countries is associated with low decision-making powers and inadequate control over family resources. Since mothers take a key role in looking after children, their decisions to take children for treatment may be delayed due to a lack of money for transport and waiting to consult the husband about where to take the child for treatment. Findings from this study indicated that the female parent (90.2%) was responsible for taking the sick child for treatment, but the decision-making on when and where to take the child for treatment was made by both parents (42.3%). It was noted from the literature that socio-cultural barriers and gender dynamics appeared to play a larger role in care-seeking for children in Nigeria. Restrictions on the movement and societal interactions of women result in the juxtaposition of mothers as the primary caregivers over fathers and this is a barrier to accessing effective, efficient and timely healthcare [17], [20]-[23].

CONCLUSION

Results indicated that a significant number of caregivers have knowledge of what diarrhoea disease means with most caregivers having no knowledge of making local ORS. This study observed the following barriers to caregivers' lack of money for transport and payment for treatment, medicine stock out and early departure of health workers and long distance to a health facility on the way and taking a sick child for treatment as the main problem faced. Most had a cultural belief that teething causes diarrhoea.

RECOMMENDATIONS

Based on the findings of the study, the implementation of policies by the government health ministry regarding public education and health promotion programmes targeted at educating parents and caregivers (in particular the

mothers) about diarrhoea, its causes prevention and proper treatment should be reviewed and strengthened. The need for county government to improve accessibility to healthcare facilities through improved community road networks and adequate resourcing of healthcare systems for effective healthcare delivery. The district health administrators and policymakers need to implement measures that would significantly reduce diarrhoea cases in this community.

REFERENCES

1. Oketcho, R., Esron, D. K., Cornelio, N. M. N. & Saifuddin, T. (2012). Epidemiological factors in admissions for diarrhoea in 6 - 60-month-old children admitted to Morogoro Regional Hospital, Tanzania. *S Afr JCH* 2012; p-6(3):81-84. DOI:10.7196/SAJCH.479.
2. Rocha, M. C. G. S., Carminate, D. G., Tibiriçá, S. H. C., Carvalho, I. P., Silva, M. L.R. & Chebli J. M. F. (2012). Acute diarrhoea in hospitalized children of the municipality of Juiz de Fora, MG, Brazil: prevalence and risk factors associated with disease severity. *Arq Gastroenterol*. 49 - no. 4 - out. /dez. 2012
3. Alelign T, Asegidew W, Abera A. (2016). A Cross-Sectional Study on the Incidence and Risk Factors of Diarrhoeal Illness among Children Under-five Years of Age in DebreBerhan Town, Ethiopia. *J Health Med Econ*. Retrieved from: <http://health-medical-economics.imedpub.com/archive.php>.
4. Shirley, K., Vivienne, M., Michael, K., & Joseph, O. (2013). Characterization and factors associated with diarrhoeal diseases caused by enteric bacterial pathogens among children aged five years and below attending Igembe District Hospital, Kenya. *Pan African Medical Journal*. 2013;16:37; doi:10.11604/pamj.2013.16.37.2947.
5. Subitha, L. & Ramakrishnan, J. (2015). Diarrhoeal diseases among children in India: Current Scenario and future perspectives. *Journal of Natural Science, Biology and Medicine* | January 2015 | Vol 6 | Issue 1. Available at; <http://www.jnsbm.org>.
6. Deshmukh, V., Lahariya, C., Krishnamurthy, S., Manoj, K. D., Pandey, M. R., & Narendra, K. A. (2016). Taken to Health Care Provider or Not, Under-Five Children Die of Preventable Causes: Findings from Cross-Sectional Survey and Social Autopsy in Rural India. *Indian J Community Med*. Pg:41(2): 108-119. doi: 10.4103/0970-0218.177527.
7. CDC. (2012). Diarrhoea: Common Illness, Global Killer. U.S. Department of Health and Human Services.
8. Afroza, K., Shahinur, R., Hafizur, R. & Hossain, S. (2013). A Cross-Sectional Study on Prevalence of Diarrhoeal Disease and Nutritional Status among Children Under 5 Years of Age in Kushtia, Bangladesh. *Science Journal of Public Health*. Vol. 1, No. 2, pp.56-61. doi: 10.11648/j.sjph.20130102.12.
9. Mumtaz, Y., Zafar, M. & Zara, M., (2014). Knowledge Attitude and Practices of Mothers about Diarrhea in Children under 5 years. *J Dow Uni Health Sci*. 8(1): 3-6.
10. Katharina, D., Tabatabai, P., Jochen, R. & Michael, M. (2014). Diarrhoea prevalence in children under five years of age in rural Burundi: an assessment of social and behavioral factors at the household level. *Glob Health Action*; 7: 24895 -<http://dx.doi.org/10.3402/gha.v7.24895>.
11. Bwogi, J., Malamba, S., Kigozi, B., Namuwulya, P., Tushabe, P. & Kiguli, S. et al. (2015). The epidemiology of rotavirus disease in under-five-year-old children hospitalized with acute diarrhoea in central Uganda, 2012-2013. *Springer*, 161:999-1003. DOI 10.1007/s00705-015-2742-2.
12. Nabongo, P., Suzanne, V., Nangobi, E., Mutunzi, R., Wajja, A. & Mayanja, K. H. et al. (2014). Two-year mortality and associated factors in a cohort of children from rural Uganda. *BMC Public Health* 2014, 14:314. Available at; <http://www.biomedcentral.com/1471-2458/14/314>
13. Merga, N., Tadesse, A. (2015). Knowledge, Perception, and Management Skills of Mothers with Under-five Children about Diarrhoeal Disease in Indigenous and Resettlement Communities in Assosa District, Western Ethiopia.
14. Uganda Bureau of Statistics (UBOS). (2016). National Population and Housing.
15. Choube, A., Prasad, S.B., Srivastava, A. & Mukesh, S. (2014). Knowledge and child care practices regarding childhood diarrhoea- A cross-sectional study. *Ind J Comm Health*. 26(3):285-291.
16. Carter, E., Jennifer, B., Perin, J. & Newby, H. (2015). Harmful practices in the management of childhood diarrhoea in low- and middle-income countries: a systematic review. *BMC Public Health*; P (15):788. DOI 10.1186/s12889-015-2127-1.
17. Bedford, K. J. A. & Sharkey, A. B. (2014). Local Barriers and Solutions to Improve Care-Seeking for Childhood Pneumonia, Diarrhoea and Malaria in Kenya, Nigeria and Niger: A Qualitative Study. *PLoS ONE* 9(6): e100038. doi:10.1371/journal.pone.0100038.
18. Saha, D. (2013). Acute diarrhoea in children in rural Gambia: Knowledge, attitude and practice, aetiology, risk factors and consequences among children less than five years of age. University of Otago. Retrieved from <http://hdl.handle.net/10523/4414>.
19. Shaw, B., Amouzou, A., Nathan P M., Tafesse, M., Jennifer B. & Pamela, J. S. (2016). Access to integrated community case management of childhood illnesses services in rural Ethiopia: a qualitative study of the

- perspectives and experiences of caregivers. *Health Policy Plan* (2016) 31 (5): 656-666. DOI:<https://doi.org/10.1093/heapol/czv115>
20. Christopher Muhanguzi. (2023). Evaluation of the Knowledge, Attitude and Practices of Nurses in the Management of Diarrhea in Children at Kampala International University Teaching Hospital, Uganda. *INOSR Scientific Research*. 9(1), 25-37.
 21. Kalenzi Stanley. (2023). Evaluation of Care-Takers Awareness, Training and Approaches in the Management of Diarrhea in Children in Nawampiti Parish. *IAA Journal of Scientific Research*. 10(1), 28-35.
 22. Emmanuel Ifeanyi Obeagu, Chukwudi Ofodile Amaechi, Blessing Okwuanaso Chetachi. (2023). Factors Associated With Diarrheal Disease among Children: A Major Cause of Deaths in Developing Countries. *International Journal of Innovative and Applied Research*. 10(11), 39-42.
 23. Patrick Mutembe. (2023). Factors Contributing to the Occurrence of Diarrhea in Children under the Age of five Years at Jinja Regional Referral Hospital, Eastern Uganda. *EURASIAN EXPERIMENT JOURNAL OF PUBLIC HEALTH*. 4(2), 10-18.
 24. Emmanuel Ifeanyi Obeagu, Getrude Uzoma Obeagu and Ugwu Okechukwu Paul-Chima (2023). Stigma Associated With HIV/AIDS: A Review. *NEWPORT INTERNATIONAL JOURNAL OF PUBLIC HEALTH AND PHARMACY (NIJPP)* 3(2):64-67.
 25. Esther Ugo Alum, Emmanuel Ifeanyi Obeagu, Okechukwu P. C. Ugwu, Patrick Maduabuchi Aja, and Michael Ben Okon (2023). HIV Infection and Cardiovascular Diseases; The Obnoxious Duos. *NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES (NIJRMS)* 3 (2):95-99.
 26. Esther Ugo Alum, Okechukwu P. C. Ugwu, Emmanuel Ifeanyi Obeagu and Michael Ben Okon (2023). Curtailing HIV/AIDS Spread: Impact of Religious Leaders. *NEWPORT INTERNATIONAL JOURNAL OF RESEARCH IN MEDICAL SCIENCES (NIJRMS)* 3(2): 28-31.
 27. Emmanuel Ifeanyi Obeagu, Stella Malot, Getrude Uzoma Obeagu and Okechukwu Paul-Chima Ugwu (2023). HIV resistance in patients with Sick Cell Anaemia. *NEWPORT INTERNATIONAL JOURNAL OF SCIENTIFIC AND EXPERIMENTAL SCIENCES (NIJSES)* 3 (2):56-59.
 28. Ugwu, O. P.C., Nwodo, O. F.C., Joshua, P. E., Odo, C. E., Bawa, A., Ossai, E. C. and Adonu C. C. (2013). Anti-malaria and Hematological Analyses of Ethanol Extract of Moringa oleifera Leaf on Malaria Infected Mice. *International Journal of Pharmacy and Biological Sciences*, 3(1):360-371.
 29. Ugwu O.P.C.(2011). Anti-Malaria Effect of Ethanol Extract of Moringa Oleifera (Agbaji) Leaves on Malaria Induced Mice. *University of Nigeria Nsukka*. 39.
 30. Ugwu Okechukwu P.C., Nwodo, Okwesili F.C., Joshua, Parker E., Odo, Christian E. and Ossai Emmanuel C. (2013). Effect of Ethanol Leaf Extract of Moringa oleifera on Lipid profile of malaria infected mice. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 4(1): 1324-1332.
 31. Ugwu OPC, OFC Nwodo, PE Joshua, CE Odo, EC Ossai, B Aburbakar(2013). Ameliorative effects of ethanol leaf extract of Moringa oleifera on the liver and kidney markers of malaria infected mice. *International Journal of Life Sciences Biotechnology and Pharma Research*, 2(2): 43-52.
 32. Enechi OC, CC Okpe, GN Ibe, KO Omeje and PC Ugwu Okechukwu (2016). Effect of Buchholzia coriacea methanol extract on haematological indices and liver function parameters in Plasmodium berghei-infected mice. *Global Veterinaria*, 16 (1): 57-66.

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