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MATERNAL KNOWLEDGE AND MANAGEMENT STRATEGIES FOR DIARRHEAL INFECTIONS IN CHILDREN UNDER FIVE: A STUDY FROM AZARE, BAUCHI STATE

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Abstract: This study assesses the knowledge levels of mothers regarding diarrhea and their strategies for the prevention and management of diarrhea among children under the age of five. Quantitative research methods were used through purposive study. The study is based on two objective which is to find out the difference between educated and non-educated mothers; the relationship between knowledge and strategies for prevention of diarrheal diseases among under five (5) children in Bauchi State. Literature was reviewed on the Concept and types of Diarrheas; an empirical study was done. The population of the study consists of 792 mothers with under-five years children; data was collected through questionnaire using 5-point likert scale and sample t-test and PPMC was used for data analysis The findings reveal that there is a significant relationship between knowledge and practice of diarrheal management among mothers of under-five children in Azare metropolis, Bauchi State. Mothers employ a variety of preventive and management strategies, including improved hygiene practices, home remedies, and traditional healing methods. However, the study highlights the importance of providing mothers with accurate and evidence-based information on diarrhea prevention and management. The study found out there is significant relationship between Knowledge and practice of management against diarrhea disease and management strategies against diarrheal disease. The study recommends need for targeted educational interventions that empower mothers with the knowledge and skills required to prevent and manage diarrhea effectively. Community-based health programs should focus on disseminating accurate information on exclusive breastfeeding, ORT, and the importance of seeking timely medical care. Additionally, efforts should be made to address the specific challenges faced by mothers in rural and disadvantaged communities.

Keywords: Diarrhoea, knowledge and strategies, under-five year, prevention and Management

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Introduction

According to World Health Organization (WHO, 2022) and United Nations Children Fund (UNICEF, 2013) there are about two billion cases of diarrheal disease worldwide every year, of which 1.9 million children younger than 5 years of age die from diarrhea each year mostly in developing countries. This amounts to 18% of all the deaths of children under the age of five and means that more than 5000 children are dying every day as a result of diarrheal diseases. Out of all child deaths from diarrhea, 78% occur in the African and South-East Asian regions (Farthing, Dreibelbis & Podewils, 2013). Each child under 5 years of age experiences an average of three annual episodes of acute diarrhea. Diarrheal disease due to unsafe water and lack of sanitation is the greatest cause of morbidity and mortality in under-five children in the world (USAID, 2015). The vast majority of deaths from diarrhea are among children under 5 years of age living in low- and middle-income countries, especially in poor countries (USAID, 2015). A child dies every 15 seconds from diarrhea caused largely by poor sanitation and a contaminated water supply (Barrett, Ezezika, Ragunathan & Bakri, 2021).). As the child's immune system is progressively compromised with each bout of diarrhea, related illnesses kill millions more indirectly. In developing countries, approximately 2 million people, the vast majority of whom are under-five children, die from diarrhea each year (Ahs, Wenjing, Lofgren & Forsberg, 2018). Nearly 90% of diarrhea is attributed to unsafe drinking water, inadequate sanitation and poor hygiene (Ahs, Glass, Bresee & Duggan 2016).

Diarrhea is a major health problem (Kosek, Bern & Guerrant, 2013). It is usually a symptom of an infection in the intestinal tract, which has a variety of causative agents including viruses, bacteria and parasites (Nyantekyi, 2020). Diarrhea is an alteration in a normal bowel movement characterized by an increase in the water content, volume, or frequency of stools. A decrease in consistency (i.e., soft or liquid) and an increase in frequency of bowel movements to stools per day have often been used as a definition for epidemiological investigations. Other direct consequences of diarrhea in children include growth faltering, malnutrition, and impaired cognitive development in resource-limited countries (Farthing Antil , Dreibelbis & Podewils, 2013).Though most episodes of childhood diarrhea are mild, acute cases can lead to significant fluid loose and dehydration which may result in death or severe consequences if fluids are not replace at first sign of diarrhea WHO/UNICEF, 2019). Diarrheal infection spreads through the ingestion of contaminated food or drinking-water, or person-to-person as a result of poor hygiene. (Shimelis, 2018). The youngest children are most vulnerable: Incidence is highest in the first two years of life and declines as a child grows older. Mortality from diarrhea has declined over the past two decades from an estimated 5 million deaths among children under five to 1.5 million deaths in 2004, (WHO, 2019),

It is widely recognized that exposure to diarrhea pathogens in developing countries is associated with the age of the child, quality and quantity of water, availability of toilet facilities, housing conditions, level of education, household economic status, place of residence, feeding practices, and the general sanitary conditions (personal or domestic hygiene) in the vicinity of the house (Wondwossen, 2018). Socioeconomic factors may directly and indirectly affect environmental, behavioral, nutritional, and demographic risk factors, with the exception of age and sex (Green, Small & Casman, 2019).

Twenty-four years ago, oral rehydration therapy was first proven to be effective in the outpatient management of patients with severe dehydrating diarrhea caused by cholera. The development of this simple therapy for the treatment of diarrhea, one of the most common illnesses of mankind, was heralded as one of the great medical achievements of the 20th century. Oral Rehydration Therapy has now become the mainstay of the World Health

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Organization's efforts to decrease diarrhea morbidity and mortality, and Diarrheal Disease Control Programs have been established in more than 100 countries worldwide (Olakunle, 2015). Oral rehydration therapy adopted by the UNICEF and WHO in the late 1970s have been successful in helping manage diarrhea among children. It is estimated that in 1990s, more than one million deaths related to diarrhea may have been prevented each year, largely attributed to the promotion and use of these therapy. Today, however, there are indications that in some country's knowledge and use of appropriate home therapies to successfully manage diarrhea including ORT may be declining (WHO/UNICEF, 2014).

In industrialized countries, relatively few patients die from diarrhea, but it continues to be an important cause of morbidity that is associated with substantial health-care costs. However, the morbidity from diarrheal diseases has remained relatively constant during the past two decades. According to figures recently released by UNICEF, 2013, about 194, 000 children under five dies annually as a result of diarrhea in Nigeria. It is in line with these that this study is conducted to evaluate and compare the knowledge and preventive practices of mothers (caregivers) regarding home management of diarrheal diseases among under-five children in Bauchi state.

Statement of the Problem

Diarrhea is a leading cause of childhood death and the second most death worldwide. Globally in 2019, there were 1.731 billion episodes of diarrhea (36 million of which progressed to severe episodes) in children younger than 5 years. In 2011, 700 000 episodes of diarrhea led to death. Each episode deprives the child of nutrients necessary for growth, thus diarrhea is a major cause of malnutrition and malnourished children are more likely to die from diarrhea. According to the Integrated Management of Neonatal and Childhood Illnesses guidelines, children with some or no dehydration should be managed at home for diarrhea. The WHO plan A also encourages mothers and caregivers to treat diarrhea at home by giving ORS and ORT. Thus, it is important to assess their awareness regarding based management of diarrhea at frequent intervals to provide feedback for the ongoing programs.

Methodology

The study adopted descriptive research design, it is concerned on reporting on the subjects or objects the way they are. This is research often aim at describing certain variables in relation to the population. The design adopted for this study was survey research design. The purpose is to gather information about variables from a representative sample of the population. The study population of the study comprises all mothers with under- five years in Bauchi State estimated to be 867,541 National Population commission (2023). The sample of the study consists of 400 mothers with under-five year children in Bauchi State. A research instrument is a tool used to collect, measure, and analyze data related to one's research interests. The data used in this research is a source data. Questionnaire were distributed to the respondents. Prior to administration of the questionnaire, a verbal introduction was given to the respondents, notifying them of their voluntary participation, and that information provided will be handled confidentially. Each respondent was given a copy of the questionnaire to answer and return within 24 hours. Retrieved questionnaire were assembled and subjected to data analysis. Frequency counts and percentage was used to described the demographic characteristics of the respondents while one sample t-test was used to test hypothesis 1 and PPMC was used to test hypothesis 2 all at 0.05 level of significant.

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Result

Hypothesis 1: There is no significant knowledge of management of diarrheal disease among mothers' of under-five children in Bauchi State.

Table 1: Summary of One-sample t-test on Knowledge of the management of Diarrheal Disease among Mothers of Under-five Children in Bauchi State.

Variable	N	Mean	Std. Deviation	Std. Error Mean	t-cal	df	Sig
Knowledge	274	23.2336	4.36983	.26399	80.433	273	.000

Table 1 revealed the summary of one-sample t-test on the knowledge of management strategies against diarrheal disease in Bauchi State. The table shows that the calculated t-value was 80.433, with the calculated p-value of .000, this implies that there is a significant knowledge of diarrheal management among mothers of under-five children in Bauchi State, therefore, the null hypothesis was rejected.

Hypothesis 2: There is no significant management strategy of diarrheal disease among mothers' of under-five children in Bauchi State.

Table 2: Summary of One-sample t-test on Management strategies of Diarrheal Disease among Mothers of Under-five Children in Bauchi State.

Variables	N	Mean	Std. Deviation	Std. Mean	Errort-cal	Df	Sig
Management	274	19.1168	3.83175	.23148	73.944	273	.000

Table 2 revealed the summary of one-sample t-test on the practice of management strategies against diarrheal disease in Bauchi State. The table shows that the calculated t-value was 73.944, with the calculated p-value of .000, this implies that there is a significant practice of diarrheal management among mothers of under-five children in Bauchi State, therefore, the null hypothesis was rejected.

There is no significant relationship between knowledge of management and management strategies of diarrheal disease among mothers of under-five children in Bauchi State Table 3: Summary of PPMC on the Relationship between Knowledge and practice management strategies against Diarrheal Disease among Mothers of Under-five Children in Bauchi State.

Variables	Mean	Std. Deviation	N	Sig.	r-cal
Knowledge	23.2336	4.36983	274	.000	.600
Management	19.1168	3.83175	274		

Table 3 revealed the summary of PPMC on the knowledge and practice of management strategies against diarrheal disease in Bauchi State. The table shows that the calculated r-value was .600, with the calculated p-value of .000,

this implies that there is a significant relationship between knowledge and practice of diarrheal management among mothers of under-five children in Bauchi State, therefore, the null hypothesis was rejected.

Conclusion

Conclusion in the study was found that overall result or majority study result depicts that inadequate knowledge is observed among mother of under five children regarding diarrhea and its management. Hence there is need to education mother regarding consequence of diarrhea and its management. The type of toilet facilities and source of drinking water were significantly associated with diarrhea episodes probably because of the high rate of high illiteracy rate and high unawareness of the risk of inadequate sanitation/hygiene in our surveyed population. However, the perceived role of teething as a cause of diarrhea and stopping breastfeeding/normal feeding during diarrhea among young mothers as well as those with little or no education calls for concern. These categories of mothers should be targeted for health education and enlightenment campaign regarding causes and management of diarrhea.

Recommendations

In view of these findings, organized public enlightenment is needed to educate parents especially mothers who are illiterates on diarrhea, prevention and treatment. The government of the day and other health outfits in the country should make diarrhea public awareness a priority to better enlighten the populace on how to identify a diarrhea ailment and what to do to prevent it.

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