



Research Paper

Influence of diarrhoea on the health status of children (0-5 years) in Nnarambia Community in Ahiazu Mbaise Local Government Area

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This study was carried out to evaluate the influence of diarrhoea on health status of children (0-5 years). Its significance is to enlighten childbearing women's knowledge on the causes and prevention of diarrhoea in order to reduce infant mortality and morbidity. The objectives of the study are to find out the level of knowledge of child bearing mothers on the causes of diarrhoea among children 0-5 years, in Nnarambia Community, to find out the attitude of mothers towards carrying out proper management of diarrhoea in children 0-5 years, to find out the extent mothers practice preventive measure/manage diarrhoea in children 0-5 years, to find out the implications of diarrhoea on the health status of children 0-5 years and to suggest possible ways of preventing/reducing diarrhoeal disease among children 0-5 years. This study adopted a descriptive survey design. Questionnaire were simple random sampling techniques was used to select a

sample size of 100. The data collection was by the use of questionnaire. The data collected was analysed using tables and percentages. Results of the research revealed that majority of the mothers (40%) of childbearing mothers have fair knowledge of the causes of diarrhoeal disease in children less than five years of age. Majority of mothers have negative attitude towards the carrying out proper management of diarrhoea in children 0-5 years. Recommendation made is to intensify effort and health education to childbearing mothers about causes of diarrhoea, encourage and motivate mothers to give oral rehydration solution ORS to their children when they have diarrhoea and to improve good personal and environmental hygiene.

Keywords: Diarrhoea, mortality, morbidity, childbearing.

INTRODUCTION

Diarrhoea is the condition of having at least three loose or liquid bowel movements each day. It often lasts for a few days and can result in dehydration due to fluid loss. Signs of dehydration often begin with loss of the normal stretchiness of the skin and irritable behaviour (WGO, 2014). This can progress to decreased urination, loss of skin colour, a fast heart rate, and a decrease in responsiveness as it becomes more severe. Loose but non-watery stools in babies who are breastfed, however, may be normal (WHO, 2013). Diarrhoea occurs in all ages but is more life threatening in children and elderly patients. It is one of the commonest childhood diseases

especially in the developing countries like Nigeria from age of zero to five years (0-5 years) (Tope-Ajayi, 2004). Diarrhoea disease is the second leading cause of death in children under five years old and is responsible for killing around 760,000 children every year (WHO, 2014). Children die mainly of dehydration in acute diarrhoea because they do not replace quickly enough, the water and electrolyte lost in the stools and in vomiting and therefore they go into a state of shock and coma and die (Lanata, 2013; Adesokn, 2011). Diarrhoea can last several days and can leave the body without the water and salts that are necessary for survival (WHO, 2014).

Most people who die from severe diarrhea actually die from dehydration and fluid loss. Children who are malnourished or have impaired immunity as well as people living with HIV are most at risk of life threatening diarrhea (Egbewale, 2004; James, 2006).

Diarrhoea is defined as the passage of three or more loose or liquid stools per day (or more frequently passage than is normal for the individual). Diarrhoea is usually a symptom of an infection in the intestinal tract which can be caused by a variety of bacterial, viral especially rota virus and parasitic organisms (Fraser and Cooper, 2009). Infection is spread through contaminated food or drinking water, or from person-to-person as a result of poor hygiene (WHO, 2014). Children under five years who are affected by diarrhoea eat less, with diarrhoea the nutrients are poorly absorbed and these make the affected children prone to infect on (Mmuonam, 2011; Rajesh, 2012). There are clinically three types of diarrhoea which includes:

- (a) Acute watery diarrhoea- last several hours or days and includes cholera.
- (b) Acute bloody diarrhoea- also called dysentery, and
- (c) Persistent diarrhoea- lasts 14 days or longer (Long et al., 2012).

Diarrhoea can be mild or serious; it can be acute or chronic. It is said to be acute when it is sudden and severe when it lasts for hours or days and chronic when it lasts for a longer time (two weeks or more) (Eisen, 2014). Diarrhoea disease is accompanied by stomach pains felling sick, dehydration and vomiting. It was discovered that one of the major factors that influences diarrhoea is improper management of health care by mothers and most of them especially those in the rural areas are not well informed about implication and cause of diarrhoea (Nordqvist, 2012 and Kaufman, 2012).

Diarrhoea can be prevented by improved sanitation, clean drinking water, and hand washing with soap. Breastfeeding for at least six months and vaccination against rotavirus is also recommended. Oral rehydration solution (ORS) clean water with modest amounts of salts and sugar is the treatment of choice. Zinc tablets are also recommended (WHO, 2013). These treatments have been estimated to have saved 50 million children in the past 25 years. When people have diarrhoea it is recommended that they continue to eat healthy food and babies continue to be breastfed. If commercial ORS are not available, homemade solutions may be used. In those with severe dehydration, intravenous fluids may be required. Most cases; however, can be managed well with fluids by mouth (Arnold and Colford, 2007). Antibiotics, while rarely used, may be recommended in a few cases such as those who have bloody diarrhoea and a high fever, those with severe diarrhoea following travelling, and those who grow specific bacteria or parasites in their stool. Loperamide may help decrease

the number of bowel movements but is not recommended in those with severe disease (Davids, 2007; Chhagan *et al.*, 2013). The key measures to treat diarrhoea include rehydration with Oral Rehydration Solution (ORS), zinc supplements, foods rich nutrition, rehydration with intravenous fluids in cases of severe dehydration or shock. However, World Health Organisation (WHO) works with member states and other partners to:

- (a) Promote national policies and investments that supports case management of diarrhea as well as increasing access to safe drinking water and sanitation in developing countries.
- (b) Developing new health interventions such as the rota virus immunization.
- (c) Build capacity in implementing preventive interventions including sanitation, source water improvement and house hold water treatment and safe storage etc.

Despite all these, the researcher is amazed at increased morbidity and mortality rate of children under five years as a result of diarrhea disease. It was a source of concern when observed in Nnarambia Community hence this study is to find out the cause and implication of diarrhoea on the health status of children 0-5 years in Nnarambia Community in Ahiazu Mbaise Local Government Area.

MATERIALS AND METHODS

Research design

Descriptive survey research design was considered to suit this study because descriptive design describes data as they are and it has to do with one time observation of independent and non-manipulated variables. Descriptive design survey design was used to obtain direct relevant information regarding the level of knowledge and practice of exclusive breastfeeding from the group of interest.

Setting

The area of the study is Nnarambia Community in Ahiazu Mbaise Local Government Area. The community comprises of six clans namely: Umuofor, Umuezerugwu, Umuonnachi, Umunkita, Amaokwe and Obia Village. Their major occupations are trading, farming, while some are in civil service. The community has infrastructure such as electricity, market, health centre as well as private clinic. Source of water include boreholes, tap water and stream. The people are predominantly Roman Catholics with few denominational churches. The population of the people in Nnarambia Community is about 4,000.

Target population

The target population for the study are all women of child

bearing age (15-49 years) who have between 0-5 years, total number of 1000 women.

Sample/sampling technique

The study population was made up of women of child bearing age, the sample size is 100 (one hundred) which is 10% of the target population. The sample size was carefully selected from target population with the use of simple random sampling using non-replacement balloting method. Ofoegbu, (2007) stated that bigger sample would take a lot of time and resources thus, adversely affecting the quality of findings. The author stated that 10% of the population should be used in thousand 20% in many hundreds and 40% if in few hundreds. Since the target population is 1,000, the researcher then sampled 10% of the population employing formula below:

$$\frac{10}{100} \times \frac{1000}{1} = 100$$

Instrument for data collection

The instrument for data collection in this study was the questionnaire. The questionnaire was made up of two sections A and B. Section A consists of personal data of the respondents while section B consists of eighteen items questions both structured and unstructured. They are designed according to the research questions to elicit information on the influence of diarrhoea on health status of children (0-5 years) in Nnarambia Community.

VALIDITY AND RELIABILITY OF INSTRUMENT

Validity

The instrument for data collection was formulated by the researcher and was validated by the project supervisor who went through the content and necessary corrections made to ensure it measures what it is designed to measure.

Reliability

To prove reliability of the instrument used, the researcher conducted a pilot study with a different group other than the target groups and the instrument consistently measure what it is supposed to measure when a test retest was done.

Method of data collection

The questionnaire was distributed to the respondents directly by the researcher and an assistant; same was collected the same day after given them time to answer the question. The illiterate ones were helped with

interview using the questionnaire.

Ethical consideration

- (a) Careful explanation of the purpose of the study was done and there was voluntary participation of the respondents.
- (b) Fair treatment was used in the conduct of the study and respondents treated equally.
- (c) The respondents were respected as permission was gotten from them.
- (d) Anonymity of the respondents was ensured.

Method of data analysis

The data was analysed using tables and percentages.

RESULTS AND DISCUSSION

From the (Table 1) majority of the respondents (97%) said that they have about diarrhoea. Also from the table, 50% of the respondents defined diarrhoea as the passage of stool frequently than usual and is accompanied by dehydration, loss of appetite, loss of weight, 30% defined it as the passage of greenish stool with mucus, 20% defined diarrhoea as the passage of watery stool for more than four times a day. From this same (Table 1), 35% agreed that eating contaminated food and drinking contaminated water is among the conditions that causes diarrhoea, 20% said that poor personal and environmental hygiene is among the conditions that causes diarrhoea, 20% said that poor personal and environmental hygiene is among the conditions that causes of diarrhoea. 15% believed that poor nutrition contributes to causes of diarrhoea. 18% suggested that side effects of certain drugs contribute while 7% of the respondents believed that infections outside the gut e.g. measles, malaria, etc. contributes and 5% said that infection inside the gut is also among the conditions that cause diarrhea. Table 1 also reveals that 40% of the respondents have fair knowledge on the causes of diarrhoea, 38% have poor knowledge, 18% have very poor knowledge, 3% have good knowledge and 1% of the respondents have very good knowledge on the causes of diarrhoea in children 0-5 years. From (Table 2), 50% of the respondent thinks that mothers have negative attitude towards the current treatment regimen of diarrhoea while 50% think that mothers have positive attitude. The table also shows that 40% of the respondents said that they feel good with the task of preparing and giving of ORT when a child has diarrhoea, 50% said that they feel bad while 10% were neutral. Finally, from the Table 2) 60% of the respondents honestly agreed that they do not have positive attitude towards carrying out preventive and management of diarrhoea in children 0-5 years while 40% honestly agreed that they have positive attitude. From (Table 3),

Table 1. Showing Respondents Level of Knowledge on Causes of Diarrhea.

Survey Questions	Options	Respondents	Percentage
Have you heard of diarrhoea?	Yes	93	93%
	No	7	7%
	Total	100	100%
Identify your source of information	▪ Family	38	38%
	▪ Friends	10	10%
	▪ Hospital	40	40%
	▪ Healthcare personnel	12	12%
	Total	100	100%
What do you think diarrhoea is?	▪ Child passing watery stool for more than four times per day.	20	20%
	▪ Passing of greenish and mucoid stool	30	30%
	▪ Defecating more than usual per day with loss of eight and dehydration and refusal to eat food	50	50%
	Total	100	100%
Response to the conditions you know that are causes of diarrhoea	▪ Eating contaminated food and drinking contaminate water.	35	35%
	▪ Poor nutrition.	15	15%
	▪ Poor personal and environmental hygiene.	20	20%
	▪ Infection of the gut by germs.	5	5%
	▪ Side effects of certain medications.	7	7%
	▪ Infections outside gut e.g. measles, malaria.		
	Total	100	100%
	How would you rate your level of knowledge about the causes of diarrhoea in children 0-5 years	▪ Very good knowledge	1
▪ Good knowledge		3	3%
▪ Fair knowledge		40	40%
▪ Very poor knowledge		38	38%
Total		100	100%

Table 2. Showing attitude of mothers towards carrying out proper management of diarrhoea in children 0-5 years.

Survey questions	Options	Respondents	Percentage
Do you think that mothers have positive attitude towards the current treatment regimen of diarrhoea?	Yes	50	50%
	No	50	50%
	Total	100	100
How do you feel with the task of preparing and giving of ORT when a child has diarrhoea?	Good	40	40%
	Dislike it or bad	50	50%
	Neutral	10	10%
	Total	100	100%
In your honest opinion would you say you have positive attitude towards carrying out preventive and management of diarrhoea in children 0-5 years?	Yes	40	40%
	No	60	60%
	Total	100	100%

mothers said the efforts they make to prevent diarrhoea includes maintenance of personal and environmental hygiene (23%), proper vaccination of children (20%), covering of foods from flies and insects (20%), good disposal of refuse (17%), proper washing of kitchen utensils (10%), breastfeeding of baby instead of bottle feeding (7%) and drinking of clean water rate 3%. Also from the (Table 3) 38% of mothers said that the measure they adopt when a child has diarrhea is preparation and

administration of ORT, 25% said they go to chemist shop to stop diarrhoea, 10% said they go to hospital for expert management of diarrhoea, 25% said they give concoction to their child having diarrhoea just to stop it and 2% said they stop breastfeeding and the give the child boiled rice. From that same table, 30% of the respondents believed that they carry out preventive measures/management of diarrhoea to a moderate extent, 56% said they carry out preventive measures/management to a poor extent, 9%

Table 3. Showing the extent of mothers practice on preventive measures/management of diarrhoea in children 0-5 years.

Survey Questions	Options	Respondents	Percentage
What are the efforts you make to prevent diarrhoea?	▪ I take more care to maintain personal and environmental hygiene	23	23%
	▪ I make sure that my children are properly vaccinated.	20	20%
	▪ I cover food to prevent flies and other insects that crawl on food.	17	17%
	▪ I always make sure of good disposal of faeces and proper washing of hands after visiting the toilet.	10	10%
	▪ I always ensure that my cooking utensils and food materials are properly washed.	7	7%
	▪ I breastfeed rather than bottle fed.	3	3%
	▪ I always boil and drink clean water.		
	Total	100	100%
What measures do you adopt when a child has diarrhoea?	▪ Go to hospital	10	10%
	▪ Buy drugs from chemist shop to stop the diarrhea	25	25%
	▪ Stop breastfeeding and give solid food	20	20%
	▪ Give traditional concoctions	25	25%
	▪ Prepare and give ORT and continue breastfeed or give food	38	38%
Total	100	100%	
To what extent do you think you carry out preventive measure/management of diarrhoea?	▪ To a great extent	5	5%
	▪ To a moderate extent	30	30%
	▪ To a low extent	56	56%
	▪ To no extent	9	9%
Total	100	100%	

Table 4. Showing the implications of diarrhoea on the health status of children 0-5 years.

Survey Questions	Options	Respondents	Percentage
Do you think that diarrhoea can have consequences on the health status of children 0-5 years?	Yes	90	90%
	No	10	10%
	Total	100	100%
Are you able to detect the danger signs of diarrhoea?	Yes	40	40%
	No	60	60%
	Total	100	100%
What do you think are the adverse effects diarrhoea has on the health status of children 0-5 years?	▪ Dehydration	60	60%
	▪ Infant	10	10%
	▪ Malnutrition	15	15%
	▪ Loss of weight/appetite	5	5%
	▪ Weakness	8	8%
	▪ Excoriation of anus	2	2%

carry out to a no extent while 5% believed they carry out prevention a great extent. From the above, 90% of the respondents agreed that diarrhoea can have consequences on the health status of children 0-5 years while 10% of the respondents disagreed. From the (Table 4) also 40% of the respondents said that they cannot the danger signs of diarrhoea while 60% said that they cannot detect the danger signs. Finally, from (Table 4) 60% of the respondents said that dehydration is among

the adverse effect of diarrhoea on health status of children 0-5 years, 15% said malnutrition, 8% said weakness, 10% said infant mortality, 5% said loss of weight/appetite, 8% said weakness while 2% said excoriation of the anus as the adverse effects of diarrhoea on the health status of children 0-5 years. From (Table 5), 98% of the respondents agreed that diarrhoea can be prevented while 2% did not agree. Also, 90% said that immunization of children 0-5 years can prevent diarrhoea

Table 5. showing ways to prevent/reduce diarrhoeal disease among children 0-5 years.

Survey Questions	Options	Respondents	Percentage
Do you think that diarrhoea can be prevented?	Yes	98	98%
	No	2	2%
	Total	100	100%
Do you think that immunization of children 0-5 years can prevent diarrhoeal disease?	Yes	90	90%
	No	10	10%
	Total	100	100%
Can proper health education on the causes of diarrhoea prevent and control diarrhoea?	Yes	95	95%
	No	5	5%
	Total	100	100%
What are other ways by which diarrhoea disease among children 0-5 years be prevented?	▪ Breastfeed rather than bottle feed babies.	60	60%
	▪ Improved weaning practices.	10	10%
	▪ Sanitary disposal of stool.	24	24%
	▪ Proper washing of fruits and vegetable with salt and water.	6	6%
	Total	100	100%

while 10% said no. However, 95% said that proper health education on the causes of diarrhoea while 5% said no. Finally, 60% said that breastfeed rather than bottled feed babies is one of the other ways diarrhoeal disease among children 0-5 years can be prevented. 24% said sanitary disposal of faeces, 10% said improved weaning practices and 6% said washing of fruits and vegetables with salt and water. Result of study shows that majority of the respondents (93%) said they have heard about diarrhea. Sources of information include hospital (40%), family (38%), health personnel (12%) and friends (10%). 50% of respondents defined diarrhoea as defecating more than usual stools per day which is accompanied by loss of weight, dehydration and loss of appetite.

Also from the study, 35% said that eating contaminated food and drinking contaminated water is among the conditions that cause diarrhoea in children 0-5 years. 20% said poor personal and environmental hygiene, 15% poor nutrition, 18% said side effects of some certain drugs. 70% said infection outside gut while 50% said infection of the gut by germs. This supports the view of WHO, (2014) which stated that infection, malnutrition and source of water supply are the major causes of diarrhoea. However, their level of knowledge was rated to be fair (40%), 38% poor knowledge, 18% very poor knowledge, while 10% and 3% were very good knowledge and good knowledge respectively.

Based on this result, one can generalize that their level of knowledge is fair. This calls for more education for improvement.

The study reveals that 50% of the respondents think that mothers have positive attitude towards current treatment

regimen of diarrhoea. 40% have good feelings with the task of preparing and giving Oral Rehydration Therapy (ORT) when a child has diarrhoea. 50% feel bad while 10% were neutral.

From the study, 60% affirmed that they have negative attitude towards carrying out preventive and management of diarrhoea in children 0-5 years. This is in line with Ansari (2012), who stated that mothers have negative attitude towards carrying out proper management of diarrhoea in children 0-5 years. From the study, mothers employ various practices, 23% said they ensure personal and environmental hygiene, 20% said they adhere to immunization regimen, 20% said they cover food to prevent flies and other insects that crawl on food, 17% said they ensure good disposal of faeces and proper washing of hands after visiting the toilet, 10% said they ensure cooking utensils and food materials are properly washed, 7% said they breastfeed rather than bottle feed and 8% said they boil and drink clean water.

In response to measures adopted when a child has diarrhoea, 88T said they prepare and give ORT and continue breastfeeding or give food, 25% and said they buy drugs from chemist shop to stop the diarrhea, 25% said they give traditional concoctions and 2% said they stop breastfeeding and give solid food. The study revealed that the extent of practice is low (56%), No extent 9% and 5% and 30% great extent and moderate extent respectively. Bacharach, (2014) is of the opinion that ORT is the most effective method of managing diarrhoea in children 0-5 years. The study revealed the implications of diarrhea on the health status of children 0-5 years include dehydration, malnutrition, infant mortality,

loss of weight/appetite, weakness, excoriation of the anus. Dupont, (2014) is of the opinion that frequent episodes of diarrhoea are also a common cause of malnutrition and the most common cause in those less than five years of age. Other long-term problems that can result from diarrhoea include poor physical and intellectual development. From the study, 98% said that diarrhoeal disease among children 0-5 years can be prevented/reduced through the following:

Breastfeed rather than bottle feed babies, improve weaning practices, sanitary disposal of stool, proper washing of fruits and vegetables with salt and water. This agrees with Friberg, (2011) who said that there are many ways of preventing/reducing diarrhoea disease among children 0-5 years of age, examples: improvements in water supplies, sanitation and hygiene, the promotion of breastfeeding, vitamin A supplementation and vaccination against rotavirus (a major cause of diarrhoea).

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