Home Management of Childhood Diarrhoea Among Mothers In Sokoto, Nigeria.

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Abstract

Diarrhoea diseases are major causes of childhood morbidity and mortality in developing countries. Treatment guidelines by the World Health Organization indicate that most cases of childhood diarrhoea can be treated at home by increased fluid intake and continued feeding during diarrhoea episodes. The aim of this study was to determine the knowledge, perception and practice of home management of childhood diarrhoea with ORS/SSS among mothers in Sokoto Metropolis.

The study design was a cross-sectional descriptive study. Multistage sampling technique was used to select respondents. Pre-tested, structured, open and close-ended interviewer administered questionnaires and observer checklist were used for data collection.

A total of 423 respondents were interviewed. The mean knowledge score (%) was 59.7±23.0. Majority (62.9%) knew correctly that diarrhoea is said to occur when a child passes loose stool more than three times within 24hours. Majority (81.1%) knew that diarrhoea can be caused by contaminated water; however, 32.4% were also of the view that evil eye is the cause of diarrhea. Majority (73.7%) of the mothers believed that ORS/SSS is the best method for home management of diarrhea while 11.1% believed it is harmful to the child. A great proportion (90.5%) of those who had attempted to manage diarrhoea at home reported that the child's condition improved.

In conclusion this study has demonstrated high level of knowledge of home management of childhood diarrhoea using ORS/SSS among the study subjects. There is therefore need for more enlightenment campaigns to improve and sustain the knowledge. The use of ORS/SSS for home management of childhood diarrhoea should be included in the curriculum of females and perhaps males as well in secondary schools.

Key Words: Childhood diarrhoea, home management, Sokoto.

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Introduction

Diarrhoea diseases are major causes of childhood morbidity and mortality in developing countries.[1,2] It is estimated that approximately one billion episodes of diarrhoea occur yearly among children under five years of age in Africa, Asia and Latin America, with more than four million deaths. This, accounts for 15-30% of deaths in children less than five years old.[3,4]

In Nigeria, diarrhoea is one of the major causes of infant and child mortality with an estimated 120,000 deaths per year among children that are less than 5 years.[5,6] Studies carried out in Rural Bangladesh showed the point prevalence of diarrhoea among 1,600 children to be 11.6%. On the average, a child suffers 4.6 episodes of diarrhoea per year while 230,000 children die due to the disease.[7] In the Dominican republic, the prevalence of diarrhoea disease was 16% in children within the ages of 1-4 years while for those less than 1 year, it was 20%. Mortality rate was found to be 15%.[8]

Treatment guidelines by the World health organization (WHO) indicates that most cases of childhood diarrhoea can be treated at home by increased fluid intake and continued feeding during diarrhoea episodes.[9] Specific treatment with use of oral rehydration salts(ORS)/salt sugar solution(SSS), fluids available in the home, breastfeeding, selective use of antibiotics and zinc supplement for 10-14 days can reduce mortality due to diarrhoea diseases.[10]

Most childhood diseases occur at home, and the initial management, as well as the decision to such health care is primarily undertaken by mothers or other home caregivers, especially for acute diarrhoea. It is common for children in the developing world to have between 3 and 11 episodes of diarrhoea per year.[11] Such frequency causes mothers to develop different strategies for managing the episodes. Thus, they establish their

own conceptual framework of what causes it and learn to recognize symptoms and signs that prompt their choice of particular health seeking behavior. Oral rehydration therapy (ORT) using ORS/SSS has been proven to be successful in the prevention and management of acute diarrhoea and dehydration but the effectiveness of these therapies depend on their becoming routine practice in the home and in health care facilities.[11]

Considering the age it mostly affects, that is, the under fives, ways of dealing with diarrhoea diseases right from the home front is a way of reducing infant mortality. Many studies have been done on diarrhoea diseases but a lot still needs to be known about the prevailing knowledge, perception and practice of home treatment of diarrhoea among mothers and care-givers so as to assist in ways of educating mothers about home treatment of diarrhoea. The aim of this study is therefore, to determine the knowledge, perception and practice of home management of childhood diarrhoea with ORS/SSS among mothers in Sokoto Metropolis. The study was carried out between January and June 2007.

Materials And Methods

The study location

Sokoto metropolis, located in Sokoto state, comprises Sokoto North, Sokoto South and some parts of Wamakko and Dange-Shuni local government areas (LGAs). The total population of people in Sokoto metropolis is 523,008 based on projection of 2006 census. The indigenous inhabitants of the study area are mainly Hausa and Fulani. Other ethnic groups resident in the area include Igbo, Yoruba, Nupe, Ebira, Igala, etc. Hausa is the commonly spoken language. Majority of the inhabitants are Muslims while the rest are Christians and people of other faiths. Traders form greater percentage of the population, while the rest are civil servants, farmers, artisans and people of other occupations.[12]

Methods

The study design was a cross-sectional descriptive study. Though, a minimum sample size of 139 was calculated using statistical formula for descriptive study ($n=z^2pq/d^2$), and a proportion (p) of 90% of factor under study (correct practice of childhood diarrhoea) observed in a previous study[13]; however, a total of 460 subjects were selected.

A multistage sampling technique was used to select the respondents. Each of the four LGAs in Sokoto metropolis was stratified by ward and one metropolitan ward was randomly selected from each LGA by balloting procedure. One hundred and fifteen respondents were then selected from each selected ward by systematic sampling technique.

Pre-tested, structured, open and close-ended interviewer administered questionnaires were used to collect information on socio-demographic characteristics, knowledge, perception and practice of home management of childhood diarrhoea from the sampled population. Each correct response to the knowledge questions was scored one mark and any wrong response or non-response was scored zero. The data were computer analysed using Epi-info version 3.3.2. Data were presented as simple frequencies and percentages with means and standard deviations to assess variability computed as appropriate.

Results

A total of 423 from the 460 selected respondents were available for the study giving a response rate of 92%.

Socio-demographic characteristics of the respondents

Majority of respondents were aged 20-29 years (44.8%), Hausa/Fulani by tribe (61.7%) predominantly Muslims (72.3%), had at least junior secondary education (68.4%), full time housewives (40.5%) and had 2-3 children (59.8%).

Knowledge of diarrhoea and its management at home

To assess the depth of knowledge of diarrhoea and its management at home, respondents were asked series of questions on various aspects of diarrhoea. The mean knowledge score (%) of the study subjects which suggests the depth of knowledge on the aspects of knowledge investigated was fair (59.7±23.0). Majority (62.9%) of the respondents knew correctly that diarrhoea is said to occur when a child passes loose stool more than three (3) times within 24hours. Although, majority of the respondents knew that diarrhoea can be caused by contaminated water (81.1%), lack of personal hygiene (75.2%) and lack of environmental hygiene (74.5%); however, 32.4% were of the view that evil eye is the cause of diarrhea (Table 1).

Majority of the respondents (79.7%) indicated that they had heard or read information about ORS/SSS. Concerning the function of ORS/SSS, majority of the mothers correctly

identified that the function is to help replace lost body fluids (80.6%) and provide energy in a child with diarrhoea (76.8%) while 23.6% correctly knew that its function is not to stop the diarrhoea. Majority (78.4%) of the respondents have correct knowledge of how to prepare SSS at home (Table 1).

Respondents were asked about what they will do if a child with diarrhoea vomits while giving the child ORS/SSS, about 51.3% of the mothers correctly knew that they should immediately stop giving the child ORS/SSS and then resume giving it to the child after a few minutes (Table 1).

Concerning source of information about ORS/SSS, the respondents identified television (56.5%), radio (56.0%), newspaper (56.0%), group sensitization/discussion (52.7%), family (51.8%) and friends (50.6%) as sources of information.

Perception of home treatment of diarrhoea

Majority (74.7%) of the respondents believe that diarrhoea can be managed at home. A great proportion (73.7%) of the mothers believed that ORS/SSS is the best method for home management of diarrhea while 11.1% believed it is harmful to the child. Amongst those who believed it is harmful to the child, 31.9% believed ORS/SSS makes the diarrhoea worse, 25.5% believed it causes a wound in the stomach of the child, 12.8% believed it causes abdominal pain, 10.6% believed it causes vomiting while 17% do not know the harm.

Practice of home management of diarrhoea

Majority 231(54.6%) of the mothers admitted that there had been episodes of acute diarrhoea in their children aged 0-5years in the past one year. About 68.4% of the 231 mothers who admitted that there had been episodes of acute diarrhoea in their children aged 0-5years in the past one year had also attempted to manage a child with acute diarrhoea at home with ORS/SSS. Among those who had attempted to manage diarrhoea at home, 143(90.5%) reported that the children's condition improved, 5(3.2%) reported that the condition worsened while 10(6.3%) reported that there was no change.

Discussion

The study shed some light on the knowledge, perception and practice of home management of diarrhoea with ORS/SSS among mothers in North West Nigeria. The study found a high level of knowledge of home management of diarrhoea with ORS/SSS that was comparable to findings from similar studies in North East Nigeria,[13] but at variance with findings from similar studies in South East Nigeria.[14] The high level of knowledge of home management childhood diarrhoea using ORS/SSS may be due to the fact that the study was carried out in Sokoto metropolis where majority (68.4%) of the respondents had at least junior secondary education

The study revealed that majority (62.9%) of the mothers knew the correct definition of diarrhoea; this may be a reflection of the education status of the respondents. The finding that majority (81.1%) of the respondents knew that contaminated water can cause diarrhoea is different from the finding of a study done in South East Nigeria, which showed that about 3% knew that dirty water can cause diarrhoea.[14]

The study found that 79.7% were aware of ORS/SSS; this is similar to a study done in North East Nigeria where 77% and 84% of the Kanuri and Bura mothers respectively were aware of ORS/SSS.[13] It is also similar to a study done in Ibadan which revealed that 80% of the mothers were aware of ORS/SSS.[15] This is however different from findings in studies carried out in Zimbabwe and India where lower levels of awareness of 50% and 43% were obtained.[3,16,17]

As regards the perceived functions of ORS/SSS, 80.6% of the mothers believed it helped to replace lost body fluids, 76.8% believed it provided energy to sustain the child and 62.4% think it stopped the diarrhoea; this is different from the findings in rural Nicaragua where 48% believed it replaced body fluids, 15% believed it provided energy to sustain the child.[18] Also in rural Bangladesh, 33% believed it replaced lost fluids.[1]

The finding that 78.5% of the mothers were aware of the correct method of preparation of SSS at home is different from the finding from a study done in Zimbabwe where only 12% were aware of the correct method of preparation of SSS,[17] but similar to 75%, 80% and 87% obtained in North East Nigeria, South West Nigeria (Ibadan) and rural Bangladesh respectively.[7,13,15] The high levels of awareness among mothers in this study group may be due to the fact that they are exposed to higher levels of enlightenment campaigns and information from media, friends and health workers.

Knowledge is one of the factors that influences perception and perception influences practice. The high level of awareness translated

Table 1 knowledge of home management of diarrhoea

Variable	Correct responses Freq.(%) n=423
Knowledge of definition of diarrhoea	
A child has diarrhoea when he/she passes loose stool >3/24hrs	266(62.9)
Knowledge of causes of diarrhoea	
Contaminated water	343(81.1)
Inadequate breastfeeding	219(51.8)
Lack of personal hygiene	318(75.2)
Lack of environmental hygiene	315(74.5)
Evil eye	286(67.6)
Different combination of meals.	86(20.3)
Awareness of ORS/SSS	337(79.7)
Knowledge of function of ORS/SSS	
Replaces lost body fluid	341(80.6)
Provide energy in a child	325(76.8)
Stop the diarrhoea	100(23.6)
Knowledge of how to prepare SSS at home.	332(78.5)
Knowledge of what to do if a child vomits while giving ORS/SSS	
Immediately stop giving the child ORS/SSS and never resume giving it to the child.	140(33.1)
Immediately stop giving the child ORS/SSS and then resume giving it to the child after a few minutes	217(51.3)
Continue giving the child ORS/SSS regardless of the vomiting.	89(21.0)

into high level of positive perception of ORS/SSS. The study found that 73.7% of the mothers believed that ORS/SSS is the best method for home management of diarrhoea; this is lower than the findings in a study carried out in North East Nigeria and rural Nicaragua where 80% and 88% of the respondents respectively said they thought ORTSSS was the appropriate treatment for diarrhoea.[13,18]

Despite the positive perception of ORS/SSS, about 11.1% of the mothers had erroneous believe that it is harmful to the child; this may be a barrier to its use. Among the mothers who believed ORS/SSS causes harm, 31.9% believe that ORS/SSS makes the diarrhoea worse, 25.5% believe it causes a wound in the stomach /digestive tract; this is different from a study done in Rural Nicaragua, where 5% believed it did not stop the diarrhoea and 2% believed it produced swelling.[18]

The finding that 68.2% of the 220 respondents whose children had episodes of diarrhoea in the past one year have attempted managing a child with diarrhoea at home with ORS/SSS is higher than 55% and 33% obtained from studies carried out in Enugu and Ibadan respectively but lower than 90% and 84% obtained among Kanuri mothers and Bura mothers respectively in a study done in North East Nigeria.[13,15] Also lower levels of use were obtained in studies carried out in Zimbabwe (5%) and India (26%).[3,7] These figures show that attempt of using ORS/SSS to manage childhood diarrhoea were highest among mothers in Northern Nigeria. Concerning the outcome of managing a child with acute diarrhoea at home

ORS/SSS, the study found that 6.3% of the 158 mothers who have attempted using ORS/SSS to manage childhood diarrhoea said that the diarrhoea showed no change; this is comparable to 5% obtained from a study carried out in Rural Nicaragua.[18]

This study has demonstrated high level of knowledge, positive perception and practice of the use of ORS/SSS for home management of childhood diarrhoea among the study subjects. It is therefore necessary to improve the knowledge and practices of home management of childhood diarrhoea using ORS/SSS through repeated health education programmes. The use of ORS/SSS for home management of childhood diarrhoea should also be included in the curriculum of females and perhaps males as well in secondary schools. This is to instill knowledge right from a tender age. Religious bodies should also be involved in the propagation of the message.

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