

Factors Influencing the Occurrence of Diarrhoea Among Children Under the Age of Five Admitted to Benadir Hospital Mogadishu - Somalia

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Abstract

Diarrhea diseases, which kill more than a million children a year worldwide affect under-developed countries like Somalia (UNICEF, 2007). The nature of diarrhea is not purely medical, but large part of it is related to the social, economic, environmental status (Dana W, 2001). The main objective of this study was to identify factors influencing the occurrence of diarrhea among children under-five years that were attending Benadir hospital, Mogadishu. The questionnaire of the study focused on three key areas of assessment in order to understand how they influence the occurrence of diarrhea in the under-five children: (a) environmental factors (b) Socioeconomic factors and (c) knowledge and awareness levels of parents. A cross-sectional quantitative study was conducted, with a sample of 52 parents and caregivers of children under the age of five attending Benadir hospital. An interview questionnaire was used to collect data during 13th to 19th May 2017, after agreed informed consent. Our study found that lack of mother's knowledge of diarrhea was correlated with increased diarrheal disease incidence in U5 children. 73.1% of respondents answered no to the questions of what causes diarrhea and how it spreads. Similarly, almost 50% of them gave untreated drinking water to their young children. Also our study didn't find much influence from environmental and socioeconomic factors in the responses of the subjects regarding what influences the occurrence of diarrhea. However, there is a relationship between rural dwelling and lower levels of knowledge and awareness of the diarrhea among respondents. Overall, our study concluded that knowledge of the parents and caregivers has a correlated reducing the occurrence of diarrhea in children under-five years. The recommendation of this study is that health education should be provided on importance

of treating water by boiling and strengthen them in cover containers capacity in implementing preventive interventions, including sanitation, source water improvements, and household water treatment and safe storage. The study also recommended to promoting hand hygiene with detergent (soap, sand) to children care givers should be emphasized as it protects the children against diarrhea and improving water quality at the source and treatment of house hold water and safe strong system.

Keywords: *Diarrheal diseases, socioeconomics, knowledge, children under-five, Somalia,*

1.0 BACKGROUND

The Diarrhea is defined as having loose or watery stool for three or more times during a 24–hours period. The frequency and severity of diarrhea is motivated by lack of access to sufficient clean water and sanitary disposal of human waste, improper feeding practices and hand washing, poor housing conditions and lack of access to adequate and affordable health care (Keusch, *et al*, 2006).

In Africa especially Sub-Saharan Africa, diarrhaeal disease was the main mortality and morbidity due to dehydration, which accounts for over 90% of deaths in children below the five (Kosek, *et al*, 2003). This had been attributed to low socioeconomic status, lack of sanitation and poor living conditions, malnutrition, poor hygiene behavior in infants and young children (Grantham-McGregor, *et al*, 2007).

WHO reported in 2009 that the top four morbidity in Somalia were pneumonia, diarrhea, neonatal disorder and measles, 24%, 19%, 17% and 12%, respectively, diarrhea is the second most important condition among under 5 mortality in Somalia (WHO, 2009) It was widely recognized that exposure to diarrhea pathogens in Somali was associated with such factors as age of the child, quality of water, availability of toilet facilities, housing conditions, level of education, household economic status, place of residence, feeding practices, and the general sanitary conditions whether personal or domestic around the house (UNICEF,2007).

One of the main factors associated with acute childhood diarrhea, was awareness of caregiver of causes of diarrhea such as lack of hand-washing, poor infant and young child feeding practices and lack of child immunizations (Godana&Mengiste, 2013).

Another research showed that the incidence of diarrhea occurrence depended on the knowledge level of the mother; the higher the level of care giver awareness and knowledge, the better their hygiene, feeding and weaning practices, hence decreasing occurrence diarrhaeal deceases in their children (Gebremariam, 2001). Lack of parent awareness was another major factor when it comes to diarrhaeal diseases in children (Gebremariam, 2001).

The specific objectives of the study was

1. Socioeconomic factors that influence the occurrence of diarrhea in under-five children.
2. Environmental factors that influence the occurrence of diarrhea in under-five children.
3. Knowledge of parents and caregivers that influence the occurrence of diarrhea in under-five children.

2.0 METHODS & MATERIALS

2.1 Research design

The research design was descriptive cross sectional study it used to capture information based on data gathered for a specific point in time. The data gathered with this method was from a group of participants with varied characteristics and demographics. This design selected because it was cost-effective, time-efficient and easily accessible for collecting information from the target population.

2.2 Study Area and target population

This research was undertaken in Benadir Hospital, located in Benadir region Mogadishu, Somalia, The hospital was built in 1977. Benadir Hospital is the largest hospital in the whole country and as such serves as the nerve of Mogadishu, the largest city in Somalia and it is the only recognized 'National Referral Hospital' in the country. The study focused on children under the age of five who was admit to the hospital with acute and/ or chronic diarrheaThe study population was primarily the parents of children under the age of five who had been admitted to Benadir Hospital with acute or chronic diarrhea.

2.3 Sampling procedure

A sample of 52 respondents was purposively selected from 65 patients who had incidence of diarrhea who were admitted in the hospital during our data collection period after agreed informed consent. The 13 patients did not accept the informed consent.

2.4 Data collection

The research was collected primary data through the application of questionnaire used to collect the primary data. The data was collected 4 days during **13th to 19th May 2017**.

2.5 Data analysis

Data collected was compiled and analyzed using the SPSS version 21.

2.6 Ethical considerations

The researchers was explained the purpose and benefits of the study to the subjects and ask them for their permission to answer the questions. Participation in the study was totally voluntary. Participants were not forced to participate in the study. Even those who initially accepted to participate were free to withdraw in the course of the study if they did not wish to continue.

3.0 RESULTS

3.1 Family Income of the respondent

Family Income of the respondent	Frequency	Percentage (%)
Low	38	73.1
Middle	11	21.2%
High	3	5.8%
Total	52	100.0

Table 3.1 Family Income of the respondent

Table 3.1 above indicates that family monthly income, slightly more than half of the households (73.1%) earned less than 150 \$USD and had income lower category. However, 5.1% earned 300-500 \$USD monthly and income were high category.

3.2 How long has this family been living in Mogadishu?

How long has this family been living in Mogadishu	Frequency	Percent
less than 1 year	23	44.2
1-5 years	13	25.0
5-10 years	8	15.4
10 years over	8	15.4
Total	52	100.

Table 3.2 How long has this family been living in Mogadishu

Table 3.2 above Show that almost 70% of the respondents have moved to the city side from rural areas within the last 5 years, A little over 30% of the respondents lived in the city for more than 5 years.

3.3 Do you wash your hand after cleaning feces from your child?

Do you wash your hand after cleaning feces from your child	Frequency	Percentage (%)
Yes	47	90.4
No	5	9.6
Total	52	100.

Table 3.3 Do you wash your hand after cleaning feces from your child

Table 3.3 above show that more than 90% of parents and caregivers said they washed their hands after cleaning feces, while only 9.6% said they don't.

3.4:-Which type of hand wash do you use after cleaning your child?

Which type of hand wash do you use after cleaning your child	Frequency	Percentage (%)
Washing by water only	18	34.6
Washing by water and soap	12	23.1
Washing by water and soil	14	26.9
Other	3	5.8
Don't wash hands	5	9.6
Total	52	100.

Table 3.4 Which type of hand wash do you use after cleaning your child?

Table 3.4 above show that most parents (50%) use either soap or soil combined with water when doing hygienic washing and almost a third washes only with water while about 6% use other forms of washing.

3.5:-Do you believe lack of toilet can cause diarrhoea?

Do you believe lack of toilet can cause diarrhoea	Frequency	Percentage (%)
Yes	20	38.5%
No	32	61.5%
Total	52	100.0

Table 3.5 Do you believe lack of toilet can cause diarrhoea?

Table 3.5 above show that almost two thirds of respondents believed lack of toilet does not cause diarrhoea.

3.6:-Do you know how to prevent diarrhea especially among under 5 years?

Do you know how to prevent diarrhea especially among under 5 years	Frequency	Percentage (%)
Yes	12	23.1
No	40	76.9
Total	52	100

Table 3.6 Do you know how to prevent diarrhea especially among under 5 years?

Table 3.6 above show that more than three quarters of respondents said they did not know how to prevent the occurrence of diarrhea in children under the age of five.

3.7:-Do you know what the cause of childhood diarrhea is?

Do you know what the cause of childhood diarrhea is?	Frequency	Percentage (%)
Yes	14	26.9
No	38	73.1
Total	52	100.0

Table 3.7 Do you know what the cause of childhood diarrhea is?

Table 3.7 Above show that more than 73% of respondents did not know causes of diarrhea.

3.8:-Do you know how to spread of diarrhea?

Do you know how to spread of diarrhea	Frequency	Percentage (%)
Yes	14	26.9
No	38	73.1
Total	52	100.

Table 4.10 Do you know how to spread of diarrhea?

Table 3.8 above show that more than 73% of parents and caregivers did not know how diarrhea spreads.

4.0 DISCUSSION

Socio economic factors associated with diarrhea among children under-five children.

The results indicates that the more than 70% of families had an income in the lower category, while only 5.8% were of high income category that regarding socioeconomic situations of the respondents that the unemployment rate of the parents was low. This showed that in this group of respondents, their economic situations were not so dire compared to many in the nation (Fosto 2006). Having said that, the income of most respondents was considered low despite the employment levels. More than 44% of the respondents said they only moved to the big city of Mogadishu from rural parts of the country less than one year earlier and almost 70% said they moved within the past 5 years. Research shows that city residents and rural residents differ in their knowledge of and awareness of diarrhoeal diseases and their preventative practices (Godana & Mengiste, 2013). Our findings show that most of these respondents were not exposed to the knowledge and awareness that city life offers.

Environmental factors that may influence the occurrence of diarrhea in under-five children

More than 59% of the respondents said that they don't believe poor hygiene causes diarrhoea. This is a major problem amongst less educated societies (Chipeta, 2004). The researchers observed that the respondents absolutely believed that they were doing their best to practice a good hygiene. This can be explained by the level of washing the Somali society does. As Muslims, they wash many time a day, they wash before and after meals and after cleaning their excrements as evident from our results 90%. Having said that, the parents' actions in practicing preventative measure shows a stark difference

Evaluate knowledge of care giver and occurrence of diarrhea among children under five children

Despite the employment levels of the parents being above average, they lacked significant awareness of diarrhea as more than 60% of them answered no to the questions of the importance of toilets to the prevention of diarrhea. Furthermore, more than 76% of respondents said they didn't know the causes or prevention mechanisms of diarrhea. This can be attributed to the low levels of education amongst the respondent parents having about 42% no education for fathers and 56% no education for mothers. Studies show that the education levels of parent's co-inside well with their knowledge and care for their children when it comes to diarrhea and diarrhaeal diseases (Hashi, 2016).

For example, very few breast feed their kids; only 17% compared to other methods of feeding. They also do not know how diarrhea spreads 73% or the causes of diarrhea. This is supported by evidence from other research which shows that it is primarily the education of the parent that allows them to adopt good hygiene and preventative practices (Godana&Mengiste, 2013, Bacharach, & Gardner, 2002).

Considering the above mentioned observations, when socioeconomic factors such as education and income levels and environmental factors such as hygienic practices are considered, the research shows that it's the education that matters most in preventing or reducing diarrhea amongst parents with children under the age of five. There are studies that support this theory such as Aremu, 2011, which showed that education of parents was key in dealing with diarrhea effectively amongst parents in sub-Saharan Africa.

5.0 CONCLUSION

This study was conducted to find answers for the factors that influence the occurrence of diarrhea in under-five children in Benadir hospital, which the largest mother and child hospitals in the Somalia. To find answers, the researchers focused on factors such as socioeconomic, environmental and knowledge or awareness of parents of children who have diarrhea and under the age of five. The researchers conducted self-reporting style interviews amongst parents of children under the age who were visiting the hospital in order to obtain raw data for the study.

The study found that most respondents were under educated and although low, most of them had some sort of income (fig 4.6 and 4.9); they had some sort of income. The study also showed that the respondents believed that poor hygiene or lack of access to toilets was not very important to prevent diarrhea while at the same time having very risky behaviors such as lack of proper breast feeding and consumption of street food.

The study concluded that one of the major contributors of diarrhea in under-five children is lack of education and awareness of the parents or caregivers. There is strong evidence in the study to support this conclusion. For example, most of the respondents were migrants from rural areas of the country, which has very little access to education or health facilities (Fig 4.16). Furthermore, the no education figures were 41.7 and 55.6% respectively for father and mother.

Therefore, this study concludes that, the most important factor that influences the occurrence of diarrhea in under-five children is lack of education for the parents of the children.

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