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Mother's Knowledge and Attitude Associated with Diarrhea in an Urban Area in Karachi, Pakistan

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Abstract:

Diarrhea remains a major cause of mortality in children under 5 years of age in countries with low socioeconomic status. The aim of this research is to identify the major causes of diarrhea and to evaluate attitude and knowledge regarding the management of diarrhea of mothers of children less than five years of age living at an urban area in Karachi, Pakistan. The study results reveal that the major cause of diarrhea is lack of awareness about the prevention and proper management among mothers of children under of five years of age, due to which children are facing many complication. It is recommended that there is need to focus on strategies that decrease the risks of diarrhea which includes the early recognition of signs of dehydration, knowledge about oral rehydration solution and enhance maternal knowledge. These interventions could be spread by using mass media.

Keywords: Diarrhea, mortality, oral rehydration solution, dehydration

1. Introduction

Diarrhea is a common complaint for all age groups. It is not defined as a disease rather than a symptom. According to World Health Organization (WHO), diarrhea is defined as the passage of three or more loose or liquid stools per day or more frequent than normal for the individual (WHO, 2009). Variety of bacteria, viruses and parasites are the causes of diarrhea. Infection spreads through contaminated food or drinking water or from person to person as a result of poor hygiene. Acute diarrhea is considered as most likely caused by an infectious agent, such as bacterial, parasitic or viral invasion, or by a non-infectious agent and if diarrhea lasting longer than two weeks but resolving within a month is known as persistent diarrhea (Bushen, & Guerrani, 2003). Approximately 3%-5% of the American population is thought to suffer from chronic diarrhea during any given period of time (Schiller, 2009). According to World Health Organization (WHO), in Pakistan mortality rate of children under 5 years of age is about 87/1000 and diarrhea is the second leading cause after acute respiratory infection. 47.2% of children with diarrhea are receiving oral rehydration therapy (Mumtaz, Zafar & Mumtaz, 2014). Diarrhea may be accompanied by cramping, abdominal pain, nausea, or urgent need to use the bathroom, and loss of bowel control. Some infections that cause diarrhea are associated with fever and chills and bloody stools (Farthing & Kelly, 2007). Dipoli & Chavan (2013) associate the exposures to diarrheal pathogen with the age of the child, quality and quantity of water resources, availability of toilet facilities, housing conditions, level of educations, household economic status, feeding practice, and the general sanitation conditions. The most important aspect of treating diarrhea involves the resolving dehydration and replacing of lost fluid (Godana, 2013). Different research studies have been done in different areas of Pakistan about management of diarrhea, mother's knowledge about diarrhea, making of oral rehydration solution but very few studies have been done to assess mother's knowledge attitude regarding management of diarrhea. Therefore the aim of the study was identify the major causes of diarrhea leading to infant mortality in an urban area of Karachi Pakistan.

2. Literature Review

Diarrhea is the second leading cause of child morbidity and mortality, especially in the developing countries. It is estimated that there are 2.5 billion episodes and 1.5 million deaths annually in children under-five years (Mumtaz, Zafar & Mumtaz, 2014). Diarrhea is not lethal itself, but the improper knowledge of mother and their misdirected approach towards its management leads to high degree of mismanagement and result in severe dehydration. In the process of literature review few studies have been identified highlighting the impact of diarrhea on child mortality and morbidity among children less than five years of age. According to Chavan (2013) acute gastroenteritis remains to be one of the most important causes of childhood morbidity and mortality and is associated with an estimated 4 million deaths each year worldwide. Viral agents account for 75% of these infections, the major pathogen being rotavirus, which is associated with up to 50% of diarrheal episodes among infants and young children.

A study conducted by Badowski et al, (2011) in Tanzania, identified a number of behavioral practices that may perpetuate the transmission of pathogens through fecal contamination of hands and drinking water. Researchers further reported that inadequate hand washing was the main contributing factor in causing diarrhea because it clearly showed that hand washing has been correlated with a reduction of diarrheal disease on the order of 42–48% and 39% in high-income countries or 32% in low-income countries. Mengistie *et al.* (2013) also indicated that a number of children born were a predictor of diarrhea among fewer than five children due to the incapability of the caregiver to care for a large number of children. Therefore this study suggested that child birth spacing might have a positive influence on prevention of diarrhea.

Godana (2013) stated that transmission sources of diarrhea are untreated drinking water. The population having household sanitation system has less chances of developing diarrheal diseases, another source of diarrhea in children less than five years is left over food or spoiled food. He also mentioned that other major cause of diarrhea in children is bottle feeding rather than breast feeding which increase the risk of diarrhea in children. Melinda & Munos, (2010) stated that previous studies on rotavirus were but no other reported studies are carried out before a decade ago in the capital, Addis Ababa available in other regions of the country and they had mentioned that rotavirus is the major cause of diarrhea. Therefore, the researchers outlined that based on this preliminary data; further work is needed to provide a broader picture on the burden of rotavirus in children through long-term community-based surveys and epidemiological studies at regional as well as national levels. Chiabi et al, (2010) reported a study conducted in 2000 that low osmolarity oral rehydration salts and zinc, extensively reduce morbidity and mortality in children with diarrhea. These results were also confirmed by other 2 surveys in India and Haryana in 2008. In their research, they highlighted that zinc treatment results in a 25% reduction in duration of acute diarrhea and 40% reduction in treatment failure or death in persistent diarrhea. In the present study the focus remained on the knowledge and attitude of mothers having children less than five years of age.

3. Methodology

3.1. Ethical Consideration

Before of conducting the survey authors obtained permission from Primary Health Center of that area for this study. All the participants had received an explanation about the study before introducing the questionnaire and only those who were agreed by signing written consent included. The participants were assured about the confidentiality of data and maintain of their autonomy throughout the study period.

This study was cross sectional study to identify the major cause of diarrhea and knowledge and attitude of mother's having children of less than five years of age. The data has been collected during the month of May and June, 2014 by home to home survey with the help of questionnaires from a number of one hundred and twenty participants (n=120). The participants from which the data was collected belong from low socioeconomic status and most of the families were poor and illiterate and they were living in Shireen Jinnah Colony, Karachi. For data collection questionnaire was developed by the authors contained two sections. The first part of the questionnaire includes demographic data second section contains questions to assess knowledge and attitude regarding management of diarrhea and participants has to answer yes and no options in which 80% mothers not used boil feeder before every feeding. Second part of questionnaires included multiple options questions in which 55% mothers have lack of awareness to boil feeder before every feeding.

4. Result and Discussion

The study investigated that the high infant mortality rate is associated with diarrhea is due to lack of awareness in the mothers of Shireen Jinnah Colony. On the basis of collected data, 60% families had one or two children whereas, 40% families had children more than two. It was identified that mothers having one or two children had less knowledge about management of diarrhea whereas, mothers having children two or more had enough knowledge about preventive measures of diarrhea but they were showing negligence and the reason behind that was lack of resources and lack of time. Furthermore it was identified that 85% of mothers had lack of knowledge about the method of making ORS at home due to which 60% children were suffering from severe dehydration, and 70% mothers were not boiling water due to lack of awareness that the obtained data will be kept confidential throughout the research. The authors also arranged a free medical health camp in the Shireen Jinnah colony for those who were participated in the study.

It has been documented that there are high chances of contamination, and greater risk of diarrhea associated with bottle feeding, and the collected data showed that 15% mothers in Shireen Jinnah Colony were using boiled feeder before every feeding and 85% mothers were not using boiled feeder before every feeding in which the main reason was lack of awareness in 55% mothers and 30% were showing negligence because most of them had lack of services and some had lack of interest to participate in awareness programs.

The study results showed that diarrhea was significantly associated with children who had lack of maternal knowledge about the use of boiling water. Considering this study findings, 30% mothers in Shireen Jinnah Colony had knowledge about the use of boiling water because they knew about the open sources of water (largely rivers and wells), which are prone to contamination and they had first heard about this through the television. Other sources were radio, friends, and relatives and they also had attended many educational programs which were beneficial for the people who were living in this community. The 30% mothers were using boil water but every mother had different method of boiling the water in which 10% mothers were boiling the water for 5 minutes and 15% mothers were boiling water for 10 minutes and the remaining 5% mothers were boiling the water for 20 minutes because every mother had different sources of their knowledge. On the other hand 70% mothers were not using boiled water in which 40% mothers had lack of knowledge about boiling water because they had no interaction with resources such as TV, radio and other educational programs and 15% mothers had lack of time because they were housewives and they had overall burden of home, children, husband etc and some mothers were living with joint families and they also had burden of large families so they were unable to manage their time properly. The remaining 15% mothers were showing negligence because they were not interested in their works and their children because these mothers were less cohesive and poorly organized with little positive interactions with their children and also the mothers lacked sensitivity or responsiveness towards their children. Consider this study findings, 60% of mothers in that community have lack of awareness about the method of making ORS because they did not attend any teaching sessions or awareness programs but 40% mothers have knowledge about method of making ORS solution because they had awareness and they attended the teaching sessions in the primary health care in that community.

This study results showed that the 50% of children in Shireen Jinnah Colony were defecating from normal to slightly because many families in this area were taking their children to nearby clinics and hospitals and they were giving ORS (oral rehydration therapy) to their children but on the other hand 50% children in this community were defecating from moderate to severe because many families were poor and they were not able to take their children to hospitals and nor they were giving ORS to their children. Therefore the children were suffering from many complications. This research showed that 60% children were suffering from dehydration in this community because most of the families were not giving the fluids such as ORS to prevent the children from dehydration and other reason of dehydration was vomiting which was a very common symptom of diarrhea and 30% children were suffering from vomiting in that community.

5. Conclusion and Recommendations

Diarrheal diseases continued to be an overwhelming problem. The estimated number of cases of diarrhea every year is staggering and does not seem to be declining. For children under five years of age, diarrhea is one of the leading causes of death. Results of this study indicated that Lack of awareness was the major contributing factor for causing diarrhea because due lack of awareness mothers were not boiling the feeder before giving feed to their children, furthermore, do not know the procedure of making of ORS at home due to which children were suffering from severe dehydration. In conclusion these findings indicate that due to lack of awareness about management of diarrhea the children were suffering from many complications. There is need to aware mothers of children under five years of age about the management of diarrhea at home to decrease the morbidity and mortality among children less than five years of age.

6. References

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Annexure

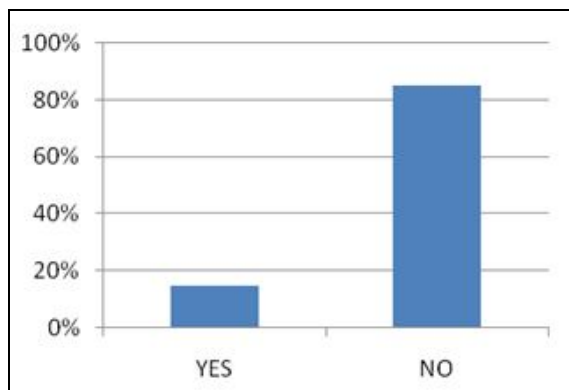


Figure 1: Do you boil before every feed?

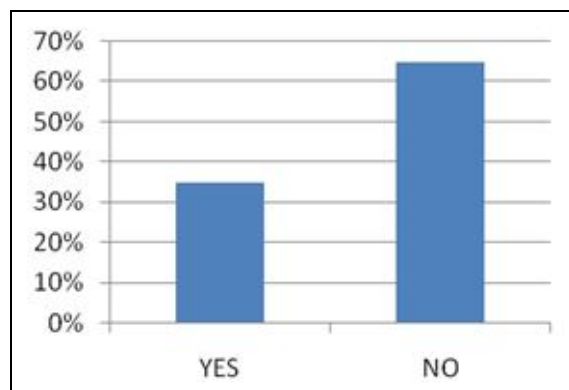


Figure 2: Do you boil the feeder?

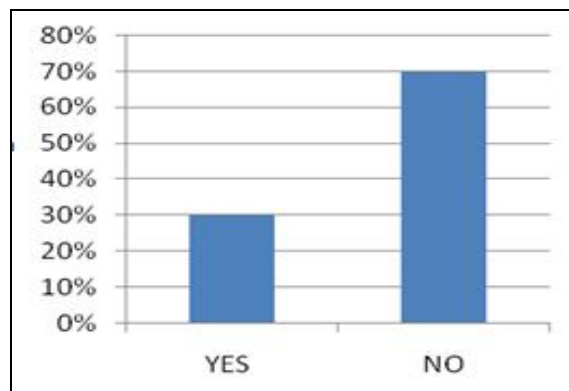


Figure 3: Do you use boiled water?

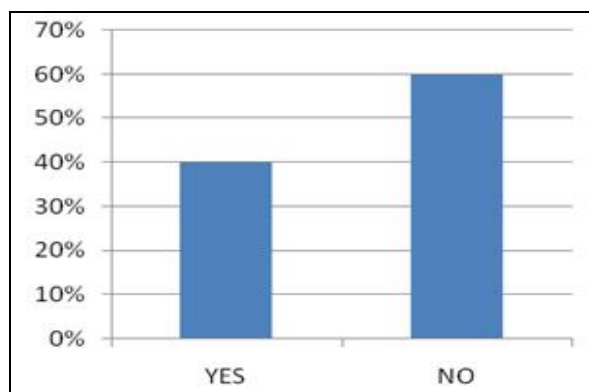


Figure 4: Do you know about the method of making ORS?