

MATERNAL KNOWLEDGE AND PRACTICES RELATED TO CHILDHOOD DIARRHEA AT A TERTIARY CARE HOSPITAL IN DISTRICT MARDAN

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ABSTRACT

OBJECTIVES

To assess the mother's knowledge, and practices regarding the prevention and home-based management of diarrhea in their children.

METHODOLOGY

This cross-sectional study was conducted on a sample of 271 mothers, using convenient sampling technique. The study population was mothers of under-five year age children recruited from a tertiary care hospital in Mardan. Data were collected through questionnaire and analyzed through SPSS version 24. The study was approved from the institute and data collection permission was granted by the hospital administration. Written consents were obtained from the participants.

RESULTS

The majority (59.4%) of the participants were from the age group of 30 to 40 years. Most (82.7%) of the participants were house wives where 61.3% of them were illiterate. The majority (75%) of the mothers reported average Knowledge, followed by Good (17%) and Poor Knowledge (8%). The major part (74%) of the participants was reported to have satisfactory practices regarding diarrhea prevention and management while 26% of the mothers reported unsatisfactory practices.

CONCLUSION

It was concluded from the study findings that parents had average knowledge and satisfactory practices regarding diarrhea among children. Efforts are required to further enhance mother's knowledge and improve their practices regarding diarrhea and its management among children.

KEYWORDS: Knowledge, Practices, Diarrhea, Mothers, Children, Diarrheal Diseases

INTRODUCTION

According to the World Health Organization (WHO), diarrhea is defined as the passage of three or more loose or watery stools per day, or stools that are considered abnormal by the mothers, or stools that are more frequent than is typical for a child.¹ Diarrhea is the most concerning disease among children where it is the second largest cause of death among children under five years of age. It is possible to avoid getting it as well as find a cure for it. Every year, there are close to 1.7 billion instances of diarrheal illnesses reported in children all over the world. Children under the age of five years old are more likely to suffer from malnutrition if they have diarrhea.^{1,2} The regions of South and Southeast Asia as well as South America saw the greatest reduction in mortality due to diarrhea. Although children across most of Africa continue to be at high risk of dying from diarrhea-related causes, the locations with the most deaths were outside of Africa, with Pakistan having the highest fatality units of any country studied.³ Statistics of diarrhea are very high in low and middle income countries. Pakistan is one of these countries, and therefore, Pakistan is reported to

have high prevalence of diarrhea among children less than five years of age. Reduction in the prevalence of diarrhea has been observed as 20.3 to 2.2 days/Child Year [CY]), incidence of diarrhea as 2.1 to 0.5 episodes/CY, and number of bloody diarrhea episodes as 18.6 to 5.2% during the course of a trial.⁴ Rotavirus is responsible for approximately one-third of hospitalizations that are caused by diarrhea, and it leads to around 800,000 fatalities annually.⁵ The factors that exacerbate diarrheal diseases and which affect children under the age of five, include; weaning food that is contaminated, inappropriate feeding practices, a lack of clean water, poor hand washing practices, limited sanitary disposal of waste, poor housing conditions, and a lack of access to adequate and affordable health care are.⁶ Oral rehydration solution (ORS) is useful in reducing the mortality rate associated with diarrhea in the community, whereas there is conflicting evidence supporting the use of fluids that are readily available at home.⁷ Mothers have a very crucial role in the prevention of diarrhea among children. If proper feeding procedures were followed for infants and young children, more than 10 percent of diarrhea-related deaths may be avoided. On the other hand, proper

hygiene habits, especially hand washing with soap and the safe disposal of excreta, can bring about a reduction in the number of cases of diarrhea.⁸ The purpose of this study was to assess the mother's knowledge and practices with regard to the prevention and home-based management of diarrhea in their children who were below the age of five in the city of Mardan, Khyber Pakhtunkhwa (KP), Pakistan. The findings of this study may create an insight among the mothers and health care professionals regarding the understanding and practices of mothers towards prevention and management of diarrhea among children and will help to design policies which may help in enhancing mother's knowledge and practices in this area.

METHODOLOGY

A descriptive cross-sectional study was carried out in district Mardan. Data were collected from a tertiary care hospital from mothers in children ward of the tertiary care hospital. The study was completed in two months i.e. September and October, 2022. Sample size was calculated using online sample size calculator. With 90% confidence interval and margin of error as 5%, with previous proportion of 72%, the anticipated sample size was calculated to be 271.⁹ A convenient sampling technique was used to select the participants for this study. Mothers of under five years age children who were admitted in pediatric ward due to diarrhea were included in the study. Data were collected by using an adopted questionnaire consisting of three parts; demographic information, knowledge of mothers and practices of mothers regarding diarrhea prevention and management among children.¹⁰ Prior to data collection, permission was sought from the administration of the hospital. The parents in the children ward of tertiary care hospital were approached and data was taken. Written informed consent was secured. Anonymity of the participants was assured. The purpose and procedure of data collection were explained to the participants. Participation in the study was voluntary. Data were analyzed using SPSS version 24. Frequencies and percentages were calculated for all categorical variables. Mean and standard deviation were calculated for continuous variables.

RESULTS

The participant's socio-demographic profiles showed that majority (59.4%) of the participants were from the age group of 30 to 40 years. Most (82.7%) of them were house wives where 61.3% of the participants were illiterate. The majority (72%) of the participants reported that their monthly income was below 20 thousand (Table-1).

Table 5: Socio-Demographic Characteristics of the Participants, n=271

	Frequency	Percent	Valid Percent	Cumulative Percent
Age of the Participants				
Less than 30 Years	61	22.5	22.5	22.5
30-40 Years	161	59.4	59.4	81.9
More than 40 Years	49	18.1	18.1	100.0
Employment Status of the Participants				
House wife	224	82.7	82.7	82.7
Employed	47	17.3	17.3	100.0
Education Status of the Participants				
Illiterate	166	61.3	61.3	61.3
Primary	57	21.0	21.0	82.3
Secondary	27	10.0	10.0	92.3
Master	21	07.7	07.7	100.0
Monthly Income of the Participants				
Less than 20000	195	72.0	72.0	72.0
20000-30000	44	16.2	16.2	88.2
31000-40000	17	06.3	06.3	94.5
More than 40000	15	05.5	05.5	100.0

Majority (36%) of the participants were reported to have two children followed by one child (28%), three children (24%), four children (10%) and five children (2%) (Figure).

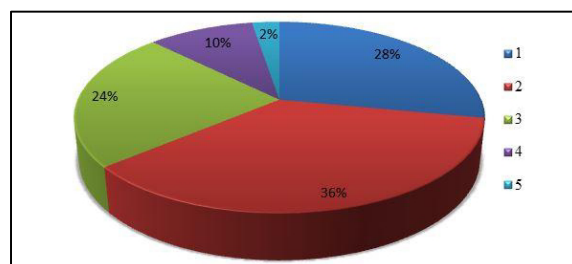


Figure 1: Pie-Chart Showing Numbers of Children of each Participant

Assessment of the mother's knowledge regarding different aspects of diarrhea among children showed that the majority (38%) of the participants were aware of the proper definition of diarrhea i.e., the passage of three or more loose or liquid stools per day. Among the participants, 36.2% endorsed that poor hygiene caused diarrhea among children under-fives years whereas, 40% of the respondents had knowledge of the micro-organisms (bacteria, virus, parasites) that caused diarrhea among children under-fives years. Majority (64.6%) of the mothers agreed that children under-five years contracted diarrhea through drinking contaminated water and 40.2% of the participants knew that children under-five years contracted diarrhea through eating contaminated food. However, 21.8% of the mothers disagreed that the under-five child contracted diarrhea through unhygienic breastfeeding practices. Regarding symptoms of diarrhea, 30.3% of

the participants were aware that diarrhea among under-five year child is associated with abdominal pain and 48% agreed that diarrhea among children leads to nausea and vomiting. Among the total respondents, 38.4% agreed that diarrhea in under-five year children caused loose, watery stools, while 32.8% of the mothers indicated that in under-five year children leads to loss of control of bowel movements. Regarding prevention and management of diarrhea among children, 41.3% of the mothers indicated that they used homemade fluid (ORS) in 24 hours to treat diarrhea in their children. Moreover, 4.3% of the mothers pointed out that they fed their child immediately after cooking. Furthermore, 45.8% of the mothers verbalized that they continued to breastfeed their child when having diarrhea. Majority (42.8%) of the participants revealed that they washed their child's hands after the toilet. In addition, 43.2% of the mothers highlighted that they used water only to wash their child's hands before and after eating. On the other hand, 42.8% of the participants reported that they used soap with water. The bulk of the participants (49.85%) informed that they washed hands with water and soap before preparing food (cooking). Likewise most the mothers (48.3%) reported that they washed food/ fruits before feeding the child. According to the arbitrary categorization of the knowledge scores of the mothers regarding diarrhea prevention and management, majority (75%) of them had - Average Knowledge Scores, only 17% had - Good Knowledge scores and a small fraction of the respondents had - Poor Knowledge Scores (Figure 2).

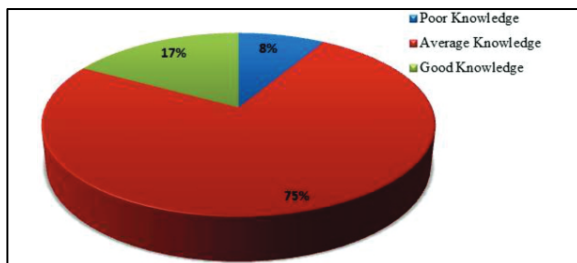


Figure 2: Pie-Chart Depicting Knowledge of the Mothers Regarding Diarrhea among the Children

Assessment of the practices of mothers highlighted that majority (74%) of the mothers had - Satisfactory practices (Figure 3).

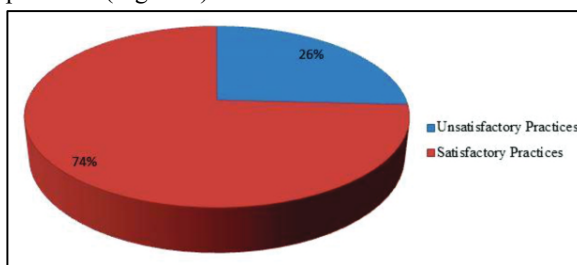


Figure 3: Pie-Chart Depicting Practices of Mothers Regarding Diarrhea among Children

DISCUSSION

The purpose of this study was to evaluate the knowledge and practices of mothers regarding the prevention and home-based management of diarrheal illnesses in children in district Mardan KP. Based on the finding, the current study reported that 75% of the mothers reported - Average Knowledge, followed by - Good (17%) and - Poor Knowledge (8%). A similar study already conducted showed that 65.2% of mothers had good knowledge about prevention and home-based management of diarrhea among under-five children.¹⁰ Likewise a study conducted in s Ethiopia, showed comparable finding (65.9%) to our study.¹¹ However, investigations carried out in Kashan, Iran (28.8%), Fagita Lekoma, Ethiopia (56.2%), and Assosa, Ethiopia (37.5%), revealed contrasting results.^{12,13,14} This may primarily be attributed to the fact that Mardan is a larger, more urbanized city that is home to a significant number of mass media outlets and so, mothers' knowledge here may be comparatively better due to improved public awareness. The definition given by respondents in our study i.e., the passage of loose stool three or more times per day, was in line with that of the participants in other studies.^{12,15} In addition, 64.6% of respondents in the study believed that diarrhea was caused by drinking contaminated water. This figure is substantially higher than studies carried out in India, Mali, and Western Ethiopia.^{12,13,14,15} Only 45.4% of the participants utilized a homemade remedy to treat their diarrhea children. This findings appears significantly different from those found in communities in South Africa's (90%) and Swaziland (97%).¹⁷ This difference could possibly be related to the higher education and awareness status of the mothers in the said countries. In the current study, majority (74%) of the participants were reported to have satisfactory practices regarding diarrhea. Conflicting evidence was noticed in other research studies (62.9%) and (37.6%).^{11,12,13} The discrepancy however, may be attributed to the fact that the study period, location, and sample size were all different. According to the findings of the present study, 62.4% of the mothers supplied liquids and food less than usual to their children during diarrheal episodes. Almost parallel evidence (70%) was noticed in published data regarding mothers reducing the amount of fluids and food when their children suffered from diarrhea.^{18,19} A similar study conducted in Bangladesh found that over 50% of mothers were in favor of feeding their children and administering fluids during their children's bouts with diarrhea.²⁰

LIMITATIONS

The article may have a limited sample size, which may not be representative of the overall population of

mothers in the region.

CONCLUSIONS

Diarrhea is one of the serious health concerns among the pediatric population. Untreated diarrhea may produce severe consequences among children including death. Mothers play an important role in the prevention and management of the diarrhea on the community level. Parent's disease education and practices regarding the causes, prevention and management and rehydration during diarrhea is crucial. Average education and satisfactory practices among mothers about the causes, prevention and management of diarrhea, were reported in district Mardan KP. There is a dire need to train and further educate mothers in order to prevent and timely manage, and avoid the lethal consequences of diarrheal diseases among children.

CONFLICT OF INTEREST: None

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CONTRIBUTORS

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- Shaier Khan** - Critical Revision; Supervision
- Ammara Syed** - Concept & Design; Data Acquisition; Data Analysis/Interpretation; Critical Revision
- Tufail Ahmad** - Data Acquisition; Critical Revision; Supervision



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