

KNOWLEDGE, ATTITUDE AND PRACTICE OF MOTHERS REGARDING THE USE OF ORAL REHYDRATION SOLUTION IN CHILDREN'S SUFFERING FROM DIARRHEA

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ABSTRACT

Objective: To assess the level of knowledge, attitude & practice of caregivers about the use of oral rehydration solution in children suffering from diarrhoea (gastroenteritis), reporting to emergency Pediatric Services Department of Khyber Teaching Hospital Peshawar.

Materials and Methods: This cross-sectional study was conducted in Emergency Pediatric Services department of Khyber Teaching Hospital Peshawar from Jan; 2016 till June 2016. Total 194 mothers were interviewed using convenient sampling technique. Those mothers who had brought their children with diarrhoea and willing to be interviewed were included in the study. No objection certificate was issued by the hospital to conduct the study in the mentioned department. Data was collected by interviewing the participants via validated questionnaire after getting informed consent. Data were analysed using SPSS v.16.

Results: Out of 197 mothers interviewed, only 57.7 % knew about diarrhoea as a disease and its severity, with 80.4 % with correct knowledge and practice of ORS preparation. Fifty percent of the participants knew the purpose of ORS that it helps in the prevention of dehydration. Only 14.4 % mothers reported giving ORS to their children during diarrhoea. Only 7 (3.6 %) participants said that they had never practised self-medication while rest of the participants were practising self-medication.

Conclusion: Positive attitude was seen among mothers regarding the use of ORS in the prevention of dehydration. Certain lapses were seen in the knowledge and practices of mothers regarding its administration and misconception regarding management of diarrhoea, which led to a prevalent practice of self-medication.

Key Words: Diarrhea, Oral Rehydration Solution, Oral Rehydration Therapy

INTRODUCTION:

According to WHO, Diarrhea can be defined as, "the passage of three or more loose or liquid stools per

day (or more frequent passage than is normal for the individual)." It can be caused by multi-pathogens and multi-factors. It is classified into three main clinical types namely; acute watery diarrhoea, acute bloody diarrhoea and persistent diarrhoea (if it is longer than 14 days). The aetiology of infectious diarrhoea is multifactorial. It can be caused by viruses like rotavirus, enteric adenovirus adenoviruses, astrovirus etc.; bacteria like Escherichia coli, Staphylococcus

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aureus, *Bacillus proteus*, *campylobacter* etc. or by fungi, for instance, *Candida albicans*, *Aspergillus* etc. It can spread from contaminated food, water or from person to person and due to poor hygiene. Diarrhoea results in loss of fluid and electrolytes leading to dehydration which can be fatal and thus has become a leading factor of malnutrition.^{1,2}

Diarrhoea most commonly affects children, and it manifests its worst outcomes in children and is thus reported to be one of the leading causes of child mortality and morbidity in children under five years of age in developing countries.^{3,4} It also contributes to the malnourishment of children and results in almost 2 million deaths per year.⁵⁻⁷ According to an estimate by WHO, there are 2.5 billion episodes and 1.5 million deaths (1 out of 5 children) each year in children under-five years of age.^{8,10} In Pakistan there are about 24 million children under the age of 5 years and each child gets 3-4 episodes of diarrhoea annually. This accounts for a total of approximately 120 million episodes per year.¹¹

In 1978, the World Health Organization launched the program for control of diarrheal disease and to reduce mortality caused by diarrhoea.¹² The program had provided with clear guidelines regarding the management of diarrhoea, use of oral rehydration therapy (ORT), feeding, drugs and education of parents regarding diarrhoea management and prevention. It is estimated that with proper ORT, 90 % cases of diarrhoea can be managed successfully.¹³ Oral Rehydration Solution (ORS) which is a balanced mixture of clean water, salt, glucose and electrolytes; are the main components of ORT. Although ORT has proven to be an effective way of managing diarrhoea still, its use is very low as only 44 % of children with diarrhoea receives the standard ORT.¹⁴

Though a decline has been observed in the mortality of diarrhoea mainly due to use of ORT, still diarrhoea is the second leading cause of deaths among children of age 5 and below. This can be controlled by using proper ORS and to educate parents regarding its importance and proper preparation. ORS usage is highly dependent on the level of knowledge and practice of parents especially mothers.

Mothers are closely related to the management of health issues of children.

OBJECTIVE

Purpose of this study was to assess the level of knowledge, attitude and practice (KAP) of mothers regarding the use of ORS.

METHODOLOGY:

Across-sectional study was conducted in emergency pediatric services department of Khyber teaching hospital Peshawar from January 2016 until June 2016. Convenient sampling technique was used to enrol mothers into this study. Those mothers who had brought their children of age under five with diarrhoea and were willing to be interviewed were included in the study. No objection certificate was issued by the hospital to conduct the study in the said department. Total 194 mothers were enrolled in the study. All the participants were interviewed using a validated questionnaire. Data gathered from the questionnaire was analysed using SPSS version 16. Descriptive analysis was performed to find out the frequencies and percentages regarding the KAP. Results were analysed based on data collected regarding the knowledge of diarrhoea as a disease, actions taken during diarrhoea, knowledge of ORS as a treatment/purpose of ORS, proper preparation of ORS and self-medication.

RESULTS:

Knowledge of mothers regarding diarrhea as a disease was assessed and it was found that among total of 194 mothers, only 112(57.7 %) were having correct knowledge regarding diarrhea that it is a serious disease if not managed properly and timely, while 82(42.3 %) mothers were not having correct knowledge of diarrhea and underestimated the disease regarding its serious and lethal outcomes. Out of total 156 (80.4 %), mothers knew the correct method of preparing ORS (Figure 1).

Among all the participants, 135 (69.6 %) mothers used ORS in between loose motions. Only 41 (21.4 %) mothers used ORS after every loose motion or in between motions. Table 1 summarises the response of mothers when asked about their actions taken during diarrhoea. Out of 194 mothers, only 28 mothers reported giving ORS. While Table 2 shows the frequency and percentages of mothers based on their knowledge regarding the purpose of ORS use. Among all the participants, 50 % knew the purpose of ORS that it helps in the prevention of dehydration.

Twenty-three (11.9 %) mothers went to self-medication because they thought the disease is not a serious one and considered doctor consultation to be unnecessary. Sixty (30.9 %) mothers did self-medications because they had previous experience with the medicine used for diarrhoea. Forty-nine (25.3 %) mothers opted for self-medication due to immediate availability of medicines at home. Thirty-nine (20.1 %) mothers did self-medications for quick relief. 16 (8.2 %) mothers opted for self-medication because of their poverty. Only 7 (3.6 %) participants said that they had never practised self-medication.

Table-1: Actions are taken during diarrhoea

Actions are taken during diarrhoea	Frequency	Percent
Consult Doctor	57	29.4
Give medicine at home	109	56.2
Give ORS	28	14.4
Total	194	100.0

Table-2: Purpose of ORS use

Purpose of ORS use	Frequency	Percent
To stop diarrhoea	19	9.8
To stop vomiting	38	19.6
To prevent dehydration	97	50.0
Don't know	40	20.6
Total	194	100.0

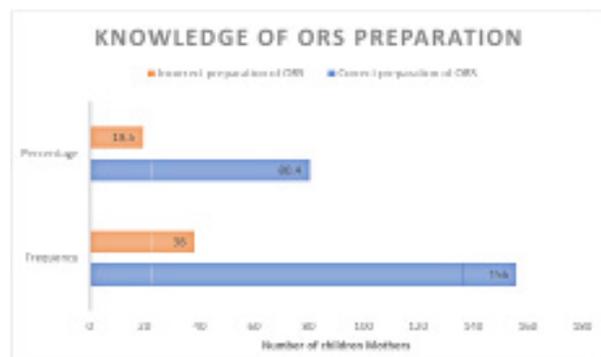


Fig 1. Knowledge of ORS Preparation among children of mothers

DISCUSSION:

The purpose of this study was to assess the level of knowledge, attitude and practice of caregivers (mothers) regarding the use of ORS. The results showed that many mothers were not aware of the causes and severity of diarrhoea as a disease. In this study, it was found that the trend of self-medica-

tion was common as 56.2 % of participants of the study reported practising self-medication, while the percentage of ORS users were very low (14.4 %), and only 29.4 % reported to consult a doctor during diarrhoea. The lower level of education or illiteracy, poor socioeconomic conditions, cultural and area of living could be the main contributors towards the lack of knowledge and practice regarding the use of ORS in the management of diarrhoea. Our study had consistent results with a study done in Iran, in which 51% children in the Urban area while 65 % in a rural area were managed with ORS.¹⁵ A study in Nigeria showed that only 9.9 % of mothers used ORS for the management of diarrhea.¹⁶ Some work has been done in Ethiopia, which showed 39.7 % of children, whose age is less than 5 years and suffers from diarrhea, received any form of oral rehydration treatment.¹⁷ A study in Karachi identified that 40 % of mothers were not able to specify the sign of dehydration. Furthermore, thirty-four percent mothers mentioned diarrhoea signs like thirst, decreased salivation, sunken eyes or dry hair. Only 25 % of mothers were giving ORS to their child.¹⁸ The type of water used for ORS preparation in our study is consistent with a study done in Karnataka, which disclosed that only 25 % mothers used boiled water for ORS preparation.¹⁹ In a study conducted in Lahore, it was found that 76 % of the caregivers prepared the ORS correctly.²⁰ However, their results regarding self-medication in the management of diarrhoea differ from the results found in the study. They reported only 3.8 % of participants involved in the practice of self-medication. This difference can be due to the frequency of the diarrhoea prevention programs and their promotional effects.

The present study showed a positive trend between, knowledge, attitude and practice and level of education among children mother. Improvement in the education level of mother directly influences the level of knowledge, attitude and practice.

CONCLUSION

The positive attitude was seen among children's mothers regarding the use of ORS in the prevention of dehydration. Certain lapses were seen in the knowledge and practices of mothers regarding its administration and misconception in the management of diarrhoea, which led to a prevalent practice of self-medication. The study concludes that there

was lack of knowledge regarding diarrhoea and its severity among the mothers. Efforts are needed to promote the use of ORS and healthy feeding habits as well as health education is necessary regarding prevention and management of diarrhoea.

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