

Original Article

Knowledge, Attitude and Practice of Mothers regarding Oral Rehydration Solution in Acute Diarrhoea at Monno Medical College Hospital

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Abstract

Background: Diarrhoea is one of the major causes of morbidity and mortality among the under-five age group in Bangladesh. Effective treatment by oral rehydration solution (ORS) can reduce diarrhoea-related mortality and unnecessary hospitalization, for which role of mothers is important. The use of ORS suffering from diarrhoea is greatly affected by mothers' knowledge and attitude towards using it in treating their children. **Objectives:** Assessment of the knowledge, attitude and practice of the mothers about ORS for better management of diarrhoea in children. **Methodology:** A cross-sectional descriptive study was carried out in the department of Paediatrics of Monno Medical College Hospital, Manikganj, during the period from January to December, 2022. Data were collected from 300 mothers by face-to-face interview by a questionnaire. Finally, collected data were analyzed, using SPSS software version 20. **Results:** Majority (195, 65.0%) of the children's age were in between 6 month to 2 years. Most (143, 47.7%) of the mothers completed their primary education. About two-thirds of the mothers (193, 64.3%) resided in rural areas. In this study, most (213, 71.0%) of the mothers always used ORS during the attack of diarrhoea, 281(93.7%) mothers had adequate knowledge about ORS, 253(84.3%) had knowledge about preparation of ORS, 235(78.3%) informed to know when to administer ORS and 170 (56.7%) knew the exact amount of ORS to administer. **Conclusion:** Positive attitude was seen among the participant mothers regarding the use of ORS. But mothers' knowledge and practices regarding its administration was insufficient.


Key Words: Knowledge, Practice, ORS, Diarrhoea, Mothers

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Introduction

Diarrhoeal disease is still one of the major causes of preventable death in developing countries, particularly among the children under five years.¹ Globally, diarrhoea can kill around 800,000 children under the age of five years every year.² According to the Bangladesh Demographic Health Survey (BDHS) 2014, it is observed that about 6 percent of children under five years were

reported to have diarrhoea.³

Recently, newer formulation of oral rehydration therapy has revolutionized the concept and management of diarrhoea. It is simple, highly effective, inexpensive and technologically appropriate.⁴

Diarrhoea is usually a symptom of an infection in the intestinal tract, which can be caused by a variety of

bacterial, viral and parasitic organisms. Infection is spread through contaminated food or drinking water, or from person-to-person as a result of poor hygiene.⁵ Diarrhoea leads to the loss of fluids and electrolytes, resulting in mild to severe dehydration, and in some cases, it can lead to death.⁶

During a diarrhoeal episode, assessment of sign of dehydration and hypovolemia on clinical examination and therapy should be directed as fluid and electrolytes replacement. In patients with diarrhoea, oral rehydration therapy (ORT) is recommended by the American Academy of Pediatrics and world health organization (WHO) as the preferred treatment for fluid and electrolytes losses in children with mild to moderate dehydration.⁷ Oral rehydration solution (ORS) has been found effective in preventing or treating dehydration resulting from diarrhoea. Although it does not stop diarrhoea, but replaces the lost fluids and essential salts. Glucose in the ORS helps intestine to absorb the fluid and salts more efficiently.⁸ The ORS alone is an effective treatment in 90% of the diarrhoea patients. It is on the WHO lists of essential medicine.⁹ Timely management of the children with ORS has substantially declined the mortality and morbidity from acute infectious diarrhoea.¹⁰

Diarrhoea is not lethal itself, the inappropriate knowledge, improper practice and negative attitudes of mothers and their wrong approach towards its management and prevention leads to severe dehydration and eventually death.¹¹

So, The objectives of the present study were to assess the knowledge about diarrhoea, ORS, the attitude and feeding practices of mothers during diarrhoeal episodes in the rural and urban village of Manikganj.

Methodology

This was a cross-sectional descriptive study, carried out in the department of Paediatrics of Monno Medical College Hospital, Manikganj, during the period from January to December, 2022. A total of 300 mothers, carrying their children from 6-months to 5-years for management of Diarrhoea at Paediatric Outpatients Department and willing to participate in the study, were enrolled by using convenient sampling. While the mothers, whose children were below 6-months and above 5-years of age were excluded from the study.

Data were collected from the respondents by face-to-face interview according to a specific structured questionnaire

for this study. The questionnaire included questions concerning the knowledge about ORS, method of preparation and its appropriate use in management of acute diarrhoeal diseases. The questions were directed to the mothers of those children to assess their socio-demographic characteristics including the age, degree of education, residence, occupation, parity and socioeconomic condition of those mothers. Finally, collected data were entered and analyzed, using SPSS software version 20.

Results

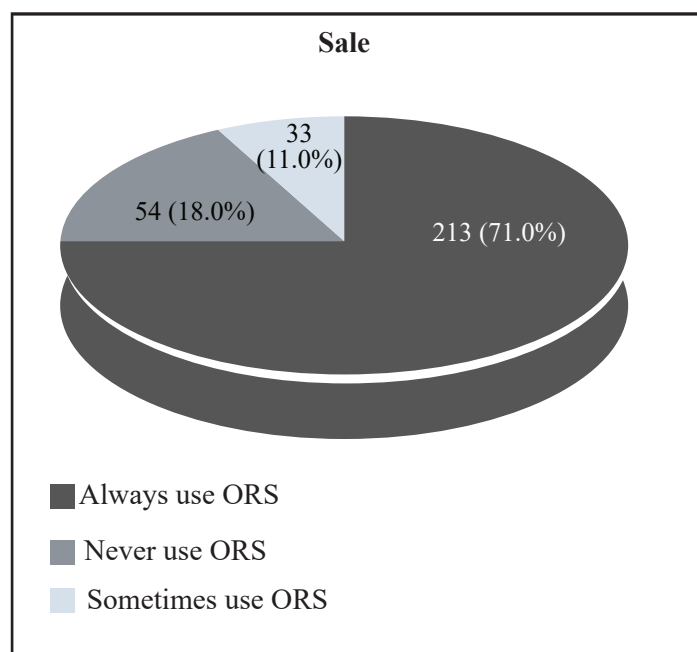
Out of total 300 interviewed mothers, majority (142, 47.3%) were in the age group of 18 to 25 years and the most (248, 82.7%) of them were housewives. Majority (195, 65.0%) of the child's age were in between 6 month to ≤ 2 years. Most (143, 47.7%) of the respondent mothers had primary education and many others (136, 45.3%) completed secondary and above. About two thirds of the children (193, 64.3%) resides in rural area. (Table I)

Table I : Demographic characteristics of the respondents (n=300)

Characteristics	Frequency	Percentage (%)
Child's age		
6 month - ≤ 2 years	195	65.0
>2 years – 5 years	105	35.0
Mother's age		
18 years – 25 years	142	47.3
>25 years – 35 years	108	36.0
>35 years	50	16.7
Mother's education		
Illiterate	21	7.0
Primary	143	47.7
Secondary & above	136	45.3
Mother's occupation		
Housewife	248	82.7
Employee	52	17.3
Residing area		
Rural	193	64.3
Urban	107	35.7

Regarding use of oral rehydration solution (ORS), the most (213, 71.0%) of the mothers always used ORS during the attack of diarrhoea. Among them (54, 18.0%) mothers sometimes used and remaining 33(11.0%) never practiced ORS. (Figure 1)

Figure 1: Pattern of Oral Rehydration Therapy practice by mothers (n=300)



Almost all (281, 93.7%) of the mothers had adequate knowledge about ORS, 253(84.3%) had knowledge about how to prepare ORS, 235(78.3%) knew when to administer ORS and (170, 56.7%) knew the amount to administer. (Table II)

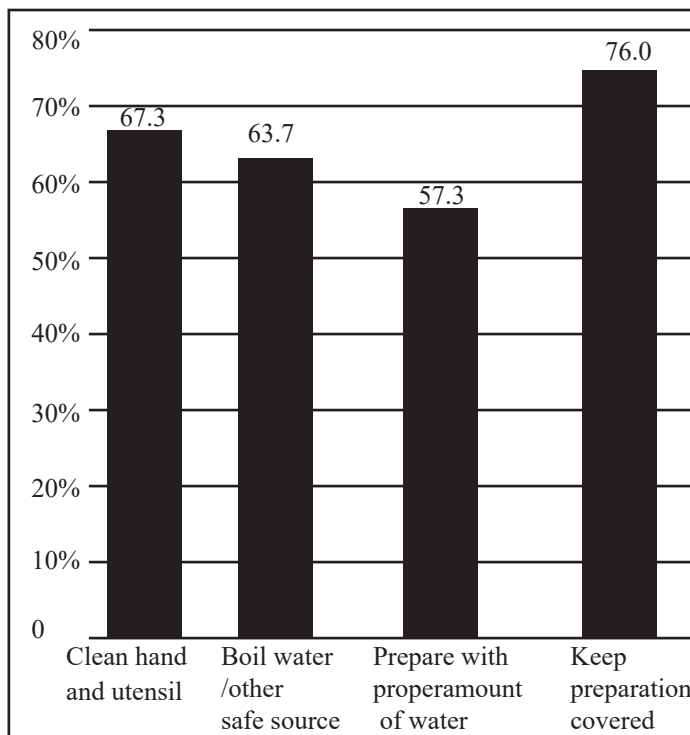
Table II: Knowledge of mothers about Oral Rehydration Therapy (n=300)

Variables	Yes (%)	No (%)
Knowledge about ORS	281 (93.7)	19 (6.3)
Knew how to prepare ORS	253 (84.3)	47 (15.7)
Knew when to administer ORS	235 (78.3)	65 (21.7)
Knew the correct amount to administer	170 (56.7)	130 (43.3)

*ORS- oral rehydration solution

Majority (202, 67.3%) of the mothers had prepared ORS using clean hands and utensils and 190 (63.7%) mothers used safe water from different sources. Here, 172 (57.3%) mothers made the preparation with proper amount of water during feeding, 228 (76.0%) mothers kept the preparation with proper covering. (Figure-2)

Figure 2: knowledge and practices of mothers in preparation of Oral Rehydration Solution (n=300)



Discussion

Among all the mothers, (279, 93.0%) were educated and half of them had finished their higher school education. This is similar with the results of a study done in Karnataka.¹² This also showed a significant association with good knowledge about ORS. In a study at Rawalpindi, Pakistan¹³ showed that about 68% mothers always used ORS during diarrhoea, which is similar to this study. In our study, we found that majority of the mothers (281, 93.7%) had good knowledge and attitude for personal hygiene. But hand washing during preparing ORS and feeding was less practiced (202, 67.3%) which is lower with a study done in urban slums of Delhi (88.0%).¹⁴ The Knowledge about ORS among mothers in our study was (281, 93.7%) higher than the studies in different states of India- Telangana (73.3%),¹⁵ Delhi (70.0%)¹⁴ and rural Aligarh (72.0%).¹⁶

As in our study, mothers who were aware of ORS, (253, 84.3%) were able to prepare it correctly, which was higher than studies conducted in Rawalpindi, Pakistan (67.4%),¹³ Rural Aligarh, India (27.3%)¹⁶ and the study in rural Delhi (48.0%).¹⁴ Out of all mothers who were aware of ORS, 56.7% had the knowledge of using correct amount of ORS- this finding is higher than the previously mentioned study conducted in Rawalpindi, 170 (56.7%) Pakistan (21.5%).¹³

However, majority (235, 78.3%) of them had the knowledge when to administer ORS during diarrhoeal episode.

Conclusion

Positive attitude was seen among the participant mothers regarding use of Oral Rehydration Solution (ORS) in diarrhoeal diseases of their children. But knowledge and practices of mothers regarding its administration was not sufficient. Public awareness, health education and use of the mass media will ensure more mothers to be reached with information on ORS to reduce diarrhoeal death as well as under-five mortalities.

Conflict of Interest: None declared

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