

ORIGINAL ARTICLE

Knowledge, Perceptions and Practices about Oral Rehydration Therapy in Under Five Children Suffering from Diarrhea in Mirpur, AJK

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ABSTRACT

Background: Dehydration associated with diarrheal diseases is a leading cause of mortality. Most of these deaths can be prevented by preventing or timely treating dehydration and using oral rehydration therapy is one of the options.

Aim: To evaluate the knowledge and practices associated with the preparation and use of oral rehydration therapy in pediatric patients suffering from diarrhea.

Study design: Descriptive cross-sectional study,

Place & duration of study: Mohi-ud-Din Teaching Hospital, Mirpur, AJK, from January to August 2021,

Methods: Mothers and care-givers of children were selected. A structured questionnaire was used to assess the knowledge and practices of the participants. The information gathered included epidemiological and socio-demographic data as well as about the knowledge, attitude and practices regarding prevention of diarrhea, usage, preparation and mode of administration of oral rehydration therapy among study respondents.

Result: Mean age of care givers was 31.53±5.973 years. Mean income of a household was 28233±10986 PKR while median income was 30000 PKR. As per the employment status, 78.33% were housewives and 21.67% of women were working. Regarding the educational status, 15.67% were illiterate while 84.33% were literate. About 46.66% of the participants knew about the various ways to prevent diarrhea. Regarding the knowledge and assessment of practices of care givers about home-based remedies and ORT, majority of the participants, 78.33%, knew about ORT, 75% have used ORT and 69.33% knew about how to prepare ORT. Furthermore, 64.66% prepared ORT using standard method and 65% knew that ORT replaced lost water in the body.

Conclusion: There was a high level of information and awareness among caregivers about the oral rehydration therapy, its correct preparation, usage and method of administration leading to its appropriate usage in diarrhea patients. But still there is a need to increase the awareness among people by mass awareness campaigns to better inform the masses and to maximize the acceptability, usage and benefits of oral rehydration therapy.

Keywords: Dehydration, diarrhea, rehydration, therapy, oral

INTRODUCTION

Diarrheal illnesses are one of the chief causes of mortality worldwide among children who are under the age of five accounting for about 7.6 million deaths per annum¹. Principle reason of deaths in such cases is dehydration, resulting from diarrhea and vomiting, and most of these causalities can be prevented by either preventing or treating dehydration^{1,2}. Critical factor in reducing diarrhea associated mortality is the introduction of oral rehydration therapy (ORT).

ORT has become the backbone of WHO efforts to reduce morbidity and mortality associated with diarrheal diseases. ORT not only prevents dehydration-induced deaths but also children appeared to better nourish and grew faster when they have received glucose based rehydration solutions³⁻⁵. Despite its efficacy and effectiveness in preventing dehydration, ORT is still underused globally and particularly in under developed countries⁶. It is very important to augment the acceptance and use of ORT especially in those countries where there is highest morbidity and mortality secondary to dehydration and diarrheal diseases. This will not only help improve survival but also reduce the number of preventable deaths in under five children as ORT corrects fluid loss and desiccation in sick children^{1,7,8}.

Oral rehydration solution (ORS) is one of the main types of ORT which can be easily prepared at home by mixing six level teaspoons of sugar and half level teaspoon of salt which should be dissolved in one liter of clean, preferably boiled water. Avoid adding too much sugar or salt as it can be dangerous for the health of child but adding a little bit of extra water doesn't cause a depends upon the preferences and beliefs of caregivers and

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because of this, many such caregivers prefer to use traditional remedies rather than using ORT in their children who are suffering from diarrhea. This matter is further compounded by the poor knowledge and awareness of such people^{2,10}.

It was believed that education has a positive effect on health seeking behavior of mothers and care givers as they are more prone to seek medical help earlier during the course of the disease. It was shown that literate women, even those who had completed primary education, are more likely to get medical treatment for their sick children who were suffering from diarrhea rather than uneducated mothers. They also possess more knowledge and awareness regarding various treatment modalities available and thus enhancing their chances of seeking treatment for their sick child and are more prone to accept and initiate ORT early in the course of disease¹¹.

Mother or caregivers' familiarity and knowledge about dehydration secondary to diarrhea and other causes and the management of dehydration using ORT and specifically ORS plays a pivotal role in the management of dehydration and also significantly affects the outcome in terms of morbidity or mortality. As there was not much research work done specifically on this subject especially the use of ORT in our area, therefore we have conducted this study to evaluate the knowledge and practices associated with the preparation and use of ORT in pediatric patients suffering from diarrhea in our area.

MATERIALS & METHODS

This descriptive cross-sectional study was conducted at Mohi-ud-Din Teaching Hospital, Mirpur, AJK from January to August 2021. It was a convenience sampling. The study included mothers and

care givers of under five children suffering from diarrhea and there were 300 participants. A structured proforma was used to gather data from study participants. This proforma was given to study participants who consented to be included in this study. The information gathered included socio-demographic and epidemiological features as well as about the knowledge, attitude and practices regarding prevention of diarrhea, usage, preparation and mode of administration of ORT among study respondents. All the information was recorded and analyzed using Microsoft Excel 2022. Results were stated in the form of percentages and shown as tables and charts.

RESULTS

There were 300 participants in this study. Mean age of care givers was 31.53±5.973 years. All of them were Muslims and married. Median number of family members in a household was 5 while minimum was 01 and maximum number was 8. Mean income of a household was 28233±10986 PKR while median income was 30000 PKR.

As per the employment status, 78.33% were housewives and 21.67% of women were working. Out of these working women, 11.67% were self-employed while 10% were employed. Regarding the educational status, 15.67% were illiterate while 84.33% were literate. Among literate population, 12% had completed fifth grade, 43% had completed matriculation and 29.33% were graduate as shown in Table 1.

When asked about the prevention of diarrhea, 46.66% of the participants knew about the various ways to prevent diarrhea. Majority of the participants, 78.33%, knew about ORT, 75% have used ORT and 69.33% knew about how to prepare ORT (Fig. 1). As per the health seeking behavior of study participants, most of them 76.67% preferred hospital followed by rural health center, by 21.66%, which was close to their residence. Only 1.67% went to a private clinic to seek help for their ailing child as shown in figure 2.

Regarding the knowledge and assessment of practices of care givers about home-based remedies and ORT, 64.66% prepared ORT using standard method, 65% knew that ORT replaced lost water in the body and 44.34% believed that it should be given after every loose stool while 42.33% believed that it should be given 2-3 times a day and 5% believed that it should be given only once a day as given in Table 2.

Figure 1: Knowledge status of study population about ORT, (n=300)

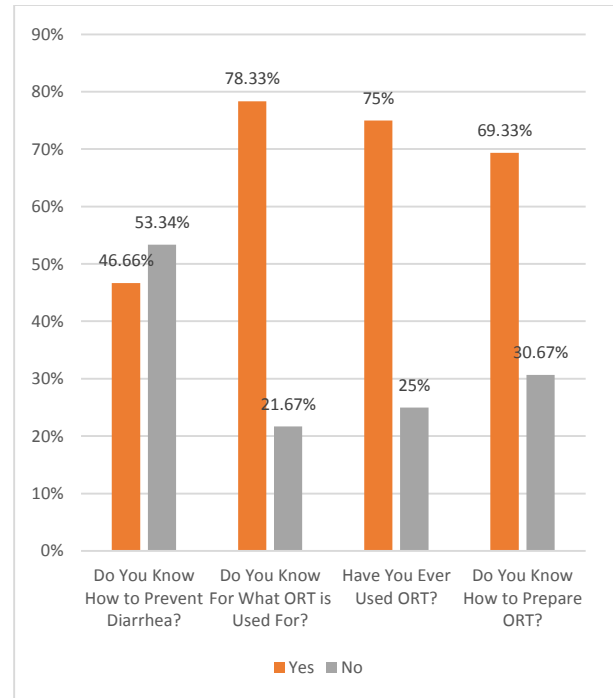


Figure 2: Help seeking behavior of study population about ORT, (n=300)

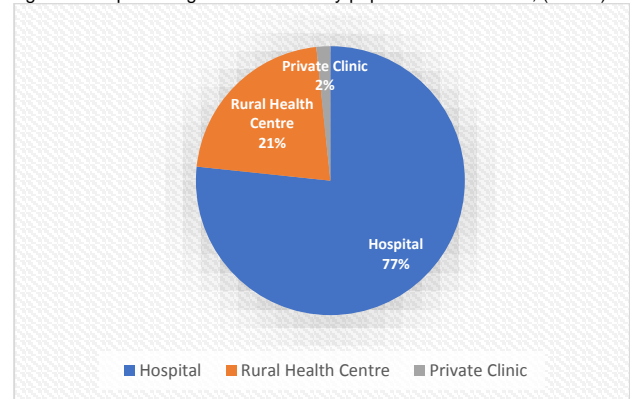


Table 1: Employment and educational status of study participants, (n=300)

Type of Employment	Number	Percentage
Housewife	235	78.33%
Self employed	35	11.67%
Employed	30	10%
Total	300	100%
Educational Status		
Illiterate	47	15.67%
Primary	36	12%
Secondary	129	43%
Graduate	88	29.33%
Total	300	100%

Table 2: Knowledge and assessment of care givers about role of ORT in the management of diarrhea, (n=300)

Variable	Number	Percentage
What are the uses of ORT?		
No Idea	65	21.67%
Adds lost water to body	195	65%
Cure diarrheal disease	40	13.33%
Total	300	100.00%
How do you prepare ORT?		
No Idea	90	30%
Standard method	194	64.66%
Home formula	16	5.34%

Total	300	100%
How Do You Give ORT to Child?		
After every loose stool	133	44.34%
Once a day	15	5%
2-3 times a day	127	42.33%
Whenever child wants a drink	25	8.33%
Total	300	100.00%

DISCUSSION

ORT is well-established treatment modality for the treatment and prevention of dehydration and it is believed to be equally effective to intravenous therapy. Furthermore, ORT can be administered at home thus avoiding hospital stay. This therapy increases the salt and water reabsorption and also significantly decrease vomiting, volume loss associated with diarrhea and so the length of disease¹². Current improvements in ORT, which contains a reduced amounts of salt and glucose, has drastically reduced mortality among malnourished children.

Awareness of mothers and care-givers about health and disease prevention plays a pivotal role in the health and well-being of not only their children but also whole family and in turn whole society¹³. Households play a key part in the handling the children suffering from diarrhea because it's very common to manage diarrhea at home in rural settings but the knowledge of rural caregivers in this regard is meager. This not only involves lack of knowledge about preparing ORT but also about its storage, composition and frequency of administration^{4,14}.

In our study, the mean age of care givers was 31.53±5.973 years and 78.33% were housewives while 21.67% of women belonged to working class. Out of these, 11.67% were self-employed while 10% were employed. Similarly, the literacy rate was found to be 84.33% while 15.67% were illiterate. Among literate population, 12% had completed fifth grade, 43% had completed matric and 29.33% were graduate. In a study conducted in Turkey, it was reported that mean age of mothers was 32.37±4.63 and the 14.4% had completed their primary education while 17.9% had completed their secondary education and 45.9% were graduates. Similarly, they have reported that 40.2% of mothers were housewives¹⁵. Majority of our study participants, (78.33%), knew about ORT but 21.67% didn't and preferred home based remedies. Kaçan et al have also reported that the study participants in their study used home based remedies to treat diarrhea in their children. Preferred ones were giving banana, mashed potatoes or porridge¹⁵. Different other studies also reported that a wide variety of home remedies were used by mothers/care-givers for treating diarrhea such as sugar-salt mix for drinking, breast feeding, drinking rice water or fruit juice, using soups, yogurt or mashed potatoes^{15,16,17}.

Majority of our participants, 78.33% and 69.33%, knew about ORT and also about how to prepare it. Onwukwe et al also reported that majority of their respondents, 89.4%, had heard of ORT². But, the prevalence of ORT was only 51% in a study conducted by Migna et al in Ethiopia¹⁸. This difference could be attributed to the fact that these studies were conducted at different geographical locations and due to variable study population, rural vs urban.

Limitation of the study: We haven't considered other components of home-based management of diarrhea which are commonly used in society like home remedies in detail. Large stage randomized trials are required to fully explore the societal attitudes, perceptions and beliefs regarding home-based management of diarrhea specifically focusing on various home-based remedies.

CONCLUSION

There was a high level of information and awareness among caregivers about the oral rehydration therapy, its correct preparation, usage and method of administration leading to its appropriate usage in diarrhea patients. But still there is a need to

increase the awareness among people by mass awareness campaigns to better inform the masses and to further increase the acceptability, usage and benefits of oral rehydration therapy.

Conflict of interest: Nothing to declare

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