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Research Article

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Knowledge regarding oral rehydration solution among mothers of under five children from a rural area of Rangareddy district, Telangana

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ABSTRACT

Background: Diarrhea is still a major killer of children under five. Almost all the deaths due to diarrhoea can be averted by preventing and treating dehydration by use of ORS (oral rehydration solution).

Methods: A cross sectional study was done among mothers who had children of 6 months to 5 years of age. Study area was rural health and training centre (RHTC), Peddamangalaram, Department of Community Medicine, Bhaskar Medical College, Rangareddy District, Telangana. 100 mothers were selected for the study by convenient sampling technique. A pre designed, pre tested questionnaire was used to get the relevant information.

Results: Mean age of the mothers was 24.87±5.8 years with majority belonged to Hindu religion, one fourth were illiterates and two thirds were home makers. About two thirds (62%) were aware about the oral rehydration solution, but only 58% agreed that ORS is useful and only 54% knew the condition where ORS is used. Health workers (ASHA/ANM) were the major sources of information about ORS.

Conclusions: The present study thus corroborates to that of observations made by various authors; denoting there is a gap between knowledge and practice of administering ORS in diarrhoeal diseases in children.

Keywords: Oral rehydration solution, Mothers, Awareness, Health workers

INTRODUCTION

Diarrhea is still a major killer of children under five. It accounts for 9 percent of all under five deaths a loss of more than 0.6 million child lives in 2012. Most of these deaths occur among children less than 2 years of age. In India, acute diarrhoeal disease accounts for about 8 percent of deaths in under 5 years age group. During the year 2013, about 10.7 million cases with 1,535 deaths were reported in India.² Reduction of childhood mortality is one of the prime goals of national health mission and millennium development goals.

Diarrhoeal deaths are usually clustered in summer and monsoon months and worse affect malnourished children and children under two year of age. Almost all the deaths due to diarrhea can be averted by preventing and treating dehydration by use of ORS (oral rehydration solution) and administration of Zinc tablets along with adequate nutritional intake by the child with diarrhea. Diarrhea can be prevented with safe drinking water, hand-washing, sanitation, immunization and breastfeeding / appropriate nutrition.3

Oral rehydration treatment can be safely and successfully used in treating acute diarrheas due to all etiologies, in all age groups, and in all countries. The aim of oral fluid therapy is to prevent dehydration and reduce mortality. Oral fluid therapy is based on the observation that glucose given orally enhances the intestinal absorption of

salt and water, and is capable of correcting the electrolyte and water deficit.⁴

Since its introduction and development for widespread use in the latter part of the 20th century, oral rehydration therapy has decreased human deaths from dehydration in diarrheal illnesses, especially in cholera epidemics and in children. It represents a major advance in global public health. ORS is available in packets & sachets which can be readily mixed with water and used for consumption. Though very simple to use, mothers must have adequate knowledge about the effective utilization of ORS.

The present study has been done with an objective to determine the knowledge about ORS among mothers of under five children and the factors associated with it.

METHODS

It is cross sectional study conducted for 3 months (August 2015-October 2015) at Rural health and training centre (RHTC), Peddamangalaram, Department of community medicine, Bhaskar medical college, Rangareddy District, Telangana. Study population includes mothers who had children of 6 months to 5 years of age and sample size and sample technique consists 100 mothers were selected for the study by convenient sampling technique.

Data collection

Informed verbal consent was taken from the study participants prior to the start of the study. A pre designed, pre tested questionnaire was used to get the relevant information by adopting interview technique. Questionnaire had questions pertaining to socio demographic information, knowledge about ORS, methods of preparation, source of information and others.

Data analysis

Data entry was done using Microsoft Excel 2010 and analysis using EPI INFO version 7. Data was summarized in percentages and proportions. Statistical associations was done using Chi square test wherever necessary with p<0.05 considered as statistically significant.

RESULTS

Socio demographic profile

Out of the total 100 study populations, mean age of the mothers was 24.87 ± 5.8 with majority (62%) belonging to 21-25 years age group followed by 26-30 years age group (17%). Majority (88%) belonged to Hindu religion.

With regards to literacy status, one fourth (24%) done their education up to intermediate and above, 27% up to

primary school, 33% up to secondary school and 16% were illiterates.

Almost two thirds 64% were home makers by occupation and 23% were manual labourers.

Modified B.G.Prasad's socio economic classification⁵ was used to determine the socio economic status of the study population. Based on that, 46% belonged to lower middle (class III), 18% belonged to upper middle (class II), 15% belonged to upper class (class I), 12% belonged to upper lower (class IV) and 9% belonged to lower (class V).

The mean number of living children to the mothers was 1.8±6.4 with majority (46%) having one living child at the time of the study (Table 1).

Table 1: Socio-demographic profile of the study population (n=100).

Demographic variable	Frequency	Percentage		
Age of the mothers (years)		J		
≤20	11	11%		
21-25	62	62%		
26-30	17	17%		
>30	10	10%		
Religion				
Hindu	88	88%		
Muslim	10	10%		
Christian	02	02%		
Literacy status				
Illiterate	16	16%		
Primary School	27	27%		
Secondary school	33	33%		
Intermediate and above	24	24%		
Occupation				
Home maker	64	64%		
Manual labourer	23	23%		
Others	13	13%		
Socio economic status				
Class I (Upper)	15	15%		
Class II (Upper middle)	18	18%		
Class III (Lower middle)	46	46%		
Class IV (Upper lower)	12	12%		
Class V (Lower)	09	09%		
Number of living children				
One	46	46%		
Two	38	38%		
Three and above	16	16%		

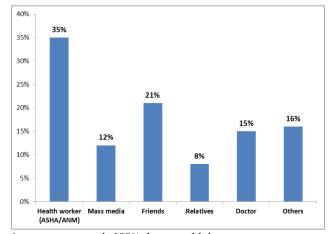
Knowledge related to ORS

About two thirds (62%) were aware about the oral rehydration solution. But only 58% agreed that ORS is useful and only 54% knew the condition where ORS is used (diarrhoea/loose motions/dehydration). They were asked to demonstrate the way they use ORS packets. Only about 30% knew the correct method of preparation of ORS. Only 42% knew about the place of availability

of ORS, where majority told that primary health centres were the places to approach for ORS (Table 2).

Table 2: Knowledge related to oral rehydration solution (ORS).

Knowledge related to ORS	Yes	No	Don't know
Awareness about ORS	62%	38%	
Agreed that ORS is useful	58%	24%	18%
Knew the condition where ORS is used.	54%	62%	06%
Knowledge about the method of preparation of ORS	30%	46%	
Knowledge about the place of availability of ORS	42%	33%	25%



*percentage exceeds 100% due to multiple answers.

Figure 1: Source of information about ORS.

Knowledge about the precautions related to the use of ORS was also assessed. In that about 62% said that ORS can be used beyond 24 hours of preparation. 34% agreed to the misnomer that ORS needs to be stopped if loose motions or vomiting continue.

Association between demographic factors and knowledge related to ORS

Among literate mothers, 74% were aware of ORS & among illiterates only 40% were aware of ORS. Literacy status of mothers was found to be significantly associated with the awareness of ORS (p<0.05). Rest others factors including age of mothers, occupation, socio economic status were not found to be statistically significant with knowledge related to ORS.

Source of information about ORS

Health workers (ASHA/ANM) were the major sources of information about ORS (35%) followed by friends (21%), doctors (15%), mass media (12%), relatives (8%) and others (16%).

DISCUSSION

Present cross sectional study which has been done with an objective to determine the knowledge regarding oral rehydration solution among mothers of under five children. Mean age of the mothers was 24.87±5.8 years with majority belonged to Hindu religion, one fourth were illiterates and two thirds were home makers.

Knowledge about ORS

About two thirds (62%) were aware about the oral rehydration solution. But only 58% agreed that ORS is useful and only 54% knew the condition where ORS is used. About 62% said that ORS can be used beyond 24 hours of preparation. And 34% agreed to the misnomer that ORS needs to be stopped if loose motions or vomiting continue.

It's very obvious from the above findings that though the awareness related to ORS was good, there were wider gaps in the knowledge related to its use and misconceptions prevailed about ORS utilization. Literacy status of mothers was found to be significantly associated with the awareness of ORS. These findings are in concordance to Rasania SK et al study where only 38.7 per cent of the mothers were able to tell the correct method of preparation and the study established that poor literacy status limits the ability of mothers to utilize ORS properly for preventing diarrhoeal induced dehydration. ⁶

Similar findings were seen in Dhadave MM et al study where 65.7% of mothers were aware of ORS solution; literacy status and occupation of the mother were found to be significantly associated with the awareness of ORS. And also in study by Eashin Gazi et al 94.1% study population have heard about ORS and 88.2% had knowledge that prepared ORS to be used within 24 hours. But only 48.1% knew the method of preparation of ORS and 65.8% knew about the adequate amount of ORS to be given.

Thammanna PS et al in their study observed that 63 (25.2%) mothers did not know about ORS, 146 (58.4%) knew about the role of ORS in diarrhoea, 129 (51.6%) had knowledge regarding homemade ORS. 9 Only 119 (47.6%) mothers knew how to prepare ORS properly.

In contrast to the above findings, study by Saurabh S et al observed that three-fourths of mothers had heard of oral rehydration solution (ORS) and knew how to prepare and administer ORS. ¹⁰

Source of information

In the present study, health workers (ASHA/ANM) were the major sources of information about ORS. This is in concordance with findings of Mahor GR where the most common source of information was health care providers. ¹¹

In Dhadave MM et al study, 89% of mothers stated that their source of information regarding ORS was the doctor. 4.4% stated family while 2.2% each stated health worker, media and neighbours as their sources of information.⁷

CONCLUSION

The present study thus corroborates to that of observations made by various authors; denoting there is a gap between knowledge and practice of administering ORS in diarrhoeal diseases in children. There is a need and scopes for strengthening and supervision of services of primary health care providers in the field to enable the beneficiaries have knowledge, behavioural changes and proper utilization. This will go a long way in reducing child mortality due to diarrhoeal diseases and achieve the goal of national health mission.

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