

STUDY OF KNOWLEDGE OF MOTHERS REGARDING USE AND PREPARATION OF ORS IN ACUTE DIARRHOEARajendra Kumar Gupta¹, Gautam Lal Nagori², Devendra Kumar Jain³**HOW TO CITE THIS ARTICLE:**

Rajendra Kumar Gupta, Gautam Lal Nagori, Devendra Kumar Jain. "Study of Knowledge of Mothers Regarding use and Preparation ORS in Acute Diarrhoea". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 20, March 09; Page: 3457-3461, DOI: 10.14260/jemds/2015/499

ABSTRACT: BACKGROUND: Around the world, there are nearly 1.7 billion cases of diarrhoeal disease every year. Diarrhoeal disease is the second most common cause of death in children under five years of age. It is both preventable and treatable. Key measures to treat diarrhoea include oral rehydration therapy (ORT) with oral rehydration salts (ORS) solution. **AIMS:** The aim of this study is to find out the knowledge and attitudes of mothers regarding use and preparation of ORS solution in management of diarrheal in OPD attached to a teaching hospital. **MATERIALS AND METHODS:** This cross sectional study was carried out on 354 mothers attending the OPD at SRG Hospital Jhalawar a teaching hospital in southern Rajasthan (India). Data was collected by using a semi-structured questionnaire which asked information regarding the knowledge of mothers about ORS, source of information about ORS, the role of ORS and the method of preparation of ORS in the management of diarrhoea. **RESULTS:** Out of 240 interviewed mothers, 140 were sufficiently educated. Most of these belonged to the lower socio economic class. Only 48 knew the correct method of ORS preparation and its use. It was also seen that 32 mothers did not know about ORS. The most common source of information was health care providers. Most of the mother knew that ORS is freely available at health centre. **CONCLUSION:** The knowledge regarding method of use and preparation of ORS for management of diarrhoea was found to be inadequate in this study. More measures need to be taken to improve this knowledge and make mothers aware about the preparation and use of ORS.

KEYWORDS: ORS, knowledge, diarrhoea.

INTRODUCTION: Most common cause of deaths in children under five years old is diarrhoeal disease, second only to ARI and is responsible for killing around 760 000 children every year. Acute diarrhoea if lasts longer, may leave the body without the water and salts that is necessary for survival. Most children who die from diarrhoea actually die from severe dehydration and fluid loss. Children who are malnourished or have compromised immunity as well as children suffering from HIV are most at risk of life-threatening diarrhoea. 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.¹ Diarrhoeal disease is a leading cause of child mortality and morbidity in the world, and mostly results from contaminated food and water sources. Worldwide, 780 million individuals lack access to safe drinking-water and 2.5 billion lack proper sanitation. Diarrhoeal diseases caused by infection are widespread throughout developing countries. In less developed countries, children under three years old experience on average three episodes of diarrhoea every year. Each episode deprives the child of the nutrients necessary for growth. As consequences, diarrhoea becomes a major cause of malnutrition, and malnourished children are more likely to fall ill from diarrhoea. Interventions to prevent diarrhoea, including safe drinking-water, use of improved

ORIGINAL ARTICLE

sanitation and hand washing with soap can reduce disease risk. Diarrhoea can be treated with a solution of clean water, sugar and salt, and with zinc tablets.¹ Timely management of the children with ORS has substantially declined the mortality and morbidity from acute infectious diarrheal.²

MATERIALS AND METHODS: A cross-sectional descriptive study was carried out among mothers who attended the OPD at urban health centre attached to the paediatric OPD Jhalawar Medical College a semi urban area and distirct headquarter of southern Rajasthan during a period of 6 months (July-December 2014) to assess the knowledge and attitude regarding role of ORS in management of diarrhoea. A total of 287 mothers attended the paediatric OPD. Out of which 240 mothers willing to participate in the study were enrolled in this study by using convenience sampling who had children of 6 months to 5 years of age while the mothers whose children were below 6 months and above 5 years of age were excluded from the study. In present study, data was collected by using a semi structured questionnaire. The knowledge and attitude of the mothers pertaining to ORS was defined as awareness about the availability and preparation of ORS and its use in the management of diarrheal diseases. The questionnaire included questions concerning the knowledge about ORS, method of preparation and source of information about ORS and also the role of ORS in the management of diarrheal diseases.

RESULTS: Out of the total 240 interviewed mothers, only 34 were found to be working whereas remaining were housewives. In this study, 58.4% of mother(140) were had education up to or more than 10th class, while 41.6% of mother(100) were not educated up to 10th class, and very few of them had education up to 8th class. In the current study, most of the respondents (184) belonged to lower socioeconomic class. Only 44 respondents belonged to the middle and only 12 belonged to the upper socioeconomic class.

Parameter		Frequency(N)	Percentage
1 Child Age	6 -11 months	96	40%
	12 - 23 months	63	26%
	2-5 years	81	34%
2 Mother's Age	18 - 25 years	153	64%
	>25 years	87	36%
3 Mother's Education	Illiterate or less than 10 th pass	100	41.6%
	More than 10 th pass	140	58.3%

Table 1: Demographic profile of participating mothers

In this study, most of the mothers were aware of the availability of ORS. Out of the 240 study participants, 107 mothers were aware that ORS is used to fulfil the deficiency of water in diarrheal diseases whereas only 18 respondents were aware that ORS is used to fulfil the deficiency of both water and salt in diarrheal diseases. It was also seen that 115 respondents were unaware about the use of ORS (Table 2).

ORIGINAL ARTICLE

	Respondent (n)	Respondent (n)	Respondent (n)
ORS	Useful in diarrhoea (195)	Not useful (13)	Don't know(32)
ORS available at	Freely available in health facility (163)	Available at medical store (68)	Don't know(9)
ORS what does it do	It replaces lost water and salt (38)	Replaces lost water (107)	Don't Know (95)
How to make ORS	One pack in measured volume of water (48)	Some water and some powder (117)	Don't Know(75)
ORS is given	Slowly at small interval (113)	On demand (96)	Don't know (31)
ORS use is explained	By health care provider (156)	Drug dispenser (23)	None (61)

Table 2: Knowledge about use and preparation of ORS

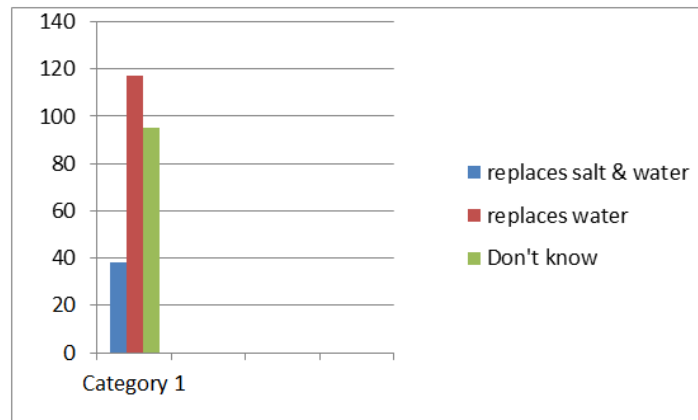


Fig. 1: Knowledge about role of ORS

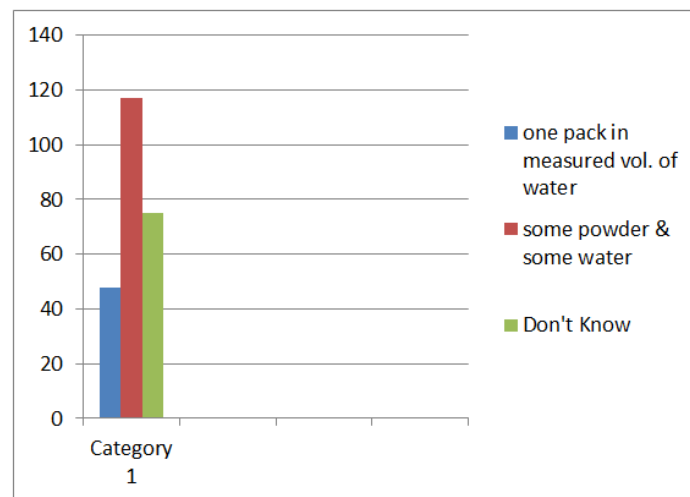


Fig. 2: Knowledge about preparation of ORS

ORIGINAL ARTICLE

DISCUSSION: Proper use and availability of ORS has proven its role in reducing the morbidity and mortality associated with acute diarrhoeal diseases. Unfortunately, especially in developing countries, due to lack of proper knowledge in mother, regarding availability, preparation and use of ORS, this goal are far from achieved. Inappropriate sanitary conditions, unsafe drinking water and lack of hygiene is also responsible for not able to reduce the incidence of diarrhoeal diseases. In this study where although 58.3% of mother are educated, only 20% knew the correct method or preparing ORS. But most of them preparing ORS in wrong way. Mothers having education beyond primary level, has shown positive impact regarding knowledge of composition proper preparation and how it is given. In current study 81% of mother understood the advantage of using ORS in diarrhoeal diseases, while 13.3% were totally unaware about ORS. About 67% percentage of mother knew that it is freely available in Govt. hospital. Health care provider explained the use and preparation of ORS to 65% of mothers.

The results are somewhat different from the study carried out by Sultana A. et al in Rawalpindi who found out that 60% mothers were found to have adequate knowledge regarding the method of ORS preparation whereas the same information was observed to be partial and incomplete among 35.94% and 4.06% respondents although 61.87% mothers were belonging from middle social class.³

In a similar study by Ibrahim MM et al, it was suggested that ORS was mainly used by the mothers who were capable of allocating their time to health care.⁴ It was seen in an educational intervention study in Nepal by Mukhtar Ansari et al that Education brought about significant improvement in knowledge +attitude and practice at 1st, 2nd and 3rd follow-up. The median scores of knowledge, attitude and practice increased from 14, 7, 6 to 26, 9, 13, respectively, due to repeated interventions. Furthermore, interventions strengthened the correlation between knowledge, attitude and practice.⁵

CONCLUSION The knowledge regarding use and preparation of ORS solution for management of diarrhoea was found to be inadequate in this study. Though most mothers are aware that it is useful, most are not aware of its proper preparation and use. More informative and educational measures need to be adopted to improve this knowledge and make mothers aware about proper preparation and use of ORS.

REFERENCES:

1. World Health Organization. Diarrhoeal disease fact sheet. N° 330 April 2013. <http://www.who.int/mediacentre/factsheets/fs330/en/index.html> accessed on 10th April 2013.
3. Cezard JP, Bellaiche M, Viala J, Hugot JP. Medication in infectious acute diarrhea in children. *Arch Pediatr* 2007Oct; 14 Supp 3: S1 69-75.
2. Sultana A, Riaz R, Ahmed R, Khurshid R. Knowledge and Attitude of Mothers Regarding Oral Rehydration Salt. *J of Rawalpindi Med Colg* 2010; 14(2): 109-111.
3. Ibrahim MM, Aden AS, Omar HM, Wall S, Persson LA. Diarrhea among children in rural Somalia. Maternal perceptions, management and mortality. *Ann Trop Paediatr*. 1994; 14(3): 215-22.
4. Mukhtar A, Ibrahim MIM, Shankar PR. Mothers' Knowledge, Attitude and Practice Regarding Diarrhea and its Management in Morang Nepal: An Interventional Study. *Trop J Pharm Res*, October 2012; 11(5): 847-54.

ORIGINAL ARTICLE

5. Ahmed A, Malik IA, Iqbal M et al (1990) the use of ORS (NIMKOL) in management of childhood diarrhoea by mothers in the suburbs of Rawalpindi, Islamabad. J Pak Med Asso, 8: 178-82.
6. Widarrsa KT & Muninjaya AA (1994) Factors associated with the use of oral rehydration solution among mothers in West Lombok, Indonesia. J Diarr Dis Res, 12 (4): 2614.
7. Ahmed IS, Eltom AR, Karrar ZA & Gibril AR (1994) Knowledge, attitude and practices of mothers regarding diarrhoea among children in a Sudanese rural community. East Afr Med J, 11: 716-19.
8. Raghu MB, Batasubhramanian S, indumathy & Baiasubhramanayam G (1994) Awareness of and attitude towards oral rehydration therapy, fnd J Pediatr, 62 (4): 43943.
9. Bhatia V, Swami HM, Bhatia M & Bhatia SPS (1999) Attitude and practices regarding diarrhoea in a rural community in Chandigarh. Ind J Pediatr, 66: 499-503.
10. Rao KV, Mishra VK & Retherford RD (1998) Knowledge and use of oral rehydration therapy for childhood diarrhoea in India: Effect of exposure to mass media. National Family Health Survey, Subject Report No. 10, November.
11. Bhandari N, Quadeer I & Bhan MK (1995) Pattern of use of oral rehydration therapy in ah urban slum community. J Ind Med Asso, 93 (6): 23942.
12. Ahmed FU, Rahaman ME & Mahmood CB (2000) Mother's skill in preparation of oral rehydration salt solution. Ind J Pediatr, 67 (2): 99-102.
13. Merrich N, Davidson B & Fox S (1996) Treatment of acute gastroenteritis: Too much and too little care. Clin Pediatr, 9: 429-35.

AUTHORS:

1. Rajendra Kumar Gupta
2. Gautam Lal Nagori
3. Devendra Kumar Jain

PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Paediatrics, Jhalawar Medical College, Jhalawar.
2. Associate Professor, Department of Paediatrics, Jhalawar Medical College, Jhalawar.

FINANCIAL OR OTHER

COMPETING INTERESTS: None

3. Junior Specialist, Department of Paediatrics, Jhalawar Medical College, Jhalawar.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Rajendra Kumar Gupta,
III/1 Medical College Campus,
Jhalawar, Rajasthan-326001.
E-mail: dr_rajendragupta@hotmail.com

Date of Submission: 09/02/2015.
Date of Peer Review: 10/02/2015.
Date of Acceptance: 26/02/2015.
Date of Publishing: 06/03/2015.