

Level of knowledge of mothers (18-35 years of age) of under 5 children regarding ORS therapy

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ABSTRACT

Context: Diarrhea is a preventable cause of under 5 years of mortality. Mothers are a primary caregiver for children at home during an illness so this study was planned. Aims: To estimate the demographic variables and level of knowledge of mothers (18-35 years of age) of under 5 children regarding ORS therapy. Settings and Design: The study was conducted in selected rural areas Chandandih (a small village in Raipur district). There is one sub-center and four Anganwadi’s in Chandandih. The population of this study was the mother (18-35 yr.) of under 5yr children. In this study non-probability, purposive sampling was adopted for selecting the sample, and the sample size is 60 mothers. Methods and Material: In this study, 60 mothers were enrolled and their demographic variables were asked, then a self-structured questionnaire was administered. Statistical Analysis Used: The data were analyzed by using descriptive statistics. Demographic variables were analyzed by using descriptive measures (frequency and percentage) and knowledge was analyzed using descriptive statistics (means, standard deviation). Results: This study showed that little and average levels of knowledge regarding ORS therapy of mothers were around 63.34% which may be attributable to their qualification level which was maximum till primary education. Moreover, many were housewives. Only 16.66% had a good level of knowledge regarding ORS therapy. Conclusions: 63.34% had little or average knowledge regarding ORS therapy.

Keywords: Diarrhea, maternal and child health, ORS

Introduction

Diarrhea is the leading cause of childhood mortality and morbidity in children under 5 years of age. Especially in developing countries. It also acts as a major contributor to undernutrition. In 2015, diarrhea caused more than 1.3 million deaths globally and was the fourth leading cause of death among children younger than 5 years. In India, mortality among under 5-year children due to diarrheal disease is 18% as per the WHO report 2006. Diarrhea can last for several days and can deplete the body without water and salts that are necessary for survival. Most children who died from diarrhea die from severe dehydration and fluid loss.

Oral rehydration therapy is a well-established therapy for the prevention and treatment of dehydration, clinically as effective as intravenous therapy in most cases can be carried out at home, thus avoid stay. Oral rehydration solution enhances and promotes the reabsorption of sodium and water and studies indicate that these solutions greatly reduce vomiting, volume loss from diarrhea, and duration of illness. Fluid therapy with oral rehydration solution and other home solutions, non-stop feeding during diarrhea, and continued breastfeeding is one of the typical treatments. Recent advancement in managing a diarrheal disease is with oral rehydration solution containing a lower concentration of glucose and salts in drastically reducing the number of death in malnourished children. The awareness of mother about health, disease, and preventive services is the barometer by which we

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Managing diarrhea at home is quite common among rural mothers but their level of knowledge is poor. The poor practice of using oral rehydration solution is accompanied by its incorrect preparation which is related to lack of mother prior experience.

Aim and Objectives

To estimate the demographic variables and level of knowledge of mothers (18–35 years of age) of under 5 children regarding ORS therapy.

Methodology

The study was conducted in selected rural areas Chandandih (a small village in Raipur district) which comes under Chandandih Panchayat. There is one sub-center and four Anganwadi’s in Chandandih. Ethical clearance had been obtained from institutional ethical committee. AIIMSRPRIEC/2017/118 was taken on 30.12.2017.

Study population

The population of this study was the mother (18–35 years) of under 5 year children.

Sampling technique and sampling size

In this study non-probability purposive sampling was adopted for selecting the sample and sample size is 60 mothers.

Criteria for sample selection

Inclusive criteria
Mothers of age (18–35 years) willing to participate and available at the time of data collection. Mothers of children aged under 5 years, who can speak and understand Hindi/English language.

Exclusive criteria
The study population who are having a sensory impairment.

After obtaining the written informed consent, a questionnaire method was used to collect the data from 60 participants in February 2018. It includes demographic data of participants that consists of baseline data of the mothers such as age, religion, occupation, age of children, no. of children, monthly income, type of house, source of water, history of any illness. After that a self-structured questionnaire for the assessment of knowledge was administered, there were 20 questions to assess the knowledge of the mother. A score of one was allotted to correct answers. The structured questionnaire had 4 alternative answers, the correct response was given a score of one and incorrect response zero. The total knowledge questionnaire score is 20. An arbitrary classification of knowledge score was done, which was classified as

- 75–100% - good knowledge
- 50–75% - average knowledge
- 25–50% - little knowledge
- Less than 25% - poor knowledge

Statistical analysis

The data were analyzed by using descriptive statistics. The data related to demographic variables were analyzed by using descriptive measures (frequency and percentage) and knowledge was analyzed using descriptive statistics (means, standard deviation).

Results

Table 1 reveals that out of 60 mothers (5) belonged to the age group of (18–20) years (8.33%), (2) belonged to the age group of (21–25) years (36.67%), (25) falls under the age group of (26–30) years (41.67%), and (8) belonged to the age group of (31–35) years (13.33%). In the educational status, (8) were illiterate (13.33%), (45) have completed their primary education (75%), (6) have studied up to high school (10%) and (1) were graduate (1.67%). All 60 mothers were following the Hindu religion (100%). Out of 60 mothers maximum (40) were housewives (66.67%), (16) were doing private jobs (26.67%), (2) were government servants (3.33%), and (2) were self-employed (3.33%), respectively. Regarding the number of children (21) mothers were having one child (35%), maximum (24) have two children (40%), (14) have three children (23.33%), and (1) was having more than 3 children (1.67%) out of 60 mothers. In the case of monthly income out of 60 mothers, (35) were earning between (1,000 and 3000) contributing to (58.33%) of the total, (10) were having monthly income in between (3,001 and 5,000) (16.67%), (8) were earning in between (5,001 and 10,000) (13.33%), and (7) were having monthly income more than 10,000 (11.67%). Maximum (45) were living in a kaccha house (75%), (14) were living in a pukka house (23.33%), and (1) were living in the mixed house (1.67%) out of 60, respectively. In the case of water usage, out of 60 mothers, maximum (58) were dependent on municipal water supply (53.33%), (12) were using hand pump (20%) and (16) were using bore-well water (26.67%) for their daily use and drinking, respectively. In the case of illness (58) out of 60 mothers were not having any illness contributing to (96.67%) of total and two were suffering from an illness (3.33%). The analysis of the data regarding the level of knowledge among mothers about ORS findings reveals that in the (12) out of 60 mothers have poor knowledge which is less than 25% of the

Figure 1: Frequency of level of knowledge of mothers of under 5 years children regarding ORS therapy
total data [Figure 1]. Further (19) out of 60 mothers have little knowledge (31.67%) which is in the range of 25–50%, (19) out of 60 mothers have average knowledge (31.67%) contributing to the range of 50–75% and (10) mothers have good knowledge (16.66%) which falls in the range of 75–100% [Table 2].

**Discussion**

Shah et al. (2019) conducted a descriptive cross-sectional study in Madhuban, Sunasari, Nepal among 117 mothers of under-5 to assess knowledge and practice regarding childhood diarrhea. They found that all mothers had knowledge of ORS and 68.4% were having ORS at home. They also found that 93.2% mothers were literate so education affected the knowledge of home management of diarrhea. Omole et al. (2019) conducted a study among mothers of under-5 children in Samaru, Kaduna State, Nigeria to assess the knowledge, attitudes, and practice of home management of diarrhea. They had assessed 350 mothers and found that around 93.7% had knowledge of ORS but only 34.4% of mothers would use ORS for home management of diarrhea. They had also found that source of knowledge of ORS was healthcare workers. Jamie et al. (2016) assessed the knowledge and attitude of mothers regarding ORS. They have taken 200 mothers as a sample, they found that 99.5% of mothers were aware of ORS using, the procedure of preparation and how to give it to children, only 0.5% mother was not aware. Rani et al. (2016) studied mother’s knowledge about diarrhea and its management which depends upon various factors such as educational status, socioeconomic factors, and feeding practices. The study assessed the knowledge and attitude of mothers regarding diarrhea, ORS, and feeding practices in children under 5 years of age. In the study they had taken 210 mothers as sample and result was 73.3% mothers know about ORS, 52.8% knew the correct method of preparing ORS, and 72.3% mothers continued breastfeeding and 41.4% don’t know the cause of diarrhea. They found that all mothers had knowledge of ORS and 68.4% were having ORS at home. They also found that 93.2% mothers were literate so education affected the knowledge of home management of diarrhea. They had assessed 350 mothers and found that around 93.7% had knowledge of ORS but only 34.4% of mothers would use ORS for home management of diarrhea. They had also found that source of knowledge of ORS was healthcare workers. Jamie et al. (2016) assessed the knowledge and attitude of mothers regarding ORS. They have taken 200 mothers as a sample, they found that 99.5% of mothers were aware of ORS using, the procedure of preparation and how to give it to children, only 0.5% mother was not aware. Rani et al. (2016) studied mother’s knowledge about diarrhea and its management which depends upon various factors such as educational status, socioeconomic factors, and feeding practices.

### Table 1: Frequency and percentage distribution of demographic variables of mothers (18-35 years) of under 5 year children. n=60

| Demographic Variables | No. | Percentage |
|-----------------------|-----|------------|
| **Age**               |     |            |
| 18-20 years           | 5   | 8.33       |
| 21-25 years           | 22  | 36.67      |
| 26-30 years           | 25  | 41.67      |
| 31-35 years           | 8   | 13.33      |
| **Educational status**|     |            |
| Illiterate            | 8   | 13.33      |
| Primary               | 45  | 75.00      |
| High school           | 6   | 10.00      |
| Graduate/Post graduate| 1   | 1.67       |
| **Religion**          |     |            |
| Hindu                 | 60  | 100.00     |
| Muslim                | 0   | 0.00       |
| Christian             | 0   | 0.00       |
| Sikh                  | 0   | 0.00       |
| Others                | 0   | 0.00       |
| **Occupation**        |     |            |
| Government job        | 2   | 3.33       |
| Private job           | 16  | 26.67      |
| Housewife             | 40  | 66.67      |
| Self employed         | 2   | 3.33       |
| **Number of children**|     |            |
| One children          | 21  | 35.00      |
| Two children          | 24  | 40.00      |
| Three children        | 14  | 23.33      |
| More than three children| 1 | 1.67       |
| **Monthly income**    |     |            |
| 1000-3000             | 35  | 58.33      |
| 3001-5000             | 10  | 16.67      |
| 5001-10000            | 8   | 13.33      |
| Above 10000           | 7   | 11.67      |
| **Type of house**     |     |            |
| Kuccha house          | 45  | 75.00      |
| Pucca house           | 14  | 23.33      |
| Mixed house           | 1   | 1.67       |
| **Source of water supply** |   |            |
| Municipal             | 32  | 53.33      |
| Hand pump             | 12  | 20.00      |
| Bore well             | 16  | 26.67      |
| **Any illness in mother** | |            |
| No                    | 58  | 96.67      |
| Yes                   | 2   | 3.33       |

### Table 2: Frequency and percentage distribution of questionnaire for level of knowledge regarding ORS therapy among mothers (18-35 years) of under 5 years children. (n=60)

| Knowledge          | Poor Knowledge (<25%) | Little Knowledge (25-50%) | Average Knowledge (50-75%) | Good Knowledge (75-100%) | Mean S.D |
|--------------------|-----------------------|---------------------------|----------------------------|--------------------------|----------|
| No.                | 12                    | 19                        | 19                         | 10                       | 16.66    |
| Percentage         | 20.0                  | 31.67                     | 31.67                      | 16.66                    | 9.37     |

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et al. (2014) conducted a study to better understand the extent of ORS utilization and reason for use or non-use in low resources setting. They conducted a semi-structured quantitative survey of 400 caregivers in Burkina Faso in 2014. The result was more than 80% of caregivers were aware of ORS. Less than half reported using it to treat their Child’s diarrhea. Users and non-users of ORS held substantially of different perception of the product, though all caregivers tend to follow the recommendation of healthcare worker,[13] Choudhary et al. (2014) conducted a descriptive cross-sectional study using structured questionnaires to determine the knowledge, attitude, and practice regarding diarrheal illness, its prevention, and management in mothers of under 5 children. 125 mothers were randomly selected from an urban slum of Delhi. 76% of mothers used ORS and only 26% considered it as the mainstay treatment of diarrhea. Also 42% of mothers had complete knowledge regarding the proper preparation of ORS. The present study is different from other studies as objective grading of the level of knowledge was done in this study according to questionnaire responses, so it gave a quantitative level of knowledge among mothers about ORS therapy. 63.34% of mothers fall between little or average level of knowledge. Only 16.67% of mothers had a good level of knowledge about ORS therapy. It has also been postulated that primary healthcare workers can be the main resource for educating and creating awareness among the mothers. Level of knowledge regarding ORS can be improved if these mothers can be educated for the same. The limitation of this study was its small sample size.

Conclusion

Around 63.34% had little or average knowledge regarding ORS therapy which can be due to the level of education and profession of mothers, only 75% have primary education and 66.67% were housewives.

Summary

Diarrhea is one of the important preventable cause of under-5 mortalities. Home-based management includes ORS as most important measures for it. Education levels and professional competencies affect the knowledge of mother regarding ORS therapy.

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Conflicts of interest

There are no conflicts of interest.

References

1. Mohsin AI, Raza AB, Ahmad TM. Knowledge, attitude, and practices of the mothers regarding oral rehydration solution, feeding, and use of drugs in childhood diarrhea. Annals 2009;15:38-42.

2. GBD 2015 Mortality and Causes of Death Collaborators. Global, regional, and national life expectancy, all-cause and cause-specific mortality for 249 causes of death, 1980-2015: A systematic analysis for the Global burden of disease study 2015. Lancet 2016;388:1459-544.

3. Padhy S, Sethi RK, Behera N. Mother’s knowledge, attitude and practice regarding prevention and management of diarrhea in children in Southern Odisha. Int J Contemp Pediatr 2017;4:966-71.

4. Jain H, Bamnawat S. Knowledge and attitude towards oral rehydration therapy among mothers of under-five children of South Rajasthan, India. Int J Contemp Pediatr 2016;3:394-7.

5. Mahor GR. Knowledge and attitudes of mothers regarding the use of oral rehydration solution in the management of diarrhea. Asian J Biomed Pharm Sci 2013;3:6-8.

6. Ansari M, Ibrahim MI, Shankar PR. Mothers’ knowledge, attitude, and practice regarding Diarrhea and its management in Morang Nepal: An interventional study. Trop J Pharm Res 2012;11:847-54.

7. Omole VN, Wamyil-Mshelia TM, Nmadu GA, Usman NO, Andeyantso EA, Adiri F. Knowledge, attitude and practice of home management of diarrhoea among mothers of under-fives in Samaru, Kaduna State, Nigeria. Port Harcourt Med J 2019;13:19-25.

8. Shah S, Shrestha M, Sharma B, Pandey N, Dahal S. Knowledge and practice on childhood Diarrhea among mothers having children under five years of age in Madhuban, Sunsari, Nepal. Int J Adv Res Pub 2019;3:20-4.

9. Aziz J, Ali Al, Ghafoor IK, Hasan AM. Knowledge and attitude of mothers regarding oral rehydration solution in Sulaimani. Mustansiriyah Med J 2019;105:7.

10. Rani VP, Vaz LS, Kusneniwar GN. Knowledge and attitude of mothers about Diarrhea, ORS, and feeding practices in under-five children in a rural area of Ranga Reddy, Telangana. JMSCR Oct 2016 (04):10: 13201-13209.

11. Masiha SA, Khalid A, Malik B, Shah SM. Oral rehydration therapy-knowledge, attitude, and practice (KAP) survey of Pakistani mothers. J Rawalpindi Med Coll Stud Supple 2015;19(8-S-1):51-4.

12. Bham SQ, Shah MA, Saeed F. Knowledge, Attitude and Practice (KAP) of Mothers on the use of Oral Rehydration Salt (ORS) in Children with Diarrhoea: A Cross-Sectional Survey Conducted at Dar-ul-Sehat Hospital, Karachi. Ann Abbasi Shaheed Hosp Karachi Med Dent Coll Jul - Dec 2015;20(2):126-31.

13. Digre P, Simpson E, Cali S, Larbey B, Moodley M, Diop N. Caregiver perceptions and utilization of oral rehydration solution and other treatments for diarrhea among young children in Burkina Faso. J Global Health 2016;6:020407.

14. Chaudhary P, Basu S, Dzeyetie AK, Guilla S, Khade S, Patel A, et al. Knowledge, attitude and practice of mothers regarding diarrhoeal illness in children under five years of age: A cross-sectional study in an Urban slum of Delhi, India. The J Communicable Diseases 2014;46:13-21.