

A Study to Assess the Knowledge and Practices Regarding ORT for Acute Diarrhea among Mothers of Under Five Children in RHC, Chandragiri

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Abstract

Background: Today, diarrhea remains a major public health problem. In developing countries, diarrhea is among the leading causes of childhood morbidity and mortality. An estimated one billion episodes and 2.5 million deaths occur each year among children under five years of age. About 80% of deaths due to diarrhea occur in the first two years of life [1,2]. The oral rehydration therapy is the keystone of National Diarrhoeal Disease Control Programme. The packets of oral rehydration salts (ORS) are available at the Primary health centres as well as in chemist shops. There are depot holders of ORS packets in the community too. Most of the times the health care workers do not emphasise the role, benefits and method of preparation of ORS. As a result of this mothers do not know the right method of preparation of ORS and do not understand the need to give ORS to the child [3]. *Objectives:* To assess the knowledge regarding ORT for acute diarrhea among mothers of under five children. To assess the practice regarding ORT for acute diarrhea among mothers of under five children. To associate the relationship between knowledge and practices of mothers of under five children regarding ORS for acute diarrhea with selected socio demographic variables. *Methods:* A descriptive study involving 100 mothers of under five children was carried out with interview schedule. Data were collected using a structured questionnaire. It included data regarding socio-demographic characteristics and questions pertaining to knowledge and practices of mothers of under five children about ORS. *Results:* Out of 100 study participants, 71(71%) mothers were homemakers and 42(42%) were primary education and the most common source of information regarding ORS was health personnel. It was seen that 56 (56%) mothers had moderate knowledge about ORS, 36(36%) mothers had moderate knowledge on practice regarding ORS for acute diarrhea. 100(100%) participants knew about zinc supplementation. The higher education level of mother was associated with better knowledge regarding various aspects of oral rehydration therapy. *Conclusion:* The knowledge and practices regarding the use of ORS for acute diarrhea is moderate. So, there is need to educate mothers regarding the use of ORS as well as homemade ORS substitutes during diarrhea, in order to reduce children mortality and morbidity rates.

Keywords: Diarrhea; Oral Rehydration Salts (ORS); Acute diarrhea; ORT.

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Introduction

Today, diarrhea remains a major public health problem. In developing countries, diarrhea is among the leading causes of childhood morbidity and mortality. An estimated one billion episodes and 2.5 million deaths occurs in each year among children under five age. About 80% of deaths due to diarrhea million deaths occur each year among children under five occur in the first two years of life [1]. Many times this number have long-term complications like dehydration, malnutrition, growth retardation, and immune impairment. Overall, these children experience an average of 3.2 episodes of diarrhea per child per year [2]. Although the majority of diarrheal episodes are not severe and may not require specific intervention, a large number are potentially fatal [3]. Diarrhea is the most important public health problem connected to water and sanitation and can be both "waterborne" and "water-washed". In recent decades, a consensus developed that the key factors for the prevention of diarrhea are sanitation, personal hygiene, availability of water and good quality drinking water and that the quantity of water that people have available for hygiene is of equal or greater importance for the prevention of diarrhea as the bacteriological water quality [4].

Diarrhea depends on what is normal for the individual. For some, diarrhea can be as little as one loose stool per day. Others may have three daily bowel movements normally and not be having what they consider diarrhea. Clinical features vary greatly depending on the cause, duration, and severity of the diarrhea, on the area of bowel affected, and on the patient's general health [5]. Under-five age group is one of the vulnerable age groups for developing the infectious diseases. Globally, diarrhoea is the second most common cause of morbidity and mortality among them, following acute respiratory infection, and is also an important cause of malnutrition [6].

Types of diarrhea may be classified into four general types each reflecting a different pathogenesis, including acute watery diarrhea, dysentery, persistent or prolonged diarrhea and chronic diarrhea [5].

In general, the morbidity of diarrhea is lowest in exclusively breast-fed children; it is higher in partially breast-fed children, and highest in fully-weaned-children. In addition, a particular risk of diarrhea is associated with bottle-feeding. Malnutrition is so common in low income societies that the concept of a vicious circle is appealing, with

diarrhea leading to malnutrition and malnutrition predisposing to diarrhea. Children whose immune systems have been weakened by malnutrition are the most vulnerable to diarrhea. Diarrhea, especially persistent and chronic diarrhea, undermines nutritional status, resulting in mal absorption of nutrients or the inability to use nutrients properly to maintain health. A number of studies have reported higher incidence of diarrhea in malnourished children.

Dehydration from diarrhea can be prevented by giving extra fluids at home, or it can be treated simply, effectively and cheaply in all age groups but the most severe cases by giving patients by mouth an adequate glucose- electrolyte solution⁷. This way of giving fluids to prevent or treat dehydration is called oral rehydration therapy (ORT). ORT, combined with guidance on appropriate feeding practices is the main strategy recommended by the WHO department of child and adolescents health and development (CAH) to achieve a reduction in diarrhea-related mortality and malnutrition in children [7].

The oral rehydration therapy is the keystone of National Diarrhoeal Disease Control Programme. It makes possible the treatment of children by mothers in their own homes. It reduces the need for costly intravenous uid treatment [3]. Correctness of ORS preparation is vital. In order to be effective the packet has to be mixed with recommended amount of potable water. Wrong preparation hampers the prevention of dehydration and contributes to mortality and morbidity due to diarrhoeal diseases [8].

Methodology

After obtaining permission from the medical officer RHC Chandragiri. The subjects were approached individually with the permission of authorities. The data was collected from mothers of under five children attending RHC OPD with informed consent included in the study. The sample was selected by simple random sampling technique. The total 100 mothers of under five children were interviewed by the investigator using a structured interview schedule.

Inclusion Criteria

Mothers who attend Rural Health Center, Mothers of Under five children, Mothers who are available at the time of data collection, Mothers who are willing to participate.

Results

The data presented in the above table reveals that out of 100 under five mother majority (52%) are in the age group of 21-25 years, next majority (22%) were in the age group of 26-30 years, (18%) were in

the age group of above 30 years and (8%) were in the age group of below 20 years of age group. Educational status of the mother majority (42%) are primary education, (29%) inter and degree, (23%) high school education, (6%) were illiterate. Considering the occupation of the mother majority (71%) are house wives, (14%) are others, (7%) are agriculture, (6%)

Table 1: Frequency and percentage distribution of demographic variables among under five mothers

Demographic Variables	Frequency	Percentage
MOTHER AGE		
Below 20 years	8	8.00
21-25 years	52	52.00
26-30 years	22	22.00
above 30 years	18	18.00
MOTHER EDUCATION		
Illiterate	6	6.00
Primary Education	42	42.00
High School Education	23	23.00
Inter and Degree	29	29.00
MOTHER OCCUPATION		
Housewife	71	71.00
Employee	6	6.00
Cooli	2	2.00
Agriculture	7	7.00
Others	14	14.00
FATHER EDUCATION		
Illiterate	6	6.00
Primary Education	42	42.00
High School Education	23	23.00
Inter and Degree	29	29.00
FATHER OCCUPATION		
Agriculture	68	68.00
Cooli	6	6.00
Employee	5	5.00
Business	7	7.00
Others	14	14.00
RELIGION		
Hindu	71	71.00
Muslim	18	18.00
Christian	6	6.00
Others	5	5.00
FAMILY TYPE		
Nuclear	65	65.00
Joint	35	35.00
MONTHLY INCOME OF THE FAMILY		
1866-5546	17	17.00
5547-9248	50	50.00
9249-13873	16	16.00
13874-18497	3	3.00
18498-36996	14	14.00
RESIDENCE		
Rural	29	29.00
Urban Slum	71	71.00
HEALTH FACILITIES		
Yes	77	77.00
No	23	23.00
JOIN HOSPITAL DUE TODIARRAHOEA		
Yes	00	00
No	100	100.00
SOURCE OF INFORMATION		
Health Personals	44	44.00
Family Members	17	17.00
Friends	39	39.00

were employees, (2%) were cooli. Father education status majority (42%) are primary education, (29%) inter and degree, (23%) high school education, (6%) were illiterate. Considering the occupation of the father majority were (68%) are agriculture, (14%) are others (7%) were business, (6%) were cooli (5%) were employee. Considering the religion (71%) were hindu, (18%) were muslim, (6%) were Christian, (5%) were others. Considering the family type nuclear (65%) were nuclear, (35%) were joint.

Based on the monthly income of the family (50% had income of 5547-9248, (17%) had income of 1866-5546, (16%) had income of 9249-13873, (14%) had income of 18498-36996 and (3%) had income of 13874-18497. Considering the residence (71%) were urban slum and (29%) were rural. Based on health facilities of (77%) were yes and (23%) were no. Based on hospital admission due to diarrhoea (100) were no and (0%) were yes. Considering source of information (44%) were health personnel, (17%) were family members, (39%) were friends.

Table 2: Distribution of knowledge regarding ort for acute diarrhoea among mothers of under five children

S. No	Level of knowledge	Frequency	Percentage
1	In adequate	22	22%
2	Moderate	56	56%
3	Adequate	22	22%

Table 2 shows that 22% of mothers had inadequate knowledge, 56% had moderate knowledge and 22% had adequate knowledge

Table 3: Distribution of knowledge on practice regarding ort for acute diarrhoea among mothers of under five children

S.no	Level of practice	Frequency	Percentage
1	In adequate	34	34%
2	Moderate	36	36%
3	Adequate	30	30%

Table 3 shows that 34% of mothers had inadequate practice, 36% had moderate practice and 30% had adequate practice.

Table 4: Mean and standard deviation for knowledge and knowledge on practices regarding ort for acute diarrhoea among mothers of under five children

S. No	Category	Mean	Standard deviation
1	Knowledge	37.650	8.416
2	practice	13.820	2.587

The mean and standard deviation were 37.65 and

practice mean and standard deviation scores were 13.820 and 2.587.

Discussion

The country is the most precious of mankind, most loved and perfect in its innocent. In India about 43percent of population were children. They have to be loved as they have a special place in the lives of the people, but large number of children become a cause of sorrow because of illness and ultimate death [1].

Child health is the corner stone of National progress and the country which neglect the child, its future progress will be affected. The period of life between 1 to 3 years is very important as their growth and development is rapid [2].

This chapter deals with discussion part to the results, obtained from statistical analysis based on the data of the study, the reviewed literature, hypothesis which was selected for the study. The purpose of the study was to "assess the knowledge and practice regarding ORT for acute diarrhoea among mothers of under five children Chandragiri. It was presented in the view of the objectives of the study.

The first objective of the study was to assess the knowledge regarding ORT for acute diarrhea among mothers of under five children

The test was conducted by using the structured questionnaire.

The results reveals that out of 100 mothers shows that 22 mothers had inadequate knowledge, 56 mothers had moderate knowledge and 22 mothers had adequate knowledge

A study was conducted on Home-based education of mothers in treatment of diarrhoea [22] with oral rehydration solution. It was revealed in the study that 650 mothers of children under 5 years of age in rural India were instructed in their homes by field teams to prepare oral rehydration solution (ORS) with sugar and salt and to use this solution at the onset of diarrhoea. In addition, local private practitioners were contacted and asked not to give antispasmodics and to recommend ORS. A study was conducted 6 months after the home visits to evaluate knowledge and use of ORS. 68% of the 650 mothers had some knowledge of oral rehydration therapy, although only 30% knew how to prepare ORS at home and when to give it. During the 6-month study period, there were 197 cases of diarrhoea, 145 (74%) of which were treated with ORS. In the cases

where ORS was not administered, 35 mothers claimed a lack of knowledge of this treatment method and 17 cited a lack of time. Only 48% of children taken to local practitioners with diarrhoea had been given ORS [8]. Since medical practitioners appear to be difficult to enlist in oral rehydration therapy efforts, it is suggested that vigorous efforts should be made to make mothers self-reliant in the early initiation of such treatment. Moreover, there is a need for constant reinforcement of knowledge.

The second objective was to assess the knowledge on practice regarding ORT for acute diarrhea among mothers of under five children. The test was conducted by using the structured questionnaire.

The results reveal that out of 100 mothers shows that 34% of mothers had inadequate practice, 36% had moderate practice and 30% had adequate practice.

A study was conducted on attitude and practices regarding diarrhoea in rural community in Chandigarh. The study on diarrhoea, its prevalence, practices and awareness of mothers was conducted in 120 randomly selected households in the rural area of Chandigarh during monsoons in 1996 [19]. In spite of access to safe drinking water and latrines in 83% and 74% of the households in the village respectively, the prevalence rate of diarrhoea in 181 under five children was observed to be 23.2%. Majority (88.1%) of children had treatment for diarrhoea whereas only half (54.8%) of children were given oral rehydration solution. 86.7% of the mothers were aware of ORS but only 18.7% could tell the correct method of its preparation. A large number of respondents implicated a variety of food items responsible for diarrhoea and restricted them during the episodes.

The third objective was to associate the relationship between knowledge and knowledge on practices regarding ORT for acute diarrhoea among mothers of under five children with selected socio demographic variables

The study shows that there is a significant association between level of knowledge regarding ORT for acute diarrhoea among under five mothers mothers age, mothers education, mothers occupation, father education regarding $p < 0.01$ level, father occupation and monthly family income regarding $p < 0.05$ level and H_1 is accepted.

Hence there is no significant association between level of knowledge regarding ORT for acute diarrhoea among under five mothers religion, family income, residence, health facilities, join hospital due to diarrhoea.

The study shows that there was a significant association between level of practice regarding ORT for acute diarrhoea among mothers of under five children with selected socio demographic variables like mothers education, mother occupation, monthly income.

There was no significant association between level of practice regarding ORT for acute diarrhoea among mothers of under five children with selected socio demographic variables like mothers age, father education, father occupation, religion, family type, residence, health facilities, join hospital due to diarrhoea, source of information.

This study was correlated with the study conducted by Kiran Kumar Rokkappanavar, S. R. Nigudgi, Shreeshail Ghooli (2016) a cross sectional survey on knowledge and practice of mothers of under-five children regarding management of diarrhoea in urban field practice area of MRMC, Kalaburagi, Karnataka, India. A total of 204 mothers were covered. Results shown that nearly two thirds (62.74%) mothers were literate and majority of them were in the age group of 21-25 years. More than half of participants lacked adequate knowledge regarding danger signs, spread and prevention. Poor dietary practices were prevalent among 50.49% mothers. Only 50.49% mothers practiced exclusive breast feeding. Nearly one fifth of the mothers practiced bottle feeding, among them only 26.82% practiced hygienic measures. Majority of mothers (55.88%) dispose child's faeces in open air. Only 43.62% mothers demonstrated proper technique of hand washing. 86.27% participants knew about ORS, among them more than half had adequate knowledge regarding preparation and administration. Only 26.96% mothers dewormed their child regularly. A strong association is found between educational status and appropriate practices regarding diarrhoea management ($p < 0.001$). Hence health education should be used as a tool to promote knowledge and good practice and reduce morbidity & mortality.

Conclusion

The study findings revealed that out of 100 mothers of under five children (22%) have inadequate knowledge (56%) moderate knowledge and also (22%) had adequate knowledge. A majority of mothers of under five children were having moderate knowledge and (34%) have inadequate practice, (36%) have moderate practice and (30%) have adequate practice. A majority of mothers of under five children were having moderate practices and

demographic variables were statistically significant, hence it can be concluded that, there should be improve need to improve knowledge and practice regarding ORT therapy for acute diarrhoea in order to reduce children mortality and morbidity rates.

Recommendations

- A similar study could be conducted on larger sample.
- A similar study can be conducted to assess the knowledge and practices of ORT for acute diarrhoea among under five mothers
- A similar study can be conducted to assess the knowledge and attitude towards treatment of acute diarrhea
- The study can be replicated in different community settings
- An experimental study can be conducted using control and experimental group

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