



A STUDY ON KNOWLEDGE OF MOTHERS IN MANAGEMENT OF DIARRHEA IN UNDER FIVE CHILDREN

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ABSTRACT

BACKGROUND: Diarrhea is one of the major health problem encountered in childhood. Every year around 760,000 children die due to this disease globally. Most of the deaths were prevented by correcting the fluid loss with recommended home fluids and oral rehydration solution. But over the last decade, momentum has slowed with decline in the use of ORS due to lack of knowledge. **OBJECTIVE:** The knowledge of mothers with under-five children was assessed about their perception on diarrheal disease and its management and its impact on socioeconomic status, educational and occupational status. **MATERIALS AND METHODS:** Around 400 mothers of different socioeconomic status participated in the study. A structured questionnaire was used in this study. Information was obtained on the knowledge of diarrhea, its causes, food management, prevention, use of ORS and Rotavirus vaccine. A scoring system was determined and their knowledge was assessed accordingly. **RESULTS:** The study showed diarrhea was much prevalent in our society. Majority of mothers felt that bottle feeding had no impact on diarrheal disease. In spite of good awareness with ORS the usage rate among the mothers was found to be low. On assessing their knowledge status. Around 80% of mothers had moderate knowledge about the disease and its management. Mothers in socioeconomic status 4 and 5 had poor knowledge about diarrhea compared to other classes. Awareness of rotavirus vaccine was found to be poor. **CONCLUSIONS:** Priority should be given to mothers belonging to lower socioeconomic status about the importance of fluid replacement and use of ORS during diarrheal illness. The impact of bottle feeding to diarrhea has to be explained to the mothers. The various misconceptions on breast feeding has to be cleared through the health education process.

KEYWORDS : Diarrhea, Oral rehydration solution, socioeconomic status.

INTRODUCTION:

The government of India had implemented the national policy for children in 1974 concerning the needs and rights for children. Diarrhea is dangerous because it accounts for 9% of under-five mortality and 3% of neonatal mortality globally. Every year around 760,000 children under 5 years of age die, most of them die due to severe dehydration and fluid loss². According to UNICEF report about half of under-five deaths occur in the five following countries namely Congo, India, Pakistan, China and Nigeria. India accounts for 22% for total under-five children deaths worldwide. Diarrhea is the third leading cause of under-five mortality in our country accounting 13% of the total deaths.³ According to the World Health Organization (WHO), diarrhoea is the passage of three or more, loose or liquid stools per day or more frequently than normal for the individual. Childhood Diarrhea is caused by many organisms, mainly viral, bacterial, and protozoan. Recent studies have estimated that rotavirus led to more than 78,000 deaths in India in 2011 among children under five years of age. There are proven lifesaving interventions that existed to reduce the mortality of diarrhea such as improved sanitation and hygiene, access to safe drinking water, vaccines, exclusive breastfeeding, and optimal complementary feeding.¹¹ The introduction of oral rehydration therapy (ORT) in 1975 has significantly reduced the mortality from this disease condition.¹² Oral Rehydration Therapy is scientifically sound, practically adoptable, culturally acceptable and economically cheap and is of appropriate technology.¹¹ Oral rehydration therapy is one of the important medical advances of the 20th century in terms of simplicity and scope to save lives.¹³ ORT which consists of rehydration, continued feeding of Normal diet, and replacement of continuous fluid loss, now saves more than 1 million children annually.¹⁴ But over the last decade, momentum has slowed, with declines in research and funding commitments and competing global health priorities. Decline in the use of ORS may be due to lack of knowledge about and access to ORT and ORS and also the increased use of intravenous therapy for correction of dehydration.²⁰ In view of this, a study was conducted in our outpatient department where the mothers with under five children

was assessed on the knowledge on diarrhea and its management, the awareness in use of oral rehydration therapy and Rotavirus vaccine.

OBJECTIVES 1. This study is done to assess the mothers knowledge regarding the understanding the nature of the disease. 2. To assess the mothers knowledge in knowing about the causes, prevention and treatment of the disease who bring their children under-5 years of age to our outpatient department belonging to different socioeconomic status. 3. To assess the knowledge and attitude towards the practice of oral rehydration therapy in home.

INCLUSION CRITERIA: Willful mothers with under five children who visited our outpatient department for the first time with minor illness. Children who were brought during our opd admission days.

EXCLUSION CRITERIA: Children who are brought sick requiring admission in intensive care and in ward. Children who are been subjected to any investigative procedure, further interventions for illness. Children who are not been brought by mothers.

METHODOLOGY: This study was done using a prevailed structured questionnaire method as for data collection. The questionnaire was adapted from the survey questionnaire 32 used in NFHS-3 and from similar questionnaires employed in other surveys and investigations such as DHS survey and adapted to the local social-cultural norms and values and beliefs. The questionnaire was initially prepared in English language and was pre tested in both English and native language, and made necessary changes based on the observations. The developed questionnaire has 2 parts.

Part 1 consists of details on the socio demographic profile of the respondents such as age of the mother, number of children under five years of age, breast feeding practice, educational status, occupation and income based on that their socioeconomic status was ascertained.

Part 2 consists of questions related to diarrheal disease, knowledge on understanding the nature of disease, its causes and management. Experience of the illness in their children, health seeking behaviour, knowledge and attitude on ORT and Rotavirus vaccine.

To assess the prevalence of knowledge in the mothers that existed in the study area. Scoring was given as per instruction from the guide. Range of scores were determined to the study.

A score of 0 to 6 was ascertained poor knowledge
 A score of 7 to 12 was ascertained moderate knowledge
 A score of more than 12 was ascertained good knowledge. 33 Based on answers given to 25 selected questions. certain questions carried a score of 0,1,2 And the remaining questions carried a score of 0 and 1. The knowledge scoring according to the questions were given in the annexure.

RESULTS

The study was conducted in our paediatric outpatient department. The respondents were selected on the basis of inclusion criteria. Nearly 400 mothers with under 5 children participated in the study. The study estimated the prevalence of diarrheal knowledge, awareness of rotavirus vaccine among the mothers and utilization of ORT. It assessed the association between knowledge, attitude and various demographic factors such as age, education status, parity, socioeconomic status. The use of ORT among the mothers were also assessed in those who had diarrheal episodes in the past.

Table - 1: On knowledge of diarrhea

EDUCATIONAL STATUS	No knowledge	Moderate knowledge	Good knowledge
Illiterate	48.2%	51.8%	0.0%
Primary school (1-5)	24.3%	45.7%	30.0%
Middle school (6-8)	45.5%	28.6%	26.0%
High school (9-10)	0.0%	84.4%	15.6%
Diploma or Plus2	13.1%	23.0%	63.9%
Graduate	7.7%	38.5%	53.8%
Profession	14.3%	28.6%	57.1%

The impact of good diarrheal knowledge with mothers who either being a graduate or studied upto 12 th std was found to be 57% and 63% respectively. In high school level around 84% has moderate knowledge on knowing diarrhea. The impact of knowledge on diarrhea is very low in middle school and high school level with only 30% and 26% respectively. With illiterates the knowledge on diarrhea appears to be poor.

Table - 2: On causes of diarrhea

EDUCATION OF MOTHER	No knowledge	Moderate knowledge	Good knowledge
Illiterate	33.9%	66.1%	0.0%
Primary school (1-5)	32.9%	40.0%	27.1%
Middle school (6-8)	45.5%	53.2%	1.3%
High school (9-10)	2.2%	53.3%	44.4%
Diploma or Plus2	11.5%	50.8%	37.7%
Graduate	12.8%	28.2%	59.0%
Profession	0.0%	14.3%	85.7%

Mothers who are qualified as professional has good knowledge of 85%. On recognizing the causes of diarrhea. were as its only 59% with graduates. Most of the mothers from uneducated to high school level has only moderate knowledge on finding the causes of diarrhea.

Table - 3: Use of ORS in the past

EDUCATION OF MOTHER	No	Yes
Illiterate	49%	50.9%
Primary school (1 -5)	34%	65.6%
Middle school (6 -8)	72%	27.1%
High school (9 -10)	23%	76.7%
Diploma or Plus2	49%	50.9%
Graduate	32%	67.6%
Profession	40%	60.0%

The use of ORS for their children who had diarrhea in the past was found to be around 72% in high school level which is much higher than the usage rate of graduates and mothers who studied upto 12 th std. the use of ors was found to be very low in mothers with mothers with mid school education level. around 50% usage rate of ORS was seen in undedicated mothers.

Table - 4: Food Management

EDUCATION OF MOTHER	Poor knowledge	Moderate knowledge	Good knowledge
Illiterate	32.1%	67.9%	0.0%
Primary school (1 -5)	1.4%	52.9%	45.7%
Middle school (6 -8)	26.0%	74.0%	0.0%
High school (9 -10)	31.1%	35.6%	33.3%
Diploma or Plus2	11.5%	47.5%	41.0%
Graduate	7.7%	38.5%	53.8%
Profession	0.0%	14.3%	85.7%

Around 85% of mothers with professional educational status has a good knowledge in food management. Only 53% of graduate mothers had good knowledge on food management. moderate knowledge was found much prevalent in middle school mothers. Around 32% of uneducated mothers had poor knowledge in food management.

Prevention :

The knowledge on prevention of diarrhea is found to be more than 90% with mothers with higher educational status than the others.

Table - 5: Prevention

EDUCATION OF MOTHER	Poor Knowledge	Good Knowledge
Illiterate	21.4%	78.6%
Primary school (1-5)	21.4%	78.6%
Middle school (6-8)	26.0%	74.0%
High school (9-10)	24.4%	75.6%
Diploma or Plus2	6.6%	93.4%
Graduate	7.7%	92.3%
Profession	0.0%	100.0%

DISCUSSION

Diarrheal diseases remain the second most leading cause of death after pneumonia among under -five mortality globally. Childhood diarrhoea is a widespread problem in developing countries. In the year 2011, 700 000 children under the age of 5 years did not survive because of complications. related to diarrhea Mothers' education and occupation, husbands' employment status, family income and family size are certain socio -demographic factors which are linked with mothers' knowledge about diarrhoea and its management. The use of ORT among the mothers were also assessed in those who had diarrheal episodes in the past. India is the country which is one among the high burden countries for childhood diarrhoea with

greatest severity and highest mortality rate followed by Nigeria, china and Indonesia.

The present study done with 400 cases showed the most common age group with incidence of diarrhoea was between 1 -3 years with 178 cases with female predominance which almost correlates with the above two studies.

Human milk and breastfeeding are the ideal and normative standards for infant feeding and nutrition. Breastfeeding has short- and long-term advantages for infant neurodevelopment. Lack of exclusive breastfeeding among infants 0-5 months of age and no breastfeeding among children 6-23 months of age are associated with increased diarrhea morbidity and mortality in developing countries. Breast milk is an elaborate package of chemicals developed over millions of years of primate evolution to promote the newborn's development and build up its defences against infection. The disadvantages of using artificial nutrition like formula and bottle-feeding on the economy of families especially in developing countries. Formula-fed children are more likely to be exposed to pathogens, which may contaminate bottles, formula and the food given to the child. Paediatric researchers estimate that 250 to 300 infants die each year from diarrheal infections as a result of bottle-feeding.

According to the study done by Mohammed in Iran⁷⁰ mother's who were in their third trimester were selected and the entire group was educated on the advantages of breast feeding over bottle feed. After implementing the program, 85% of the mothers fed their children exclusively with mother's milk and 15% used both breast-feeding and or mula-feeding. It was noticed decrease in the bottle feed showed lower incidence of diarrhoea and pneumonia.

According to the present study done it showed there was less incidence of diarrhoea in exclusive breast feeding than bottle feeding. Education and socioeconomic status plays a very important role in the health of the child.

The study done by Amitkumar Rao in the urban areas of Bengaluru showed that among 280 mother's nearly 90% of the mothers were illiterate and unemployed. Only 73% of the mothers were not aware of the causes of diarrhoea whereas only 23% knew the cause of diarrhoea.

The study done by Osonwa Kalu et al showed the women stated that a larger proportion of the respondents 75(37.5%) said they had attained secondary education while 51(25.5%) had primary education. Most of the women were full time house wife's

According to the study done by Manijeh Khalili⁷¹ 36% of the mothers used unclean hand. 52% mothers declared that diarrhea may occurred due to the digestion of contaminated food and water, 47.7% reported that the teething may cause diarrhea, and the few remaining mentioned the common cold as an Etiology.

The study done BY DR. OMARYOUSOF MOHAMED ALI done in shendi town showed 46% of diarrhoea was caused due to unclean bottle feed, 30% due to fly and 22% of the mothers felt it was due to teething while the remaining 2% believed other causes of diarrhoea.

Most of the mothers belonging to socioeconomic status 3, 4 and 5 has a moderate knowledge over diarrheal disease. In overall the knowledge on diarrhea seems to be moderate in understanding Upper class and upper middle class has good knowledge in knowing the cause of diarrhoea. Mothers belonging to other classes appears to have moderate knowledge and 38% of mothers having poor knowledge on it.

The study done by Manijeh Khalili⁷¹ showed the various diet management given by mother's. 2.3% of the mothers stopped

breast-feeding and 33.7% diluted their milk during diarrhea. 31.3% of subjects used dough, 30.3% of them fed their child with enameled rice, and 22.3% preferred fruit juice as a major supplementation

The study done by Osonwa Kalu O in Nigeria showed that Out of 200 study participants only 30 (43.5%) respondents had used ORS for managing diarrhea whereas 39(56.5%) did not use ORS.

The study done by Manijeh Khalili showed that two hundred and sixty four mothers (88%) gave ORS solution to their children and 12% of them used apple juice.

The present study showed that Among the studygroup of 400 respondents, when asked about oral rehydration solution. 309 (77%) of mothers were aware of ORS management in diarrheal disease, 23% of mothers were not aware of ORS management in diarrheal disease. Among the 309 mothers who were aware of ORS, 270 mothers know the correct method of preparing ORS, while 39 of mother's were not aware of the method to prepare ORS. Among them, 190 mothers (48%) had a source of knowledge of ORS from medical officers, while 7% from nurse and 9% of mothers heard it from mass media and 5% of mothers learnt from their neighbours. And the method of preparation of ORS 47% heard from source of information, 16% from directions given in sachet 3% from assumption. Among the 400 respondents only 37% were aware that ORS can correct the fluid loss in diarrheal management and 63% were not aware of ORS management. The use of ORS for the children with diarrhea in the past was found to be around 72% in high school level which is much higher than the usage rate of graduates and mothers who studied upto 12th std. the use of ORS was found to be very low in mothers with mothers with mid school education level. around 50% usage rate of ORS was seen in uneducated mothers. The present study correlates with the other two studies. According to study done by Amitkumar Rao none of the mothers were aware of rota vaccine.

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