Original Article

Management of Diarrhea with Home Available Fluid Among Mothers of Under Five Children in ICDS Centre

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ABSTRACT

Background: Diarrheal disease constitutes a leading cause of morbidity and mortality among children in developing countries. More than 3 million deaths are estimated to result each year the world. Over as a consequence of diarrheal disease in children of under 5 year of age group, 80% of these deaths occur in the first 2 years of age.

Material and Method: Anon-experimental research survey approach and descriptive research design was adopted. Purposive sampling of 100 mothers from ICDS Centre was done. Predesigned and validated tools were used. Structure questionnaire was used for assessment of knowledge and stated practice.

Results: Majority (45%) of the respondents had good knowledge and few also had (28%) very good knowledge. In stated practice approximately 48% of respondents were average with another 18% showing very good practices. Remaining respondents (34%) practices were good. There was positive correlation between knowledge and stated practice. Significant association was found between knowledge and demographic variables.

Conclusion: The findings of the study are helpful for the health workers in hospital and community to teach the mothers on management of diarrhea in early stage and its prevention for further complication.

Key words: Home available fluid, Knowledge, Practices.

INTRODUCTION

Healthy children today make a healthier nation tomorrow. Children are an asset of the family, society, community where they live. The contribution of the mother in creating a healthy population is beyond explanation.[1]

Diarrhea is a common but potentially severe illness in infant and children then become the cause of death. It is an acute or chronic intestinal disturbance.[1]

Diarrhea diseases probably have been man's companions from the beginning of life. In the present century, diarrheas of

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varied etiology in the pediatric age group are responsible for 50 - 75% of morbidity and 20 - 30% death. Every year in the developing world, about 3.2 million children under five years of age die from condition related to diarrhea. Most of this death is the outcome of dehydration and malnutrition. In the world every six second a child dies of diarrhea. In India alone, 1.5 million children die annually of diarrhea.[2]

Diarrhea is the chief reasons of morbidity and mortality of under five children. Globally, an estimated 1.8 billion cases of childhood diarrhea are reported which is responsible for deaths more than three million under five children per annum. Approximately60-70 per cent of diarrhea related deaths are caused by dehydration. The concept of management of diarrhea is simple, Oral rehydration therapy has developed the concept of management of diarrhea, which is simple, economical for our country. Government of India and WHO jointly sponsors ORT as one of its top important activities for child survival due to diarrhea. Mothers of under five children are being learnt about causes, symptoms and treatment of diarrhea in this program. Use of oral rehydration solution largely depends, on the, level of mother's knowledge and her attitude towards its use.[3]

Diarrhea is caused by some types of germs. These germs are carried to the body of a healthy person through food, milk, water, fly, utensils, finger nails, bottle feeding, non-use of soap for cleaning feeding container, water storage in wide-mouthed container, use of pond water for the same and indiscriminate disposal of children's stool etc. When the germs enter, the body starts to lose of water and salt, which is known as Diarrhea. Continuation of diarrhea effects shortage of salt and water in the body. This is a serious condition and if not controlled early, it can lead to death of the patient.[4]

The World Health Organization recommends the use of oral rehydration salt to reduce the duration and severity of the episode. It has been the experience of health-care workers in Kolkata, India, that as many as 90-95% of all cases of cholera and acute diarrhea can be treated with oral fluids alone. The use of oral rehydration therapy (ORT) is the first choice in diarrheal disease control efforts. The fluids given could be either ORS or recommended home-based fluids [e.g., soups, rice water, clean water, barley water, puffed-rice-soaked water, pressed-rice-soaked water, green coconut water, whey water, buttermilk (lassi), etc.]. It was advised that all children with diarrhea should be given more fluids to drink to compensate the loss of fluids and that feeding should not be stopped during diarrhea.[5]

Need of the study

A mother in the family occupies pivotal role. If she is educated and having significant health awareness, she will take the responsibility of increasing the total family awareness which facilitates high standard of living. Healthy practices adopted by the mother can raise the healthful living condition thereby lessens the morbidity and mortality of under five-year children. In rural community, due to poor socio-economic condition, inadequate sanitation, poor hygiene practice, contaminated food & malnutrition and lack of safe drinking water all of which affect the spread a severity of diarrhea than urban community.

By the personal experience and observation, the Investigator felt that there is correlation between mother's knowledge and child's health. Hence the Investigator felt the need to assess the knowledge and stated practice of mothers of under five children regarding management of Diarrhea.

Objectives of the study:

1) To assess the knowledge of mothers of under five children about home available fluid regarding management of diarrhea.
2) To determine stated practice of mother of under five children about home available fluid regarding management of diarrhea.
3) To find out correlation between knowledge and stated practice score.
4) To find out association of the knowledge of mothers of under five children with selected variables.

MATERIAL AND METHOD

Purposive sampling technique was used in this study. Interview schedule is one of the most suitable method to enquire and find out the knowledge and stated practice of mothers. Review of literature was done. The blue print of the tool was prepared. It was based on structured knowledge questionnaire related to causes, management and prevention of diarrhea and preparation of home available fluid. Plan for scoring was done. Maximum possible score is 12 for knowledge and 10 for stated practice. Minimum possible score was 0. Validity was established by expert opinion and modification was made as per suggestion. Language validity was established by a qualified person. The demographic data consisted of 11 items, according to the expert opinion the final tool consisted of eight items. Testing of the tool was done on 10 mothers by interview schedule. Checked any difficulty expressed by the respondents or felt by the investigator. The pre-testing indicated that the study was feasible and item were clear. The time taken for each interview was 15 - 20 minutes. Some improvement was made in some question and then the tool was finalized for data collection. The reliability of the interview schedule will be established by Split half method. The reliability of the test was 0.89 for knowledge& 0.92 for stated practice. So, the tool was found to the highly reliable for the data collection. The data was collected by structured interview schedule and analysis of the data was done by frequency and percentage distribution and computation of correlation. Chi-square was done for establishing association among selected variables. Formal permission taken from the Institutional Ethics Committee, DHS, DME, Joint DHS (Nursing), DPHNO, CMOH, BMOH. Data was collected from 100 mothers having children of age group under five of rural community, ICDS Centre. The time for data collection was 3 weeks (29.12.14 to 17.01.15).Institutional Ethics Committee approved the study and informed consent was obtained from every participant prior to interview and observation. Data were collected from 10-12 respondents daily. Data were collected by using Bengali version of the tools. Self-introduction was given and purpose of the study explained to the respondents. Informed consent was taken from the mother and assured regarding confidentiality. Role of the respondents in the study was discussed to get free and frank response. The obtained data was organized in statistical way so that summarized result was visualized scientifically.

RESULTS

Figure-1, 2 & 3 depicts that 31% respondent has secondary education, maximum number of the mothers (58%) are housewife and 57% of their monthly family income is up to Rs.5000/. Table-1, reflects that 37% respondents have two children, majority of the respondents (48%) practice are open field defecation and maximum number of respondents (66%) use to drink water from public supply system.

Table–2 shows maximum of the respondents (45%) have good knowledge score, 28% have very good knowledge score and 27% have average knowledge score

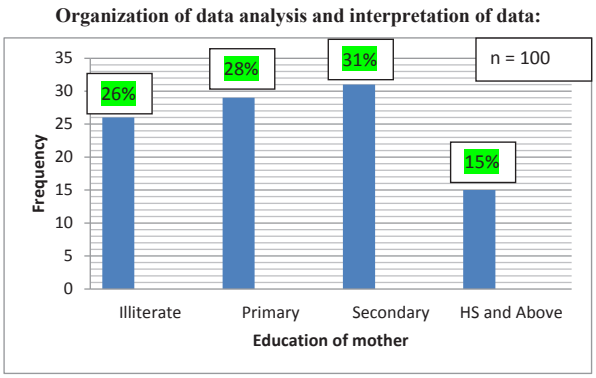

Figure 1: Percentage distribution of sample according to mother's education.

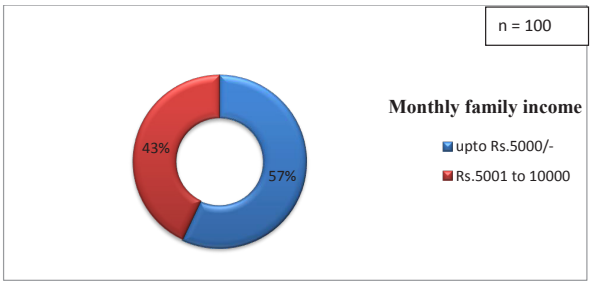

Figure 3: Percentage distribution of sample according to mother's monthly family income.

regarding management of diarrhea with home available fluid among mothers of under five children.

Table-3 represents mean knowledge score of mothers regarding management of diarrhea with home available fluid is 7.52 & median is 7.47. The standard deviation (SD) is 1.45 which indicated that variation in their knowledge.

Maximum respondent's (48%) have average stated practice score, 34% have good stated practice score and 18% have very good stated practice score regarding management of diarrhea with home available fluid among mothers of under five children, which are showing in Table-4.

Table-5 shows mean stated practice score of mothers regarding management of diarrhea with home available fluid is 6.15

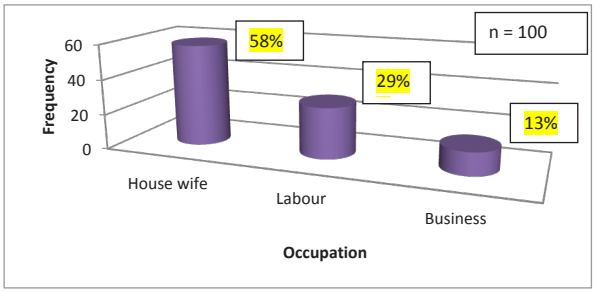

Figure 2: Percentage distribution of sample according to mother's occupation

& median is 7.38. The standard deviation (SD) is 1.40 which indicated that variation in their stated practice.

Table-6 reflects that mean knowledge score of mothers regarding management of diarrhea with home available fluid is 7.52 and mean stated practice score of mothers regarding management of diarrhea with home available fluid is 6.15. Here calculated 't' value is greater than table 't' value. So positive correlation found between knowledge and stated practice score and it is statistically significant.

Table-7 depicts that the calculated 'Chi square Value' is more than the tabulated 'Chi square Value', so there is significant association between knowledge with age of mother, education of mother and source of drinking water at 0.05 level of significance. This study didn't get association between knowledge about home available fluid regarding management of diarrhea with Occupation, Monthly family income, Religion, Number of under five children, Type of disposal of excreta at 0.05 level of significance.

DISCUSSION

Major findings of the research study have been discussed with result obtained by the investigator in their studies. The present study reveals that (45%) have good knowledge score, 28% have very good knowledge score and 27% have average

Table 1: Frequency and percentage distribution of sample related to number of children, type of disposal of excreta and source of drinking water. (n= 100)

Sample Characteristics	Frequency	Percentages (%)
Number of children:		
1) One	34	34
2) Two	37	37
3) Three	17	17
4) More than three	12	12
Type of disposal of excreta:		
(I) Open Field Defecation	48	48
(II) Community Latrine	19	19
(III) Household Latrine	33	33
Source of Drinking Water:		
(I) Public Supply System	66	66
(II) Tube Well	34	34

Table 2 : Knowledge score among mothers of under five children about home available fluid regarding management of diarrhea. (n= 100)

Level of Knowledge Score	Frequency	Percentage
Very Good (9–10)	28	28%
Good (7–8)	45	45%
Average (5–6)	27	27%

Table 3: Mean, Median and SD of knowledge scores of mothers. (n= 100)

Variable	Mean	Median	SD
Knowledge Score	7.52	7.47	1.45

Table 4: Stated practice score among mothers of under five children about home available fluid regarding management of diarrhea. (n= 100)

Level of Stated Practice Score	Frequency	Percentage
Very Good (8 - 9)	18	18%
Good (6 – 7)	34	34%
Average (4 – 5)	48	48%

Table 5: Mean, Median and SD of stated practice scores of mothers. (n= 100)

Variable	Mean	Median	SD
Stated Practice Score	6.15	7.38	1.40

Table 6: Correlation between knowledge and stated practice score (n= 100)

Mean Knowledge Score	Mean stated Practice Score	Correlation between knowledge and stated practice score ('r')	't' Value
7.52	6.15	0.83	14.73

Table 7: Chi-square value showing association between Mother age, education and Source of Drinking Water with knowledge level of mothers about home available fluid. (n= 100)

Selected demographic variables	< Median	≥ Median	df	Chi square
Age of Mother				
<20 Years	6	10	3	8.155*
20 – 25 Years	33	19		
26 – 30 Years	6	14		
> 30 Years	7	5		
Mother's Education				
Illiterate	18	8	3	8.29*
Primary	10	19		
Secondary	18	12		
H.S. and Above	6	9		
*Statistically significant with p<0.05 at df (3)				
Source of Drinking Water				
Public Supply System	39	27	1	3.91*
Tube Well	13	21		
*Statistically significant with p<0.05 at df (1)				

knowledge score regarding management of diarrhea with home available fluid among mothers of under five children.

Maximum respondent's (48%) have average stated practice score, 34% have good stated practice score and 18% have very good stated practice score regarding management of diarrhea with home available fluid among mothers of under five children.

According to the Integrated Management of Neonatal and Childhood Illnesses guidelines, children with some or no dehydration should be managed at home for diarrhea. The WHO plan [6] also encourages mothers and caregivers to treat diarrhea at home by giving ORS and ORT. In this case the awareness of mothers regarding home-based management of diarrhea is foremost importance to assess the knowledge about home available fluid for this study.

Similar study was considered to determine the knowledge, attitudes and practices of mothers with respect to food restriction during acute diarrhea in Ibadan, South West Nigeria, where 46.8% of the respondents had secondary education.

Only 6.0% had knowledge of nutritional management of diarrhea while 54.8% had knowledge of oral rehydration therapy.[7]

Concerning the home available fluids, the majority of the respondents replied that they administered sugar salt solution, followed by daal ka pani (cooked pulses water) and Khichdi (a mix of rice and lentils). Similar observations were made by Rehanet al.[8]

The study in North India on child diarrhea was explored the variation in the household management. Qualitative and quantitative methodologies were used to collect data on a series of variables, including maternal knowledge, beliefs, and practices during diarrhea and use of oral rehydration therapy (ORT). Therefore in ORT interventions there is a need to explain that the function of ORT is to replace lost fluids, and not to stop the diarrhea.[9]

These results are more or less comparable with the study conducted by Gilany AH et al (2005)[10], in Egypt (a developing country) which showed that in the past (2 wks.) of diarrheal episodes, one quarter i.e., (25%) had received ORS and (75%) had received antibiotics.

Sood AK et al studied 108 rural mothers of children suffering from diarrhea. 88.33% of mothers believed that ORS alone cannot treat diarrhea.[11] Zodpey SP et al (1998) conducted a case control study on risk factors for dehydration in Nagpur. This study identified the risk factors as religion, severe under nutrition, non-washing hands by mother before preparation of food, frequency of stool >8/d, frequency of vomiting >2/d, withdrawal of breast-feeding during diarrhoea, withdrawal of fluids during diarrhoea and not giving ORS, home available fluid or both during diarrhoea, in the outcome of development of moderate or severe dehydration. Timely intervention in the preventable risk factors included in this study may prevent the development of moderate or severe dehydration in the children suffering from acute watery diarrhea.[12]

Implications:

Though diarrhea is a common condition, nurse must have adequate knowledge to provide basic management of diarrhea among under five children. As study shows that the mothers have not satisfactory knowledge about management and prevention of diarrhea, so nurse can guide and supervise the mothers for provide care to their children.

Health education should be inclusive in basic care protocol for the patients and caregiver of the family. Nursing personnel are working in various health care setting should have the ability to provide health education for different group of patients and their family members.

Nursing research is very much required in preparation of education materials and to see their effects on the patient and their family. The findings of the study can be used to develop teaching materials.

Limitation:

Only under five children from rural ICDS Centre were included in this study.

Recommendations:

On the basis of the findings following recommendations were offered for future research.

- The study can be conducted in large sample for generalization of the findings.
- A comparative study can be done among mothers of urban & rural community.
- A study can be replicated for the nursing students for home management of diarrhoea among under five children.

CONCLUSION

Over all, the mother of under five children had good knowledge score but average stated practice score regarding management of diarrhea with home available fluid. If health education could be correctly provided to the specific target group (mothers, guardians and healthcare providers) regarding all the rules of home management, the situation can be improved.

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List of Abbreviation

IMNCI - Integrated management of neonatal and childhood illness

ORT – Oral rehydration therapy

WHO – World Health Organization