

Knowledge on Home Care Management of Diarrhea among Mothers of Under-Five Children

Prof. S. Rajathi¹, Prof. J. Sunitha Priyadharshini², D. Saranya³

¹Professor cum Head of Child Health Nursing Department, ²Principal, ³Asst.Professor, Arun College of Nursing, Vellore-01.

Corresponding Author: Prof. S. Rajathi

ABSTRACT

Background: In developing countries, diarrheal diseases remain one of the leading causes of preventable fatality especially among the children aged under-five years due to dehydration and delayed management of this disease. Most of the diarrheal episodes are treated in the home by primary health care providers of mothers.

Objectives: To evaluate the knowledge of the mothers of under five children about diarrhea & its management and to identify the relation of the knowledge with demographic variables.

Materials and Methods: Through the non randomized convenient sampling technique, one hundred thirty mothers who had at least one child of more than one year old were selected. The mothers were interviewed for the 40 items multiple choice questionnaires. The collected data were analyzed by descriptive and inferential statistics.

Results: Out of 130 mothers, seventy three percent had inadequate knowledge, nineteen percent had moderate and remaining nine percent only had adequate knowledge in home care management of diarrhea and its prevention. The chi square value depicts that, mother's age, occupation and number of the children had significant relationship with knowledge score at $P \leq 0.05$.

Conclusion: The results revealed that, majority (73%) of mothers had inadequate knowledge about management and prevention of diarrhea. The educational instructional and interventional programs must be a vital part in promote their knowledge in order to reduce mortalities and morbidities related to diarrhea.

Keywords: Knowledge, Home care management, Diarrhea, Mothers and Under five children

1. INTRODUCTION

The susceptible age group of the children under five years is consistently affected by assorted common and easily treatable illnesses. [1] According to World Health Organization (WHO, 2016) report the major illness affecting this age group is mainly Pneumonia, diarrhea and malaria. In worldwide, 5.6 million children under the age of 5 years died in 2016 i.e., 15, 000 per day [2] The developing countries like India, diarrheal diseases are the leading cause of mortality and almost entirely preventable if dehydration is prevented or treated with

home-based oral fluids. [3] The Oral rehydration therapy (ORT) is a simple and inexpensive; potentially effective treatment for dehydration related to diarrhea which has been promoted widely throughout the developing world. [4]

According to United Nations Children Education Fund (UNICEF) and WHO guidelines, ORT should begin at home with "home fluids" or a home-prepared "salt and sugar" solution at the first sign of diarrhea to prevent dehydration. [5] The high mortality and morbidity due to diarrheal diseases can be markedly declined

by ORT which includes proper management with Home Available Fluids (HAF), Oral Rehydration Salt solution (ORS) and by continuing normal feeding. [6] The WHO & Integrated Management of Neonatal and Childhood Illness (IMNCI) management guidelines also encourages the mothers and the caretakers to treat diarrhea at home by giving ORT to reduce the duration, severity, hospitalization, overall medical costs and death. [7] The home care management of diarrhea with ORS is beneficial in preventing dehydration and death of young children. It has been a key intervention in improving health outcomes among under-five children in developing countries. [8]

1.1 Need for the study

Acute diarrheal diseases are one of the main illness affecting children in the world, hence it is plummeting their well-being and creating considerable insist for health services. [9] In developing countries, one out of ten babies born fails to reach its fifth birthday falling victim to diarrheal diseases. Eight out of ten of these fatalities occur in the first two years of life .On the average, children below three years of age experience three episodes of diarrhea each year and also the incidence is highest in the first two years of life and declines as the child grows older. The prevalence of diarrhea varies from place to place. The community practices relating to ORT and other treatment modalities also vary from place to place. [6] But the consequence of diarrhea is common in children includes dehydration, growth faltering, malnutrition, and impaired cognitive development. [10]

In many developing countries, most diarrheal episodes are treated at home, and mothers are the primary health care providers for under-five children. They are the ones who decide about the type of food given to the child and the overall management of the disease. [11] The awareness towards diarrhea as well as household actions to prevent or manage the disease have paramount importance to dwindle diarrhea related morbidities and mortalities. [12] Therefore, their knowledge

about this common disease is critically important. So that mother's knowledge regarding causes, clinical manifestations, prevention of dehydration and complications are very essential thereby reducing morbidity & mortalities.

Hence, all of the above mentioned factors have urged the investigator to find out whether mother's knowledge is adequate to manage and prevent complications of diarrhea.

2. MATERIALS AND METHODS

The necessary ethical and administrative permission was obtained. The descriptive study design was carried out in pediatric outpatient department in Arun Multi Super Specialty Hospital, Vellore. The non randomized convenient sampling technique was used to select the samples of 130 mothers who have at least one child of more than one year old were included.

After getting the informed consent, the structured interview method was used to collect data from the participants of 25-30 minutes without having any possible interaction with other participants.

2.1. Description of Instrument

The structured interview questionnaire was prepared; based on the IMNCI guidelines, extensive review of literatures, expert's opinions and investigators personal experiences. The reliability of the tool was established by the test and re-test method. The Performa has 2 sections.

Section-I : It contains demographic variables of subjects includes age, education, occupation of mother & father, family income, type of family, total number of children , type of housing, religion, area of residence and source of knowledge.

Section-II: It consists of 40 multiple choice questionnaires regarding knowledge aspect of diarrheal management and its prevention with 6 sub divisions. The scores given for the questionnaires are as follows, for correct answer score '1' and for wrong answer score '0'. Based on the scores, the level of knowledge on diarrhea management

are inadequate knowledge less than 40% score, moderate knowledge 40 – 60% and adequate knowledge more than 60% of score.

3. RESULTS AND DISCUSSION

The collected data were analyzed by descriptive & inferential statistics and discussed as follows,

3.1. Regarding the demographic variables, half of the mothers were in the age group of 18-22 years (51%) and primarily the mothers had one (45%) & two (40%) children. Regarding the educational status, the majority of the mothers (72%) were completed their primary school education and 74% of the mothers were belongs to Hindu. The majority (88%) of the fathers and 31% of the mothers were employed in private sector. Nearly half of the mothers (55%) were belong to nuclear family and majorities (87%) were living in rented thatched houses. Considering with residential area, the majority (78 %) were from urban and remaining 22% from rural areas. The experiences (58%), in health centers (27%) and personal readings (15%) were the main sources of the knowledge about the management.

3.2. Based on objectives, the knowledge on home care management of diarrhea among the mothers of under five children are,

Principally the mother in the role of the family is vital in health promotion, disease prevention and child care. The figure 1 shows the overall level of knowledge that, the majorities of 73 % mothers had inadequate knowledge, 18.5 % had moderate and only 8.5 % mothers had adequate knowledge. The study findings were similar in Nigeria contacted by Okoh and Alex-Hart (2014) found that, the mothers had meagre methods of home management of childhood diarrhoea and also shown an unsatisfactory level of knowledge. [13] The other related study conducted in Iran revealed that, the level of knowledge of caregivers on home management diarrhoea was inadequate. [14]

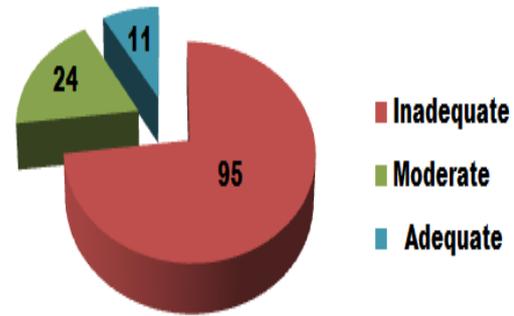


Fig1: The pie chart shows that, the overall knowledge score on number of mothers in diarrhoea management

The initial and accurate care of diarrheal disease begins at home. The mother knowledge in all the aspects of diarrheal management makes the family to be healthy and also prevent morbidities and mortalities. The figure 2 depicts that, the mean and Standard deviation (S.D) of mother's knowledge on home care management of diarrhea in domain wise.

In regard to all the 6 domains, the mean score revealed that the mothers had slightly better knowledge in meaning (92%) and clinical manifestations (89 %) when compared to causes (66%), home care management especially of ORS preparation (72%), majorities (82%) were not aware of home fluids administration, prevention of complications (87%) and diarrhoea (79%). The overall mean and standard deviation (S.D) score was 13.58 ± 8.88 . The findings are supported by Desta BK revealed that mothers poor knowledge in the causes of diarrhoea may probably limit them from taking appropriate timely actions. [15] Merga N also stated in the study, the knowledge of mothers on perceived cause, recognition of danger signs, prevention, and management of diarrhoea is inadequate. [12]

In another study was found that, 50% of mothers only made ORS properly and gave ORS to their children ideally. The correct preparation and ideal use of ORS have not reached in proper way to 47% of mothers and at the same time the mother didn't have an idea to continue the breastfeed or home available fluids of rice water, clear soup or plain water in order to maintain hydration and prevent the complications. [10]

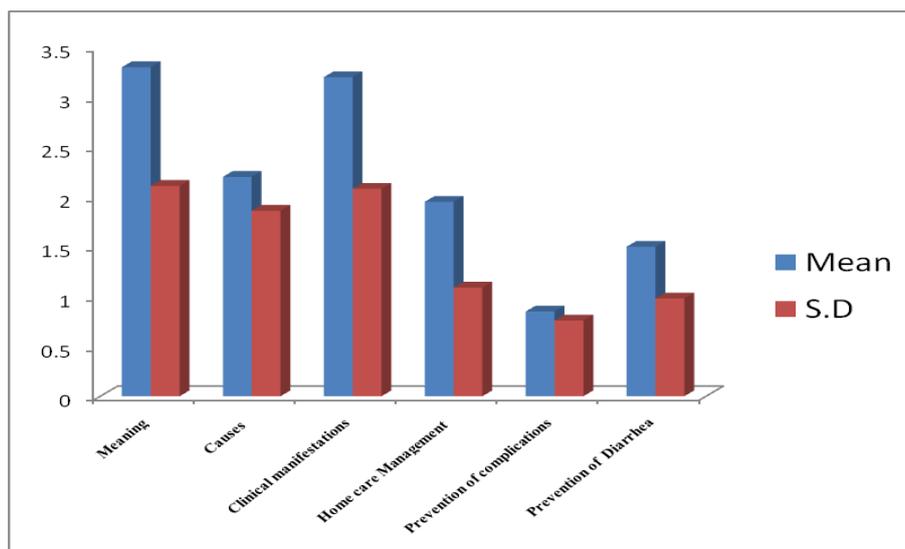


Fig2: The bar diagram depicts the domain wise mean and Standard deviation of mother's knowledge in diarrheal management.

Regarding the prevention of diarrhea; the intervention such as increasing women's literacy, improving basic sanitation, safe water storage & drinking and other health care services are needed to decline the diarrheal diseases morbidity and mortality in long term. [16] Therefore, determining the magnitude of childhood diarrhea and recognizing how mothers can manage is very essential for the better planning and decision making.

3.3 In regard to identify the relation of the knowledge with demographic variables,

The table 1 represents that, the knowledge of the mothers had significant relationship with the variables of age & occupation of the mother and number of the children at $P \leq 0.05$ level of significance. It revealed that, the mothers who were in the age group of 29 - 35years had adequate knowledge when compare to the other two age categories. Considering with occupation of mother, nearly half of mothers i.e., 50-

55% working in private sectors had moderate and adequate knowledge when compare to other categories. In view of total number of children; who are all have two or more than 2 had moderate and adequate knowledge. Hence, all the significant variables depicts that their experience makes mothers to gain more knowledge.

It was supported by; Ghasemi AA et al., found that, the mothers older than 31 years and those who were working outside the home and the mothers with 3 or more children had significantly better knowledge about diarrhea management. [17] In other study stated the controversial views of mothers who were above 45 years old were 2.4 times likely to have risk of poor knowledge as compared to the age range of 15- 24 years old. The mothers who were private employees and daily workers were 2.1 and 3.7 times likely to have poor knowledge as compared to government employees. [18]

Table 1: Significant variables of mother's knowledge on home care management of diarrhea

S. No.	Demographic Variables	Inadequate		Moderate		Adequate		Chi square test	
		No.	%	No.	%	No.	%		
1.	Mother's age (years)	18-22	61	64.2	2	8.3	2	18.2	3.79 P < 0.01* (S)
		23-28	23	24.3	9	37.5	3	27.3	
		29-35	11	11.5	13	54.2	6	54.5	
2	Mother's occupation	Home maker	44	46.3	2	8.3	-	-	3.32 P < 0.03* (S)
		Coolie	18	18.9	3	12.5	3	27.3	
		Private	22	23.3	12	50.0	6	54.5	
		Govt	11	11.5	7	29.2	2	18.2	
3	Total number of Children	One	56	58.9	2	8.3	1	9.1	2.48 P < 0.02* (S)
		Two	31	32.7	15	62.5	6	54.5	
		Three	8	8.4	7	29.2	4	36.4	

P < 0.05 level of significance, S-significant.

4. RECOMMENDATIONS

A similar study may be done with the larger samples for better generalization.

Educational programs on ORS preparation and management of dehydration to be conducted for caregivers / family members.

The same study can be conducted with experimental approach having a control group with larger samples.

A comparative study can be done in rural and urban areas.

A similar study can be conducted along with attitude and practice of mothers.

5. CONCLUSION

The results revealed that, majority (73%) of mothers had inadequate knowledge about home care management and prevention of diarrhea. The educational instructional and interventional programs must be an imperative part in promote their knowledge. The imparting of awareness and education to mothers is the utmost essential to progress the family, community and country. Once the healthy practices adopted by the mother can rise the healthful living condition thereby lessens the morbidity and mortality of under five year children.

Hence, the health and welfare department has to take initiate measures to enrich the mothers knowledge through training & orientation; improve home based management and scale-up of Information, Education and Communication (IEC) strategy up to the primary health care level to address issues of diarrhea. Thus, creating awareness & educating the mothers regarding knowledge on home care management of diarrhea will aids to reduce the incidence and also related mortality & morbidity in order to promote the healthy children.

6. REFERENCES

1. Raja RV, Rubini M S, Hemalatha K. Prevalence and determinants of morbidity among under five children in rural area of Tamil Nadu. *International Journal of Interdisciplinary and Multidisciplinary Studies*.2016. 3; (4): 5-10.

2. Children: reducing mortality. World Health organization fact sheet. updated Oct 2017. Available in <http://www.who.int/mediacentre/factsheets/fs178/en/>
3. Lakshminarayanan S and Jayalakshmy R. Diarrheal diseases among children in India: Current scenario and future perspectives. *J Nat Sci Biol Med*. 2015 Jan-Jun; 6(1): 24–28. doi: 10.4103/0976-9668.149073
4. Agbolade M.O, Dipeolu I.O and Ajuwon A.J* Knowledge and Use of Oral Rehydration Therapy among Mothers of under-five children in a Military Barrack in Ibadan, Nigeria. *Afr. J. Biomed. Res*. 2015;18:7- 15.
5. Diarrhoea Treatment Guidelines including new recommendations for the use of ORS and zinc supplementation for Clinic-Based Healthcare Workers .Jan 2005. Available in http://pdf.usaid.gov/pdf_docs/Pnadk428.pdf.
6. Stanlya AM, Sathiyasekarana B.W.C, Palani G. A Population Based Study Of Acute Diarrhoea Among Children Under 5 Years In A Rural Community In South India. *Sri Ramachandra Journal of Medicine*, Jan - June 2009; 1(1). Available in <http://www.sriramachandra.edu.in/university/pdf/research/journals/aug2008/book1.pdf>.
7. Revised Guidelines For Management Of Diarrhea In Children For Medical Officers & Health Workers India August 2007. Available in <http://jrjms.jharkhand.gov.in/FileUploaded%20By%20User/8.%20Revised%20guidelines%20on%20diarrhea.pdf>
8. Munos MK, Walker CLF,* and E Black RE. The effect of oral rehydration solution and recommended home fluids on diarrhoea mortality. *Int J Epidemiol*. 2010; 39(1): i75–i87. doi: 10.1093/ije/dyq025.
9. Mohammed S and Tamiru D.The Burden of Diarrheal Diseases among Children under Five Years of Age in Arba Minch District, Southern Ethiopia, and Associated Risk Factors: A Cross-Sectional Study. *International Scholarly Research Notices*. 2014. Article ID 654901. Available in <http://dx.doi.org/10.1155/2014/654901>
10. Bello UL, Yunusa U, Abdurashid I et al., Comparative Studies of Knowledge and Perception of Parents on Home Managements of Diarrheal Diseases among Under Five Children Between two Communities Of Kano State, Nigeria.

- International Journal of Pharmaceutical Science Invention.2015; 4 (9):23-31.
11. Olopha OO, Egbewale B. Awareness and Knowledge of Diarrhoeal Home Management among Mothers of Under-five in Ibadan, Nigeria. *Universal Journal of Public Health* 5(1): 40-45, 2017 <http://www.hrpub.org> DOI: 10.13189/ujph.2017.050106.
 12. Merga N and Alemayehu T. Knowledge, Perception, and Management Skills of Mothers with Under-five Children about Diarrhoeal Disease in Indigenous and Resettlement Communities in Assosa District, Western Ethiopia. *J Health Popul Nutr.* 2015 Mar; 33(1): 20–30.
 13. Okoh B. A. N., Alex-Hart B. A. Home management of diarrhoea by caregivers presenting at the diarrhoea training unit of a tertiary hospital in Southern Nigeria. *British Journal of Medicine & Medical Research.* 2014;4(35):5524–5540.
 14. B. Abdinia, “Knowledge and practice of mothers in the management of children’s Diarrhea, in Northwest, Iran,” *Archives of Pediatric Infectious Diseases.*2014; 2(4). Article ID e17581.
 15. Desta BK, Assimamaw NT, and Ashenafi TD. Knowledge, Practice, and Associated Factors of Home-Based Management of Diarrhea among Caregivers of Children Attending Under-Five Clinic in Fagita Lekoma District, Awi Zone, Amhara Regional State, Northwest Ethiopia, 2016. *Nursing Research and Practice.* 2017: Article ID 8084548. Available in <https://doi.org/10.1155/2017/8084548>
 16. Oloruntoba EO, Folarin TB, Ayede AI. Hygiene and sanitation risk factors of diarrhoeal disease among under-five children in Ibadan, Nigeria. *Afr Health Sci.* 2014 Dec; 14(4): 1001–1011. doi: 10.4314/ahs.v14i4.32
 17. Ghasemi AA, Talebian A, Masoudi Alavi N, Mousavi GA. Knowledge of Mothers in Management of Diarrhea in Under-Five Children, in Kashan, Iran. *Nurs Midwifery Stud.* 2013;2(1):158-62. DOI: 10.5812/nms.10393
 18. Amare D, Dereje B, Kassie B, Tessema M, Mullu G, et al. Maternal Knowledge and Practice Towards Diarrhoea Management in Under Five Children in Fenote Selam Town, West Gojjam Zone, Amhara Regional State, Northwest Ethiopia,2014. *J Infect Dis Ther* 2: 182. doi:10.4172/2332-0877.100018

How to cite this article: Rajathi S, Priyadarshini JS, Saranya D. Knowledge on home care management of diarrhea among mothers of under-five children. *International Journal of Research and Review.* 2018; 5(4):21-26.
