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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 BHUBANESWAR

Community Medicine

Dr. Ipsa Mohapatra — Assistant Professor, Department of Community Medicine, Kalinga Institute of Medical Sciences, Bhubaneswar, Corresponding Author

Dr. Krishna Mishra — 1st year PG, Department of Community Medicine, Kalinga Institute of Medical Sciences, Bhubaneswar

Dr. Amit Kumar — 1st year PG, Department of Community Medicine, Kalinga Institute of Medical Sciences, Bhubaneswar

ABSTRACT

Diarrhea is the second most common cause of morbidity and mortality among the under-five children. As a primary caregiver, the mother's knowledge, perception and management skills are of importance. A cross-sectional study was undertaken with the objectives to determine the knowledge, attitude and practice regarding diarrheal diseases, its prevention and management in mothers' of under-five children, in the field practice area of the Urban Health and Training Centre of Kalinga Institute of Medical Sciences, Bhubaneswar; from 1st September to 1st November, 2016. A sample size of 125 mothers with children belonging to under-five age group, with an assumption that the proportion of awareness on diarrhoeal illness among the mothers' population as 50%. 94% mothers defined diarrhoea appropriately. 56% of them were aware about modes of spread. Most(96%) mothers believed in and 58% practiced hand washing with soap post-defecation to prevent diarrhoea. 40% of them recognized critical signs of dehydration, 66.4%the importance of increased fluid requirement and 42.4% practiced it for management of diarrhoea. Though 97.6 % mothers used ORS, only 42.4% considered it as the mainstay treatment of diarrhoea. Thus, we conclude that though the community knowledge, attitude and practices on diarrhoeal illness and its prevention is marginally satisfactory, the poor knowledge regarding signs of dehydration and relevance of ORS as primary management component is a matter of concern. Proper knowledge can ensure decrease in the childhood morbidities and mortalities.

KEYWORDS:

Diarrhoea, Knowledge, Practice, Mother, Children

INTRODUCTION

Every day, pneumonia and diarrhea kill more than 4,000 children around the world. Globally, 1.4 million children under-five died from these two diseases in 2015. Diarrheal disease is the second leading cause of death in children under-five years old and kills around 760,000 children each year. Loss of water and salts resulting from diarrhea can result in severe dehydration which results in severe morbidity and mortality. Diarrhoea was a leading killer of children, accounting for nine-percent of all deaths among under-five children worldwide in 2015, with around 88 per cent of these occuring in South Asia and sub-Saharan Africa. This translates to over 1,400 young children dying each day, and about 526,000 children a year, despite the availability of simple effective treatment.

In India, acute diarrhoeal disease accounts for about eight-percent of death in children under-five years and on an average each child gets three-to-four episodes of diarrhoea per year; to account for a total of approximately 11.6 million episodes per year, with 1,323 deaths in 2014 .

Healthy children are the foundation of robust economies and thriving communities and nations; they are the lifeblood of sustainable development. The Integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD) sets forth strategies and solutions for reducing the burden of these diseases by 2025 . Without faster progress to save lives, this disease will be among one of the greatest road blocks to achieving Sustainable Development Goal (SDG) 3.2 – ending preventable child deaths.

Despite the availability of easily implementable interventions and existence of national guidelines for management at the community level, in India, diarrhea is still one of the top five causes of death among infants and under-five children. Oral Rehydration Therapy [ORT] with Oral Rehydration Solution [ORS] remains the cornerstone of appropriate case management of diarrheal dehydration and is considered the single most effective strategy to prevent diarrheal deaths in children. There is lack of knowledge and awareness amongst care providers on how to implement and achieve greater coverage of existing cost-effective interventions. Sometimes visiting a healthcare facility might be time taking owing to inaccessibility. Hence, the management of diarrheal illness should start with home available fluids and adequate knowledge has to be given to the caregivers . Diarrhea can last several days, and can leave the body without water and salts that are necessary for survival. Most children, who die from diarrhea, actually die from severe dehydration and fluid loss. Children who are malnourished or have impaired immunity as well as people living with HIV are at utmost risk of life-threatening diarrhea. Diarrhea is usually a symptom of an infection in the intestinal tract, which can be caused by a variety of bacterial, viral and parasitic organisms. Infection is spread through contaminated food or drinking water, or from person-to-person as a result of poor hygiene . The Integrated Management of Neonatal and Childhood Illness (IMNCI) guidelines advises the use of ORT, along with continued feeding, and zinc supplementation for appropriate diarrhea case management. As a primary caregiver to an under five-child, the mother's knowledge, perception and management skills are important to minimize the effects of morbidity and mortality associated with diarrheal diseases. The slum dwellers are particularly vulnerable to diseases because of malnutrition, poor socio-economic factors, poor immunization status, overcrowding, poor personal hygiene and some cultural practices. So with this in consideration this study was carried out with the objective to determine the knowledge, attitude and practice among mothers of under-five children regarding acute diarrheal diseases, methods of its prevention and management by them.

MATERIALS & METHODS

Type of study- It was a community based cross-sectional studyTimeline of the study- The study was carried out over a span of 3 months i.e from 1st September to 30th November, 2016. Sample size- The target sample size for this study was estimated at 125 mothers with children belonging to under-five age group, with an assumption that the proportion of awareness on diarrhoeal illness among the mothers' population is 50%, permitting for 95% confidence level, 10% precision and 30% non-response rate. Study tool- Information was collected using a semi-structred open-ended questionnaire, where a number of questions were adapted from the NFHS- 3 questionnaire . Diarrhoea was defined as per World Health Organization (WHO) definition. The questionnaire contained sections on socio-demographic data & the knowledge regarding diarrhea (signs & symptoms, complications and management) along with attitude and practices followed for its prevention and management. The questions on knowledge were framed as multiple response type, with

opportunity to choose more than one option in some questions. The questions on attitude judged the importance that the respondent attributed to the factor or behaviour on a Likert five item scale ranging from 'not important ' to 'very important'Translated odia version of the questionnaire was pilot tested in another slum nearby.'

Sampling techniqueThe total population of all the five slums under the field practice area of Urban Health & Training Centre [UHTC], Kalinga Institute of Medical Sciences[KIMS], Bhubaneswar is around 12,500 with 3200 households. Systematic random sampling method was used to select the households in such a manner that every 25th house** was interviewed. In case the selected household did not fulfill the selection criteria, the next household that fulfilled the criteria was selected.** [The target sample size for this study being estimated at 125 mothers with children belonging to under-five age group]

INCLUSION CRITERIA

1. Mothers whose children were in the age group of 6 months to 5 years. [The study targeted to interview the mothers of the household for her youngest child five years and below]
2. Mothers who gave consent.
3. Mothers who were residing in the slum since at least 1 year.

EXCLUSION CRITERIA

1. Mothers with chronically ill under-five children.2. Not willing to participate.3. Not found after 2 home visits.4. Mentally incapacitated mother or mother < 18 years.

Ethical implication:

Ethical clearance and approval was obtained from the Institutional Ethics Committee [IEC], KIMS. Informed written consent was obtained from the participant mothers, assuring their full confidentiality and voluntariness, that they had the right to refuse the participation at any stage of data collection.Data analysisData was entered into Microsoft Excel spreadsheet and analysed using Epi Info 7 software [version 3.5.4]. Descriptive statistics were used and Chi-square test as the test of significance; taking a p value of< 0.05 as statistically significant.

RESULTS

Out of the 125 mothers interviewed in total, the mothers' mean (±SD) age was 26.42 (±3.80) years, ranging from 19 to 37 years. The mean (±SD) age of their childen included in study was 24.98 (±14.78) months. On an average, these mothers had 1.58 (±0.67) children of less than 5 years of age. Around 78.4 % of the respondents were Hindus and majority of these families i.e around 80% had their total monthly family income in the range INR 5,000 - 15,000/month. Around 15.2 % of the respondents were illiterate, 13.6 % had primary education, 23.2 % had middle school education, 29.6 % had high school education, 12 % had higher secondary education and there were 6.4% graduate mothers.

All the houses had access to tap water supply and 66% used sanitary latrines for defecation. Overcrowding was a common finding in 60 % of the families. 22 % of the under-five children had an episode of diarrhea within the last one month. Almost all of the respondent mothers i.e.around 94% knew about diarrhea but as few as 24% could correctly define diarrhea as the passage of watery stools three or more times a day. Knowledge of respondents regarding the causes of diarrhea has been presented in

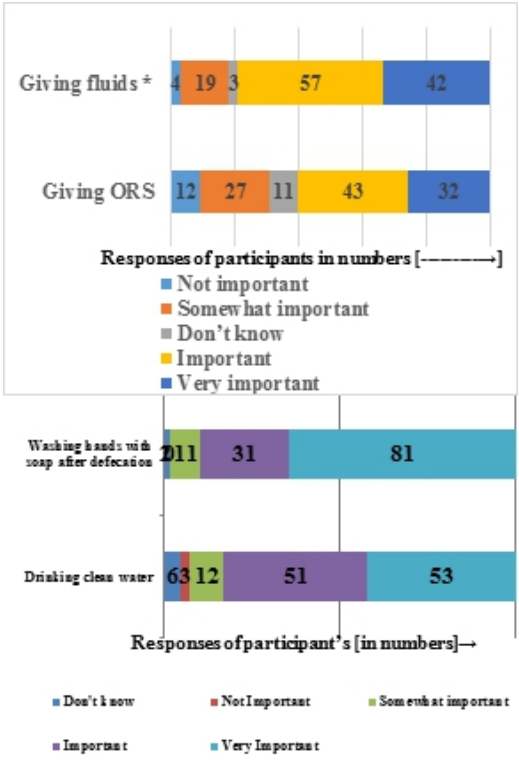
Table 1.Table 1.Knowledge of mothers regarding diarrhoea/ dehydration in their under-five children, its causes and preventive/ management measures (n=125)

Knowledge	Frequency [in nos.]	Percentage [%]
Knew about diarrhea	117	93.60
Knew about modes of spread	70	56.00
Knew about danger signs of diarrhea	50	40.00
Had heard about ORS	122	97.60
Knew about home based preparation of ORS	83	66.40
Usage of drugs in diarrhea	52	41.60
Heard about Zn supplementation	3	2.40
Heard about rotavirus vaccine	52	41.6
Believed that starvation cures diarrhea	10	8.00
Knew about role of breast feeding in the prevention of childhood illness	115	92.00
Unhygienic surrounding were responsible for diarrheal diseases	95	76.00

93.60% of the mothers knew about diarrhea but only 56% could tell about the mode of spread. Around 8% of the mothers believed that fluid restriction cures diarrhea. The attitude of mothers to prevent diarrheal illness of their under-five children and their preventive measures for such ailments is depicted in the Fig 1.

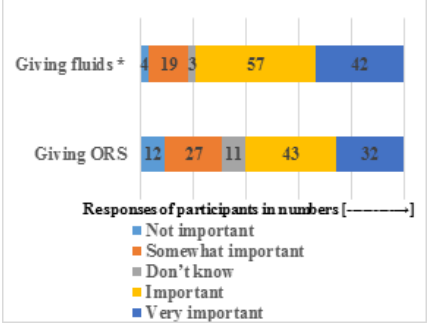
Hand washing practices with soap after handling the child's stool and before feeding the child was considered to be very important by 81% of the mothers to prevent food and fluid contamination used for the child.

Fig 1.Attitude of mothers towards preventive measures for diarrhea of their under- 5 children (n=125)



The attitude of mothers towards management of diarrhoea, regarding the use of ORS and other fluids is depicted in Fig 2. Likert scale has been used for interpreting the responses with answers ranging from do not know to very important.

Fig 2: Attitude of mothers towards management measures for diarrhoea of their under-five children (n = 125)



*Fluids other than ORS included rice water, coconut water, water with salt and lemon and plain water

The practices of the mothers', for preventing and managing diarrhoeal episodes in their under-five children is shown in table 2.

Table2.Practices followed by mothers towards prevention and management of diarrhea in their under-5 children (n=125)

Practice	Frequency	Percentage (%)
PREVENTIVE MEASURES		
Exclusive breast feeding	95	76.00
Handwashing with soap after defecation	93	74.40
Before feeding	33	26.40
Usual disposal of child stool in:- 1. Latrine 2. Open air	70 55	56.00 44.00
MANAGEMENT MEASURES		
A. Usual response to diarrheal illness		
Immediate medical care <24 hrs	99	79.20
Home care with ORS	123	98.40
Home remedies and self medication	55	44.00
Continuing breastfeeding during diarrheal episodes(n=59) *	59	100.00
B. Taken medical advice from:-		
1.Government or private medical practitioner	79	63.20
2. Quack or local chemist or others	46	36.81

*n= No. of mothers who were breast feeding their children at the time of interview

DISSCUSSION

Despite the fact that ORS can substantially reduce the mortality and morbidity resulting from diarrhea, poor knowledge pertaining to diarrhea and its management has posed a great challenge in the developing countries of the world with huge numbers of diarrhea-associated deaths and ill-health among children. In our study done among mothers' of under-five children, the mean age of the mothers was 26.42 (±3.80) years which is nearly similar to the mean age of mothers in a study done in slum community in Bankura (23.68 ± 4.89) years but less than the mean age of mothers in Akhavanet al whichis31.5 ± 4.7 years . The mean age of the children in our study was 24.98 (±14.78) months.

In our study 93.60% of the respondents knew about diarrhea but only 56% could tell about the mode of spread. This gap can result in poor practices in diarrheal management. A study in Karnataka reported that around 93.13% of the mothers were aware of diarrhea which is at par with the current study but as few as 41.17% could tell about the mode of spread which is considerably less than the present study . In a study done in rural area of Ranga Reddy in Telangana, 40% of the mothers were found to have adequate knowledge regarding the method of ORS preparation and most of the respondents (34.3%) came to know about ORS from doctors. In our study around 40% of the respondents knew about the danger signs of dehydration in diarrhea which is slightly less than a study done in Jamaica (43%). In our study, 43% of the mothers knew the advantage of using ORS in diarrheal diseases and thought that it was important while 32% mothers thought that using ORS was very important during an episode of diarrheal illness, but in a study in Iran only 78.97% of mothers were aware of the role of ORS in the treatment of dehydration caused by diarrhea. In a study in north-west Ethiopia, 26.6% of the mothers had no any knowledge about the cause of diarrhea but in our study almost all the respondents had some knowledge about the cause of diarrhea and could answer at least one of the options given, there were multiple responses also. Awareness about zinc supplementation in diarrhea was present in as few as 2.60% of the mothers in the present study and they came to know about it either from a doctor or from television.

ORS was used by 98.40 % of the mothers in our study but only 66.40 % of mothers knew how to make ORS at home. Breast feeding was continued by 100.00 % of mothers, during episodes of diarrhea in our study where as in a study in Karachi only 67 % of the mothers continued breastfeeding and other types of semi-solid feeding of their under-five child during a diarrheal episode . This can be explained by the fact that breastfeeding decreases after two years of age and our sample includes mothers of children who were six months to five years old. In our study, unscientific methods of management and self-medication was being practiced by around 44% of the respondents. In a study done in a slum community in Bankura, only 9.3% of the mothers had good practice in managing childhood diarrhea while around 20.58% mothers were completely unaware of the management of a diarrheal episode at home . However, only 19.35% had used ORS before referring to a doctor in that study where as in our study 98.40% used ORS before referring the child to any healthcare facility which shows that the mothers were adequately aware of the home-based diarrheal management by the use of ORS . In one of study conducted in Pakistan, 42 % of mothers were not administrating ORS accurately. Such a high frequency of wrong administration of ORS was mainly due to lack of education among respondents as 78 % of them were found to be illiterate Our study showed a positive association between the knowledge and practices of mothers, thus highlighting the importance of formal education as well as awareness programmes in order to enable mothers to prevent the complications of dehydration and decrease mortality amongst children. This is of utmost importance in order to improve the general health status of our children.

Conclusion

Positive attitude was seen among mothers regarding the use of ORS in the prevention of dehydration. Yet certain lapses are seen in the knowledge and practices of mothers regarding its administration. Mothers must be encouraged to start ORS without waiting for a visit to the doctor. Such simple measure to improve the practices of mothers would considerably reduce the burden of morbidity and mortality amongst children under -five years of age.

Conflict of interest

None

REFERENCES

1. Abdinia, B. (2014). Knowledge and Practice of Mothers in the Management of Children ' s Diarrhea , in Northwest , Iran. Rev Salud Publica, 3(2), 2012–2015. https://doi.org/10.5812/pedinfect.17581
2. Akhavan, T., Kheirkhah, D., Abbasi, P., & Zadeh, M. H. (2015). Maternal Knowledge , Attitude and Practice about Oral Rehydration Therapy in Children's Diarrhea, Iran. International Journal of Review in Life Sciences, 5(9), 1098–1103.
3. Amare, D., Dereje, B., Kassie, B., Tessema, M., Mullu, G., Alene, B., & Ayele, A. (2014). Infectious Diseases & Therapy Maternal Knowledge and Practice Towards Diarrhoea Management in Under Five Children in Fenote Selam Town , West Gojjam Zone , Amhara Regional State , Northwest Ethiopia , 2014. , Infectious Diseases and Therapy, 2(6). https://doi.org/10.4172/2332-0877
4. Bachrach, L. R., & Gardner, J. M. (2002). Caregiver knowledge , attitudes , and practices regarding childhood diarrhea and dehydration in Kingston , Jamaica, 12(1), 37–44.
5. Bham, S. Q., Shah, M. A., & Saeed, F. (2015). 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, 20(2), 126–131.
6. Desalegne Amare, Birtukan Dereje, Berhanu Kassie, Minchl Tessema, Getachew Mullu, B. A. and A. A. (2014). Maternal Knowledge and Practice Towards Diarrhoea Management in Under Five Children in Fenote Selam Town, West Gojjam Zone, Amhara Regional State, Northwest Ethiopia,. Infectious Diseases & Therapy, 2(6).
7. Gazi Easin, Chowdhury Aniket, Kumar Rakesh, Sarkar Aditya Prasad, Basu Subhra Samujjwal, Saha Sanjay, (2015), Can mothers care for acute diarrhoeal disease of their under five children effectively at home? A cross sectional study in slum community in Bankura, Journal of Evidence based Medicine and Healthcare, Volume 2,Issue 36, 5575-5584
8. International Institute for Population Sciences (IIPS) and Macro International. 2007. National Family Health Survey (NFHS-3). (2007). National Family Health Survey (NFHS-3), 2005–06: India: Volume II. Mumbai: IIPS.
9. K. Sridevi, Shrinivas Subudhi, P. Madhavi, Prashant. R. Kokiwar, S. V. (2015). Knowledge, attitude and practices regarding homebased management of diarrhea: A comparative study. MRIMS Journal of Health Sciences, 3(1), 62–64.
10. K.Park. (2017). Jabalpur Banarasidas: Bhanot Publishers; 2017 (24th ed.). Bhanot Publishers.
11. Masiha, S. A., Khalid, A., Malik, B., Muhammad, S., & Shah, A. (2015). Oral Rehydration Therapy- Knowledge , Attitude and Practice (KAP) Survey of Pakistani Mothers. Journal of Rawalpindi Medical College Students Supplement, 19, 51–54.
12. Rani, V. P., Vaz, L. S., & Gn, K. (2016). JMSCR Vol || 04 || Issue || 10 || Page 13201-13209 || October. Journal of Medical Science and Clinical Research, 4(10), 13201–13209.
13. Rokkappanavar, K. K., Nigudgi, S. R., Ghooli, S., Kk, R., Community, I. J., Public, M., & Mar, H. (2016). A study on knowledge and practice of mothers of under-five children regarding management of diarrhoea in urban field practice area. International Journal of Community Medicine and Public Health, 3(3), 705–710.
14. UNICEF Data: Monitoring the Situation of Children and Women [https://data.unicef.org/topic/child-health/diarrhoeal-disease/]
15. UNICEF-Pneumonia-Diarrhoea-report2016- web-version_final
16. WHO. (2009). Diarrheal disease. WHO. Media Centre. Fact sheet N°330.
17. Retrieved from http//www.who.int.mediacentre/factsheets/fs330/en/index/html