

A Study Regarding Knowledge of Acute Diarrhoeal Diseases in the Mothers of Under 5 Year Children Residing in Urban Slums of Indore City



Medical Science

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Dr. Rajendra Kumar Mahore

Demonstrator Gandhi Medical College Bhopal

*** Dr. Sachin Parmar**

P.G. Community Medicine Department MGM MC Indore *Corresponding Author

ABSTRACT

Introduction Comparing estimates of the current global burden of diarrhoeal diseases with previously published estimates, highlights that the incidence of diarrhea has not changed much, although overall diarrhoeal mortality has declined. For children aged under 5 years, a median of three episodes of diarrhea occurred per child-year, which is similar to that reported previously. The current estimates in under-five children just that there are 1.4 billion episodes of diarrhea per year with 123 million clinic visit annually and 9 million hospitalization world wide, with a loss 62 million disability-adjusted life year (DALYS). *Aims& Objective:* To obtain the information about knowledge of mothers of under 5 years children regarding causation, transmission, prevention & management of acute diarrhoeal diseases. To study the attitude & practices regarding causation of diarrhoea. Specific objectives are To access about the personal hygiene of mothers of children below 5 years of age and To access their knowledge about hand washing practices & diarrhoea caused by ROTA virus. *Methodology:* - A cross-sectional observational study was carried out over 150 randomly selected mothers were taken for study from urban area at Indore City for their awareness about Knowledge, attitude and practice regarding causation, transmission, prevention & management of acute diarrhoeal diseases.. A Semi structured questionnaire was used to collect the desirable data over a period of three months (Oct-Dec 15). The data was analyzed using appropriate statistical software. *Conclusion:* Based on this study over a sample of 150 randomly selected mothers of urban Indore, we reach to the conclusion that majority of the mothers studied in this research had inadequate knowledge about cause and management of diarrhea. This study emphasizes the need for intervention programs especially for the mother Regarding prevention and management of acute diarrheal diseases.

Introduction:

Diarrhoea is defined as the passage of loose, liquid or watery stools. These liquid stools are usually passed usually more than 3 times a day.

WHO initiated the diarrhoeal diseases control programme in 1980, approximately 4.6 million children used to die each year of the dehydration caused by diarrhoea. Diarrhoea is still a major pillar of children under 5, from 1.2 million deaths in 2000 to 0.7 million in 2011. In India, acute diarrhoeal disease accounts for about 8% of deaths in under-five years age group during the year 2011, about 10.6 millions cases with 1,293 deaths were reported in India. ¹

Diarrhoea is frequent passage of abnormally soft or liquid faeces with or without discomfort ⁽²⁾. Diarrhoea can be acute in the first fourteen days then persistent thereafter ⁽³⁾. Diarrhoea presents with complications like dehydration, electrolyte imbalances, cardiac arrest, shock, nausea and vomiting ⁽⁴⁾. In developing countries ninety (90%) of all underfive deaths are due to complication of diarrhoea ⁽⁵⁾. There is higher underfive mortality due to diarrhoea in developing countries than in developed countries due to mother's unhygienic practices and improper feeding practices ⁽⁶⁾. The Feeding Practices The WHO (1992) reports that more than a third of hospital beds are occupied by underfive children with diarrhoea infections due to diarrhoea infections emanating from lack of breast feeding (WHO,1992). ⁽⁷⁾In another related study in Mbabane Swaziland in 1996 ,it was found that thirty three percent (33%) of diarrhoea incidences in children is caused by lack of exclusive breastfeeding in the first three months accounting for fifteen percent(15%) of all underfive deaths ⁽⁸⁾. Breast milk contains enough nutrients required by the child under 6 months of age and, giving a child supplementary feeding within the first two months might enhance susceptibility of child to diarrhoea as it may be contaminated and may limit the protective breast-milk ⁽⁹⁾. UNICEF (1999) reports that eighty four percent (84%) of children were receiving supplementary feeding within their first two months of life ⁽¹⁰⁾.Gyimah 2003 also noted that mothers of underfive children should maintain a high standard of cleanliness at all times to prevent diarrhoea occurrence ⁽¹¹⁾.This was supported by Hutley et al(1998) who found that ninety

percent(90%) of all diarrhoeal diseases in underfive children is related to mothers' unhygienic practices and poor sanitation.. In another study findings revealed that thirty eight (38%) of mothers do not wash their hands prior to meals, fifty five percent(55%) of mothers of underfive children do not boil drinking water for their children.(McLennan 2000)Another study by Saidi et al (1997) showed that children were drinking which water was contaminated with bacteria hence emphasizing need for boiling water for children to prevent diarrhoea⁽¹²⁾. Findings from a research carried out in Israel showed that if mothers encouraged their children to wash hands prior to meals diarrhoeal episodes would reduced by sixty percent (60%) (Blinking, Fraser D, 1999).Curtis et al (2003) supported these findings by highlighting that if hand washing is done with soap risk for diarrhoea is decreased by fifty percent (50%) ⁽¹³⁾.Mothers have been shown to clean their hands with methods which leave diarrhoea causing pathogens in by a study in Bangladesh where 41% of rubbed their hands on the ground and used only water to wash their hands after helping their children with toileting About thirty percent (30%) of children have been shown to retain faecal matter on their bodies and clothes after cleaning by their mothers ⁽¹⁴⁾. This study further showed that ninety five percent (95%) of children were not told by their mothers to wash hands after defecation and of these children 38% were shown to retain faecal matter⁽¹⁵⁾.

Materials & Methods:

A cross-sectional observational study was carried out over 150 randomly selected mothers were taken for study from urban area at Indore City for their awareness about Knowledge, attitude and practice regarding causation, transmission, prevention & management of acute diarrhoeal diseases.. A Semi structured questionnaire was used to collect the desirable data over a period of three months. The data was analyzed using appropriate statistical software. Mothers who were absent at the time of data collection or who are not willing to participate are excluded from the study.

Study was carried out using a pre-tested Semi structured questionnaire, which included demographic variables like Age, Occupation, No. of under 5 children and Address. The data was ana-

lyzed using appropriate statistical software.

Results:

Most of the children (86.7%) are having 1-10 episodes of diarrhoea in a year. Most of the mothers (74.0%) prefer visit to a private practitioner during diarrhoeal episode. 58% of mothers prepare ORS in boiled water, & 16.7% of mothers in potable water 38% respondent mothers even don't know how to prepare ORS. Only 45.3% of mothers didn't stop feeding during diarrhoeal episodes. Most of the mothers stated only single sign of dehydration, none of them aware about all signs of dehydration. Majority of mothers (62.7%) were aware about only sugar and salt solution (Not about other homemade fluids given during diarrhea). Only 24.7% of mothers had knowledge about complete management (i.e. ORS, breast feeding/top feeding & Zinc tablets) of diarrhoea.

About personal hygiene practices: 91.3% of mothers wash their hands before cooking, eating & breastfeeding but only 4.0% of mothers know about right method of hand washing. Only 68.0% of mothers prefer milk feeding by bowl & spoon, 32.0% of mothers prefer bottles feeding. Only 40.0% of mothers use soap/ash for cleaning their milk utensils. Most of the mothers (74.0%) prefer Narmada pipe line water. Most of the mothers (84.7%) use covered utensils for storage of water. Only 6.0% of mothers prefer chlorine tablet/candle filter/UV/RO for treatment of drinking water. 74.7% of mothers use (have provision of) household latrine. 94.0% of study population used soap/handwash for washing their hands after defaecation. Most of the mothers (88.0%) regularly cut nails of their children. 58.0% of mothers were not concerned about cleanliness of toys of their children. Majority of study population (96.7%) didn't have knowledge about rota virus. Only one mother vaccinated to her child for rota virus.

Discussion:

A total of 150 mothers were interviewed in urban slums (Mushahedi) of Indore city.

The average age group of the study subjects was 21-25 years. It was found that majority of the mothers were housewives. Moreover it was seen that 49.3% of study population were educated up to either primary or middle school whereas 10.7% were illiterate. In our study, it was stated that only 48.7% children were completely immunized. Similarly this type of study done in Mumbai slums and its immunization status was 71%⁽¹⁸⁾.

Exclusive breast feeding should be continued for 6 months. It protects the child against various infections, diseases and from malnutrition⁽¹⁷⁾. Our study showed that 85.4% of mothers were doing exclusive breast feeding and the remaining 0.6% was not doing so. Similarly study done by Springer publisher company and its result was 80%⁽⁹⁾. We found that only 57.4% mothers breast fed for more than 8 times a day. However 14% mothers started supplementary feeding of their children before 6 months which is known to cause infections, the main reason being early marriage and early child birth (15-20 years).

Diarrhea is very common among the children under 5 years. Most of the children (90.7%) in our study the episodes of diarrhea was 1-10 in a year, whereas more than 10 episodes were seen in 9.3% children. Similar study shown 2-3 episode in bulletin of WHO; 2003⁽¹⁸⁾. Hence these children require medical attention and their mothers should be counseled for the needs of prevention as well. Most of the mothers stated that they noticed very few signs (lethargy and restlessness) of dehydration due to diarrhea; moreover none of the mothers were aware of all the signs. It was observed that only 45.3% of mothers had continued breast feeding while 32% reduced the frequency of feeding

and it was seen that 22.7% of mothers completely stopped breast feeding their children as they believed that by giving rest to the bowel, the diarrhea would subside by its own while similar study done by Int.j.sci.{Qassim} and its result was 4%⁽¹⁹⁾.

The immediate treatment regime for diarrhea followed by the majority of the mothers (74%) was to visit the nearest clinic or hospital similar type of study done by Int.j.sci.{Qassim} and its result was 77%⁽¹⁹⁾ whereas only 23.3% mothers gave ORS similar type of study done by Int.j.sci.{Qassim} and its result was 24.4%⁽¹⁹⁾. It was also seen that 16.7% mothers prepared ORS in potable water as compared to 58% who preferred boiled water. As per WHO guidelines, it is recommended that ORS should be prepared in potable water. However in Indian slums, the purity of water is highly questionable, hence the ANMs and AWW promote the mothers to prepare ORS in boiled water. Various homemade fluids (sugar and salt solution, rice water, lassi, coconut water) were made available to the children suffering from diarrhea out of which sugar and salt solution was used by majority of the mothers (62.7%). By our study, we found that only 24.7% mothers followed complete management (ORS, breast feeding, Zinc tablets for 10-14 days) for the treatment of diarrhea.

Hand washing practices should be performed for keeping personal hygiene and thereby preventing infectious and contagious diseases. It was found that majority of the mothers (91.3%) (washed their hands before cooking, eating and breast feeding while 62% result shown in journal of health, population and nutrition 18⁽¹¹⁾ and only 4% mothers had proper knowledge about the right methods of hand washing technique, whereas 24% mothers were completely unaware of this.

Only 6% mothers preferred chlorine tablets /candle filter/ UV/RO for the purification of drinking water. Moreover 56% mothers purified their drinking water by simple filtration method.

74.4% of our study population used household toilets for the purpose of defecation as compared to 23.3%, who use public toilets. Majority of children (94%) washed their hands with soap / hand wash.

Rota virus diarrhea is very common in children below the age of 12 months and causes severe dehydration in children less than 5 years in India, whereas in developed countries the first episode is frequently delayed until the age of 2-5 years⁽²⁰⁾. It was noted that only 3.3% of our study population had knowledge about diarrhea caused by Rota virus and out of 150 mothers, only one had vaccinated her child against Rota virus as per results obtained.

Conclusion:

The mothers studied in this research had inadequate knowledge about cause and management of diarrhea. This study emphasizes the need for breastfeeding intervention programs especially for the mother during antenatal and postnatal check-ups.

Most of the children (90.7%) in our study have had 1-10 episodes of diarrhea in a year. The treatment of diarrhea was mainly using ORS and homemade fluids; however most mothers preferred rushing to the doctor for the immediate management. We found that only 24.7% mothers followed complete management (ORS, breast feeding, Zinc tablets for 10-14 days) for the treatment of diarrhea. Moreover the mothers noticed very few signs of dehydration like lethargy and restlessness as they were unaware of all the signs. This study also emphasizes the need for intervention programs especially for the mother regarding aspects prevention and management of acute diarrheal diseases.

Table 1: Showing knowledge regarding to prevention and control of diarrhoea

Practices followed by the mother when child suffer from diarrhoea. (n=150)				Breast feeding practices during diarrhoeal episodes.			
S. No.	Practices followed	Frequency	Percent	S. No.	Breast feeding	Frequency	Percent
1.	Visit to private practitioner	111	74.0	1.	No change	68	45.3
2.	Give ORS	35	23.3	2.	Reduce	48	32.0
3.	Homemade management	1	.7	3.	Stop	34	22.7
Knowledge regarding preparation of ORS.				Practice to be followed if a child suffers from diarrhoea			
S. No.	Knowledge	Frequency	Percent	1.	Give ORS	96	64.0
1.	Don't know	38	25.3	2.	Continue breast feeding	16	10.7
2.	Potable water	25	16.7	3.	Give Zn tablet for 10-14 days	1	.7
3.	In boiled water	87	58.0	4.	All of the above	37	24.7

Table 2: Showing personal hygiene practices

Practices of handwashing before cooking, eating & breast feeding.				Knowledge regarding right method of hand washing.			
S. No.	Right method of hand washing	Frequency	Percent	S. No.	Right method of hand washing	Frequency	Percent
1.	Yes	6	4.0	1.	Yes	6	4.0
2.	No	107	71.3	2.	No	107	71.3
Storage of drinking water.				3.	Never heard before	37	24.7
S. No.	Storage	Frequency	Percent	Place of defaecation.			
1.	In open utensils	2	1.3	S. No.	Option	Frequency	Percent
2.	In covered utensils	127	84.7	1.	House hold latrine	112	74.7
3.	Direct use from water source	19	12.7	2.	Public latrine	35	23.3
4.	Other	2	1.3	3.	Open field	3	2.0

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