

Current Maternal Knowledge about Diarrheal causes in Children and Role of Oral Rehydration Salt

Mirza Inam ulhaq, Shahzad Akhtar Aziz, Ayesha Khan, Ayesha Jehan, Anam Farooq, Feroz Inayat

ABSTRACT

Objective: To evaluate the community knowledge about diarrheal causes in children and use of ORS as initial management tool

Study Design. A descriptive cross sectional study.

Place and Duration of Study. The study was conducted in the outpatient department of Railway hospital from July 15 to September 15, 2011.

Materials and Methods: Total 150 mothers were included in the study with inclusion criteria of having at least one child of less than five years of age. A pretested study questionnaire was admitted to the respondents duly filled by the researcher along with the in-depth interview. The result obtained through the study were then categorized into the causes related to digestive system, food contamination and use of hot and cold. Results were analyzed on SPSS 13.0

Results: Out of 150 mothers included in the study, 30% believed contaminated food and water cause diarrhea where as 18% viewed infections such as bacterial or viral to be the cause. A large percentage i.e. 22% could not associate any cause to the occurrence of diarrhoea. 69% continued the breast feeding and normal feeding during the disease but 31% discontinued the treatment and replaced it with rice water, yogurt, juices and mineral water available in local markets

Conclusion: This study demonstrated that majority of mothers believed childhood diarrhea is caused by contamination of food and water with the bacterial and viral illness.

Key words *Prevalence, Childhood diarrhea, Sub urban population, Breast feeding, Contamination.*

Introduction

Diarrheal diseases are major causes of childhood morbidity and mortality in developing countries. Knowledge and practices of mothers or other care-takers of children are important determinants of the occurrence or outcome of diarrheal diseases. Diarrheal diseases account for nearly 1.3 million deaths a year among children under-five years of age, making them the second most common cause of child deaths worldwide. Over half of the deaths occur in just five countries: India, Nigeria, Afghanistan, Pakistan and Ethiopia.¹

Oral rehydration salts (ORS) and oral rehydration therapy (ORT), adopted by UNICEF and WHO in the late 1970s, have been successful in helping manage diarrhea among children. It is estimated that in the 1990s, more than 1 million deaths related to diarrhea may have been prevented each year, largely attributable to the promotion and use of these therapies.² Mull and Mull (1988) emphasized the importance of incorporating mothers' perceptions of childhood diarrhea in ORT programs (Mull and Mull, 1988; Malik et al, 1992b; Chavasse et al, 1996). Improving the hygiene and maternal domestic practices is one of the most important means of reducing the prevalence of diarrheal disorder.³ Kalsoom and Saeed et al (1997) reported about maternal beliefs of bad breast milk,

Correspondence:

Dr. Mirza Inam-Ul-Haque,
Department of Community Medicines
Islamic International Medical College, Rawalpindi.
e-mail: Mirza.InamulHaque@riphah.edu.pk

Table I: List of different beliefs about childhood diarrhea

Serial #		Frequency	percent
1.	Watery stools	84	56
2.	Watery stools/vomiting	39	26
3.	Watery stools & abdominal. Pain	18	12
4.	Watery stools, Vomiting, Fever	6	4
5.	Watery stools, Vomiting, Fever, abdominal. Pain	3	2
	TOTAL	150	100

Pregnancy, flies, food and utensils as the major causes of diarrhea.

Material and Methods

An observational study was conducted in an outpatient department of Pakistan Railway hospital, Rawalpindi from July 15, 2011 to September 15, 2011. Sampling technique was stratified random sampling. The sample size was 150 with the inclusion of all the mothers who had at least one child less than five year of age and educational status of at least matriculate.

The data was collected through the distribution of pretested questionnaires filled by the final year students which included information about the common understanding of the term diarrhea, its causes, severity, complication, diet taken during diarrhea and management with ORS. The questionnaire also includes different health education measures used for creating awareness about diarrhea prevention in people.

The data was analyzed by using SPSS version 13.0. Descriptive statistics were applied for all qualitative variables and presented in the forms of tables, frequencies and percentages.

Results

The total 150 respondents were included in the study; of which 84% were mothers having at least secondary education and 16% belonged to graduate group: with 68% falling in the age up 15-20 years, 24% each in age groups 20-25 8 % in age group 25-35.

A large percentage of 56% people perceived diarrhea to be watery or increased frequency of stools. 26% understood diarrhea is both, watery stools with vomiting. 12% believed watery stools with abdominal pain are characteristic of diarrhea.

It was revealed that 30% believed contaminated food and water causes diarrhea where as 18% attribute infections such as bacterial or viral to be the cause. A large percentage i.e. 22% could not associate any cause to the occurrence of diarrhea. However, 6% reported other miscellaneous causes such as use of unsterilized feeders, teething, stress, weather changes, and drugs such as use of antibiotics, over-eating and consumption of junk food.

Table II: List of causes of childhood Diarrhea

Serial #	Cause	Frequency	Percent
1.	Infection	27	18
2.	Contaminated food	24	16
3.	Contaminated water	12	8
4.	Contaminated food & water	45	30
5.	Soil eating, flies	9	6
6.	Do not Know	33	22
	TOTAL	150	100

Table-III shows 34 percent mothers had knowledge about ORS preparation. 66 percent were totally unaware', 60% of the respondents treated diarrhea using self medication and 20% with ORS and home

Table III: Knowledge about home made ORS

Serial #	Homemade preparation	Frequency	Percent
1. 5gm table salt 20 gm sugar	Know	57	34
2. 5gm table salt 20 gm sugar	Do not know	93	66
	TOTAL	150	100

remedies and 20 % visited the outpatient department when the dehydration became severe. 69% continued the breast feeding and normal feeding during the disease but 31% discontinued the treatment and replaced it with rice water, yogurt, juices and mineral water available in local markets. The study also found out that 96% believed in creating mass awareness about diarrhea through television, radio and news paper specially during the summer season, as 98% knew it was a preventable disease which if not treated adequately can prove to be fatal.

Discussion

Mothers in this part of Pakistan have diverse and complex explanations about the causes of diarrhea based on individual experiences and personalities as well as educational status. A study conducted at institute of American Academy Of Pediatrics about food absorption in infants showed majority of mothers held contaminated food as leading causes of diarrhoea.⁴ Similar study done by(Nielsen et al, 2001) indicates that its mandatory to target the wider range of people within the community including religious leaders ,elders, community health workers ,traditional workers .In other study published in South East Asian Journal of public health revealed various existing

beliefs and practices as unbalanced diet of hot and cold food, contamination with flies ,worms in stomach ,soil eating ,passing of shadow. Another study published in Pediatric infectious diseases journal indicated that most of the mothers gave less food to children during diarrhea and medicine were given to child only when there is blood with stool.⁵ while in our study, breast feeding and normal feeding were continued during diarrhea by majority This was important finding as there are fluid and electrolyte losses during diarrhea and if a child is in adequately fed, he may become dehydrated. The study also focused on the preventive measures for diarrhea control, almost all substantiated the correct method i.e. interrupting the mode of transmission (faeco-oral route) by using boiled water, maintaining general hygiene of cooking/feeding utensils, washing hands before feeding the child, and improving the general sanitation conditions. The Integrated Management of Neonatal and Childhood Illness guidelines given by SANTE also recommended the interruption of transmission as most important control measure.⁶ Water supply and sanitation are good predictors of diarrhea, in our study 9 out of every 10 respondents believed that keeping a clean house, washing fruits and vegetables, washing hands before cooking, washing kitchen utensils, supervising what children eat, and breast feeding were important ways to prevent diarrhea, same findings were also projected by Murray and Lopez.^{7,8}Diarrhea, even though a preventable disease has a high mortality index of 28% annually.⁹Therefore, ample emphasis should be laid on its prevention. In order to decrease high rates of morbidity

and mortality attributed to diarrhea, an en masse awareness campaign needs to be launched. There has been a reported decline in diarrheal mortality which is most likely due to adequate case management (introduced since 1980's). Victoria and others' (2000) review provides Oral Rehydration Therapy, has influenced the outcome of dehydrating diarrhoea.¹⁰ If the mixtures of ORS is unavailable a simple homemade consisting of 5 gm table salt and 20 gm sugar dissolved in one liter of water can be easily prepared emphasis should be laid on homemade preparation as the cost is on the rise and cost effective measures are required.¹¹

Conclusion

The study concluded mothers are important stake holders in children growth specially during breast feeding ,weaning and supplementary feeds ,all intervention must direct to enhance health education and similarly use of oral rehydration salt should be advocated at all levels of healthcare.

References

1. World Health Organization(2001),weekly epidemiological Record,No.31,3 Aug,2001
2. World Health Organization Expert Consultation. The Optimal Duration Of Exclusive Breast Feeding,2001
3. Govender T, Barnes JM, Pieper CH. Contribution of water pollution from inadequate sanitation and housing quality to diarrheal disease in low-cost housing settlements of Cape Town, South Africa. *Am J Public Health* 2011;101:4-9
4. Black R, Cousens S, Johnson HL, Lawn JE, Rudan I, Bassani DG, et al Global, regional and national causes of child mortality in 2008: A systematic analysis *The Lancet* 2010; 375:1969-87.
5. Lifschitz CH Carbohydrate Absorption From Fruit Juices In Infants, *American Academy Of Pediatrics* 2000;105;4.
6. Black RE. Persistent diarrhea in children in developing countries. *Pediatric infectious diseases journal* 1993, 12:751-61
7. SANTE: The Integrated Management of Neonatal and Childhood Illness: Steps to prevent child mortality *SANTE* 2007; 13:1-8
8. Murray CJL and Lopez AD. The global burden of disease a comprehensive assessment of mortality and disability from diseases and risk factors in 1990 and projected to 2020. Geneva World Health Organization, 1996
9. Black R, Cousens S, Johnson HL, Lawn JE, Rudan I, Bassani DG, et al Global, regional and national causes of child mortality in 2008: A systematic analysis *The Lancet*. 2010; 375:1969-87.
10. Victoria C.G., Bryce J., Fontaine O., Monasch R. Reducing Deaths from Diarrhoea through Oral Rehydration Therapy. *Bulletin of the World Health Organization*. 2000; 78:1246-55
11. WHO (2010) Program for Control of Diarrheal Diseases, Scientific Working Group Reports CDD/80.1, WHO Geneva

