SHORT COMMUNICATION

Knowledge, Attitude and Practice of Mothers Regarding Management of Diarrhea in Children of Early Age

Rubeena Gul and Raheela Amin

INTRODUCTION

In Pakistan 4.446 million children are born every year, out of which 8.99% die before reaching the age of 5 years.[1] The pediatric death toll due to diarrheal illnesses exceeds that of AIDS, tuberculosis and malaria combined. In poor countries, diarrheal disease is second only to pneumonia in causing deaths of children under five years of age. Every week, 31,000 children in low-income countries die of diarrheal diseases.[2] The most common causes of death amongst children under 5 years of age, not considering new borns are diarrhea and pneumonia.[3] In Pakistan, diarrhea is rated as the number one killer of children, accounting for about 25,000 deaths annually.[4] Every day, about 1,100 Pakistani children under the age of 5 years die of diarrhea and diseases related to water, sanitation and hygiene.[5] In addition, diarrheal diseases are costing Pakistan Rs.55 billion annually as 91 million population lack access to proper sanitation in the country.[6]

Khyber Pakhtunkhwa has an area of 74521km^2 and Peshawar is its capital city. Total population of Peshawar is 20.05 million. Population of children under five year of age makes 16% of the population i.e. 3.208 million. In 2007 data collected from all available health facilities show that 3,879 cases of severe diarrhea were reported in children of 5 years of age. In 2008, 6901 cases reported and in year 2009 till June, 1,750 cases were reported.[7]

Community health education is of utmost importance for effective case management, since it has the potential to establish productive contact between health services and the community to increase the capability of families to recognize danger signs of diarrhea in children to encourage early care seeking behaviors. Effective health education can be provided on the basis of accurate understanding of prevailing knowledge, attitude and practice of community. Therefore, it is necessary to have relevant information concerning KAP of mothers about diarrhea for successful implementation of control activities. Therefore, the objective of this study is to determine the knowledge, attitude and practices of mothers regarding the management of diarrheal diseases in children of five years of age.

Department of Community Medicine, Khyber Medical College, Peshawar, Pakistan.

Correspondence: Dr. Rubeena Gul, Department of Community Medicine, Khyber Medical College, Peshawar, Pakistan.

Email: gul_rubeena@yahoo.com

METHODOLOGY

A cross-sectional descriptive study was carried out in both rural and urban areas of Peshawar, over 12 weeks period from June to August 2010. The selected study areas were the diverse areas (both urban and rural) of Peshawar city. Using convince sampling technique a sample of 600 households, 300 each from urban and rural locations were selected. Data were collected by administrating a structured questionnaire to the mothers comprising the sample. The Inclusion criterion was mothers with at least one child of under five years of age. The respondents were the mothers of under five year old child.

Pilot study was conducted to check the validity of the study interview instrument. Data were collected using structured questionnaire with both open and close ended questions. The instrument was implemented by conducting face-to-face interviews with the mothers of the under five-year-old child. Before implementation of interview, verbal consent was taken from the mothers.

RESULTS

Of 600 mothers from rural and urban areas, 44% and 75.3% mothers respectively were educated. Of 44% rural mothers 14.6% had primary, 13.3% had middle, 6% had secondary level education. Of 75.3% urban mothers 8% had primary, 13.3% had middle, 50.6% had secondary level education.

75% and 86.7% of the sampled rural and urban mothers respectively had knowledge about diarrhea. While 20% rural and 39.33% urban mothers had a good knowledge of the effects of diarrhea - body weakness, weight loss and fluid loss i.e., they knew that loose watery stool is dangerous and can cause dehydration. 28.6% rural and 29.33% urban mothers had satisfactory knowledge i.e. body weakness and fluid loss. 26.6% rural and 18% urban mothers had basic knowledge i.e. body weakness.

146 (48.7%) rural and 242 (80.7%) urban mothers had knowledge about how to prepare S.S.S. i.e., a fistful of sugar, a pinch of salt and a jug of water a simple solution for a life threatening condition.

270(90%) and 276(92%) mothers had knowledge about ORS solution respectively i.e., they knew that one packet of ORS is added to one liter or four glasses of water.

Regarding home-based treatment as shown in fig:1, 44.6% rural and 71.3% urban mothers had positive attitude, i.e. giving S.S.S and ORS solution. While 38.6% rural and 20% urban mothers gave green tea and raw sugar solution. 16.6% rural and 8.66% urban mothers gave plain water and juice to their child.

156 (52%) rural mothers treated their child at home, 142(47.3%) took their child to hospital and 2(0.7%) to a non-certified medical practitioner. Similarly, 98 (32.7%) urban mothers treated their child at home with home-based fluids, 198(66%) took their child to hospital and 4(1.3%) took their child to a non-certified medical practitioner.

Regarding breast-feeding practices 220(73.3%) and 250(83.3%) mothers continued breast feeding the child during a diarrheal episode.

Among 600 mothers from rural and urban areas, 134(44.7%) and 94(31.3%) stopped weaning diet during an episode of diarrhea respectively.

All the mothers gave fluids when their child had an episode of diarrhea of which 140(46.7%) and 168(56%) mothers respectively gave fluids in no dehydration following plan A, where fluid deficit is less than 5% of the total body weight and the child is thirsty, when the child keeps asking for water, is an early useful symptom of dehydration where early oral fluid therapy is done as shown in Fig:2. 18% rural and 31.33% urban mothers increased fluid intake in some dehydration following plan B, where fluid deficit is 5-10% of total body weight, thirst, sunken eyes and depressed fontenella. While 35.33% & 12.6% gave fluids in severe dehydration following plan C where fluid deficit is more than 10% of the total body weight beside the above signs the child has cold extremities.

Among 600 mothers from rural and urban areas, 240(80%) and 268(89.3%) mothers respectively practise the ORS solution preparation. But 222(74%) rural mothers and 290(96.7%) urban mothers could properly demonstrate how to prepare ORS solution preparation.

Regardless of type of dehydration majority of the children were taken to the hospital. 270(90%) of rural and 280(93.3%) of urban mothers followed the instructions given by the doctor i.e. to give fluids after each loose motion and continue breast feeding during an episode of diarrhea.

Figure 1: Comparison of Attitude of Mothers Regarding Home Based Treatment of Diarrhealoiseas in Urban and Rural Areas

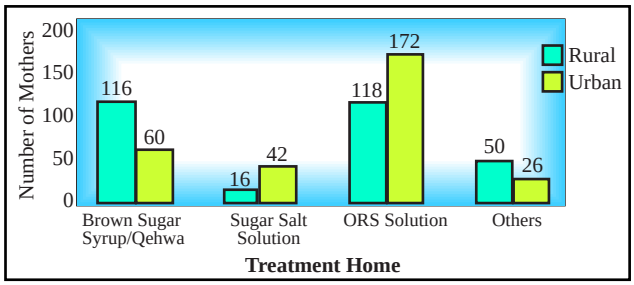
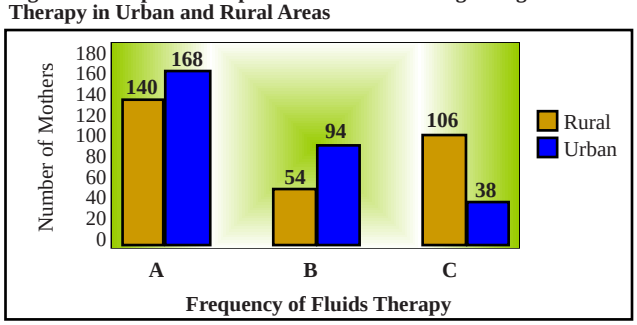


Figure 2: Comparison of practices of Mothers Regarding Fluids Therapy in Urban and Rural Areas



DISCUSSION

Primary health care is very important for the development of a country. Educated mothers can play important role in the control of diarrheal diseases. If mothers are educated, they will know how to treat their child properly and will practise oral rehydration therapy properly and will follow the instructions given by the doctor. Our survey reveals that literacy rate of mothers is lower in rural than urban areas which correlates with economic survey of 2009-10,[8] as literacy is prevalent in females but progress is uneven across the province.

86.7% mothers from urban area while 75% mothers from rural areas have knowledge about increasing fluid intake in diarrhea. The main source of information in urban areas is mass media while in rural areas it is the basic health unit. In order to increase the awareness further, it is important to improve health services, encourage the health staff in their efforts and to improve the source of communication by training the health staff in interpersonal communication and also educate the gate keepers i.e. religious scholars, teachers etc by using health education tools which are locally acceptable.

81% and 49% mothers from urban and rural areas respectively are aware of increasing intake of fluids during an episode of diarrhea. These fluids are locally acceptable as revealed by our study. Therefore, mothers in rural areas must be educated so that they can properly treat their child at home. In our study, it is evident that most of the mothers from urban and rural areas (92% and 90%) have knowledge about ORS solution which

indicates improvement in health education in both urban and rural areas; this figure is contradictory to WHO 1992-1993,[9] our figures report 6% of the mothers correctly practise home case management for their children with diarrhoea.

The attitude of mothers for the control of diarrhea is of prime importance. Home-based treatment is more common among the mothers of rural areas than urban areas. ORS the appropriate low cost technology is effective, easy availability in all parts of the region. But mothers are right in saying that in order to give ORS solution to a child it needs a lot of dedication and patience on the part of the mother to see the encouraging effects of the solution. While hospital-based treatment is more common amongst the urban mothers the reason for this attitude of mothers is that health centers are easily accessible and available as compared to their counter parts who prefer treating their children at home. Despite that 2% mothers from urban areas take their children to non certified medical practitioners as compared to 0.7% mothers from rural areas. The reason being the hard set traditional beliefs, illiteracy and ignorance on part of mother that plays a crucial role in their attitude.

Although majority of the study group breastfed their children but still they stopped weaning diet as their prime concern was to stop diarrhea.[10] However interaction between malnutrition and diarrheal disease is bi-directional.[11] Increase in immunization coverage, better health care access, improvements in water and sanitation and other socioeconomic changes the effect on both diarrheal mortality and childhood nutrition. Recent trends in mortality from diarrhea and the prevalence of malnutrition should be interpreted in the light of these complex relationships.[12]

Since personal hygiene and environmental sanitation are of utmost importance in prevention of diarrhea, health education must receive higher priority. For this reason, education of caretakers particularly mothers should be considered as an important intervention in prevention of diarrheal diseases in young children.

Urban mothers have good knowledge and practice as compared to their rural counterparts about oral rehydration solution. It is mostly because of the fact that it is easily prepared and is convenient for the care giver to prepare and to give to their child. Also globally, the proportion of diarrheal episodes treated with oral rehydration therapy is estimated to have risen from less than 15% in 1984 to approximately 40% in 1993.[13] This is due to increased breast feeding practices, weaning practices, improvement in sanitation and immunization against measles.

CONCLUSION

It is concluded that knowledge and attitude of mothers regarding control of diarrheal diseases is quite appreciative. Home based treatment is adopted mostly by rural mothers while most of mothers from urban areas take their child to hospital for treatment. While majority of the mothers in urban and rural areas knew about the preparation of S.S.S and ORS solution, however most of the mothers who correctly practice S.S.S and ORS solution preparation are from urban areas.

RECOMMENDATIONS

Shortage of funds, lack of trained personnel, greater emphasis on efforts in the provision of medical care to urban areas, and inappropriate medical education are some of the reasons which make one cautious when making recommendations.

Health education of mothers about the proper use and preparation of oral rehydration fluids should be pursued and incorporated into existing integrated management of childhood illnesses programme. In addition emphasis on the continuation of breast feeding and type of weaning diet during an episode of dirrhea.

REFERENCES

1 Anonymous. Acute diarrheal diseases. Multiple indicators, surveillance. Health and nutrition cycle. January to march 1995. A collaboration B/w the national planning commission secretariat HMG Nepal and UNICEF. march 1996; 46-47.

2 www.oneworldhealth.org

3 The state of the world's children 2008, UNICEF

4 The NEWS, October 15, 2008

5 UNICEF news, may 5, 2008, www.unicef.org/infoby country/pakistan.html

6 International Year of Sanitation: Diarrhoeal diseases cost country Daily times, march 5, 2008.

7 DS-2 Curative Care, HMIS (Health Management information Center), District Peshawar.

8 Pakistan Economic Survey 2009-10

9 WHO 1992-1993

10 Guerrant RL, Schorling JB, McAuliffe JF, de Souza MA. Diarrhea as a cause and effect of malnutrition: diarrhea prevents catch-up growth and malnutrition increases diarrhea frequency and duration. American Journal of Tropical Medicine and Hygiene 1992; 47:28-35.

11 Rutstein SO. Factors associated with trends in infant and child mortality in developing countries during the 1990s. Bulletin of the World Health Organization 2000; 78:1256-70.

12 Victora CG, Bryce J, Fontaine O, Monasch R. Reducing deaths from diarrhoea through oral rehydration therapy. Bulletin of the World Health Organization 2000; 78:1246-55.