

Author Affiliation:

*Associate Professor, ****Professor and Head, Dept. of Community Medicine, **Professor and Head, ***Resident, Dept. of Paediatrics, *****Medical Intern, P.D.V.V.P.F'S Medical College, Vilad Ghat, Ahmednagar, Maharashtra- 414111.

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Avachat Shubhada Sunil,
Asso. Prof. Dept. of community Medicine, P.D.V.V.P.F'S Medical College, Vilad Ghat, Ahmednagar, Maharashtra- 414111.
E-mail: shubhadasunil@gmail.com

Assessment of Knowledge and Practices Regarding Causes and Control of Diarrhea among Mothers of Under Five Children

Avachat Shubhada Sunil*, Mhaske Sunil N., Rathod Bipin***, Zambare Mrinal B.****, Eishwarya John*******

Abstract

Introduction: Diarrhoea is still a major killer of under five children in India. Mothers are the main care takers of children and to reduce the morbidity and mortality due to diarrhoea, they should have correct knowledge regarding prevention and control of childhood diarrhoea. Therefore the present study was conducted among mothers of under five children to assess their knowledge about prevention and control of diarrhea. *Methodology:* A cross sectional study was conducted among 115 mothers of under five children who had visited a teaching hospital (study setting) during study period. Data was collected by interviewing the mothers with the help of pre designed questionnaire. Data was analyzed by appropriate statistical techniques. *Results:* Approximately half of the participants had (50.4%) average knowledge, 24.3% had poor knowledge level. Only 46% of mothers were knowing at least one cause of diarrhea and unclean water was the most common cause perceived by them. 71% mothers heard about ORS and health workers was the main source of information for them. *Conclusion:* The knowledge was average and significantly better among educated women.

Introduction

Under Five Children are vulnerable segment of the population as they are more prone for communicable diseases like diarrhoea, respiratory infections which result into morbidity and sometimes mortality.

Diarrhoea is still a major killer of children under five, although its toll has dropped by a third over the past decade. Globally it killed more than 1600 children every day in 2012 [1]. Although the mortality

due to diarrhea is declined the incidence of diarrhea is not much reduced. In India in the year 2013, about 10.7 million diarrhea cases with 1,535 deaths were reported [2].

Child health care practices have been recognized as a significant factor behind mortality rates among under five age group children [3]. Timely care seeking for diarrheal disease is positively related to survival [4]. Improving mothers' care-seeking behavior could also contribute in reducing a large number of child morbidity and mortality in developing countries.

Diarrhoea is more prevalent in developing countries like India largely due to lack of safe drinking water, poor hygiene and inadequate sanitation [5]. The problem of diarrhea can be tackled at both primary and secondary prevention levels.

Several studies have evaluated health care-seeking behavior and health care use among mothers in developing countries in relation to diarrheal diseases [6].

In the present study conducted among mothers of under five children in a teaching hospital, we have assessed the knowledge regarding prevention and control of childhood diarrhea.

Methodology

Study design: A cross sectional study was conducted in a teaching hospital in urban area of Western Maharashtra.

Sampling technique and Sample Size: All the women seeking health care during study period in the teaching hospital, having youngest child under five years of the age and who were ready to participate in the study were included in the study. A total 115 mothers of under five children participated in the study.

Data Collection: Data was collected with the help of pre designed questionnaire by interview technique. Questions were designed to assess knowledge and practices regarding causes, preventive measures and control of diarrhea. Both open ended as well as close ended questions were asked in local language while interviewing the mothers. Questions were related to following domains –causes of diarrhoea, preventive measures and control remedies for diarrhoea. Total 20 questions were asked and one mark was given for each correct answer, the knowledge level was categorized as poor if the score was less than 5, average if score was between >5-10, good if score was >10-15 and excellent if score was >15.

Statistical Analysis: Data was compiled, tabulated and analyzed by appropriate statistical techniques like mean, percentages, proportions. Chi square test was applied to test the association between variables.

Results

A cross sectional study was conducted among 115 mothers of under five children, to assess their knowledge about causes and prevention of childhood diarrhoea. Out of 115 women 39% women had child below one year, 49% had child in the age group of 1-3 years and 27% had child in the age group of >3-5 years. More than half of participants (53%) confirmed that their kids had 1-2 episodes of diarrhea during last one year, while 28% respondents told that their kids had more than three episodes of diarrhoea during the last year.

The mean knowledge score was 8.1. Approximately half of the participants had (50.4%) average

knowledge, 24.3% had poor knowledge and only 20.8% and 4% women had good and excellent knowledge respectively.

Only 46% of mothers were knowing at least one cause of diarrhea and unclean water was the most common cause perceived by them (31%) followed by improper food (20%) and only 5.2% women could tell that infection as cause of diarrhea (Table 1).

Oral rehydration solution is the best remedy to control and manage diarrhoea, in our study about 71% mothers heard about ORS and health workers was the main source of information for them. More than half of them were knowing regarding preparation of ORS but hardly 9% of them could tell the role of ORS in diarrhea treatment (Table 2). However only 36.5% women were giving ORS to their children during diarrhea, plain water (62%), Rice kanji (45%), coconut water (18%) were the other home available fluids offered to children by them during diarrhea episode.

Regarding preventive measures for diarrhea, only 39% respondents knew that exclusive breast feeding for first six months prevents diarrhea however majority of them (71%) reported that clean water and food prevents diarrhea while 26% respondents confirmed that hygiene is also important factor in diarrhea prevention. Control of housefly (31%) and safe waste disposal (22.6%) were the other preventive measures told by the respondents.

Knowledge regarding causes, prevention and control was significantly higher among educated mothers and diarrhea episodes were significantly less among kids of participants having higher knowledge level. Statistically significant association was observed between educational

Table 1: Knowledge regarding causes and mode of transmission of diarrhoea (Multiple response table)

Variable	No. of Respondents
Contaminated Water	36(31%)
Contaminated Food	24(20.8%)
Lack of hygiene	14(12.8%)
Infection	06(5.2%)

Table 2: Knowledge regarding management of diarrhea

Variable	Yes	No	Total
Heard about ORS	82 (71.30 %)	33(28.70%)	115
Knowledge about Preparation of ORS	67(58.26 %)	48(41.73%)	115
Knowledge about role of ORS	11 (9.56 %)	104 (90.43%)	115

Table 3: Knowledge about prevention of diarrhea (multiple response)

Preventive Measures	Yes	No	Don't Know	Total
Exclusive Brest Feeding	45 (39%)	11 (9.5%)	59 (51.3%)	115
Clean Water and Food	82 (71.3%)	18 (15.6%)	5 (4.3%)	115
Hygiene	30 (26.1%)	42 (36.5%)	43 (37.4%)	115
House Fly Control	36 (31.4%)	24 (20.8 %)	55 (47.8 %)	115
Sanitary Larine	26 (22.6%)	38 (15.6 %)	51 (44.3 %)	115

Table 4: Association of educational status and knowledge

Educational Status	Knowledge Score				Total
	< 5	>=5-10	> 10-15	> 15	
Illiterate and Primary	23	30	3	1	57
Secondary and Higher Secondary	4	24	13	1	42
Graduate	1	4	8	3	16
Total	28	58	24	5	115

$\chi^2=31.02$ d.f.6 p<0.001 highly significant

Table 5: Association of knowledge and diarrhoea episodes among children

Knowledge Score	Episodes of Diarrhea Score			Total
	None	1-3	> 3	
< 5	9	12	7	28
> 5-10	12	29	17	58
> 10-15	12	11	1	24
> 15	3	1	1	5
Total	36	53	26	115

$\chi^2=12.64$ d.f.6 p<0.005 significant

status of women and knowledge level(p<0.005) and highly significant association was observed between knowledge level of mother and number of diarrhea episodes among their kids. (p<0.001)(Table 3 and 4).

Discussion

A cross sectional study was conducted among 115 women having under five child for their knowledge regarding causes, control and prevention of diarrhea.

In the present study more than half of the participants could not tell any single cause of diarrhoea and contaminated water was the most common cause perceived by them (31%), improper food(20%) and only 5% mentioned infection as a cause of diarrhoea, similar finding was observed by Mumtaz et al in their study conducted in Pakistan and Jamaui et al in their study from Nigeria ,contaminated water was the most known cause of diarrhoea among the participants[7,8]. In other studies from India also contaminated water and food were the most common perceived causes among the participants [9,10].

Exclusive breast feeding, hygiene, environmental sanitation, safe water are the measures expected for prevention of diarrhoea. In present study majority of women felt that clean water and food are the important preventive measures and only few of them were able to report importance of hygiene, environmental sanitation in prevention of diarrhoea. Kevisetuo in his study conducted in urban slum also reported that 83% participants told clean water,19% participants told safe waste disposal, as the important measures for prevention of diarrhoea [10].

Oral rehydration therapy is mainstay of diarrhea

treatment and in our study 58% women were correctly knowing about ORS preparation. In study conducted by Jamiu et al 59% women knew how to prepare ORS while only 32% women were knowing the preparation of ORS in study conducted by Shah et al [11].

Knowledge regarding home available fluids was better among the participants in our study and water, rice kanji, ORS, coconut water were the fluids offered by them to their kids during diarrhoea. Similar finding was observed by Choube et al and shah et al in their studies[11,12]. In our study 36% women told that they used ORS, similar to this, 46% women used ORS in study conducted by Rasanian et al.

Higher education levels were significantly associated with higher knowledge level in our study(p,0.005)similar finding was observed in studies conducted by Suman et al, Kevisetuo in India and Ansari et al in Nepal [9,10,14].

Findings in our study reaffirms the importance of women's knowledge in reducing diarrhoea morbidity among their children. Children of mothers having higher knowledge significantly had less diarrhoea morbidity,(p<0.001).

Conclusion

Diarrhoea is a common infection among under five children and mothers should have proper knowledge regarding causes, prevention and control but in present study the knowledge level was average. Though ORS awareness was good correct knowledge of its preparation was lacking. Mothers education had significant association with the knowledge about diarrhoea.

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