

# KNOWLEDGE, ATTITUDE AND PERCEPTIONS OF MOTHERS ABOUT DIARRHOEA HAVING AT LEAST ONE CHILD UNDER FIVE YEARS

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## ABSTRACT

**Objective:** To assess the knowledge, attitude and perception regarding diarrhea among mothers of children less than five years of age in public hospital at Peshawar.

**Material and Methods:** A descriptive cross-sectional study conducted at Pediatrics Ward and OPD of Khyber Teaching Hospital, Peshawar, Pakistan from March 2015 to April 2015. Convenient sampling was adopted to sample 460 subjects by interviewing mothers after taking their consent. Mothers having at least one child less than five years of age and who came to the hospital were included in the study.

**Results:** Mother's knowledge regarding the main causes of diarrhoea; contaminated water-71.09%; contaminated food-83.04%; handling food without washing hands-32.61%. About signs of dehydration, 72.60% mothers knew about the signs of dehydration but only 15.65% were able to fully appreciate it. Mothers who knew how to prepare ORS were 78%. Regarding prevention of diarrhoea, only 18% mothers perceived the importance of personal hygiene while only 6.30% did boil water. Covering food practice was being done by 6.08% mothers. 73.91% mothers said that they used antibiotics for diarrhoea.

**Conclusion:** There is an inadequate maternal knowledge, attitudes and lack of perceiving the diarrhoea and its scope. There is need of proper and effective health education to mothers about diarrhoea, its causes, prevention and management.

**Key Words:** Diarrhoea, mothers, child, knowledge, attitude, perception

**This article may be cited as:** Gul R, Hussain SS, Hussain F, Ali W, Imdadullah, Khan B, Saeed A. Knowledge, attitude and perceptions of mothers about diarrhoea having at least one child under five years. *J Med Sci* 2017; 25: (1) 6-9.

## INTRODUCTION

Diarrhoea according to WHO is having three or more loose stools per day, or having more stools than is usual<sup>1</sup>. It is the second leading cause of death in children under five years<sup>2</sup> which can easily be both prevented and treated. An estimated 2.5 billion cases of diarrhoea occur among children under five years each year leading to 1.5 million deaths globally<sup>3</sup>. Although diarrheal diseases are preventable by low cost intervention like continuous breast feeding and fluid replacement with oral rehydration solution (ORS)<sup>4</sup> but still are unable to

reduce this disease burden in under 5 year old children.

Diarrhoea itself is not the killer, but its consequences like dehydration and malnutrition puts an additional burden on a child born in a vulnerable environment. ORS a cost effective intervention implemented since the 1970s<sup>5</sup> but its progress is slow, the reason being unpleasant taste and inconvenient one-litre packaging, which have made it unpopular with children and caregivers alike. Studies have shown that improving the knowledge, attitude and perception of the mothers regarding causes and management of diarrhea, rotavirus vaccination and improved quality of safe drinking water, improved hygiene and sanitation can not only lead to a decrease in mortality but in long run is cost effective<sup>6</sup> intervention.

Eighty-three per 1000<sup>7</sup> is under 5 mortality rate for Pakistan. One in every 11 (9.1%)<sup>8</sup> die untimely due to diarrhea and its consequences. Only 47.2% of children with diarrhea are receiving oral rehydration therapy<sup>9</sup>. Since childhood mortality reflects indirectly the nutri-

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**Date Received:** August 11, 2016

**Date Revised:** December 15, 2016

**Date Accepted:** January 5, 2017

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tional status, availability of the health services and use of appropriate technology.

Although lot of studies had been carried on the knowledge, attitude and perception but no study was done in Khyber Teaching Hospital. Thus this study was carried out to assess the knowledge, attitude and perception of mothers about causes, signs and prevention of diarrhea in the Khyber Teaching Hospital Peshawar.

### MATERIAL AND METHODS

The study was carried out in the pediatric ward and OPD of the Khyber Teaching Hospital Peshawar, Pakistan from March to April 2015, at pediatrics ward and OPD. A written permission was taken from the incharge of the Pediatric department before data collection.

Descriptive Cross-sectional Study was conducted. A Non-Random Convenient Sampling technique was used. A total sample size was 460 which was calculated by an online calculator ([surveysystem.com/sscal.htm](http://surveysystem.com/sscal.htm)) with confidence level of 95% and range of error was  $\pm 4.5$ . We interview mothers at pediatrics ward and OPD of the hospital. Those mother who had at least one child under five and who's child has currently diarrhoea or had suffered from diarrhoea in last one month were included in study population. The informed verbal consent was taken from all the mothers who took part in the study maintaining their confidentiality.

A questionnaire was developed after the literature review. Demographic details and information about what is diarrhea, causes of diarrhea, signs of dehydration, what they do when their child has diarrhea, use of antibiotics, dietary preference in diarrhea, method of preparing instant ORS and Salt sugar solution (SSS) and how to prevent diarrhea. A Pilot study was performed initially with the sample size of 30 mothers and necessary modifications were made in the questionnaire. Data was analyzed in plot.ly and calculatorsoup.com. results were presented in form of text, frequency, percentage, tables and bar graphs.

### RESULTS

Mean age of the mothers was  $28.5 \pm 8.85$  years. Two hundred & twenty (47.8%) were illiterate while 240(52.17%) were literate. Majority of mothers 423(91.96%) were housewife while only 37(8.04%) were working women. 218(47.39%), 133(28.91%), 109(23.69%) belong to Rural, Urban, Semi-urban areas respectively. 109(23.69%) were inpatients, 231(50.22%) were seen in OPD and 120(26.08%) came in emergency. 332(72.17%) mothers considered loose watery stools with greater frequency than normal as diarrhoea. Regarding causes of diarrhoea, 382(83.04%) and 327(71.09%) mothers considered contaminated food and water respectively as cause while 150(32.61%) of the mothers considered handling food without washing

**Table 1: Knowledge about causes of Diarrhea among mothers**

Causes of Diarrhoea	N (%)
Contaminated Food	382(83.04)
Contaminated Water	327(71.09)
Handling food without washing Hands	150(32.61)
Teething	148(32.17)
Pathogens	131(28.47)
Unhygienic disposal of excreta	130(28.26)
Child eating Mud	95(20.65)
Hot Humid Climate	85(18.48)
Lack of health education	70(15.21)
Evil eyes	64(13.91)
Overcrowding	50(10.86)
Not taking vaccine	21(4.56)
Others	10(2.170)
Don't know	7(1.52)

**Table 2: Attitude and perception regarding diarrhea among study participants**

Response toward Diarrhea	N(%)
Home base management	253(55)
Consult doctor	188(40.86%)
Leave it on its own	7(1.52)
Go to Quack	6(1.30)
<b>When Child gets Dehydrated/Diarrhoea</b>	
Give ORS	431(93.69)
Give plenty of food	170(36.95)
Both	136(29.65)
Give antibiotics	340(73.91)
Others	138(38)
<b>Visits to the Doctor</b>	
Immediately	96(20.86)
After 2-3 days	86(18.69)
depends on severity of diarrhoea	262(56.95)
Don't visit	16(3.47)
<b>Prevention of Diarrhea</b>	
Using boiled/filtered water	29(6.30)
By properly covering and cooking food	28(6.08)
By keeping personal hygiene	85(18.47)
Vaccination	10(2.17)
Don't Know	308(66.95)

hands as cause of diarrhea (Table 1).

One hundred and ninety-two (41.73%) mothers said that diarrhea is spread from Child to Child. 334(72.60%) knew about the sign and symptoms of dehydration associated with diarrhea. Regarding signs of dehydration, only 72(15.65%) mothers knew and could elicit all signs of dehydration. Only

142(30.86%) mothers thought that diarrhoea can cause death of their child.

Mothers knowledge about ORS solution i.e., they knew that one packet of ORS is added to one liter or four glasses of water. Mothers had positive attitude, i.e. giving S.S.S and ORS solution. 431(93.69%) mothers gave ORS after diarrhoeal episode while only 91(19.78%) mothers knew how to prepare sugar salt solution. While 176(38.26%) partially Knew and 199(43.26%) not Know how to make SSS. Diet preferences were mainly in 210(45.65%) soft foods as compared to fluids in 38(8.26%) both fluid and soft diet was given in 202(43.91%). Food Restriction was practiced in only 11(2.39%) Breastfeeding was done by 416(90.43%) of mothers. Antibiotics were preferred by 340(73.91%) mothers in case of diarrhoeal episode.

Regarding management of diarrhoea, more than half of mothers 253(55%) preferred to manage it at home while 188(40.86%) mothers said that they consult doctor (Table 2). Regarding prevention of diarrhoea, only 29(6.30%) mothers' boiled water while proper covering and cooking if food was done by only 28(6.08%) mothers. Vaccination for prevention of diarrhoea was done by only 10(2.17%) mothers.

### DISCUSSION

Approximately 72% of the mothers knew what is diarrhea. These findings are consistent with the study conducted in Karachi which stated that 72% of mothers knew what diarrhea is<sup>10</sup>. While another study conducted in Bangladesh the percentage was 88%<sup>11</sup>. The reason being low literacy rate in the country<sup>12</sup> and lack of effective community based program in place.

Forty-five percent of the mothers relatively did not know the causes of diarrhoea. They considered contaminated food and water, handling food without washing hands as the predisposing factors, findings are consistent with study done in Indonesia which showed similar results<sup>13</sup>. In terms of knowledge about the signs of dehydration, 72% mothers knew about the signs of dehydration but only 8% of mothers were able to fully specify them. While response about signs and symptoms of dehydration was variable. This study is consistent with other study that was carried out in Gambat Pakistan<sup>14</sup>. Regarding giving of breast milk in diarrhoea, according to our study 90% mothers agreed that breast milk is good for child in diarrhoeal episode and showed a higher level of knowledge. Out of 460 mothers, 360(78%) knew how to prepare instant ORS correctly. In a research carried out in Nepal, after health education, it is increased to 70 %<sup>15</sup>. And almost 80% mothers considered ORS effective in treatment of diarrhoea.

Regarding attitude of the mothers when their child had an episode of diarrhea majority of the mothers started giving ORS, which not only prevents dehydration but

also severity of the episode of diarrhea. while most of them took the child to doctor in case child get worse<sup>16</sup>. These findings are also in accordance with guide lines of Integrated management of childhood illnesses which is being actively implemented in the hospital. Seventy-three percent of the mothers used antibiotics either by themselves or on advice of the doctor or the other health care providers in the community. The use of antibiotics not only increases the cost of treatment but also exposes the child to the adverse effect of the medication<sup>17</sup>. Effective community based intervention and training of the health care providers on the treatment of diarrhea according to IMCI should be enforce.

Regarding the prevention of diarrhoea, only 18% mothers perceived the importance of personal hygiene in contrast to 62% in Karachi, Pakistan<sup>16</sup> research 45% in a Gambia research very few mothers knew various preventive methods and perceived their importance like boiling conducted in Indian city of Karnataka, showed that only 25% mothers boiled their drinking water<sup>17</sup>.

### CONCLUSION

There is mother's lack of knowledge regarding diarrhea, its causes and preventions. Mothers were not able to identify specific signs of dehydration and used irrational drugs like antibiotics during diarrhoeal episode. Most of the mothers preferred soft foods and fluids and knew how to prepare instant ORS but many of them were still unaware of the other general preventive measures and vaccinations for rotavirus diarrhea cases.

### RECOMMENDATIONS

IMCI guidelines should be followed strictly therefore generalization of the information should be done with caution. Lady health workers should be trained in order to provide effective case management information to the mothers in the community. Also inter sectoral collaboration should be enhanced in order to address the under lining cause of diarrhea i.e. poverty, lack of education etc. rather focusing on the signs and symptoms of diarrhea.

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**CONFLICT OF INTEREST:** Authors declare no conflict of interest

**GRANT SUPPORT AND FINANCIAL DISCLOSURE** NIL

### **AUTHOR'S CONTRIBUTION**

Following authors have made substantial contributions to the manuscript as under:

- Gul R:** Concept and Idea.  
**Hussain SS:** Data collection, Analysis.  
**Hussain F:** Literature review, Analysis.  
**Ali W:** Critical review.  
**Imdadullah:** Statistics.  
**Khan R:** Bibliography.  
**Saeed A:** Table and graph designing

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.