

KNOWLEDGE AND PRACTICES OF RURAL MOTHERS ABOUT DIARRHEA AMONG  
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## ABSTRACT

**Background:** Diarrhea is one of the most common cause of morbidity and mortality in children. About two-thirds of the total annual deaths in Pakistan are currently among children under the age of five, and diarrhea is considered to be one of the major contributors to these deaths. **Objective:** To assess knowledge and practices of rural mothers about diarrhea among infants. **Methodology: Study design** Cross-sectional study. **Place and Duration:** This study was conducted at OPD and diarrheal unit of children ward Allied hospital Faisalabad, from April to August 2017. A total of 200 rural mothers of infants were included in the study by non-probability consecutive sampling technique. Before commencing with the data collection, informed consent was taken. The performa was designed and pretested and it contained variables like age, mother's education, mothers occupation, family income per month, knowledge about definition of diarrhea, causes of diarrhea, signs of dehydration, consequences of diarrhea, preparation of market available ORS sachet, continuation of breast feeding during diarrhea, consultation with doctor during diarrhea, time of consultation with the doctor, diet preferences during diarrhea and preventive measures applied by mothers during diarrhea. All the data collected was recorded on the performa, entered and analyzed by using SPSS version 22. **Results:** Mean age of mothers was 25±6 years. In our study (52.4%) mothers were illiterate. Regarding mothers occupation 70% were housewives. Regarding Knowledge of the mothers on definition of diarrhea 49.43% told loose watery stool, 5.57% told increased frequency and 31.61% told both loose watery stool and increased frequency. As regards causes of diarrhea, (22.11%) pointed out contaminated water, (12.78%) eating mud and (25.82%) told both contaminated water and eating mud. Regarding signs of dehydration (12.82%) sunken eyes, (8.25%) dry skin and (30%) considered both sunken eyes and Dry skin. Regarding practices during diarrhea, 65.76% continued breast feeding during diarrhea, 85.76% consulted doctor but before consulting the doctor, 21.88% did self-medication and 65.62% consulted the doctor when condition of child was not improving. 40% gave diet preferences to both ORS and khichree, 26.79% ORS and 6.69% khichree only. 45% applied boiling the water, covering the food and keeping child and environment clean as preventive measure during diarrhea whereas 22.32% did boiling the water and covering the food only, whereas, 3.57% boiling the water only and 2.67% covering the foods only. **Conclusion:** Majority of the mothers has good knowledge and practices about diarrhea but still many of them do not have clear idea about prevention and ideal practices to be adopted during diarrhea and they should be focused. There is a need of health education program to be started in the rural areas of Faisalabad.

**KEYWORDS:** Knowledge, Practices, Rural Mothers, Diarrhea, Prevention, Treatment.

## INTRODUCTION

Diarrhea is defined as "the passage of three or more loose or liquid stools per day or more frequent than normal for the individual".<sup>[1]</sup> Diarrhea accounts for significant proportion of childhood deaths in South Asia<sup>[2]</sup>, most important is first year of life.<sup>[3-4]</sup> The overall incidence of diarrhea remains unchanged however mortality is decreasing.<sup>[5]</sup> Diarrhea is one of the preventable and curable disease. Early diagnosis and prompt initiation of management has a key role in

reducing mortality in diarrhea children.<sup>[6]</sup> Role of mother is very important if we want to reduce mortality related with the diarrhea in infants.<sup>[7]</sup> Diarrhea is not lethal itself, improper knowledge of the mothers and their misdirected approach towards its management leads to high degree of mismanagement and result in severe dehydration.<sup>[8,9]</sup> In 1990, for example, 27 percent of under-five deaths were associated only with this disease. In the case of children aged 1-11 months, this association increased to 40 percent. Studies have been conducted in different areas of our country regarding knowledge and practices of

mothers of infants about diarrhea but very little has been done in rural areas in this regard. The objective of the study was to assess the knowledge and practices of rural mothers about diarrhea among infants and its management.

## METHODOLOGY

This was a cross-sectional study, conducted at EPI center of OPD and Diarrheal unit of children Ward of Allied hospital Faisalabad. The duration of the study was two months from April to August 2017. A total 200 rural mothers of infants were included in the study by non-probability consecutive sampling technique. Those mothers who gave the informed verbal consent were included in the study. An exclusion criteria followed was; those mothers who did not give the consent, not having an infant and belonged to the urban areas of Faisalabad. The performa was designed and it contained different variables like age, mothers education, mothers occupation, family income per month, knowledge about definition of diarrhea, causes of diarrhea, signs of dehydration, consequences of diarrhea, preparation of market available ORS sachet, continuation of breast feeding during diarrhea, consultation with doctor during diarrhea, time of consultation with doctor, diet preferences during diarrhea and preventive measures applied by mothers during diarrhea. All the data collected was recorded on the performa, entered and analyzed by using SPSS version 16 of computer programme.

## RESULTS

A total of 200 rural mothers of infants were included in the study. Mean age of mothers was noted 25±6 years. Majority of mothers 118(58.93%) were between 20-29 years of age, 111 mothers (55.53%) has family income per month between 5000-15000 PKR, 105 mothers (52.4%) were literate and 140 mothers (70%) were housewives. (Table I). Knowledge of the mothers regarding definition of diarrhea, 104 mothers (52%) considered loose watery stool as diarrhea. Regarding causes of diarrhea, 52 mothers (25.82%) told both contaminated water and eating mud as main causes of diarrhea. Regarding signs of diarrhea, 60 mothers (30%) considered both sunken eyes and Dry skin as signs of dehydration, 162 mothers (81%) has knowledge for correct preparation of ORS of market available sachet. (Table II) Regarding practices during diarrhea, 131 mothers (65.76%) continued breast feeding during diarrhea, 172 mothers (85.76%) consulted doctor during diarrhea but before consulting the doctor 43 mothers (21.88%) did self-medication. 66 mothers (33.05 %) gave diet preferences to both ORS and khichree and 90 mothers (45%) applied boiling the water, covering the food and keeping child and environment clean as preventive measure during diarrhea. (Table III).

**Table I: Demographic features of study subjects (n=200).**

Variables	Frequency (%)
Age in Groups (years)	
<20	12 (6.25%)
20-29	118 (56.93%)
30-39	64 (32.14%)
>39	6 (2.68%)
<b>Monthly Family Income (in PKR)</b>	
<5000	52 (25.89%)
5000-15000	111 (55.35%)
>15000	37 (18.76%)
<b>Mother's Education</b>	
Illiterate	105 (52.4%)
Primary	50 (25.00%)
Middle	20 (10.71%)
Metric	11 (5.5%)
Above Metric	14 (7.16%)
<b>Mother's Occupation</b>	
House Wife	140 (70%)
Govt. Servant	12 (6.25%)
Agriculture Workers	21 (10.71%)
Any Others	27 (13.5%)

**Table III: Practices about Diarrhea of study subjects (4=200).**

Continuation of Breastfeeding	Number (%)
Yes	131 (65.76%)
No	69 (34.24%)
<b>Consultation with Doctor</b>	
Yes	172(85.76%)
No	28 (14.24%)
<b>Time of consultation with Doctor</b>	
Immediately	10 (5%)
When condition not improving	147 (73.5%)
When self condition fails	49 (24.5%)
No	18 (9%)
<b>Diet preference during diarrhea</b>	
ORS	53 (26.7%)
Khichree	13 (6.69%)
Banana	19 (9.37%)
Yogurt	22 (11.16%)
Boiled rice	13 (6.69%)
ORS and Khichree	66 (33.05%)
ORS, Khichree and Yogurt	14 (6.25%)
<b>Application of Prevention</b>	
Bulling the Water	7 (3.57%)
Covering to food	6 (2.67%)
Washing hands	19 (8.93%)
Keep interment and child clean	28 (14.28%)
Boiling water and covering to food	44 (22.32%)
Boiling water, covering food and keep interment and child clean	80 (40.18%)
Don't Know	16 (8.03%)

**Table II: Knowledge about Diarrhea of Study Subjects.**

Definition of diarrhea	Frequency No (%)
Loose watery Stool	104 (52%)
Increased Frequency	11 (5.57%)
Both Loose watery stool and increased Frequency	63 (31.61%)
Don't Know	22 (13.38%)
<b>Causes of diarrhea</b>	
Contaminated water	44 (22.11%)
Eating Mud	26 (12.78%)
Contaminated Water and Eating Mud Both	52 (25.82%)
Teething	17 (8.92%)
Evil Eye	17 (8.92%)
Don't Know	44 (21.45%)
<b>Sign of Dehydration</b>	
Sunken Eyes	25 (12.72%)
Dry Skin	16 (8.15%)
Both Sunken Eyes and Dry Skin	60 (30.00%)
Thirsty	17 (8.93%)
Weight Loss	29 (14.73%)
Sunken Eyes + Dry Skin + Thirst	21 (10.71%)
Sunken Eyes + Dry Skin + thirst + weight loss	18 (9%)
Don't Know	31 (15.64%)
<b>Consequence of Diarrhea</b>	
Weak and Lethargic	139 (69.64%)
Wt. loss	50 (25%)
Will because unconscious	9 (4.46%)
Death	2 (1%)
<b>Preparation of ORS Packet available in Market</b>	
Yes	145 (72.30%)
No	55 (27.70%)

## DISCUSSION

In our study, 118 mothers (56.93%) were between 20-29 years of age group with mean of 25+6 years, 111 mothers (55.35%) has 5000-15000 PKR family income per month while 105 mothers (52.4%) were literate. In our study knowledge of mothers about diarrhea was satisfactory. A study conducted in Iran also showed that mother's education played an important role in this regard.<sup>[10]</sup> In this study, 34% has correct knowledge about definition of diarrhea while a study conducted in Bangladesh reported high knowledge about of mother's correct definition of diarrhea.<sup>[11]</sup> In our study 52 mothers (25.82%) told that both contaminated water and eating mud were the main causes for diarrhea. This is comparable to results highlighted by Shah N.<sup>[12]</sup> In our study when asked about the signs of dehydration, 60 mothers (30%) told that both dry skin and sunken eyes both were the main signs, 76 mothers (38%) responded by giving sunken eyes or dry skin or thirst or weight loss,

these findings are consistent with a study done in Gambat, Sindh, Pakistan.<sup>[13]</sup> Regarding consequences of diarrhea, 138 (69%) mothers pointed out that child will become weak and lethargic due to diarrhea. Similar results were also shown by Mumtaz Y.<sup>[14]</sup> In our study, 144 mothers (72%) knew how to correctly prepare market available ORS packet as compared to 86% a study were knew correct preparation of ORS.<sup>[15]</sup> In our study, 131 mothers (65.62%) continued breast feeding during diarrhea which is in contrast with Khalili M.<sup>[10]</sup> 172 mothers (85.76%) consulted the doctor and 131 mothers (65.62%) consulted the doctor when the condition of the child was not improving. 43 mothers (21.88%) consulted doctor after doing self-medication. In contrast another study 30% mothers did self medication.<sup>[14]</sup> In this study, 66 mothers (33%) gave both ORS and Khichree and 53 mothers (26.79%) gave only ORS to the kids during diarrhea. A study conducted in Burkina stated that during diarrhea, 50% mothers gave pulses, khichree, rice water and banana while 25% gave only ORS.<sup>[16]</sup> Regarding application of preventive measures, 81 mothers (40.8%) applied boiling the water, covering the food and keeping the child and environment clean contrast to Karnataka study only 25% mothers boiled the water.<sup>[18]</sup> In another study, 45% mothers gave the importance to personal hygiene. 18 Limitation of our study is that due to finances, we have done consecutive sampling and duration of study was only two months. While the strength is that we have focused on rural mothers because majority of population of our country is living in the rural areas.

## CONCLUSION

Majority of mothers has good knowledge and practices regarding diarrhea but still many of them has still not clear idea about prevention and ideal practices to be adopted during diarrhea. There is a need of health education program to start in the rural areas of Faisalabad.

## Conflict of interest

The authors have declared no conflict of interest.

## REFERENCES

1. World Health Organization and UNICEF 2009. Diarrhea: why children are still dying and what can be done [online] available at [http://www.who.int/maternal\\_child\\_adolescent/documents/9789241598415/en/index.html](http://www.who.int/maternal_child_adolescent/documents/9789241598415/en/index.html)
2. Walker CL, AryeeMJ, Boschi-Pinto C, Black RE. Estimating diarrhea mortality among young children in low and middle income countries. *PloS One.*, 2012; 7: e29151.
3. Bern C, Martines J, de Zoysa I, Glass RI. The magnitude of the global problem of diarrheal disease: at an year update. *Bull World health Organ.* 1992; 70:705-14.
4. Alber MJ, Faruque AS, Faruque SM, Sack RB, Mahalanabis D. Case-control study of

- enteropathogens associated with diarrhea in Dhaka, Bangladesh. *L Clin Microbiol*, 1999; 37: 3458-64.
5. Abramson JS, Abzug MJ, Adger H et al. *Nelson Text book of Pediatrics ELSEVIRE*, 2008; (18 th edition); 337: 160-5.
  6. Podewils LJ, Mintz ED, Nataro JP, Parashar UD. Acute infectious diarrhea among children in developing countries. *Semin pediatr Infect Dis.*, 2004; 15: 155-168.
  7. Ene-Obong HN, Iroegbu CU, Uwaegbute AC. Perceived causes and management of diarrhea in young children by market women in Enugu State, Nigeria. *J Health Popul Nutr.*, 2000; 18(2): 97-102.
  8. Rehan SH, Gautam K, Gurung K. KAP of mothers regarding diarrhea. *Indian J prev Soc Med.*, 2003; 34: 1-6.
  9. Population reference Bureau. 2009 World Population Datasheet; 2009. [www.prb.org](http://www.prb.org). Pdf 09 / 09 wpds\_eng.pdf
  10. Khalili M, Mirshahi M, Zarghami A, Rajabnia M, Farahmand f. Maternal knowledge and practice regarding childhood diarrhea and diet in Zahedan, Iran. *Health Scope*, 2013; 2: 19-24.
  10. Hackett KM, Mukta S, Chowdhury SB, Daniel W. Knowledge, attitude and perceptions on infant and young child nutrition and feeding mothers in rural Bangladesh. *Maternal and Child Nutrition*, 2012; 3: 80-5.
  11. Shah N, Lohar I, Shaikh S, Usman Y, Usman J. Perception of community regarding common diseases prevailing in a squatter settlement of Karachi, Pakistan. *J Pak Med Assoc*, 2010; 60: 562-65.
  12. Agha A, White F, Younus M, Kadir MM, Alir S, Fatimi Z. Eight key household practices of integrated management of childhood illness (IMCI) amongst mothers of children 6 to 59 months in Gambat, Sindh, Pakistan. *J Pak Med Assoc*, 2007; 57: 288-93.
  13. Mumtaz Y, Zafar M, Mumtaz Z. Knowledge, attitude and practices of mothers about diarrhea in children under 5 years. *J Dow Uni Health Sci.*, 2014; 1: 3-6.
  14. Rishi RK, Bodakhe SH, Tailang M. Patternso of use of oral rehydration in Srinagar (Garwal), Uttaranchal. India. *Trop Doct*, 2003; 33: 143-145.
  15. Wilson SE, Ouedraogo CT, Lea P, Ouedraogo A, Hess Sonja Y, Rouamba Noel, et al. Caregiver Recognition of Childhood Diarrhea, Care Seeking Behaviors and Home treatment Practices in Rural Burkina Faso. *Plos One.*, 2011; 3: 300-5.
  16. Bevoor, Darshan. A study to evaluate the effectiveness of planned teaching programme on knowledge on prevention and control of malnutrition among mothers of under five children residing in vantmuri primary health centre of Belgaum city, Karnataka. *KLE Uni J.*, 2012; 7: 10-15.
  17. Sillah F. Knowledge, Attitude and Practice Assesment of Mothers in Managing Children under Five years of age with diarrhea in the Gambia. *Taipei Med Uni J.*, 2012; 7: 7-19.