

Current Practices by Mothers about the Management of Acute Watery Diarrhea Attending Sharif Medical City Hospital, Lahore

Adeela Hassan¹, Haris Manan², Firdous Idrees³, Hareem Ghazanfar⁴, Sidra Nazeer⁵, Muhammad Rauf Tahir⁶, Aisha Akhtar⁷, Sara Ashraf⁸

¹ Sharif Medical City Hospital, Lahore,

² Sharif Medical City Hospital, Lahore,

³ Sharif Medical City Hospital, Lahore,

⁴ Sir Ganga Ram Hospital, Lahore,

⁵ National Institute of Food Science and Technology, University of Agriculture, Faisalabad.

⁶ Allama Iqbal Medical College, Lahore.

⁷ Sharif Medical City Hospital, Lahore,

⁸ Sharif Medical City Hospital, Lahore.

DOI: 10.29322/IJSRP.9.01.2019.p8527

<http://dx.doi.org/10.29322/IJSRP.9.01.2019.p8527>

Abstract- OBJECTIVE: Aims of this study include the awareness and information about management of diarrhea among mothers visiting Sharif Medical City Hospital, Lahore and to assess knowledge about basic prophylactic measures that can be taken including ORS and Rotavirus vaccination.

MATERIALS AND METHODOLOGY: It was a cross sectional descriptive survey done at Sharif Medical City Hospital Lahore. A total of 255 mothers attending Sharif Medical City Hospital were included in the study. The data was collected by the authors from those who were briefed and written informed consent was taken, using a pre-tested semi structured questionnaire which was analyzed using SPSS 23.0. Calculation of frequencies and percentages was done and data was entered in the form of tables and figures.

RESULTS: The study depicted that 54.3% children suffering from diarrhea were in age group of 12-24 months and 45.7% were in age group of 36-60 months. Regarding educational status, our study revealed that 75.3% mothers were literate and 24.7% were illiterate and among these 255 mothers 99.6% had knowledge about ORS. In our study 57.4% mothers preferred ORS for management of diarrhea and among them 86.7% mothers found ORS effective. Besides ORS 85.1% mothers gave syrup as prescribed by doctor in the management of diarrhea. 69% mothers reported ineffective of homemade remedies while 31% claimed beneficial values of homemade remedies. 100% mothers properly disposed of excreta and used to wash their hands before preparing food and after defecation.

CONCLUSION AND RECOMMENDATIONS: The study showed that majority of the mothers attending Sharif medical city hospital have knowledge about the management of diarrhea in their children. Few mothers lack proper information about the managing the diarrheal illness. Except few mothers attending Sharif medical city hospital majority of them are well aware of protective measures they could take that is, hand washing, breastfeeding and proper disposal of excreta for prevention of diarrhea. It is important that adequate education should be given

to mothers regarding the management and preventive measures of diarrhea including Rota virus vaccination. Further researches should be carried out from time to time in order to assess the awareness about the preventive measures of diarrhea and improvement in knowledge about the management of diarrhea.

Index Terms- Acute watery diarrhea, management, mothers

I. INTRODUCTION

Diarrhea is an increase in stool volume or frequency of passage of stool. It is most commonly associated with digestive disorders, but it can be the part of primary diseases outside of digestive system.¹ The serious economic issues for developing countries are because of diarrheal diseases. The most common reason of death from acute diarrhea is the deprivation of water and essential minerals, which can be replaced in many cases by the use of oral rehydration solution (ORS).²⁻⁴ Diarrheal disorders are the second most common cause of death of under five children after pneumonia worldwide. It kills a great number of children as compared to AIDS, malaria and measles combined.^{5,6}

Main causes of diarrhea include bacteria, virus and different parasites. Infection spreads via contaminated food or drinking water or from person to person because of poor hygiene. Diarrhea can be prevented and treated with better management and knowledge. Loss of fluid in diarrhea has dire consequences and it is the main contributing reason of malnutrition.^{7,8} A lot of factors are responsible for risk of diarrhea i.e. poverty, mother literacy rate, water supply, sanitation, poor hygiene practices and also important are pattern of infant feeding, weaning and other practices. Diarrhea can continue for several days and leaves the body without salt and water that are needed for survival. Lots of children who expire due to diarrhea mainly expire from severe dehydration and loss of fluid. Malnourished children or children with impaired immunity as well as suffering from HIV are mostly at the risk of life threatening diarrhea. It is mostly caused by

contaminated food and water sources. Globally, 780 million individuals are deprived of improved drinking water and 2.5 billion are deprived of improved sanitation. Infectious diarrhea is widespread in developing countries.

In developing countries, diarrhea is the second major cause of child morbidity and mortality. It is concluded that there are 2.5 billion diarrheal episodes and 1.5 million deaths in children under-five years of age per annum. This estimates 21% of all the deaths occurring in developing countries and the number is really high uptil now which is not acceptable.^{9,10} Diarrhea kills young children more the any other diseases.

According to World Health Organization (WHO), the mortality rate of less than 5 years of age is 87/1000 in Pakistan and diarrhea is the second major etiology after acute respiratory infection.¹¹ In a survey conducted among less than 3 years of age in Sindh, Pakistan prevalence of diarrhea was found as 51%.¹²

Globally, In developing countries an estimated 13,000 million of diarrheal episodes with 3.2 million deaths occur in children per annum. 80% of these deaths include in children under 2 years of age. 95 than 3 times per year. This study also supports under five deaths at 35% of mortality rate.⁹ % of all deaths (200,000) in infants and 23-30% in children less than five age group children and account for 15% of all pediatric deaths.¹³

It is among these communicable diseases which is both preventable and curable. Early and correct identification of disease plays a key role in reducing mortality. Major steps to prevent diarrhea including safe drinking water, use of improved sanitation and hand washing with soap can decrease the risk. Diarrhea can be managed with clean waters solutions, sugar and salt and with zinc tablets.

As it is universal phenomenon in our communities that the mothers are the first contact for these children in case of any ailment. It has been observed that many faulty, baseless practices exist among the mothers regarding the management of different common health problems. In case of diarrhea specially which is very common among the children less than 5 years of age. It has been observed that they use inappropriate ORS composition either making it too strong or too dilute which has its own harmful effects making the situation much worse. Some mothers especially in rural communities, they use spurious and homemade medicines for treating the diarrhea. Similarly use of the dried leaves i.e. jamun, they are also used to treat the diarrheal episodes. These harmful practices beliefs and customs which are existing in the communities make the situation even grimmer.

Finally some mothers, they even seek health advice from nonsense spiritual healers that ultimately leads to increase the morbidity. Keeping in view the above mentioned factors it is pertinent to study the current practices by mother of diarrheas among children in rural setup.

II. MATERIALS AND METHODS

STUDY DESIGN

It was a descriptive cross sectional epidemiological study.

SETTING:

The place of study was Sharif Medical City Hospital (SMCH) Lahore. There is a huge catchment area around hospital. The hospital has 300 beds. It provides general medical care, accident and emergency services, pediatric and neonatal intensive care unit. It has burn center, trauma center and radiology department which include the facility of CT scan. It also has well established nephrology and neurology departments. It also provides surgeries for accident cases.

DURATION OS STUDY:

The study was conducted in month after the approval of synopsis from April to May in 2017.

SAMPLING TECHNIQUE

The sampling technique was non-probability purposive.

SAMPLE SELECTION:

INCLUSION CRITERIA:

1. All age groups.
2. Mothers visiting SMCH after giving informed consent.

EXCLUSION CRITERIA

1. Unwilling Mothers

DATA COLLECTION PROCEDURE

A semi-structured survey questionnaire was made and finalized after pre testing containing both closed and open ended questions. The researcher visited Sharif Medical City Hospital and interviewed mothers of children under 5years of age.

DATA ANALYSIS:

Data analysis was done through computer software SPSS (Statistical Package for Social Science) version 23. The data was cleaned clearly and statistically analyzed by same software. The frequencies and percentage were calculated and data was entered in the form of tables and diagrams.

ETHICAL CONSIDERATION:

The permission from ethical community of Sharif Medical & Dental College was obtained before proceeding for the study. Confidentiality of data was maintained.

III. RESULTS

Table 1

**FREQUENCY OF DISTRIBUTION ACCORDING TO AGE OF MOTHER
 n = 255**

	Frequency	Percentage
below 20	9	3.5
21-25	57	22.4
26-30	107	42.0
31-35	63	24.7
36-40	19	7.5
Total	255	100.0

This table demonstrates that among 255 mothers in SMC 9(3.5%) were below 20, 57(22.4%) were 21-25 years of age, 107(42%) were 26-30 years of age, 63(24.7%) were 31-35 years of age, 19(7.5%) were 36-40 years old.(**Figure.1**)

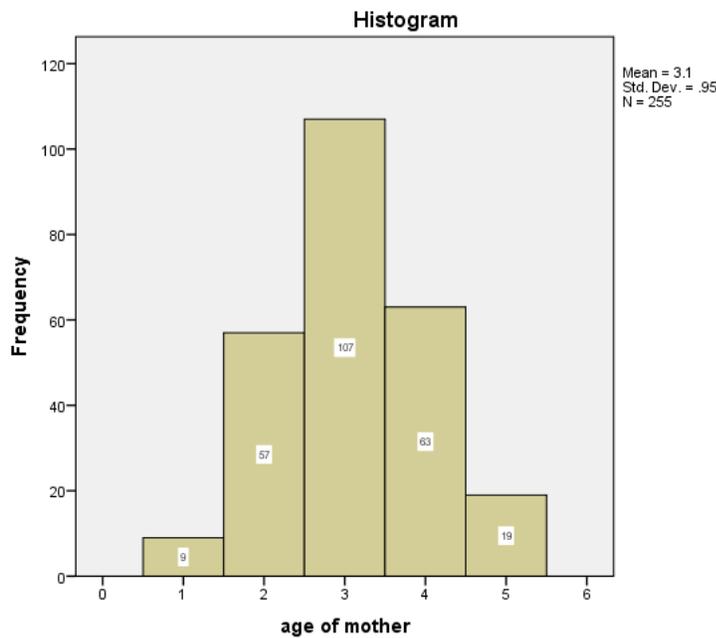


TABLE 2

FREQUENCY OF DISTRIBUTION ACCORDING TO EDUCATIONAL STATUS OF MOTHER

	Frequency	Percent
above intermediate	71	27.7
intermediate	42	16.4
matric	52	20.3
illiterate	63	24.6
primary	28	10.9
Total	256	100.0

This table demonstrates that 71(27.7%) mothers were above intermediate, 42(16.4%)mothers were intermediate,52(20.3%)mothers were matric,28(10.9%)mothers were primary and 63(24.6%)mothers were uneducated.(**Figure.2**)

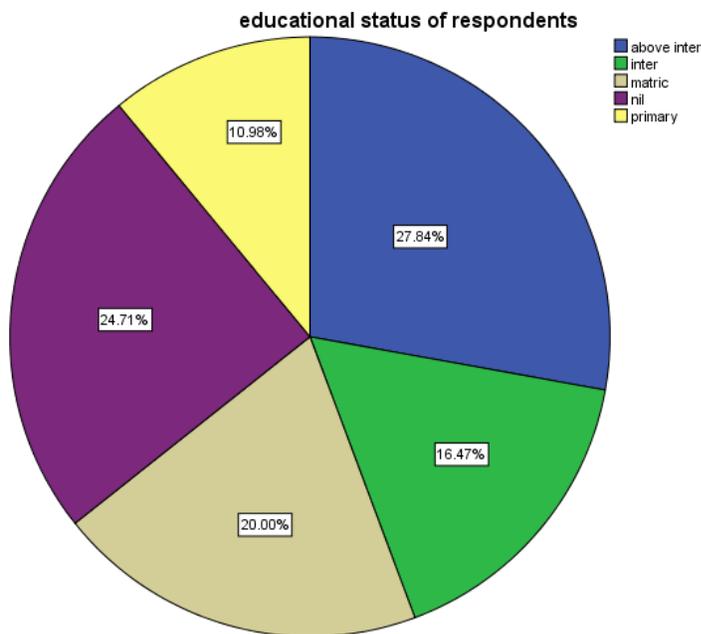


Figure.2
 Pie chart shows the educational status of mothers.

TABLE 3

FREQUENCY OF DISTRIBUTION ACCORDING TO LOCAL NAME OF DIARRHEA

Local names for diarrhea	Frequency	Percent
dast	25	9.8
diarrhea	6	2.3
loose motion	171	66.8
pechyas	12	4.7
potiyan	42	16.4
Total	256	100.0

This table demonstrates that 25(9.8%) mothers called it Dast, (2.3%)mothers called it Diarrhea,171(66.8%)called it Loose Motion,12(4.7%) called it Pechyas,42(16.4%) called it Potiyan.(Figure.3)

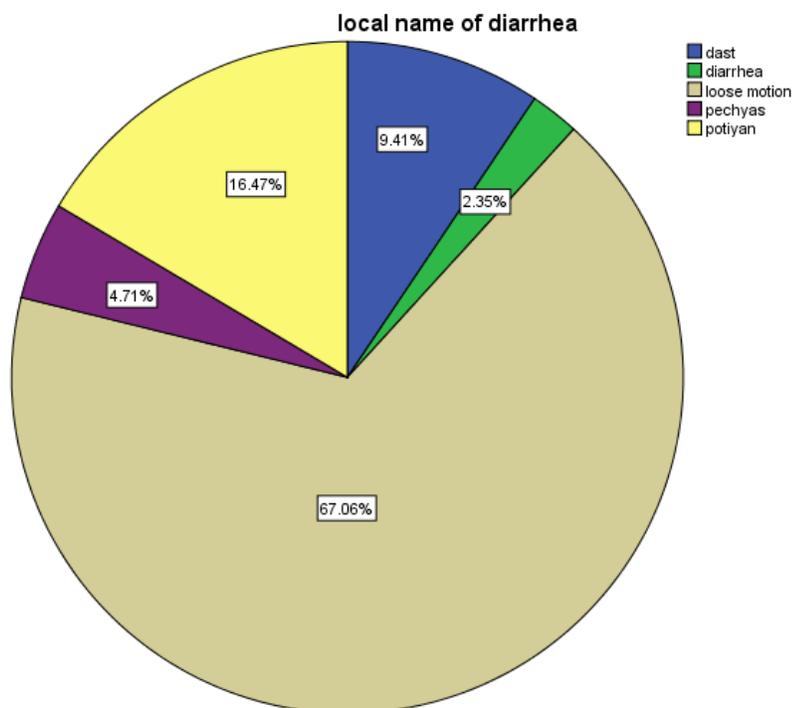


Figure.3
 Pie chart shows percentage of local names used for diarrhea.

TABLE 4
FREQUENCY OF DISTRIBUTION OF DIARRHEA ACCORDING TO AGE OF CHILD

Age of child	Frequency	Percent
1	50	19.5
2	67	26.2
3	66	25.8
4	40	15.6
5	33	12.9
Total	256	100.0

This table demonstrates that 50(19.5%)of children were of age 1 year,67(26.2%) children were of age 2 years,66(25.8%) children were of age 3 years,40(15.6%)children were of age 4 years,33(12.9%)children were of age 5 years.

TABLE 5
FREQUENCY OF DISTRIBUTION ACCORDING TO MANAGEMENT OF DIARRHEA

Management of diarrhea	Frequency	Percent
ORS	147	57.4
Home-made remedies	12	4.7
Medication	47	18.4
Hospitalization	48	18.8
Total	255	99.6

This figure demonstrates that 147(57.4%) mothers use ORS, 12(4.7%) mothers used Home-made remedies, 47(18.4%)mothers used Medication,48(18.8%) mothers Hospitalize their children.

TABLE 6
FREQUENCY OF DISTRIBUTION ACCORDING TO KNOWLEDGE ABOUT ORS

Knowledge about ORS	Frequency	Percent
nil	1	.4
Rehydration	117	45.7
Rehydration ,electrolyte balance	138	53.90
Total	256	100.0

TABLE 7
FREQUENCY OF DISTRIBUTION ACCORDING TO FORM OF ORS GIVEN TO CHILD

Form of ORS	Frequency	Percent
packet	206	80.5
liquid	33	12.9
Total	239	93.4

This table shows that 206(80.5%) mothers used ORS which is in Packet form and 33(12.9%) mothers used ORS which is available in Liquid form.

TABLE 8
FREQUENCY OF DISTRIBUTION ACCORDING TO SOURCE OF INFORMATION FOR PREPARING ORS

Source of information	Frequency	Percent
media	3	1.2
doctor	187	73.0
relatives	31	12.1
written on packet	16	6.3
Total	237	92.6

This frequency table shows that Media is the source of information for preparing ORS for 3(1.2%) mothers, Doctors for 187(73.0%) mothers, Relatives for 31(12.1%) mothers and 16(6.3%) mothers used method written on Packet.

TABLE 9
FREQUENCY OF DISTRIBUTION ACCORDING TO EFFECTIVENESS OF ORS

Effectiveness of ORS	Frequency	Percent
yes	222	86.7
no	15	5.9
Total	237	92.6

This table shows that ORS is effective for 222(86.7%) children and 15(5.9%) children have no effect of ORS.

TABLE 10
FREQUENCY OF DISTRIBUTION ACCORDING TO TYPE OF MEDICINE GIVEN

Type of medicines given	Frequency	Percent
antibiotics	14	5.5
homeopathic	1	0.4
I/V fluid	7	2.7
nil	16	6.3
syrup	217	85.1

Total	255	100.0
-------	-----	-------

This table shows that 14(5.5%) mothers used Antibiotics, 1(0.4%) mothers used Homeopathic medicines, 7(2.7%) mothers used I/V fluids, 217(85.1%) mothers used Syrup for the management of diarrhea in their children.

TABLE 11
FREQUENCY OF DISTRIBUTION ACCORDING TO EFFECTIVENESS OF MEDICINE

Effectiveness of Medicine	Frequency	Percent
yes	228	89.4
no	27	10.6
Total	255	100.0

This table shows that Medicine given to children is effective for 228(89.4%) children and has no effect on 27(10.6%) children.

TABLE 12
FREQUENCY OF DISTRIBUTION ACCORDING TO SOURCE OF INFORMATION FOR PREPARATION OF HOME MADE REMEDIES

Source of information for home made remedies	Frequency	Percent
media	1	.4
community	47	18.4
mother/mother in law	34	13.3
nil	173	67.8
Total	255	100.0

This table demonstrates that source of information for preparing Home-made remedies in 1(.4%) mothers is Media, 47(18.4%) mothers is Community, 34(13.3%) mothers is Mother /Mother in law, 173(67.8%) did not use any home-made remedy.

TABLE 13
FREQUENCY OF DISTRIBUTION ACCORDING TO EFFECTIVENESS OF HOME MADE REMEDIES

Effectiveness of home made remedies	Frequency	Percent
yes	79	31.0
no	176	69.0
Total	255	100.0

This table shows that Home-made remedies were effective for 79(31.0%) children and have no effect on 176(69.0%) children.

TABLE 14
FREQUENCY OF DISTRIBUTION ACCORDING TO SYMPTOMS THAT LEADS CHILD TO HOSPITAL

Symptoms that leads to Hospital	Frequency	Percent
repeated episode of diarrhea	107	42.0
Vomiting, dehydration, repeated episode of diarrhea	109	42.7
Weakness, fever ,abdominal pain	39	15.3

Total	255	100.0
-------	-----	-------

This table demonstrates that frequency of distribution according to symptoms that leads mothers to take their children to hospital.

TABLE 15
FREQUENCY OF DISTRIBUTION ACCORDING TO CONTINUATION OF BREASTFEEDING

Breastfeeding	Frequency	Percent
yes	170	66.7
no	85	33.3
Total	255	100.0

This table shows that 170(66.7%) mother continued breastfeeding to their children and 85(33.3%) mothers did not continue.

TABLE 16
FREQUENCY OF DISTRIBUTION ACCORDING TO FORM OF FOOD GIVEN TO CHILD

Form of food	Frequency	Percent
liquid	96	37.6
solid	158	62.0
Total	254	99.6

This table shows that 96(37.6%) mothers give liquid food to their children and 158(62.0%) mothers give solid food to their children.

TABLE 17
FREQUENCY OF DISTRIBUTION ACCORDING TO AGGRAVATING FACTOR

Aggravating factors for diarrhea	Frequency	Percent
yes	114	44.7
no	140	54.9
Total	255	100.0

This table shows that aggravating factor is positive for 114(44.7%) and negative for 140(54.9%).

IV. DISCUSSION

The present study “CURRENT PRACTICES BY MOTHERS ABOUT THE MANAGEMENT OF ACUTE WATERY DIARRHEA ATTENDING SHARIF MEDICAL CITY HOSPITAL, LAHORE “is based on the analysis of total 255 mothers.

This study showed majority of children were under 2 years of age i. e. 54.3% and 75.3% children were of educated mothers. Studies conducted by Dheeraj Shah et al and Patric Kelly et al had similar results showing children less than 2 years of age were more prone for diarrhea.^{14,15}

Social determinants in this study is showing that 75.3% mothers were higher educated and 24.7% were illiterate or only can write their name, 42(16.4%) were intermediate, 52(20.3%)

mothers were matric. Regarding age of mothers, 107(42%) were 26-30 years of age and least 9(3.5%) were below 20 years of age. The use as well as availability of ORS can minimize the diarrhea related morbidity and mortality it is not very effective in developing countries because of lack information about availability and use of ORS in treatment of diarrhea.

In present study, 99.6% had knowledge about ORS and 206(80.5%) mothers used ORS in the form of packets, while 33(12.9%) used liquid ORS. Mahor GR et al. showed similar results about the knowledge of ORS that 94.5% mothers had information about the benefit of ORS use in diarrhea and 5.5 % mothers had no knowledge about the implication of ORS use.¹⁶ Our study shows that 14(5.5%)mothers used antibiotics, 1(0.4%) mothers used homeopathic medicines, 7(2.7%) mothers used I/V fluids, 217%(85%) mothers used syrup for the management of diarrhea in their children.

V. RECOMMENDATIONS

1. Improvement in reach of safe drinking water and good sanitation as well as encouraging good hygiene are main factors in diarrhea prevention.
2. Children stool have a higher load of pathogens as compared to adults and many children play in area where stools are found therefore measures should be adopted for proper disposal of excreta in rural areas.
3. Rural access to improve drinking water resources should be made better.
4. Public should be educated to manage or store their household water supplies in a safe manner.
5. Mothers should be educated to treat about the nutritional needs of a child.
6. Infants should be take their mother milk exclusively for 1st six months of their life.
7. The more children could have access to ORS packet or zinc supplementation if packaged together in kits of diarrheal treatment which can be delivered by workers in community department, or directly to households via campaign or health days of children.
8. To promote sanitation and hygiene among children age 3 to 5 years schools can serve as important training grounds school children in turn mostly affects such practices in home.
9. Importance of hand washing on prevention of diarrhea should be communicated through media.
10. Government should allocate and mobilize resources for diarrhea control.
11. To control diarrhea in an effective manner, treatment and preventive steps should be included health workers training and be reflected in supply chain and programmed monitoring.
12. Families and communities should ensure that breast feeding, hand washing, sanitation and treatment of house hold water receives the deserving priority. The private sector can encourage innovation in supplying and delivering key interventions.
13. Higher authority's leaders can expand public awareness of the issues and their solutions.

VI. CONCLUSION

According to WHO, Antidiarrheal and antibiotics have a very little importance in management of diarrhea. Community health education has a big role in management of diarrhea. The health education which is effective can only be given on the basis of an exact understanding of prevailing information and practices of community people. Mothers give primary health care so that mother's information regarding etiologies of diseases, signs of diseases, symptoms of diseases, prevention and control are really essential, thereby decreasing morbidity and mortality because of diarrhea.

REFERENCES

- [1] Mwambete KD, Joseph R. Knowledge and perception of mothers and caregivers on childhood diarrhea and its management in Temeke municipality, *Tanzan J Health Res*:2010;12(1):47-54.
- [2] Parker L, Lamont DW, Wright CM, Cohen MA, Alberti KG, Craft AW. Mothering skills and health in infancy:the Thousand families revisited. *Lancet*.1999;353(9159):1151-2.
- [3] World Health Organization. Treatment of dehydrated patients. Readings on diarrhea, student manual. Geneva:World Health Organization;1992.p.65-78.
- [4] Ahmed F, Ansaruzzaman M, Haque E, Rao MR, Clemens JD. Epidemiology of postshigellosis persistent diarrhea in young children. *Pediatr infect Dis J*. 2001; 20(5):525-30.
- [5] World Health Organization. Diarrheal disease, 2013. Available at <http://www.who.int/mediacentre/factsheets/fs330/en/>(last accessed on January 26, 2017).
- [6] World Health Organization. Diarrhea: Why Children are still dying and what can be done, 2009. Available at http://whqlibdoc.who.int/publications/2009/9789241598415_eng.pdf?ua=1 (last accessed on September 13, 2017)
- [7] World Health Organization 2009.Diarrheal disease fact sheet. (Online)Available at <http://www.who.int/mediacentre/factsheets/fs330/en/index.html>. Assess on 12th March 2013.
- [8] World Health Organization 2012.World health statistics 2012. (online) Available at <http://www.who.int/gho/publications/world-health-statistics/2012/en/>.Assess on 12th March 2013.
- [9] Black RE ,Morris SS, Bryce J : Where and Why are 10 million children dying every year ? *Lancet* 2003, 361:1147-52.
- [10] Jones G, Steketee RW. Black RE, Bhutta ZA, Morriss SS : CHILD survival study group. How many child deaths can we prevent this year? *Lancet* 2003, 362: 65-71.
- [11] Bryce J. Boschi-pinto C , Shibuya K, Black RE : The child health epidemiology reference group. WHO estimates the cause of death in children .*Lancet* 2005, 365:1147-52.
- [12] Fischer Walker CL, Friberg IK Binkin N. Young M ,Walker N : Scaling up diarrhea prevention and treatment interventions : a lives saved tool analysis . *PLoS Med* 2011; 8:1-8.
- [13] United Nations Children's Fund / World Health Organization : diarrhea: Why children are still dying and What can be done . New York: UNICEF/WHO 2009.
- [14] Shah D, Chaudhury P, Gupta P, Mathew JL. Promoting Appropriate Management of Diarrhea: A Systematic review of Literature for Advocacy and Action: UNICEF-PHFI Series on Newborn and Child Health, India, *Indian pediatrics*. 2012; 28(6):553-9.
- [15] Kelly P, Khanfir H, David PH, Arata M. Environmental and behavioral risk factors for diarrheal disease in Morocco; *Environmental health project*.2013; 89:95-9.
- [16] Mahor GR et al. Knowledge and attitudes of mothers regarding use of Oral Rehydration Solution in management of diarrhea. *Asian Journal of Biomedical and pharmaceutical sciences*, 2013; 3(22):6-8.

AUTHORS

Adeela Hassan deelu9004@gmail.com
Haris Manan Copyright.electronicmail@gmail.com
Firdous Idrees idreesumair94@gmail.com
Hareem Ghazanfar hareem619@gmail.com
Sidra Nazeer sidranazeer719@gmail.com
Muhammad Rauf Tahir Dr.RaufTahir26@gmail.com
Aisha Akhtar aishaakhtar35@gmail.com
Sara Ashraf saraashraf9064@gmail.com