

Knowledge, Attitude and Practice (KAP) of Mothers on the use of Oral Rehydration Salt (ORS) in Children with Diarrhoea: A Cross-Sectional Survey Conducted at Dar-ul-Sehat Hospital, Karachi

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Abstract

Objective: To assess knowledge, attitude and practices of mothers on the use of ORS in diarrhoea in children

Method: This cross-sectional KAP study was conducted in the Department of Paediatrics, Dar-ul-Sehat hospital, Karachi from February 2015 to 30 April 2015. Sampling type was non-probability convenience and the sample size was 200. Mothers who were local residents, opted for participation in the study, accompanying children in OPD and ward and also accompanying women having children were included in the study. Mothers unable to understand the language and/or perceive the questions were excluded.

Results: The mean age of the mothers was 28.7 ± 3.7 years. Mean age of the children was 20 ± 16 months. Socioeconomically 170 (85%) families were earning >Rs. 20,000/month. Most of the fathers and mothers (n=170, 85% and n=128, 64%) had completed graduation. Significant majority of fathers (n=167, 84%) were on job. Regarding mothers 180 (90%) were house wives. Ninety four (47%) of the mothers had correct understanding of diarrhoea while one hundred one (51%) knew about ORS. Significant majority (n=180,90%) thought ORS was good in diarrhoea while one hundred forty one (71%) consulted a doctor. Family members (n=114, 57%) contributed most to the information given on ORS.

Conclusion: Majority of the mothers had a correct understanding of diarrhoea, knew about ORS and sought a doctors' advice when the child had diarrhoea. More than eighty percent of the mothers knew how to prepare ORS and thought that ORS was beneficial for diarrhoea.

Keywords: ORS, diarrhoea, vomiting, anti-diarrhoeals, infantile diarrhoea.

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Introduction

Acute diarrhoea is defined as sudden onset of excessively loose stools of >10ml/kg/day in infants and >200gm/24hrs in older children which lasts <14 days. In chronic diarrhea the episode lasts >14 days¹. Persistent diarrhoea poses unpleasantness for parents and children. It also increases rate of morbidity and mortality in children in developing

countries^{2,3}. In children water storage is very little and fat storage is much greater; so they become quickly dehydrated. Giving extra water during diarrhea prevents them from dehydration. This extra water can be given in the form of Oral Rehydration Solution (ORS) or intravenous fluids¹.

Diarrhoea causes nearly 760,000 deaths annually in children under five years⁴. A significant proportion of such deaths can be prevented through proper sanitation and hygiene and through safe drinking water. Mortality rate of less than five years of age is 87/1000 in Pakistan as declared by WHO. In Pakistan diarrhoea is the second leading cause of death after acute respiratory tract infection. The percentage of children using oral rehydration therapy

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in diarrhea was 47.2⁵. Misdirected approach of the mothers towards management of diarrhea results in severe dehydration⁶.

ORS does not stop diarrhea but replaces the lost fluids and essential salts, thus preventing or treating dehydration. Glucose in the ORS helps intestine absorb the fluid and salts more efficiently. ORS alone is an effective treatment in 90% of the diarrhea patients. It is on the WHO lists of essential medicines⁷. In a survey conducted in Karachi it was found that 89.9% of the mothers were aware about ORS⁸. However their knowledge about correct amount needed was poor.

As ORS is a cheap remedy for diarrhoea, its use largely depends on caretakers knowledge and attitude toward it. Knowledge, attitude and practices (KAP) regarding ORS will help mothers take proper home measures to reduce the intensity of diarrhea in children, thereby decreasing workload on already weakened health system. The study in hand assesses knowledge, attitude and practices of mothers toward ORS use.

Patient and Methods

This was descriptive, cross-sectional study conducted in the Department of Paediatrics, Dar-ul- Sehat Hospital from February 2015 to April 30, 2015. Sample type was non-probability convenience. Sample size was 139 keeping the prevalence of ORS use 90%, CI 95% and required precision being 0.05 calculated by WHO sample size software. With inflation sample size was raised to 200.

Mothers who agreed to participate in the study, were attending Paediatric department (outpatient and inpatient) for their children's diarrhoea or any other problem and those accompanying their children in the ward along with accompanying women having at least one child under five years were included. Exclusion criteria comprised of mothers unable to understand the language properly, unable to perceive the questions and who were foreigners.

Permission in writing was taken from the head of the department of Pediatrics. Verbal informed consent was taken from the mothers of the children. Mothers were assured of their anonymity, autonomy and confidentiality. The due care of their children would not be affected even if they refused to answer any of the questions. Questionnaire was easy and understandable. Medical students after being trained, along with few members of faculty interviewed the participants. Difficulty in understanding the questions were explained to the participants.

SPSS-17 was used for analysis and data were completely password protected. Cleaning and coding of data were done prior to analysis. The main dependent variables were knowledge of mothers on diarrhoea and ORS, their attitudes and practices toward using ORS. Main independent variables were age of the child and that of mothers along with their occupation, education and socioeconomic status. Mean and SD were calculated for age of the child and mothers; Frequencies and percentages were calculated for knowledge, attitude and practice of mothers on ORS, information advice and method of preparation of ORS given by family members, qualified medical practitioner, media and Lady Health Workers (LHWs).

Results

The mean age of the mothers was 28.7 ± 3.7 years. Mean age of the children was 20 ± 16 months. Socioeconomically 170 (85%) families were earning >Rs. 20,000/month, (Table 1). Most of the fathers and mothers (n=170, 85% and n=128, 64%) had completed graduation (Table1). Significant majority of fathers (n=167, 84%) were on job. Regarding mothers 180 (90%) were housewives, (Table 1). Ninety-four (47%) of the mothers had correct understanding of diarrhoea while one hundred one (51%) knew about ORS. Significant majority (n=180, 90%) thought ORS is good in diarrhea while one hundred forty one (71%) consulted doctor for this, (Table 2). Family members (n=114, 57%) contributed most to the information given on ORS (Table 3).

Table 1. Basic demography of the parents of children with diarrhoea (n=200)

Variable	Frequency	Percent
Socio-economic status n=(195)		
< Rs.10,000/m	2	1
10,001 - 20,000/m	23	12
>Rs. 20,000/m	170	85
Education of father n= (197)		
No education	6	3
Madarsa	0	0
Middle	2	1
Matric	19	10
Graduation	170	85
Education of mother n=(198)		
No education	13	7
Madarsa*	1	0.5
Middle education	8	4
Matric	48	24
Graduation	128	64
Occupation of father n= (196)		
Unemployed	0	0
Student	0	0
Self employed	21	11
Job	167	84
Other	8	4
Occupation of mother n= (198)		
House wife	180	90
Student	0	0
Self employed	2	1
Job	16	8
Other	0	0

*Muslim private schools with core emphasis on Islamic studies and Arabic literacy. It is a privately-operated school which relies on the support of the local community or foreign donors, particularly from Islamic or Muslim countries²¹

Table 2. Knowledge, Attitude and Practice (KAP) of mothers on ORS, (n=200)

Knowledge	Frequency	Percent
What is diarrhoea? (n=199)		
Loose stools < 5/day	105	53
Loose stools > 5/day	94	47
What is ORS? (n=199)		
Salt	101	51
Anti-diarrhoeal	34	17
Glucose	29	15
Water	15	8
Drug	3	2
Don't know	17	9
How long ORS should be used? (n=196)		
Same day	60	30
Till cure	136	68
How to prepare ORS?		
Yes	164	82
No	36	18
Attitude		
Have you ever given ORS (n=195)		
Yes	168	84
No	27	14
ORS is (n=196)		
Good in diarrhoea	180	90
Use less in diarrhoea	6	3
No response	10	5
Stop feeding during diarrhoea (n=199)		
Yes	64	32
No	135	68
Practice		
What is doing during diarrhoea in child? (n=196)		
Just wait	28	14
Feed at home	25	12
See a doctor	141	71
Stop ORS in vomiting during diarrhoea		
Yes	71	36
No	129	66
Use anti diarrhea drug during diarrhoea (n=197)		
Yes	106	53
No	91	46

Table 3. Information, advice and preparation of ORS (n=200).

	Family member	Qualified medical practitioner	Media	LHW
Information about ORS	114 (57%)	90 (45%)	20 (10%)	2 (4%)
Advice about ORS	118 (59%)	88 (44%)	18 (9%)	2 (1%)
Preparation of ORS	128 (64%)	68 (34%)	22 (11%)	2 (1%)

Discussion

Diarrhoea is a major cause of illness and death among young children in developing countries. Treatment guidelines issued by the World Health Organization indicate that most cases of childhood diarrhoea can be treated at home by increasing the fluid intake and by continued feeding during the diarrhoeal episodes. Oral rehydration and early realimentation have dramatically reduced mortality and morbidity in acute infectious diarrhoea in children⁴.

In this study mean age of the mothers was 28.7 ± 3.7 years and range being 20-42 years. Regarding the source of information on the use of ORS, 57% of the mothers obtained information from family member; 45% by qualified medical practitioner, 10% through media and only 2% credited to Lady Health Worker (LHW). In a study conducted by Sultana and colleagues⁹ it was found that 20% of the mothers got information on the use of ORS from their mothers, 37% from doctors and 25% through media. A study conducted in Lahore¹⁰ revealed that 114 (75.8%) mothers came to know about ORS from a health personnel and from a doctor in a majority of cases. Findings in our study could be explained on account of the fact that the hospital is catering medical need of middle to upper socioeconomic class and Lady Health Worker involvement in such community is less. Such information given through qualified medical practitioner was significant. As most of the women were literate, they believed in qualified medical practitioners. Fifty seven percent mothers gaining information by family members in this context portrayed good family setup in our society. Results on the advice of ORS and preparation of ORS use were similar.

Regarding the meaning of diarrhoea, in this study 94 (47%) answered correctly as large watery stools more than five per day. On the contrary Datta and colleagues¹¹ demonstrated that 68% of the mothers knew the understanding of diarrhea.

As far as understanding of ORS is concerned, the study in hand shows 101 (51%) mothers

thought it was a salt, 29 (15%) thought it was glucose, 15 (8%) answered as water and 17 (9%) did not know about ORS. In a study conducted in Rawalpindi by Sultana and colleagues¹² only 4% mothers were found ignorant of ORS. Significant percentage of participants on understanding of ORS in both the studies conducted in Pakistan show that preventive paediatric programs are being implemented effectively in our country by the health sector and making effective use of print and electronic media.

In this study 106 (69%) mothers said ORS should be used till cure and 164 (82%) knew how to prepare ORS. Improper preparation and intake of ORS hamper the prevention and treatment of diarrhoea diseases and contribute to morbidity and mortality. The study conducted by Yasmin¹³ and colleagues in Karachi reveals that 80% of the mothers knew how to prepare ORS. The results in both the studies are similar which shows mothers contribution towards prevention of dehydration during diarrhoeal illness.

In this study feeding (breast feeding, bottle feeding, semi solids or solids) was continued by 67% of the mothers during diarrhoea as before and that was encouraging since it was a high percentage. This is in contrast to a study conducted by Waqas in Multan¹⁴ where only 43% of the mothers were found feeding the children during diarrhoea. In the study in hand it was found that 168 (86%) of the mothers had used ORS before. This is significantly higher in comparison to the finding in the study conducted by Rasana¹⁵ in India where 210 (46%) of the mothers were found to have used ORS. These studies may indicate that a significantly higher percentage of mothers in Pakistan are using ORS than that in India and hence, may show better preventive health programs in Pakistan.

Regarding the efficacy of ORS, the study in hand shows 180 (90%) mothers feel ORS was good while 6 (3%) thought it was useless in diarrhoea. This is in contrast to the finding in the study conducted by Mukhtiar and colleagues in Nepal¹⁶ where it was shown that only 8.5% of the mothers

feel ORS was good and prevented the child from getting dehydrated. Both countries being third world countries, our mothers have a better understanding of ORS as compared to Nepal.

In this study 64 (34%) of the mothers stopped feeding during diarrhoea. This in contrast to a study conducted by Seyal¹⁷ in Lahore where 116 (11%) mothers stopped feeding during diarrhoea. In another study¹⁸ mother feeding was discontinued in only 3% on the cases. This study revealed that 141 (72%) of the mothers consulted doctor, 28 (14%) just waited and 25 (13%) fed their children at home for diarrhea. In a study conducted in Lahore by Mohsin¹⁹ it was shown that 42 (14%) of the mothers gave ORS, 48 (16%) gave drugs and 189(83%) gave drugs with ORS; 12 (4%) were given home fluids and in 9 (3%) of the cases nothing was given before taking the child to hospital. Regarding health seeking practices, 52.5% mothers consulted doctor after two days while 30% mothers opted for self medication¹³.

In this study 106 (54%) of the mothers used anti diarrhoeal drugs in diarrhoea which is in contrast to a study conducted in Lahore¹⁹ which shows drugs are used by 237 (79%) of the mothers. While another study²⁰ shows 52.4% mothers used drugs.

In this study Khichri, Yogurt and Banana (KYB) was offered by 89% of the mothers and 11% offered others diets as well. Data elsewhere regarding KYB is scarcely available.

Information to mothers regarding importance and use of ORS in diarrhoea should be a part of counseling and health education. In public sector it can be done by LHWs and in private sector, media along with general practitioners and hospitals should actively participate through public awareness programs.

Conclusion

Understanding of mothers on diarrhea and ORS was not satisfactory; 53% and 51% respectively. On the other hand, knowledge on preparation of ORS, perception of ORS and seeking doctors ad-

vice were satisfactory; 82%, 90% and 71% respectively.

Conflict of interest

The authors declare no conflict of interest with respect to research, authorship and publication of study.

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