



Community Medicine

MATERNAL KNOWLEDGE AND IT'S IMPLICATION FOR PREVENTION AND CONTROL OF DIARRHOEA AMONG UNDER-FIVE CHILDREN URBAN, URBAN SLUM AND RURAL AREAS OF GUJARAT.

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ABSTRACT

Background: Diarrhoeal diseases are main cause of mortality and morbidity in infants and young children all over the world in the developing countries. Community studies on perceptions of mothers on diarrhoeal disease and its management are very limited in urban slum and rural setup. So, with this view, present study aimed to assess the Knowledge, Attitude and practices of participants regarding diarrhoea and its management. **Methodology:** Community based cross sectional study was conducted in Urban area, urban slum and Rural area of district among 450 mothers having children below five years. **Result:** It was seen that 26.0% were infant, 56.0% were males and 44.0% were females, overall literacy level of participant was 75.7%, about 90.0% participants mentioned diarrhoea as loose-watery in consistency, 94% participants' mention diarrhoea due to seasonal variation. In urban area maximum (94.7%) participants mentioned persistent vomiting as danger sign followed by blood/ mucus / pus in stool (75.3%), others (68%), decrease urine output (42%) and sunken eyes (42%). Majority (96.4%) of the study participants were aware about ORS. **Conclusion:** Create Awareness about supplementary food which can be given during diarrhoea or not. Health education regarding importance of exclusive breast feeding, timely initiation of breast-feeding and timely and properly weaning should be given to mothers during antenatal visits Mother should be made aware about importance of hygiene of vessel, of the hands, water food. They should be sensitized regarding washing of hands with soap before feeding to child and after defecation

KEYWORDS :

INTRODUCTION

Children are our supreme asset and they are the future human resource of the Country. Under five, a highly vulnerable group constitutes 13% of the total population in India. Annually nine million children in developing countries die before they reach their fifth birthday. Seven in ten under five deaths in these countries are from illness such as acute pneumonia, diarrhoea, measles, malaria and malnutrition. Diarrhoea is more prevalent in the developing world and remains the second most common cause of death among children under five globally, following closely behind pneumonia. Together, pneumonia and diarrhoea account for an estimated 40 per cent of all child deaths around the world each year. (1) Beyond the potentially devastating and immediate impact it also has long-lasting implications such as malnutrition, stunted growth, and learning difficulties. (2) The burden is greatest in the developing world, where access to safe water, sanitation and medical care is often limited. In India nearly 3, 86,000 children below the age of 5 year die annually due to diarrhoea only. (3) It accounts for 20% of total under five deaths and 2 % of neonatal deaths. On an average, children below 3 years of age in developing countries, including India, experience about three episodes of diarrhoea each year. (4)

The Government of India has issued a revised diarrhoea management guideline recently that includes revised therapeutic advances such as use of low-osmolarity ORS and zinc. These guidelines have also become an integral part of Integrated Management of Neonatal and Childhood Illnesses (IMNCI). Steps have also been initiated to improve supplies of low-osmolarity ORS and zinc through the public health system under the National Rural Health Mission (NRHM) of the Government of India. (5) Factors like illiteracy, poverty, unhygienic practices during water collection and storage, poor hand washing practices and limited access to sanitation facilities contribute to persistence of diarrhoea. The wrong management or non prevention of dehydration results in cost of treatment of diarrhoea from few rupees when treated in time to few hundred rupees when rehydration is delayed and intravenous therapy has to be instituted.

Community studies on perceptions of mothers on diarrhoeal disease and its management are very limited in urban slum and rural setup. So with this view, present study was conducted to assess the knowledge, attitude and practice of mothers towards the use of oral rehydration solution (ORS) and other remedies in the management of diarrhoea among under-five children and To assess the various feeding practice

(Breast feeding, other feeding options, etc.) adopted by mother during episode of diarrhoea.

MATERIALS AND METHODS

Study Area: Present study was carried out in urban, urban slum and rural area of study district to assess maternal knowledge, attitude and practice for prevention and control of diarrhoea in under five children.

Study Design: cross sectional study.

Period Of Study: Study carried out for 6 month.

Sampling Units

Mother of Under-five children assessed for knowledge, attitude and practice towards use of ORS and feeding practices during diarrhoeal episode.

Sample Size

Where, N= required sample size

P= Prevalence of diarrhoea, Q=100-p, L=allowable error (20 %)

Prevalence of diarrhoea in same study district was 20%(76)

P is taken as 20%, so as q=80%. If l=20% of P value

Then, sample size would be.....N = $4 \times 20 \times 80 / 4 \times 4 = 400$.

For equal distribution in three areas, sample size of 450 will be selected. This sample furthers sub grouped into three equal parts, i.e. 150 each from urban, urban slum and rural settings.

Sampling Technique

Out of 450 Mothers of Under-Five children, 150 Mothers will be studied from Urban, 150 Urban-slum and 150 from rural areas of study district.

Inclusion Criteria

- Mothers who were having children below the age of five years.
- Participants residing in the same area at least for the last one year.

Exclusion Criteria

- Mothers who were health care worker (excluded because of their specific training in health care services and specialized knowledge concerning the treatment of diarrhoea).
- Study participants not fulfilling inclusion criteria.

Ethical Clearance

The present study was approved by the Institutional Ethical committee on Human subjects Research and ethical clearance was obtained.

Data Collection

With the help of pretested questionnaire from data was collected by interviewing the mothers after obtaining informed consent.

Information regarding sociodemographic factors, knowledge and attitude regarding diarrhoea and practices related to its management were collected. Care was taken to make the subjects understand the questions, so as to avoid any false answers. Sufficient time was given to each subject to answer.

OBSERVATIONS

In present study, above table indicates age wise distribution of children; 26% were infant, 28.7% were between 1-2 years age group while 22.7 %, 14.0% and 8.6% were belonged to 2-3, 3-4- and 4-5-years age group respectively. In urban slum highest 34.7% children were in 1-2 years age group as compared to urban and rural area whereas lowest 6.0% children were belonged to 4-5 years in urban area as compare to others. (Table 1)

Above table depicts that 56% were male child while 44% were female child. In urban slum, 61.3% were male child as compared to urban and rural area. Female children (48.7%) were more in urban area. (Table 2) Above table shows that one third of the study participants were literate upto primary level and almost one fourth were illiterate. It seems that maximum number of literate were in urban area in contrast to urban slum and rural areas. Overall literacy level of participant was 75.7%. In urban slum 38.7% participant were illiterate followed by 33.3% in rural area. In urban area only 0.7% participant were illiterate. In urban area 56.6% participant had education level upto graduate whereas 22.7% had higher secondary education. (Table 3)

It can see that in urban area more than nine tenth (90.0%) participants mention diarrhoea as loose-watery in consistency followed by 80.7% from urban slum and 77.3% from rural. In urban area maximum (94%) participants' mention diarrhoea due to seasonal variation followed by contaminated food with dirty hand (91.3%), teething (57.3%) whereas rest were others. In urban slum area equal number participants (84%) had mentioned diarrhoea due to contaminated food with dirty hand as well as seasonal variation followed by teething (66.0%) while rest were others causes. In present study when enquired about danger sign, in urban area maximum (94.7%) participant mention persistent vomiting as danger sign followed by blood/ mucus / pus in stool (75.3%), others (68%), decrease urine output (42%) and sunken eyes (42%). (Table 4)

It can be seen from the above table that sparing few, majority (96.4%) of the study participants were aware about ORS. In rural area, 98.7% participants knew about ORS followed by 97.3% from urban. In urban slum 6.7 participants does not know about ORS. (Table 5)

About 50.2% participants went to doctor immediately followed by 43.6% were after 1 day and 6.2% after 2 or more days for treatment of diarrhoea. In urban area 64.7% participants immediately went to doctor followed by urban slum (49.3%) and rural (36.7%) for seeking treatment of diarrhoea. (Table 6)

DISCUSSION

In present study, above table indicates age wise distribution of children; 26% were infant, 28.7% were between 1-2 years age group while 22.7 %, 14.0% and 8.6% were belonged to 2-3, 3-4- and 4-5-years age group respectively.

In study by Afroza Khatun et al (2013) highest number (27.50%) of children were in the age group 0-12 months. While 22%, 18.50%, 18% and 14% percentage of children in age group of 13-24, 25-36, 37-48 and 49-60 months respectively. (6) Similar results were found in the study conducted by Akrem Mohammad Al-Atrushi et al, reported 30% children less than 12 month, 34% children between 12- 23 months while 17.7%, 11% and 7% belonged to respected 24-35 months, 36-47 months and 48-60 months age group. (7)

In urban slum, 61.3% were male child as compared to urban and rural area. Female children (48.7%) were more in urban area. In study conducted by Afroza Khatun et al (2013) reported, amongst 400 children, 52.25% were male and 47.75% were female. (6) In another study conducted by Ansari et al (2012), showed based on gender 55.5 % were male children and 44.5% were female reported. (8) These findings were quite similar with the findings of the current study. Anil M H (2011) has found similar results in his study, he reported 54.7% of

male while 45.3% female. (9)

Above table shows that one third of the study participants were literate upto primary level and almost one fourth were illiterate. In a study by Mukhtar Ansari et al among a marginalised community of Morang, Nepal reported 72.3% mothers had no education, 9.2% had informal education, 17.7% had primary education and 0.8% had intermediate education. (10) Study done by Remidius Kakulu, (2012) in mkurunga district, Tanzania noted 28.6% mothers had no education, 62.5% had primary level, 8.6% had secondary level and 0.3% had college and above. (11)

More than nine tenth (90.0%) participants mention diarrhoea as loose-watery in consistency followed by 80.7% from urban slum and 77.3% from rural. In study by Anil M H (2011) at vantamuri sub centre in Belgau district study, 292 (64.24%) mothers could define diarrhoea correctly. 146 (32.12%) of mothers defined it as passing of more than or equal to 5 loose stools per day. (9)

In study conducted by Mubashir Zafar (2014) in Karachi, Pakistan shows that 47% of mother's beliefs that evil eyes were the basic cause for diarrhoea, 17% beliefs due to contaminated water, 14% due to eating mud, 10% blames due to teething and 5% don't know the cause. (12) In study conducted by Shah MS et al (2011) in rural Aligarh, when enquired about the danger signs of diarrhoea, 78% of the mothers were aware of them. (13) Amongst the responses, watery stools (83%) were the most prominent followed by repeated vomiting (56.9%) and blood in stools (32.3%).

Majority (96.4%) of the study participants were aware about ORS. In study by Bentley ME (1988) in rural north India, reported that 94% of the mothers sought some form of treatment; more than half did so on the first day. (14)

Recommendations

- Raising the female literacy will go a long way in prevention of morbidity amongst children in general and diarrhoea and other infection in particular
- Create Awareness about supplementary food which can during diarrhoea or not.
- Health education regarding importance of exclusive breast feeding, timely initiation of breast- feeding and timely and properly weaning should be given to mothers during antenatal visits.
- There is urgent need for intensification for wider coverage of children for immunization with Vitamin-A prophylaxis programme.
- Mother should be made aware about importance of hygiene of vessel, of the hands, water food. They should be sensitized regarding washing of hands with soap before feeding to child and after defecation.

Table –1: Age-wise Distribution Of Under Five Children

Age (Years)	Urban		Urban Slum		Rural		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
0-1	35	23.3	41	27.3	41	27.4	117	26.0
1-2	42	28.0	52	34.7	35	23.3	129	28.7
2-3	38	25.4	29	19.3	35	23.3	102	22.7
3-4	26	17.3	13	8.7	24	16.0	63	14.0
4-5	9	6.0	15	10.0	15	10.0	39	8.6
Total	150	100.0	150	100.0	150	100.0	450	100.0

Table –2: Sex-wise Distribution Of Under Five Children

Sex	Urban		Urban Slum		Rural		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Male	77	51.3	92	61.3	83	55.3	252	56.0
Female	73	48.7	58	38.7	67	44.7	198	44.0
Total	150	100.0	150	100.0	150	100.0	450	100.0

Table – 3: Distribution According To Literacy Status Of Participants

Literacy Status	Urban		Urban Slum		Rural		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Illiterate	1	0.7	58	38.7	50	33.3	109	24.3
Primary	3	2.0	61	40.6	82	54.7	146	32.4
Secondary	27	18.0	24	16.0	17	11.3	68	15.1
Higher Secondary	34	22.7	7	4.7	1	0.7	42	9.3

Table – 4: Distribution Of Participants According To Knowledge About What Is Diarrhoea

	Urban (n=150)		Urban Slum (n=150)		Rural (n=150)	
	No.	(%)	No.	(%)	No.	(%)
Consistency						
Loose – Watery	136	90.7	121	80.7	116	77.3
Semi-Solid	14	9.3	29	19.3	34	22.7
Frequency						
≤ 3	28	18.6	64	42.7	57	38.0
>3	122	81.4	86	57.3	93	62.0
Urgency After Meal	0	0.0	1	0.6	2	1.3
Causes of Diarrhoea						
Excess food / liquid intake	21	14.0	3	2.0	1	0.7
Bottle feeds / formula milk	33	22.0	32	21.3	54	36.0
Contaminate food with dirty hand	137	91.3	126	84.0	110	73.3
Contact with diarrhoea patient	5	3.3	0	0.0	1	0.7
Teething	86	57.3	99	66.0	64	42.7
Seasonal variation	141	94.0	126	84.0	126	84.0
Danger Sign						
Persistent Vomiting	142	94.7	111	74.0	93	62.0
Sunken Eyes	63	42.0	16	10.7	7	4.7
Decrease Urine Output	77	51.3	30	20.0	15	10.0
Blood/ Pus /Mucus/ In Stool	113	75.3	91	60.7	64	42.7
Drowsiness / Lethargic	41	27.3	20	13.3	14	9.3
Seizure	8	5.3	1	0.7	0	0.0
Inconsolable Cry	1	0.7	2	1.3	2	1.3
Other (Restless, Poor Skin Turgor, Excessive Thirst)	102	68.0	67	46.7	75	50.0

Table – 5: Distribution Of Participants According To Their Awareness About Ors

Awareness About ORS	Urban		Urban Slum		Rural		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Yes	148	98.7	140	93.3	146	97.3	434	96.4
No	2	1.3	10	6.7	4	2.7	16	3.6
Total	150	100.0	150	100.0	150	100.0	450	100.0

Table – 6: Distribution Of Participants According To Their Timely Decision To Consult Doctor/health Facility

Period (Days)	Urban		Urban Slum		Rural		Total	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
0	97	64.7	74	49.3	55	36.7	226	50.2
1	50	33.3	56	37.3	90	60.0	196	43.6
≥2	3	2.0	20	13.3	5	3.3	28	6.2
Total	150	100.0	150	100.0	150	100.0	450	100.0

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