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Original Research Article

Perception of parents on childhood diarrhoea and its co-relation with their knowledge score

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ABSTRACT

Background: Diarrhoea is a major cause of morbidity and mortality, accounting for four million deaths in children. Most of these deaths are due to dehydration and preventable through oral rehydration therapy. Factors like illiteracy, poverty, social misbeliefs, taboos, cultural practices and lack of proper knowledge on diarrhoeal diseases contribute to persistence of diarrhoea in the community. Rural people are significantly less aware than their urban counterparts regarding value of hand washing, cleanliness, latrine for night soil disposal, storage of water in preventing diarrhoea. Aims and objectives of this study was to assess the knowledge and perception regarding diarrhoeal diseases among parents of the paediatric patients and its co-relation with the knowledge score in a rural teaching hospital.
Methods: It was a prospective observational study. Data collected from a preformed pre-validated questionnaire administered to the parents of Pediatrics patients by face to face interviews in local language. Study population was 250 and Chi square test was applied for the statistical analysis.
Results: Significant association of education level and socio-economic class with knowledge score has been seen. The awareness of ORS has been seen to increase with the higher-level socio-economic class and education level and the difference was statistically significant.
Conclusions: Improving parents' knowledge and awareness while incorporating existing perceptions might lead to positive changes.

Keywords: Childhood diarrhoea, Knowledge score, Management, Socioeconomic status

INTRODUCTION

Diarrhoea is a major cause of morbidity and mortality, accounting for four million deaths in children. Most of these deaths are due to dehydration and preventable through oral rehydration therapy. However, at present only one million expected deaths are being prevented through ORT. Factors like Illiteracy, poverty, Social misbeliefs, Taboos, Cultural practices and lack of proper knowledge on Diarrhoeal diseases contribute to persistence of Diarrhoea in the community.[1] Rural people are significantly less aware than their urban counterparts regarding value of hand washing, cleanliness, latrine for night soil disposal, storage of water in preventing Diarrhoea.[2] Approximately 2.2 million people in developing countries, most of them children (90%), die every year from the diseases associated with lack of access to safe drinking water, poor sanitation/hygiene and overcrowding. Of the 6.6 million deaths among children aged 28 days to five years, 1.7 million (26%) die from diarrhoea because of dehydration (Claeson and Merson 1990;Synder and Merson 1982). Diarrhoea kills more young children around the world than Malaria, AIDS and TB combined. (WHO 1997). Deaths in diarrhoeal cases

are largely attributable to its complications which include dehydration, impaired renal function, acidosis, secondary infections and disseminated intravascular coagulation as well as hypotension and fainting (Gabr 1983). The alarming situation is aggravated by delay in initiation of treatment and inadequate rehydration resulting in high morbidity.[3] Diarrhoea is the second leading cause of child mortality worldwide.

Each year more than 1.5 million children under the age of 5 die of acute diarrhoea which translates to 18% of deaths of children under the age of 5 between 2000 to 2003. Seventy percent of all cases of diarrhoea in children may be attributed to food contamination. The incidence of diarrhoea increases after introduction of complementary food due to the unhygienic preparation of weaning food, especially in children aged 6 to 24 months. The combined effect of inadequate sanitation, unsafe water and poor personal hygiene are responsible for 88 percent of childhood deaths from diarrhoea. As a consequence of poor feeding and repeated infections, one third of children under the age of 5 in developing countries were stunted in 2005. Factors contributing to diarrhoea among children in the community should be identified. Several studies have presented the actual cases versus the perceived causes of diarrhoea. Three risk factors of diarrhoea have been identified unclean water and food, unhygienic practices of caregivers and poor domestic hygiene.

The knowledge and perception of caregivers guide their food and hygiene practices and their choice of treatment for diarrhoea cases. In spite of many faceted problems surrounding diarrhoea, improving food and personal hygiene practices is obviously one of the most effective ways of reducing the burden of diarrhoea in children.[4-6] This study therefore intended to assess the knowledge and perception of mothers /caregivers on childhood diarrhoea and to inculcate good hygienic practices in them as well.

METHODS

It was a prospective observational cross-sectional study which was carried out during a 4 months period. This data was collected from a preformed pre-validated questionnaire administered to the parents of pediatrics patients by face to face interviews in local language by the investigator. Inclusion and exclusion criteria were all participants willing and unwilling to give consent to participate in the study respectively.

The main issues that were addressed were socio-demographic profile of the participants, environmental details of their household habitats, water supply source and storage, socio-economic profile, waste disposal, basic knowledge on Diarrhoea, awareness on dehydration signs, prevention, home treatment, ORS awareness.

All these variables were put into a Knowledge score and we gave a particular score based on the same on the answers given. Author allotted “1” score for a correct answer and” zero” for wrong answer. Total of all the questions were considered for calculation of knowledge score.

Study population was 250 including the indoor and outdoor patients considering the prevalence of Diarrhoea in under-fives from 26.4% to 37% with 95% confidence and allowable error as 14%.

Stastical analysis

Entry of all data from the questionnaires was cleaned, analyzed in MS excel sheet format and Chi-square test was applied for the statistical analysis.

RESULTS

Out of 250 parents interviewed we got the results depending upon various variables for which we applied knowledge score.

Table 1: Education level of respondents.

Education	N	%
<5th std	17	6.8
5-10 std	87	34.8
10-12 std	71	28.4
Graduate	75	30
Total	250	100

Out of 250 parents, 34.8% were educated between Std 5-10th, 30% were graduates, 28.4% were educated between 10-12th std and 6.8% were below 5th std. Majority of Respondents were below matriculate level.

Table 2: Socio-economic class of respondents.

Kuppuswamy Scale	N	%
Upper class	20	8
Upper middle class	93	37.2
Lowe middle class	89	35.6
Upper lower class	34	13.6
Lower class	14	5.6
Total	250	100

Out of 250 respondents, 37.2% were from UM, 35.6% fell in lower middle class, 13.6% in UL, 5.6% in LC and 8% in UC. UM Class was in majority in our study.

Table 3: Knowledge score.

Knowledge score	N	%
4-5 Below average	2	0.8
5-6 Average	22	8.8
6-7 Good knowledge	226	90.4
Total	250	100

Out of 250 respondents, 226 had a good knowledge score, 22 had average and only 2 of them had below average score.

The knowledge scores were divided on the basis of quartiles of range. Whole range is divided into 3 or 4 equal groups of range of score.

Table 4: Home remedial measures.

Treatment at home	N	%
Khichdi	200	80
Coconut water	16	6.4
Medicines	8	3.2
ORS	9	3.6
Curd	10	4
Lemon juice	5	2
Rice	2	0.8.

Out of 250 respondents, 80% gave home based food as khichdi for diarrhoea, 6.4% gave coconut water, 3.2% gave medicines on their own,3.6% gave ORS, 4% gave curds, 2% gave lemon juice and 0.8% gave rice.

Table 5: ORS awareness.

ORS awareness	N	%
Yes	209	83.6
No	41	16.4
Total	250	

Out of 250 respondents, 209 (83.6%) had ORS Awareness, 16.4% had no awareness.

Table 6: Awareness of signs of dehydration.

Awareness of signs of dehydration	N	%
Yes	229	91.6
No	21	8.4
Total	250	100

Out of 250 parents, 229 (91.6%) had awareness on signs of Dehydration and 21 (8.4%) had no awareness.

Table 7: Relation between education level and ORS awareness.

Education	ORS awareness		Total			
	Yes	No		Ei	Oi	Chi-sq
<5 std	5	10	15	12.54	5	4.53362
5-10 std	63	24	87	72.732	63	1.302203
10-12 std	65	6	71	59.356	65	0.536673
Graduate	76	1	77	64.372	76	2.100453
Total	209	41	250	209	83.6	8.472949

Table 8: Relation between socio-economic level and ORS awareness.

Kuppuswamy scale	ORS awareness		Total			
	Y	N		Ei	Oi	Chi-sq
UC	20	0	20	16.72	20	0.643445
UM	91	2	93	77.748	91	2.258778
LM	78	11	89	74.4.4	78	0.173797
UL	18	16	34	28.424	18	3.822818
LC	2	12	14	11.7.4	2	8.045763
	209	41	250	209	83.6	14.9446

Table 9: Relation between education level and knowledge score.

Education	Knowledge score			Total
	4-5	5-6	6-7	
<5 std	0	6	11	17
5-10 std	2	12	73	87
10-12 std	0	4	67	71
Graduate	0	0	75	75
	2	22	226	205

The awareness of ORS has been seen to increase with the higher-level socio-economic class and the difference was statistically significant.

Significant association of education with knowledge score has been seen. Individuals with higher education have higher knowledge score

Similarly, significant association of knowledge score has been seen with socio economic class, individual with higher socio-economic class had higher knowledge score

as compared to those belonging to lower socio-economic class.

Table 10: Relation between socio-economic level and knowledge score.

Kuppuswamy scale	Knowledge score			Total
	4-5	5-6	6-7	
*UC: Upper class	0	0	20	20
UM: Upper middle class	0	1	92	93
LM: Lower middle class	0	7	82	89
UL: Upper lower class	2	7	25	34
LC: Lower class	0	7	7	14
	2	22	226	250

DISCUSSION

This study sheds light on knowledge, awareness, attitudes and practices of parents in management of diarrhoea based on their knowledge score.

Majority (34.8%) of the parent/mother had an education level between Std 5-10th, only 30% were graduates, 28.4% were educated between 10-12th std and 6.8% were below 5th std. Majority (37.2%) were from upper middleclass, 35.6% fell in lower middle class, 13.6% in upper lower, 8% in upper class and 5.6% in lower class. These findings were similar to the Telangana study by Prasanna et al and another study by Naseem et al.[7-9] However in a Kolkatta study by Banerjee et al majority were from lower class.[10]

About 209 (83.6%) parents had ORS Awareness, 16.4% had no awareness. This finding was a welcome observation and was similar to the Telangana study by Prasanna et al and Naseem et al and the Sudanese study where there was an overall good ORS awareness.[7-9] The awareness of ORS has been seen to increase with the higher level of Education and socio-economic class and the difference was statistically significant.

About 80% parents gave Home based food as Khichdi for Diarrhoea, 6.4% gave coconut water, 4% gave curds, 2% gave lemon juice and 0.8% gave rice. This was contradictory to study by Naseem et al where they did not give any solid diet.[8] The findings were better than a study by Ahmed et al in a Sudanese study where food was stopped during Diarrhoea.[9]

Out of 250 parents, 229 (91.6%) had awareness on signs of Dehydration and 21 (8.4%) had no awareness in our study. The Sudanese study had mothers with only 40% of awareness which was lesser than our study.[9] Whereas in a Srinagar study by Buch et al the Group B parents had no awareness on danger signs as against Group A (30.2% VS 9.1%).[1]

Out of 250 respondents, 226 had a good knowledge score, 22 had average and only 2 of them had below average score. We applied knowledge score. Author allotted "1" score for a correct answer and" zero" for wrong answer. Total of all the questions were considered for calculation of Knowledge score. Individuals with higher education and higher socio-economic class have higher knowledge score which was expected. This particular method applied for assessing knowledge about Diarrhoea is not seen in any study and we have got a good co-relation with the perception of parents regarding diarrhoea by this method.

CONCLUSION

Improving parents' knowledge and awareness while incorporating existing perceptions might lead to positive changes. The Knowledge score method can be used successfully to assess the awareness, attitude and practices of diarrhoea in parents and used as a tool to collate the different variables.

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