pISSN 2394-6032 | eISSN 2394-6040

Original Research Article

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20184563

Knowledge regarding diarrhoea and its management among mothers of under-five children in an urban area of Amritsar, Punjab

Amanpreet Kaur*, Harpreet Kaur, Harpreet Kaur, Priyanka Devgun

Department of Community Medicine, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India

Received: 14 September 2018 Revised: 16 October 2018 Accepted: 17 October 2018

*Correspondence: Dr. Amanpreet Kaur,

E-mail: divupari138@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Diarrhoeal diseases are a leading cause of childhood morbidity and mortality in developing countries, and an important cause of malnutrition. In 2003 an estimated 1.87 million children below 5 years died from diarrhoea. In India nearly 1.5 million under-fives are dying every year only due to acute gastroenteritis. Therefore the present study was conducted to find the knowledge about diarrhoea and its management among the mothers of under-five children.

Methods: A total of 400 mothers of under-five children were interviewed. The mothers were selected by adopting simple random sampling method. A pre-designed and pre tested questionnaire was used to collect the information. House to house survey was done to collect the information. Statistical analysis was done by using SPSS 20.0.

Results: Majority of the mothers (72.8%) were in age group of 21-30 years. Out of total 53% knew that diarrhoea is passage of three or more loose stool in a day. Education status of mother has significant relation with the knowledge about diarrhoea and its spread (p=.000). 69.5% of the mothers knew that ORS should be given in dehydration. Only 66.3% could tell the correct method of preparing ORS solution. Source of knowledge about ORS for the mothers was mass media (45%), health workers (40.7%), books (29.7%), neighbours (28.2%) and family member (22.2%).

Conclusions: The study concludes that there is lack of knowledge among mothers regarding diarrhoea and its management. There is a need of health education for mothers about diarrhoea and its management. IEC activities should be increased to educate the community about the principles of environmental hygiene.

Keywords: Knowledge, Diarrhoea, Mothers, Under five, Urban

INTRODUCTION

Conventionally diarrhoea is the passage of three or more loose or liquid stools per day, or more frequently than is normal for the individual. Acute diarrhoea is an attack of sudden onset, which usually lasts for 3-7 days, but may last up to 10-14 days. Diarrhoea that starts as an acute episode and lasts for more than 2 weeks is considered persistent or chronic.¹

In developing countries leading cause of morbidity and mortality in children is diarrhoea. Around 1.87 million

under-five children died due to diarrhoea in 2003. 80% deaths in the first two years of child's life occur due to diarrhoea. Every year <3 yr old child experience three episodes of diarrhoea in developing country.²

Recommended treatment (ORT with continued feeding) to prevent dehydration and worsening nutritional status is received by only 39% of <5 year children in developing countries. Lowest level of treatment coverage i.e. 35% is there in Africa whereas it is highest (55%) in East Asia and Pacific (excluding China).³

In India nearly 1.5 million under-five out of total 18 crores die every year due to acute gastroenteritis. If little care is taken with the onset of diarrhoea and oral rehydration therapy is provided timely, 90% of the deaths can be prevented.⁴

It is believed that diarrhoea is a normal occurrence during "teething" or it is the consequence of teething. There is a common saying that a child during teething should have bouts of loose motions, fever and red eyes. Weak tea with butter or ghee or milk and ghee is given to young children by mothers in diarrhoea. It is believed that if lot of butter or ghee is rubbed on the head it facilitate eruption of teeth.⁵

In the late 1970s UNICEF and WHO adopted Oral rehydration salts (ORS) and oral rehydration therapy (ORT), which is successful in managing diarrhoea among children. It is estimated that in the1990s, more than 1 million deaths related to diarrhoea may have been prevented each year, largely attributable to the promotion and use of these therapies. Today, however, knowledge and use of appropriate home therapies to successfully manage diarrhoea, including ORT, may be declining in some countries.⁶

Keeping in view the above statistics the current study was planned to assess the knowledge regarding diarrhoea and its management among mothers of under-five children.

METHODS

A community based cross-sectional study was conducted in the urban field practice area of the Department of Community Medicine of SGRD Institute of Medical Sciences and Research, Amritsar. The sample size required for the study was calculated as

$$n = \frac{Z^2 p(1-p)}{d^2}$$

Where n = Sample size

p= expected prevalence or proportion

d= precision rate

Hereby taking

Z=1.96 (approx. = 2, for level of confidence of 95%)

p=0.5 (considering knowledge of mothers about diarrhoea as 50%)

d = 0.05; n = 384.

So a total of 400 mothers of under-five children were interviewed during the period from June to August 2018. According to the quarterly report there were 1370 underfive children in urban field practice area of Community Medicine. The mothers were selected by adopting simple

random sampling method. The mothers who gave consent were included in the study. A pre-designed and pre tested questionnaire was used to collect the information. House to house survey was done to collect information about demographic profile, knowledge about diarrhoea and its management. Statistical analysis was done by using SPSS 20.0.

Inclusion criteria

The mothers of under-five who were willing to participate were included in the study.

Exclusion criteria

The mothers who didn't give consent and those who were not available at the time of study were excluded from the study.

RESULTS

A community based cross-sectional study was conducted in the urban field practice area of the Department of Community Medicine of SGRD Institute of Medical Sciences and Research. A total of 400 mothers of underfive children were interviewed. Out of 400 mothers. 72.8% were in age group of 21-30 years while 14.4% and 12.8% were <20 and >30 years old. 59.5% of the mothers had one child and 37.2% and 3.3% had two and three children respectively. Regarding the educational status of the mothers 43.7%, 22.5%, 15.8% and 1.8% were studied up to matric, middle school, graduation and post graduation respectively. 16.2% of the mothers were illiterate. 90.2% of the mothers were housewives and rest (9.8%) were employed. Education profile of the fathers revealed that 51.7% were educated up to matric, 20.8% up to graduation, 13.8% up to middle school, 3.5 up to post graduation and 10.2% were illiterate. Majority of the fathers (71.7%) were semiskilled worker, 18.5% were unskilled and 9.8% were skilled workers.

It was observed that 53% mothers knew that diarrhoea is passage of three or more loose stool in a day. The causes of diarrhoea given were lack of cleanliness (60.2%), wrong food taken (38.2%), teething in children (37.8%), worms in stomach (33.2%), change of weather (31.7%), and bad eye (20%). 15% of the respondents said that it spread by contaminated water and food, 9% said by contaminated fingers and 76% knew about both the methods of spread. As shown in table no.3 education status of mother has significant relation with the knowledge about diarrhoea and its spread (p=0.000). About the management of diarrhoea, 71.8% knew that it can be managed at home. Out of the total, 269 (67.2%) mothers had the knowledge that diarrhoea can lead to dehydration. Among the mothers who knew that diarrhoea can lead to dehydration different signs of dehydration known to them were excessive thirst (61%), tearless eyes (33.1%), sunken eyeballs (29.7%), and loss of stretchiness of skin (19%).

Table 1: Socio-demographic profile of the respondents.

		Frequency	Percentage (%)
Age in years	<20	58	14.4
	20-30	291	72.8
	>30	51	12.8
No. of children	1	238	59.5
	2	149	37.2
	3	13	3.3
	Illiterate	65	16.2
	Middle school	90	22.5
Education status of mothers	Matric	175	43.7
	Graduate	63	15.8
	Postgraduate	7	1.8
Occupation of mother	Housewife	361	90.2
	Employed	39	9.8
	Illiterate	41	10.2
	Middle school 55		13.8
Education status of husband	Matric	207	51.7
	Graduate	83	20.8
	Postgraduate	14	3.5
	Unskilled worker	74	18.5
Occupation of father	Semi-skilled worker	287	71.7
	Skilled worker	39	9.8

Table 2: Knowledge regarding various aspects of diarrhoea.

Various aspects of diarrhoea		Frequency	Percentage (%)
Cause of diarrhoea	Lack of cleanliness	241	60.2
	Teething	151	37.8
	Wrong food taken	153	38.2
	Change of weather	127	31.7
	Bad eye	80	20
	Worms in stomach	133	33.2
	Contaminated water or food	60	15
Spread of diarrhoea	Contaminated fingers	36	9
	Both	304	76
	Excessive thirst	164	61
Sions of dehydration	Sunken eyeball 80		29.7
Signs of dehydration	Tearless eyes	89	33.1
	Loss of stretchiness of skin	51	19
ORS preparation method	Correct	193	66.3
(Out of 291 who said they know)	incorrect	98	33.7
Duration in which prepared	Correct	188	47
ORS used	Incorrect	212	53
	Family member	89	22.2
Course of Imagelodge about	Neighbours	113	28.2
Source of knowledge about ORS	Health workers	163	40.7
OKS	Books	119	29.7
	Mass media	180	45
	Boiling/treating drinking H ₂ O	249	62.3
Prevention of diarrhoea	Maintaining hygiene	Saintaining hygiene 263 65	
	Eating fresh food	289	72.3

Various aspects of diarrhoea	Education status of mother							
		Illiterate (%)	Middle school (%)	Matric (%)	Graduation (%)	Post graduation (%)	P value	
Diarrhoea definition	Correct	10 (15.4)	37 (41.1)	105 (60.0)	53 (84.1)	7 (100)	0.000	
	Incorrect	55 (84.6)	53 (58.9)	70 (40.0)	10 (15.9)	0 (0)		
	Contaminated water only	20 (30.8)	15 (16.7)	23 (13.1)	2 (3.2)	0 (0)		
Spread of diarrhoea	Contaminated Fingers only	11 (16.9)	14 (15.6)	9 (5.1)	2 (3.2)	0 (0)	0.000	

61 (67.8)

33 (36.7)

20 (22.2)

37 (41.1)

25 (27.8)

65 (72.2)

143 (81.7)

98 (56.0)

58 (33.1)

19 (10.9)

100 (57.1)

75 (42.9)

59 (937)

48 (76.2)

8 (12.7)

7 (11.1)

49 (77.8)

14 (22.2)

7 (100)

7 (100)

0.000

0.000

0(0)

0(0)

4 (57.1)

3(42.9)

34 (52.3)

7 (10.8)

12 (18.5)

46 (70.7)

10 (15.4)

55 (84.6)

Table 3: Association of educational status of mother with knowledge about diarrhoea.

69.5% of the mothers knew that ORS should be given in dehydration. On asking about the preparation of ORS 72.8% of mothers said that they know how the ORS is prepared but out of them only 66.3% could tell the correct method of preparing ORS solution. There was a significant association between education status of mother and their knowledge about method of preparation of ORS (p=.000). 69.5% of mothers knew that ORS should be started at the time of onset of diarrhoea. The frequency of giving ORS told by mothers was as the patient desires (42.4%), every hour (24.8%), after each stool (24%), and after vomiting (8.8%). Out of total mothers, 56.2% said that ORS replenish the water loss, 26.2% said it stops diarrhoea and rest (17.6%) didn't know about how ORS works. Correct duration in which the prepared ORS should be used was known to 47% of mothers. On asking about how long ORS should be used 49.5% of mothers said that it should be used until diarrhoea stops while 20.5%, 15.2%, 14.8% said to use for three, one and seven days respectively.

Both

Yes

No

ORS preparation

Prepared ORS used

within 24 hours

method

Correct

Incorrect

Don't know

About the availability of ORS 36.2% said it is available from medical stores, 20.2% said from Government health centres while 43.6% knew about its availability from both. Source of knowledge about ORS for the mothers was mass media (45%), health workers (40.7%), books (29.7%), neighbours (28.2%) and family member (22.2%). About the breast feeding in diarrhoea 60.8% said it should be continued in diarrhoea. Preventive measures known to the mothers were boiling /treating drinking water (63.2%), maintaining personal hygiene (65.7%), eating fresh foods (72.3%).

DISCUSSION

The study was conducted in the urban field practice area of the Department of Community Medicine of SGRD Institute of Medical Sciences and Research. A total of 400 mothers of under-five children were interviewed. Majority (72.8%) were in the age group of 21-30 years. Similarly in a study done in southern Odisha 74% mothers were in age group of 21-30 years.⁷ 59.5% of the mothers had one child and 37.2% and 3.3% had two and three children respectively. Regarding the educational status of the mothers 43.7%, 22.5%, 15.8% and 1.8% were studied up to matric, middle school, graduation and post-graduation respectively. 16.2% of the mothers were illiterate. In a study done among mothers in a tertiary care hospital it was found that 11.5% of the mothers were illiterate, 51.5% had studied up to high school level and 12.5% were graduates or post-graduates.⁸ In the present study 90.2% of the mothers were housewives and rest (9.8%) were employed.

Out of total 53% knew that diarrhoea is passage of three or more loose stool in a day. The causes of diarrhoea given were lack of cleanliness (60.2%), wrong food taken (38.2%), teething in children (37.8%), worms in stomach (33.2%), change of weather (31.7%), and bad eye (20%). 76% of the mothers knew about the mode of spread. In another study the knowledge of mothers about causes, transmission, and prevention of diarrhoea was found to be 37.5%. In a study done among the mothers of under five in Civil Hospital, Karachi the knowledge about the causes of diarrhoea was: contaminated water (17%), eating mud (14%), teething (10%), evil eye (47%). In the present study 71.8% of the mothers knew that it can be managed at home. Out of the total 269 (67.2%) mothers had the knowledge that diarrhoea can lead to dehydration. Among the mothers who knew that diarrhoea can lead to dehydration different signs of dehydration known to them were excessive thirst (61%), tearless eyes (33.1%), sunken eyeballs (29.7%), and loss of stretchiness of skin (19%). In a study conducted in urban slum of Delhi, correct responses on critical signs of dehydration varied from 3% to 37%.¹¹

69.5% of the mothers knew that ORS should be given in dehydration. On asking about the preparation of ORS 72.8% of mothers said that they know how the ORS is prepared but out of them only 66.3% could tell the correct method of preparing ORS solution. 69.5% of mothers knew that ORS should be started at the time of onset of diarrhoea. The frequency of giving ORS told by mothers was as the patient desires (42.4%), every hour (24.8%), after each stool (24%), and after vomiting (8.8%). Out of total mothers 56.2% said that ORS replenish the water loss, 26.2% said it stops diarrhoea and rest (17.6%) didn't know about how ORS works. Correct duration in which the prepared ORS should be used was known to 47% of mothers. In a study done by Saurabh et al 78% of the mothers were aware about ORS. 76.7% knew how to prepare and administer ORS. 77.5% of the mothers who were aware of ORS knew that ORS solution should be used within 24 hours of preparation.¹²

Source of knowledge for the mothers was mass media (45%), health workers (40.7%), books (29.7%), neighbours (28.2%) and family member (22.2%). About the breast feeding in diarrhoea 60.8% said it should be continued in diarrhoea. Similarly in another study 58.5% mothers continued to feed their child, while 26% fed their child to some extent and remaining 15.5% stopped to feed.⁸

Preventive measures known to the mothers were boiling /treating drinking water (63.2%), maintaining personal hygiene (65.7%), eating fresh food (72.3%). In another study 62% mothers perceived the importance of personal hygiene and very few mothers (14.5%) knew about boiling water as a preventive method. ¹⁰

CONCLUSION

The study concludes that there is lack of knowledge among mothers regarding diarrhoea and its management. There is a need of health education for mothers about diarrhoea and its management. The health care workers play an important role in creating awareness in the community about the prevention and management of diarrhoea. The workers should be trained regularly to update their knowledge about diarrhoeal diseases. IEC activities should be increased to educate the community about the principles of environmental hygiene.

ACKNOWLEDGEMENTS

We would like to thank the mothers who participated in the study and to all those who contributed to the completion of this proposal in one way or another.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- 1. Bhalwar R, Dudeja P, Jindal AK. Acute Gastoenteritis, Communicable Diseases. Textbook of Community Medicine. 2nd edition. 2018: 572.
- 2. The treatment of diarrhoea: A manual for physicians and other senior health workers. WHO 2005. Available at: http://apps.who.int/iris/bitstream/handle/10665/43209/9241593180.pdf?sequence=1
- 3. Diarrhoea: Why children are still dying and what can be done. Preventing and treating childhood diarrhoea: Where we stand today. Available at: https://7pointplan.org/preventing-treating-childhood-diarrhoea.html
- 4. Suryakantha AH. Epidemiology of Communicable Diseases. Community Medicine with Recent Advances. 4th edition. 2017: 402.
- Lal S, Adarsh, Pankaj. Epidemiology of Communicable Diseases and Related National Health Programmes. Textbook of community Medicine. 4th edition. 2014: 495-496.
- WHO/Unice Joint Statement. Clinical management of acute diarrhoea. 2004. Available at: https:// rehydrate.org/diarrhoea/pdf/acute-diarrhoea.pdf
- 7. Padhy S, Sethi RK, Behera N. Mother's knowledge, attitude and practice regarding prevention and management of diarrhoea in children in Southern Odisha. Int J Contemp Pediatr. 2017;4(3):966-71.
- 8. Ashraf A, Bhat MA, Mahrukh. Childhood diarrhoea: assessment of knowledge, attitude and practices among mothers attending the tertiary care hospital an observational analytical study. Int J Community Med Public Health. 2017;4:1219-22.
- 9. Merga N, Alemayehu T. Knowledge, Perception, and Management Skills of Mothers with Under-five Children about Diarrhoeal Disease in Indigenous and Resettlement Communities in Assosa District, Western Ethiopia. J Health Popul Nutr. 2015;33(1):20-30.
- 10. 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;8(1):3-6
- 11. Chaudhary P, Basu S, Dzeyie A, Gulla S, Khade S, Patel A, et al. Knowledge, Attitude and Practice of Mothers regarding Diarrhoeal Illness in Children under Five Years of Age: A Cross Sectional Study in an Urban Slum of Delhi, India. J Commun Dis. 2014;46(3):13-21.
- Saurabh S, Shidam UG, Sinnakirouchenan M, Subair M, Hou LG, Roy G. Knowledge and Practice Regarding Oral Rehydration Therapy for Acute Diarrhoea among Mothers of Under-Five Children in an Urban Area of Puducherry, India. Natl J Community Med. 2014;5(1):100-4.

Cite this article as: Kaur A, Kaur H, Kaur H, Devgun P. Knowledge regarding diarrhoea and its management among mothers of under-five children in an urban area of Amritsar, Punjab. Int J Community Med Public Health 2018;5:4751-5.