ORIGINAL RESEARCH PAPER

Volume-7 | Issue-12 | December-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

"A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES OF THE MOTHERS REGARDING DOMESTIC METHODS OF THE DRINKING WATER SANITATION IN SELECTED URBAN AREA" .

Community Medicine

Yamuna CB

Rehna VR

Maneesha krishnanandan* *Corresponding Author

Sapna Kumari

Renu sharma

ABSTRACT

Background

"Water is life and clean water means health"

-Audrey Hepbur

At the eve of the millennium, despite all the progress reported worldwide in the recent decades more than 2,3 billion people still live without access to sanitation facilities and are unable to practice such basic hygiene as washing their hands with soap and water .Disease related to poor sanitation and water availability cause many people to fall ill or even die ,children are the most vulnerable to health hazards and consequently are affected the most.While the impact of poor sanitation and hygiene is known to be disastrous for small children , it has also has an important impact on the health of school age children including adolescents .It is obvious that lack of sanitation and hygiene is a public disaster that disaster that deserves the highest priority .When children survive beyond their fifth birthday , they still face major problems of ill health and malnutrition[1].

Objectives

- To assess the knowledge on prevention of water borne disease among the mothers in a selected urban area of pune.
- To assess the practice on prevention of water borne disease among mothers of underfive children in urban area of pune.
- To compare the knowledge and practice regarding prevention of water borne disease among mothers of selected urban area of pune.

Aim

To assess the level of knowledge and practices of mothers regarding domestic methods of water sanitation and to educate on domestic water sanitation methods based on their findings

Methods:

A cross sectional survey was conducted over a period of six weeks among 300 housewifes in a selected urban community. A systematic random sampling was done selecting the K th house and every Kth house was selected for the study and mothers were interviewed through a semi structured questionnaire. The questionnaire consisted of source, collection, storage, purification , consumption, merits of portable drinking water and demerits of unsafe drinking water.

Results

Out of 150 respondents 97 (65%) had good knowledge and 40 (26.67%) had average knowledge and 13 (8.33%) had poor knowledge whereas the water sanitation practices of the mothers were very poor even though they had knowledge about the water sanitation.68% of the respondent were having poor practices and 24%had average and 8% had very poor practices .

Conclusion

The study revealed the gap in the knowledge and practice of the mothers regarding water sanitation which is a very important daily routine of every human being .it demand a concerted effort from the community health nursing team to bridge these gap between knowledge and practice which will bring a positive behavioral and knowledge change.

KEYWORDS

INTRODUCTION

Adequate supply of fresh and clean drinking water is a basic need for all human beings on the earth, yet it has been observed that millions of people worldwide are deprived of this. Industrial growth, urbanization and the increasing use of synthetic organic substances have serious and adverse impacts on freshwater bodies. Many areas of groundwater and surface water are now contaminated with heavy metals, POPs (persistent organic pollutants), and nutrients that have an adverse affect on health[1]

Objectives

- To assess the knowledge on prevention of water borne disease among the mothers in a selected urban area of western Maharashtra
- To assess the practice on prevention of water borne disease among mothers of underfive children in urban area of western Maharashtra
- To compare the knowledge and practice regarding prevention of water borne disease among mothers of selected urban area western Maharashtra

Methodology

- Study design-Descriptive study
- Research setting-urban community of western part of Maharashtra
- Target population-Mothers of Urban area
- Accessible population-Mothers present at the time of sample collection

Sample

- Sampling - Systematic random sampling
- Sample size-150 Houses
- Duration of study: 4 weeks

Tools for data collection

Modified questions on drinking water and sanitation for household survey by WHO and UNICEF 2006

- Socio demographic data
- Knowledge on water purification and sanitation.
- Practice related to water purification and sanitation.

Data analysis and interpretation

Table 2: Socio-demographic data

Parameters	No of cases	Percentage (n=150)	
Age (Yrs)	18 – 25	35	23.33
	25 – 35	48	32
	35 – 45	43	28.67
	45 & above	24	16
Educational qualification	Profession or honours	0	0
	Graduate or postgraduate	9	6
	Intermediate or diploma	5	3.33
	High school	49	32.67
	Middle school	20	13.33
	Primary	21	14
	Literate	46	30.67
Family income per months (Rs)	≤42876	0	0
	21438 – 42875	10	6.67
	16078 – 21437	14	9.33
	10719 – 16077	58	38.67
	6431 – 10718	57	38
	2165 – 6430	11	7.33
	<2165	0	0
Socio economic class	Upper class	0	0
	Upper middle class	4	2.67
	Lower middle class	45	30
	Upper lower class	57	38
	Lower class	44	29.33
Occupation	Profession	4	2.67
	Semi-profession	3	2
	Clerical, shop owner	0	0
		18	12
	Skilled worker	50	33.33
	Semi skilled worker	32	21.33
	Unskilled worker	43	28.67
	Unemployed		
Type of family	Nuclear	104	69.33
	Joint	30	20
	Extended	16	10.67

Table 2: The knowledge score of mothers regarding domestic methods of drinking water sanitation in study group

Knowledge score	No of cases	Percentage
0 – 3 (Poor)	0	0
4 – 7 (Average)	72	48
8 – 10 (Good)	78	52
Total	150	100

Figure.12 Pie diagram showing the knowledge score of mothers regarding domestic methods of drinking water sanitation in study group

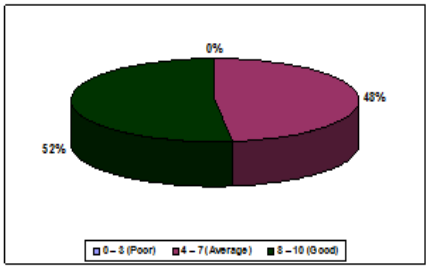


Table 3: The practice score of mothers regarding domestic methods of drinking water sanitation in study group

Practice score	No of cases	Percentage
0 – 5 (Poor)	7	4.66
6 – 10 (Average)	130	86.67
11 – 15 (Good)	13	8.67
Total	150	100

Figure.13 Pie diagram showing the practice score of mothers regarding domestic methods of drinking water sanitation in study group

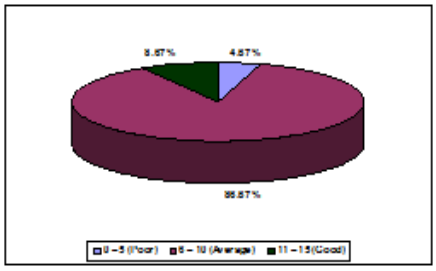
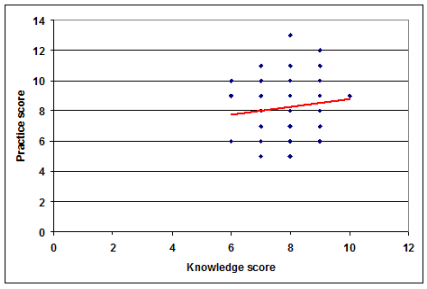


Table 4: Correlation between knowledge score and practice score in study group

Correlation between	r Value	P Value
Knowledge and practice score	0.14	0.087

Figure.14 Scatter diagram showing correlation between knowledge score and practice score in study group



The above diagram depicts that there is no significant correlation between the knowledge level and practice score.though the knowledge level of mothers are good the practice of water sanitation at domestic level is very poor.

Table 5: Knowledge regarding water sanitation in study group n=150

Knowledge regarding water sanitation	No of cases	Correct response
Is the water you use is safe for the household to drink	144	96
Should you treat your water in any way to make it safer to drink	42	28
Where should you store water	143	95.34
How often should you change stored drinking water	141	94
How often you should clean the container of drinking water	132	88
How does your drinking water taste	143	95.34
Did you get any information regarding water,sanitation and hygiene from any sources	54	36
Do you face any challenges in water procurement	128	85.34
What are the challenges faced by you for water procurement	142	94.67
Do you think sewage from pet animals is a source of water pollution in your region	80	53.34

Table 6: Practice regarding water sanitation in study group

Practice regarding water sanitation	No of cases	Percentage
Do you treat your water in any way to make it safer to drink	41	27.34
What do you usually do to water to make it safer to drink	44	29.34
What kind of toilet facility do members of your household usually use	144	96

Do you share this facility with other household	52	34.67
How many households use this toilet facility	40	26.67
The last time (youngest child<10yrs) passed stools, what was done to dispose	115	76.67
How often do you change stored drinking water	139	92.67
How often do you clean the drinking water container	137	91.34
What are the critical times of handwashing you follow	148	98.67
What are the materials used for handwashing	148	98.67
Storm water run off is a source of water pollution in your region	57	38
How do you take out water from the container	106	70.67
Do you drink water directly from the source	20	13.34
Where do you dispose household solid waste	24	16
Where do you dispose household waste water	13	8.67

Table 7: Comparison of knowledge and practice score according to age in study group

Age (Yrs)		Knowledge score		Practice score	
	N	Mean	SD	Mean	SD
18 – 25	35	7.34	.873	8.54	2.147
25 – 35	48	7.67	.859	8.50	1.149
35 – 45	43	7.84	.924	8.00	1.864
45 & above	24	7.79	1.021	7.38	1.245
F Value		2.14		3.22	
P Value		0.098		0.025	

INTERPRETATION

Table 7 explains the association between mother's knowledge and practice and their age group.The mean knowledge score of age group of 35-45 is 7.84,with SD of 0.924 and for the age group of 18-25 is 7.34 with SD of 0.873.the mean practice score of 18-25 is 8.54 with SD of 2.147 and for the age group of above 45 is 7.38 with SD of 1.245.It is showed that there is no significant association between the age of mother and knowledge level and practice.

Figure.15 Bar diagram showing comparison of knowledge and practice score according to age in study group

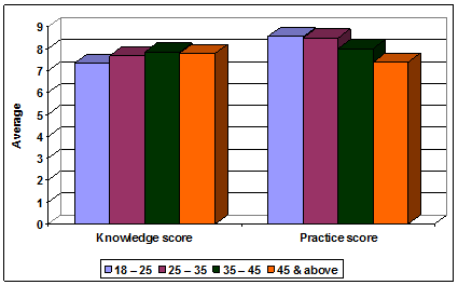


Table 8: Comparison of knowledge and practice score according to educational qualification in study group

Educational qualification		Knowledge score		Practice score	
	n	Mean	SD	Mean	SD
Graduate or postgraduate	9	8.33	.500	11.00	2.449
Intermediate or diploma	5	7.40	.548	7.00	2.739
High school	49	7.65	1.011	8.33	1.405
Middle school	20	7.75	.967	7.20	1.281
Primary	21	7.10	.831	8.10	1.338
Illiterate	46	7.78	.814	8.09	1.396
F Value		3.03		8.74	
P Value		0.012		<0.0001	

INTERPRETATION

Table 8 explains the association between mothers knowledge and practice score with their educational qualification.The mean knowledge score of postgraduate/graduate is 8.33 with SD of 0.500 and for primary education is 7.10 with SD of 0.831.The mean practice score of post graduate/graduate is 11.00 with SD of 2.449 and that of intermediate/diploma is 7.00 with SD of 2.739.It is showed that there is significant association between the education of mother and the knowledge and practice.

Figure.19 Bar diagram showing comparison of knowledge and practice score according to occupation in study group

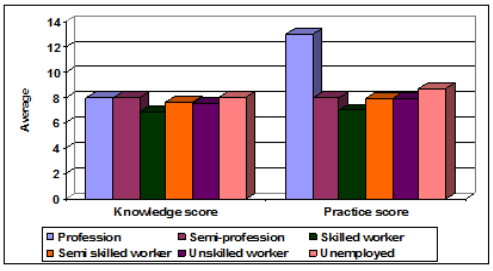


Table 12: Comparison of knowledge and practice score according to type of family in study group

Type of family		Knowledge score		Practice score	
	n	Mean	SD	Mean	SD
Nuclear	104	7.64	.902	8.03	1.451
Joint	30	8.00	.910	8.97	2.282
Extended	16	7.13	.806	7.75	1.528
F Value		5.05		4.36	
P Value		0.008		0.014	

INTERPRETATION

Table 12 explains the association between mothers knowledge and practice score and the type of family. The mean knowledge score of joint family is 8 with SD of .910 and of extended family is 7.13 with SD of .806.the mean practice score of joint family is 8.97with SD of 2.282 and of extended family is 7.75 with SD of 1.528.It is showed that there is significant association between the type of family and knowledge and practice.

DISCUSSION

A cross sectional study conducted among the rural population of Chennai, India, assessing the existing drinking water and sanitation related knowledge attitude and practise using a modified version of previously validated questionnaire. The study concluded that , 45% of the participants were not following any method of water treatment and among them half of the participants felt that water available to them was clean and did not require any additional treatment. 25% of the participants surveyed did not have any access to toilets inside their household.

In this study Out of 150 respondents 97 (65%) had good knowledge and 40 (26.67%) had average knowledge and 13 (8.33%) had poor knowledge whereas the water sanitation practices of the mothers were very poor even though they had knowledge about the water sanitation.68% of the respondent were having poor practices and 24%had average and 8% had very poor practices

CONCLUSION

The study revealed the gap in the knowledge and practice of the mothers regarding water sanitation which is a very important daily routine of every human being .It demand a concerted effort from the community health health care team to bridge these gap between knowledge and practice which will bring a positive behavioral and knowledge change.

REFERENCES

1. "http://en.wikipedia.org/wiki/ Water- ".
2. "http://en.wikipedia.org/wiki/ Water-borne infections ".
3. http://www.lenntech.com/library/diseases/diseases/waterborne-diseases.htm
4. Palmgren C, Small MJ. Risk Anal. Something in the water? A health impact assessment 2000 Aug;20(4):495-511.
5. www.who.int/mediacentre/news/releases/2015/jmp-report/en/
6. AKM Masud Rana. Effect of Water, Sanitation and Hygiene Intervention in Reducing Self-reported Waterborne Diseases in Rural Bangladesh. BRAC Research Report.

December 2009.:
7. Ehavou Atteaikn . Water-borne diseases and access to safe water for Sub-Saharan Africa populations. Menahnsoiakn Ehyasia 2010-2011. Am. J. Pub. Health 91(10): 1565-70.
8. Peter H. Gleick. Dirty Water: Estimated Deaths from Water-Related Diseases 2000-2020. Pacific Institute Research Report. August 15, 2002.
9 Pike-MacDonald S, Best DG, Twomey C, Bennett L, Blakeley J. Promoting safe drinkingwater. Can Nurse. 2007 Jan;103(1):14-9.
10. Chennai:India;2013.Water and sanitation hygiene knowledgw,attitude and practice among household members living in rural setting of India.Available from:https://www.ncbi.nlm.nlhgov.
11. Guatemala:Santarose;2010.population density,poor sanitation and enteric infection in Santarosa,Guatemala.Available from :https://www.ncbi.nlm.nlhgov.
12. Assam:India;2007.evaluation of media used in indigenous household iron filter units of rural and semi urban Assam,India.Available from Pubmed
13. Bamendankwe;Northwest Cameroon;2014.prevalence of waterborne disease within household.available from https://www.omicsonline.org
14. Garba(2010)diarrheal disease and its prevention measures in Kissumukenya
15. Leciere H,Schwartzbrod L,Dei-case 2002 waterborne disease and its causative agent.critical reviews in microbiology 4:371-409
16. Strausbaugh TJ(1997)water purification measures as a primary preventive approach in combating waterborne diseases
17. Ramllah:UNCF;2017.water sanitation and hygiene assessment at the household.a available from https://www.reliefweb.int
18. Chitoor Dt Ap:2012.water and sanitation hygiene practices for under five children among household of Sugali tribe.published in journal of environmental and public health available from dogpile.org
19. South Africa:2002.availability of dermestic water and sanitation in household;available from www.ciesin.columbia.org
20. Varanasi:India;2011 successful research on water purification.available from https://Toi.Indiatimes.com
21. Thandalam:Chennai;2013 water and sanitation hygiene knowledge attitude and practice among household members in the rural setting of India. Available from :https://www.ncbi.nlm.nlhgov.
22. Dhaka:Bangladesh;2010:research paper on waterborne disease caused by using surface water;available from https://banglajoi.infos
23. Chlorination and safe storage of household drinking water in developing countries to reduce waterborne disease;2003
24. Vellore:India;2017;household sanitation is associated with risk of bacterial and protozoal enteric infection,but not viral infection and diarrhea.A cohort study in a low income urban neighbourhood in Vellore India.Available from:https://www.ncbi.nlm.nlhgov.
25. Vidisha:MP;seasonal variation of physic chemical characteristics of river Betwa in Vidisha.available from www.ijset.net
26. Literature review of association among drinking water disease outbreak.2013.Available from:https://www.ncbi.nlm.nlhgov.