A STUDY TO ASSESS THE KNOWLEDGE ON WATERBORNE DISEASES AMONG GENERAL POPULATION AT MARAIMALAI NAGAR, KANCHIPURAM DISTRICT

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Abstract

Water borne diseases are viral, bacterial, and parasitic diseases which use water as a common means of transmission. Water borne diseases are caused by water that has been contaminated by human or animal wastes and include diseases such as cholera, typhoid, shigella, polio, meningitis and hepatitis A&E. A Study to assess the knowledge on waterborne diseases among general population at Maraimalai Nagar.

Objectives: To assess the knowledge on water borne diseases among general population. To associate the knowledge on water borne diseases among general population with their demographic variables.

Methodology: Quantitative research and descriptive design was adopted to the study. A total of 100 general public were selected by non- probability convenient sampling technique. The samples were interviewed by self - prepared interview schedule. The tool had two sections. Section - A Consists of demographic variables and Section -B Consists of 21 questionnaires to assess the level of knowledge on water borne diseases. The collected data analyzed by using descriptive and inferential statistics.

Results: The result of the study reveals that among 100 general public, 23 (23%) people had adequate knowledge on water borne diseases, 49 (49%) people had moderately adequate knowledge on water borne diseases and 28 (28%) people had inadequate knowledge on water borne diseases. CONCLUSION: Most of the people had moderately adequate knowledge, so investigator felt the need to help them to improve their knowledge through an educational approach by providing health education pamphlet.

Keywords: Waterborne diseases, Knowledge about waterborne diseases

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1. Inroduction

Water borne diseases are caused by water that has been contaminated by human or animal wastes and include diseases such as cholera, typhoid, shigella, polio, meningitis and hepatitis A&E. Humans can act as hosts to the bacterial, viral or protozoal organisms that cause these diseases. In many countries whole sewage treatment is inadequate, human wastes are disposed of in open citrines, ditches and canals or are spread on cropland, resulting in extensive diarrheal disease it is estimated that 4 billion cases of diarrheal disease occur every year, causing 3 million to 4million deaths, mostly among children worldwide the lack of sanitary waste disposal and of clean water for drinking, cooking and washing is to blame for over 12 million deaths a year**.**

Water borne diseases include dysentery, cholera, typhoid fever and a wide range of other parasite infections. These diseases kill more than a million people each year, many of these children in developing countries. People can convert these diseases when they drink water that contains dangerous micro-organisms, including viruses, bacteria and single-celled organisms called protozoa and longer parasites such as worms watery borne diseases can also occur if people eat food that has been prepared using contaminated water or when parasite enter the body directly through an open wound. Research suggests that in some settings climate change could affect water borne diseases because changes in temperature and rainfall can affect the survival of disease causing organisms.
According to the World Health Organization (WHO)2017, such diseases account for an estimated 3.6% of the total DAILY global burden of disease, and cause about 1.5 million human deaths annually. The World Health Organization estimates that 58% of that burden, or 8,42,000 deaths per year, is attributable to unsafe water supply, sanitation and hygiene.

Sudhir Ben Nelson, Vishnu G Ashok, MadihaNazer, Manibalan. S, MadhumithaR.A (2017) Vector-borne diseases account for over 17% of all infectious diseases. Up to 700 million people are infected and more than a million die each year from mosquito-borne illness. The extent of people’s cooperation can determine the success or failure of the entire campaign for Mosquito control. Methods: A cross-sectional observational study was carried out in Kanyakumari district among 180 individuals selected through multi-stage sampling. Data was collected using a semi structured interview schedule. Results: Every one of the study participants knew that mosquitoes spread diseases. Dengue was the most common disease related to Mosquito. Among the respondents, 113(62.7%) answered that coconut shells most common mosquito breeding place. Coconut shells (66%) & Open drainages (61.1%) were reason for water stagnation inside & outside their own compound respectively. 71.1% have seen mosquito larva in stagnant water around their house and among them 75.8% have done something to kill larva. Most common method used was putting bleaching powder in the larva breeding places (39%) followed by source reduction (26.5%). Bleaching powder was also the most common method (57%) used for prevention of mosquito breeding. 78.9% of the households were using personal protective measures, mosquito coil (59.8%), the most commonly used method. Only 38.5% of them said that fogging was done in their area in past 6 months. Conclusion: A good proportion of the households are taking preventive measures, but still so many households lacks practice or found to be doing wrong practices. Therefore, we recommend that community should be empowered with the right & adequate knowledge.

2. Methodology

Quantitative approach and non-experimental descriptive design used. Sampling techniques was non probability convenient sampling technique. The study variables are (Knowledge on water borne disease) and demographic variables are(Age, sex, marital status, education, occupation income, type of family, area of living, toilet facilities and sanitary state). This study was conducted at Maraimalai Nagar and the target population of was general population between 18- 60 yrs. The sample size of the study was 100. The tool encompasses of 2 sections. Section A - consist of 10 questions to assess the demographic variables. Section B – was self prepared questionnaire consisting of 21 items on knowledge on water borne diseases. Each question carry one score for correct answer and zero score for wrong answer.

Ethical Considerations
Formal approval was obtained from the institution review board and institutional ethical committee of SRM University, Kattankulathur, Kanchipuram, Tamilnadu, India. To execute the study the researcher obtained official written permission obtained from the head of department of management in SRM University, kattankulathur, kanchipuram, Tamilnadu. Content validity was received from the various expert from the field of nursing, bio-statistician and research expert.

3. Results

4.1 Section A Frequency and percentage distribution demographic variables of general public N= 100

Demographic variables		Frequency (n)	Percentage (%)
Age	18-30 Years	34	34
	31-40 Years	29	29
	41-50 Years	35	35
	51-60 Years	2	2
Sex	Male	38	38
	Female	62	62
Education	Profession	20	20
	Graduate Or Postgraduate	13	13
	Intermediate Or Post High School	13	13
	High School Certificate	13	13
	Middle School Certificate	18	18
	Primary School	14	14
	Illiterate	9	9
Marital Status	Married	67	67
	Unmarried	26	26
	Widow	3	3
	Widower	4	4
Occupation	Profession	19	19
	Semi Profession	15	15
	Clerical, Shop Owner, Farmer	15	15
	Skilled Worker	29	29
	Semi-Skilled Worker	12	12
	Unskilled Worker	3	3
	Unemployment	7	7
Family Income	Rs 1,500- Rs 4,700	8	8
	Rs 4,701- Rs 7,800	15	15
	Rs 7,801- Rs 11,800	31	31
	Rs 11,801- Rs 15,700	46	46
Type of Family	Joint	22	22
	Nuclear	76	76
	Extended	2	2
Toilet Facilities	Available	100	100
	Not Available	0	0
Sanitary State	Very Clean	31	31
	Clean	64	64
	Dirty	5	5

Source of Water	Tap Water	23	23
	Borehole	57	57
	Municipality Supply	8	8
	Well Water	12	12

Table 4.1.2 Frequency and percentage distribution of the assessment and the level of knowledge
N = 100

Level of knowledge	**Number (n)**	**Percentage (%)**
In adequate knowledge	28	28
Moderately adequate knowledge	49	49
Adequate knowledge	23	23
Total	100	100

The above table 2 reveals that among 100 study population, 23 (23%) people had adequate knowledge, 28 (28%) people had inadequate knowledge and 49 (49%) people had moderately adequate knowledge.

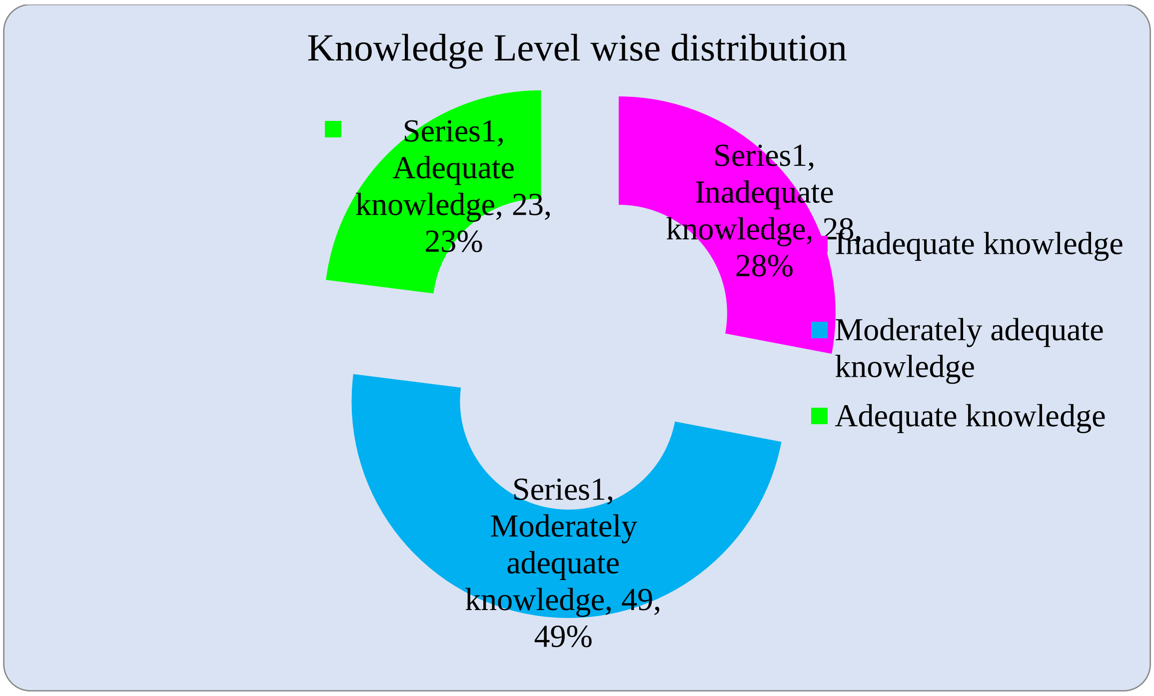

Table 4.1.3 Association between the level of knowledge on water borne disease among general population with their demographic variables N = 100

		Knowledge Level									
		Inadequate knowledge		Moderately adequate knowledge		Adequate knowledge		Total		Chi Square Test	P Value
		n	%	n	%	n	%	n	%		
Age	18-30 Years	12	43	14	29	8	35	34	34	3.981 6 df	0.679 NS
	31-40 Years	7	25	14	26	8	35	29	29		

	41-50 Years	9	32	19	39	7	30	35	35		
	51-60 Years	0	0	2	4	0	0	2	2		
Sex	Male	6	21	21	43	11	48	38	38	4.697 2 df	0.096 NS
	Female	22	79	28	57	12	52	62	62		
Education	Profession	2	7	15	31	3	13	20	20	16.732 12 df	0.160 NS
	Graduate Or Postgraduate	5	18	5	10	3	13	13	13		
	Intermediate Or Post High School	4	14	7	14	2	9	13	13		
	High School Certificate	2	7	4	8	7	30	13	13		
	Middle School Certificate	7	25	8	16	3	13	18	18		
	Primary School	5	18	7	14	2	9	14	14		
	Illiterate	3	11	3	6	3	13	9	9		
Marital Status	Married	21	75	32	65	14	61	67	67	3.476 6 df	0.747 NS
	Unmarried	6	21	14	27	6	26	26	26		
	Widow	1	4	1	2	1	4	3	3		
	Widower	0	0	2	4	2	9	4	4		
Occupation	Profession	6	21	6	12	7	30	19	19	9.838 12 df	0.630 NS
	Semi Profession	5	18	6	12	4	17	15	15		
	Clerical, Shop Owner, Farmer	3	11	8	16	4	17	15	15		
	Skilled Worker	9	32	16	33	4	17	29	29		
	Semi-Skilled Worker	2	27	8	16	2	9	12	12		
	Unskilled Worker	2	7	1	2	0	0	3	3		
	Unemployment	1	4	4	8	2	9	7	7		
Family Income	Rs 1,500- Rs 4,700	1	4	4	8	3	13	8	8	2.802 6 df	0.833 NS
	Rs 4,701- Rs 7,800	5	18	6	12	4	17	15	15		
	Rs 7,801- Rs 11,800	9	32	17	35	5	22	31	31		
	Rs 11,801- Rs 15,700	13	46	22	45	11	48	46	46		
Type of Family	Joint	6	21	11	22	5	22	22	22	0.836 4 df	0.934 NS
	Nuclear	21	75	37	76	18	78	76	76		
	Extended	1	7	1	2	0	0	2	2		
Toilet Facilities	Available	28	100	49	100	23	100	100	100	NA	NA
	Not Available	-		-		-		-			

Sanitary State	Very Clean	7	25	16	33	8	35	31	31	1.746 4 df	0.782 NS
	Clean	20	71	31	63	13	57	64	64		
	Dirty	1	4	2	4	2	9	5	5		
Source of Water	Tap Water	5	18	12	25	6	26	23	23	4.958 6 df	0.549 NS
	Borehole	19	68	27	55	11	48	57	57		
	Municipality Supply	0	0	5	10	3	13	8	8		
	Well Water	4	14	5	10	3	13	12	12		

NS - Not Statistical Significance Association between Demographical Variables and Knowledge levels at 95% ($P > 0.05$). NA – Not Applicable Table 4.1.3 Reveals that were no significant association between the level of knowledge on water borne disease among general population and with their demographic variables.

4. Conclusion

The findings of the present study reveals that among 100 samples 23(23%) people had adequate knowledge, 28(28%) people had inadequate knowledge, and 49(49%) people had moderately adequate knowledge. There is no significant association between the level of knowledge on water borne disease among general population and with their demographic variables.

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