



## KNOWLEDGE AND PRACTICE OF MOTHERS OF UNDER FIVE CHILDREN REGARDING SELECTED WATER BORNE DISEASES: A DESCRIPTIVE STUDY

### Nursing

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### ABSTRACT

The aim of the present study was to assess the knowledge and practices of mothers of under five children regarding waterborne diseases. Hence a quantitative research approach was considered appropriate to assess the knowledge and practices of mothers. The research design adopted for this study was descriptive research design. This study was conducted in Nelamangala, Bangalore which is located around 03 kilometers away from investigator's college. The total population of village is around 15,045 with 5,000 families residing in the area. Sample size was 100 mothers of under five children residing in Nelamangala, Bangalore. Sample in this study were selected by using non probability convenient sampling technique. A structured interview schedule is used for collecting demographic data of the mothers of under five children such as age, education, occupation, number of children, type of family, type of diet, source of water supply, type of sanitation and sources of information regarding waterborne diseases and its prevention. Knowledge of mothers of under five children regarding waterborne diseases and its prevention in which out of 100 mothers most of them 61% (61) had inadequate knowledge, 39% (39) had moderately adequate knowledge and none of them had adequate knowledge regarding waterborne diseases and its prevention.

### KEYWORDS

Knowledge, Practice, waterborne diseases

### INTRODUCTION

Acute diarrheal diseases are one of the leading cause of childhood mortality and morbidity in the developing countries. A recent analysis of the findings of 27 active surveillance studies conducted for one year or more suggests that around 750 million children below 5 years of age in Asia, Africa and Latin America is suffered from acute diarrhea each year.

As the water borne disease are mainly because of unhygienic living conditions, the present study is aimed at assessing the level of knowledge of mothers and distributing the study guide in order to reduce the morbidity and mortality. Safe drinking water occupies a vital place in the health care system. A close link is there between clean water, sanitation, water borne diseases infant mortality and population growth. Provision of clean water helps to cut most of these diseases.

In acute diarrheal diseases, it is estimated that between 3 and 6 million in this age group die annually from acute diarrhea. 80% of these deaths occur in the first 2 years of life of the 200,000 infants up to one year age dying in India every year, 9.5% die due to diarrhea. According to the world health organization (WHO) there are 16 million to 33 millions cases and 500,000 to 600,000 deaths from typhoid fever annually though one study conservatively estimated that 22 million cases and 216,000 related deaths occurred in 2000.

Mishra D, et al, (2008) study conducted on typhoid fever and viral hepatitis. Feco – oral route is the most common mode of transmission for both enteric fever and hepatitis A, and thus infection by these agents may occur concurrently especially in tropical endemic areas like India. In this scenario there occurs a diagnostic dilemma with respect to differentiation from “typhoid hepatitis” the hepatic manifestations of typhoid power”.

The investigator has observed the frequently occurring diarrheal diseases. During the clinical positing in children ward at selected hospital at Nelamangala the investigator observed that many children were admitted with water borne disease like Diarrheal, Typhoid, hepatitis “A” etc., Mother is a key person in the family; she should look after the entire family. So she should be well knowledge about hygienic measures during collection and storage of water. Children usually dip their dirty hands in water pots (or) containers. This unhygienic measures lead to infectious diseases like Diarrhea, Typhoid. Hepatitis “A” etc., so the mother should have knowledge about water borne diseases, in order to prevent them.

No study was conducted in this region to focus attention on the level of knowledge of mothers having children below five years regarding water borne diseases. So the investigator is interested to assess the knowledge of mothers regarding water borne diseases and to impart knowledge by providing information booklet.

### MATERIALS AND METHODS

The aim of the present study was to assess the knowledge and practices of mothers of under five children regarding waterborne diseases. Hence a quantitative research approach was considered appropriate to assess the knowledge and practices of mothers. The research design adopted for this study was descriptive research design. This study was conducted in Nelamangala, Bangalore which is located around 03 kilometers away from investigator's college. The total population of village is around 15,045 with 5,000 families residing in the area. Sample size was 100 mothers of under five children residing in Nelamangala, Bangalore. The investigator planned deliberately to select mothers of under five children residing in Nelamangala, Bangalore. Sample in this study were selected by using non probability convenient sampling technique. A structured interview schedule is used for collecting demographic data of the mothers of under five children such as age, education, occupation, number of children, type of family, type of diet, source of water supply, type of sanitation and sources of information regarding waterborne diseases and its prevention. Formal permission was obtained from medical officer Nelamangala, Bangalore. Oral consent of each subject was obtained and the subjects were informed that their participation was voluntary and have the freedom to withdraw from the study. Privacy, confidentiality and anonymity of the subjects were guarded throughout the study.

### RESULTS

Description of demographic variables of mothers of under five children

**Table-1 Frequency and percentage distribution of mothers of under five children according to age, education, occupation and number of children**

(n = 100)

S. No	Demographic variables	n = 100	Percentage
1	<b>Age of the mother</b>		
	20 - 25years	29	29
	26 -30 years	59	59
	31-35 years	12	12
2	<b>Education</b>		
	No formal education	34	34
	Primary	38	38
	High school	28	28
	Graduate and above	-	-
3	<b>Occupation</b>		
	Home maker/House wife	43	43
	Self employed	27	27
	Private employee	22	22
	Govt employee	08	08
4	<b>Number of children below 5 yrs of age</b>		

One	70	70
Two	28	28
Three	2	2

- The data depicts the frequency and percentage distribution of demographic variables such as type family, type of diet, source of water supply, type of sanitation and sources of information of mothers. With regard to type of family, 49% (49) of them are nuclear family, 49% (49) of them are joint family, 2%(2) of them are single parent family.
- With regard to type of diet out of 100 mothers, 55% (55) of mothers are non- vegetarian, 45% (45) of mothers are vegetarian. With regard to source of water supply out of 100 mothers, 63% (63) of mothers get water from public tap, 17% (17) of mothers get water from bore well, 12% (12) of mothers get from well and 8% (8) of mothers get water from pond.
- With regard to type of sanitation, out of 100 mothers, majority 65(65%) of them use house latrine, 08(08%) of mothers use open field defecation and 27(27%) of mothers use public latrine. With regard to sources of information received regarding waterborne diseases and its prevention, out of 100 mothers majority 51% (51) of them received from health personnel, 35% (35) of them received from elders, 14 % (14) of them received from mass media and none of them receive from any other sources.

**Table 3: Range, Mean, Standard deviation, of knowledge of mothers of underfive children**

(n = 100)

Sl. No	Aspects of knowledge regarding waterborne diseases	Maximum score	Respondents knowledge			
			Range	Mean	SD	Mean %
1	General information	4	1-4	2.03	0.78	50.7
2	Hepatitis A	5	1-5	2.13	1.08	42.6
3	Typhoid	8	2-7	3.49	1.20	43.6
4	Diarrhea	5	1-4	2.36	0.93	47.2
5	Prevention	8	2-6	3.55	1.40	44.4
	<b>Over all</b>	<b>30</b>	<b>7-13</b>	<b>13.56</b>	<b>2.35</b>	<b>45.2</b>

**Table 2: Classification of respondents based on the practices of mothers regarding waterborne diseases.**

(n = 100)

S. No	Practice	Classification of mothers	
		Frequency	%
1	Poor Practices	29	29
2	Average practices	63	63
3	Good practices	08	08

#### Association of knowledge and practice with selected demographic variables.

- The chi-square value computed for association of knowledge with age, education, occupation and number of children below 5 years of age.
- The data depicts that the demographic variables such as age of the mother, education, occupation, number of children shows no statistically significant association with the knowledge of mothers at 5% level of significance.
- Data depicts that the demographic variables such as education of mother and number of children were found significant association and the other demographic variables were not found significant association.

#### DISCUSSION

The level of knowledge was observed as majority of 61(61%) mothers had inadequate knowledge, 39(39%) had moderately adequate knowledge and none of them had adequate knowledge regarding waterborne diseases and its prevention. The Mean score % of overall knowledge was 45.2% with a mean score of 13.56 having a SD of 2.35 over a range of 7-13. The mean% of knowledge regarding general information on waterborne diseases was found to be highest 50.7% with a mean score of 2.03 having a SD of 0.78 over a range of 1-4 and mean% of knowledge regarding hepatitis A was found to be lowest as 42.6% with a mean score of 2.13 having a SD of 1.08 over a range of 1-5. In the area of Diarrhea the mean % score was 47.2% with mean of 2.6 and SD of 0.93. In the area of prevention the mean % was 44.4% with mean and SD of 3.55±1.40. In the aspect of typhoid, the mean % was 43.6% with mean and SD of 2.36±1.20. The level of practices of

mothers of underfive children regarding waterborne diseases and its prevention in which out of 100 mothers most of them 63(63%) were had average practices, 29(29%) had poor practices and 08(08%) of them had good practices regarding waterborne diseases and its prevention.

A similar study was conducted to assess that Nine people out of 25 had a symptom of abdominal pain accompanied by diarrhea after they used stored valley water in a water tank as a provisional water supply source without chlorine sterilization. Among them Giardia lamblia was detected in fecal samples of 7 people using the polymerase chain reaction method. Although G. lamblia was also detected from water provided by the provisional water supply system stored in the water tank and used as drinking water, it was not detected in the water tank itself. This water-borne outbreak is considered to have occurred when the provisional water supply tube was destroyed under a building construction and contaminated by G. lamblia, but its precise cause has not been clarified.

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