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## Knowledge regarding prevention of water borne disease among mothers of under five children at Nellipaka village, Bhadrachalam, Telangana

**Latha P, Renuka K, Karthi R and Srinivasan N**

### Abstract

**Background:** Water borne diseases are infectious diseases spread primarily through contaminated water through these disease are spread either directly or through the flies. Water is the chief medium for spread of these diseases. Most intestinal diseases are infectious and are transmitted through fecal waste. Pathogens are virus, bacteria, protozoa and parasitic worms. The diseases are more prevalent in areas with poor sanitary conditions. The pathogens travel through water sources directly through handling food and water. Hepatitis, cholera, dysentery and typhoid are the more common water borne diseases. <sup>1</sup>

**Aim:** The aim of the study was to assess the knowledge regarding prevention of water borne diseases among mother of under five children.

**Objectives:** 1. To assess the level of knowledge regarding prevention of water borne diseases among mother of under five children.

2. To associate the selected demographic variable with the level of knowledge on prevention of water borne diseases among mother of under five children.

**Methods:** A quantitative approach with descriptive design, 50 mothers of under five children were selected by using simple random sampling technique.

**Results:** Study revealed that, among 50 mothers of under five children, 22(44%) had inadequate knowledge, 3(6%) have moderate knowledge and 25(50%) had adequate knowledge regarding water borne diseases and its prevention.

**Conclusion:** The study concluded that, significant percentage of the mothers of under five children, 25(50%) had adequate knowledge regarding water borne diseases and its prevention.

**Keywords:** prevention, water borne diseases, mothers of under five children

### Introduction

*“Prevention is better than cure”*

Water related diseases are the most common cause of deaths. The paucity of clean water for domestic use has led to the increase in the number of deaths in both the urban and rural parts of developing economies. And India is no different. Deaths due to water related diseases in India are in the range of nearly 80 percent <sup>[2]</sup>. Diarrhoea remains the most prevalent water related disease in India. It mostly affects children under the age of 5 and often leads to death. In India cholera related deaths are most common in places with shortage of good quality water. In 2010, nearly 140 people died of cholera in Odisha (formerly known as Orissa). Malaria mostly kills children in India, as adults slowly form some sort of immunity against the parasite, over the years. Water related diseases plague many Indians. The availability of fresh and good quality drinking water to all Indians remains a concern <sup>[3]</sup>.

India - 12,901 reported waterborne illness fatalities 2010-2013 - More likely 1.4 million child diarrhoea deaths during that period. Due to water drinking water contamination in the country, more than 3,000 people have been dying every year due to diseases caused by contaminated water since 2010. The ministry has divided such diseases into five, acute diarrhoeal diseases, enteric fever (typhoid), viral hepatitis, cholera and acute encephalitis, with the first diseases having claimed the most number of lives. According to information accessed from the the ministry of health and family welfare, a total of 12,901 people have lost their lives to diseases caused due to contaminated drinking water in the country,

with states like Uttar Pradesh West Bengal, Odisha and Andhra Pradesh recording more than 50 per cent of the deaths<sup>[4]</sup>.

Water borne diseases are infectious diseases spread primarily through contaminated water through these diseases are spread either directly or through the flies. Water is the chief medium for spread of these diseases. Most intestinal diseases are infectious and are transmitted through fecal waste. Pathogens are virus bacteria protozoa and parasitic worms. The diseases are more prevalent in areas with poor sanitary conditions. The pathogens travel through water sources directly through handling food and water. Hepatitis, cholera, dysentery and typhoid are the more common water borne diseases. A large number of chemicals that either exist naturally in the land or are added due to human activity dissolve in water there by contaminated it and leading to various diseases<sup>[5]</sup>.

### Need for the Study

A study conducted to find out the causes of diarrhoea in young children found that the rotavirus is responsible for the most severe cases. The study was conducted in seven different sites in sub-Saharan Africa and South Asian countries including India. The Global Enteric Multicenter Study (GEMS), published in Lancet, shows diarrhoeal disease, which kills one in every ten child during first five years of their life has the highest rate of incidence in India<sup>2</sup>. The WHO estimates that diarrhoea induced by the rotavirus kills between 90,000 and 153,000 in India every year. According to WHO, around 2.3 million children below the age of five in India annually and of this 334,000 are due to diarrhoea-related diseases. In India, 70 to 80% diseases is related to water contamination and poor sanitation and more than 12,000 children under the age of 5 years die each year from rotavirus diarrhea. Over 3 lakh children in India die annually due to diarrhoea-related diseases<sup>[4]</sup>.

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### Problem Statement

A study to assess the Knowledge Regarding Prevention of Water Borne Disease among Mothers of under Five Children at Nellipaka Village, Bhadrachalam, Telangana.

### Objectives

1. To assess the level of knowledge regarding prevention of water borne diseases among mother of under five children.
2. To associate the selected demographic variable with the level of knowledge on prevention of water borne diseases among mother of under five children.

### Assumptions

1. The mothers of under-five children's have some awareness, knowledge regarding prevention of water born disease.
2. The selected demographic variable may have on influence on mothers of under-five children's knowledge on water borne diseases and its prevention.

### Delimitations

1. Mothers of under five children living in a selected area, Bhadrachalam
2. Data collection is one week period.
3. Sample size is 50.

### Materials and Methods

**Research Approach:** Quantitative research approach

**Design:** Descriptive design.

**Setting:** The study was conducted at Nellipaka village, Bhadrachalam

**Population: Target Population:** All Mothers of under five children.

**Accessible Population:** Mothers of under five children in selected area of Bhadrachalam

**Sample size:** Sample size was 50 mothers of under five children

**Sampling Technique:** Simple random sampling technique.

### Sampling criteria

#### Inclusion Criteria

- Mother of under five children are present during data collection period
- Mother of under five children who are willing to participate in the study

#### Exclusion criteria

- Mothers of under five children who are physically and mentally ill
- Mothers of under five children who are not present during data collection period

### Description of the Tool

The tool consists of two sections

#### Section-I: Demographic data

It comprised of demographic characteristics of the under-five children's such as age, religion, type of family, family history of any illness, income of family, history of medical disorders and source of information.

#### Section -II

A structured questionnaire to assess the knowledge regarding prevention of water borne diseases among mother of under five children.

**Score Interpretation**

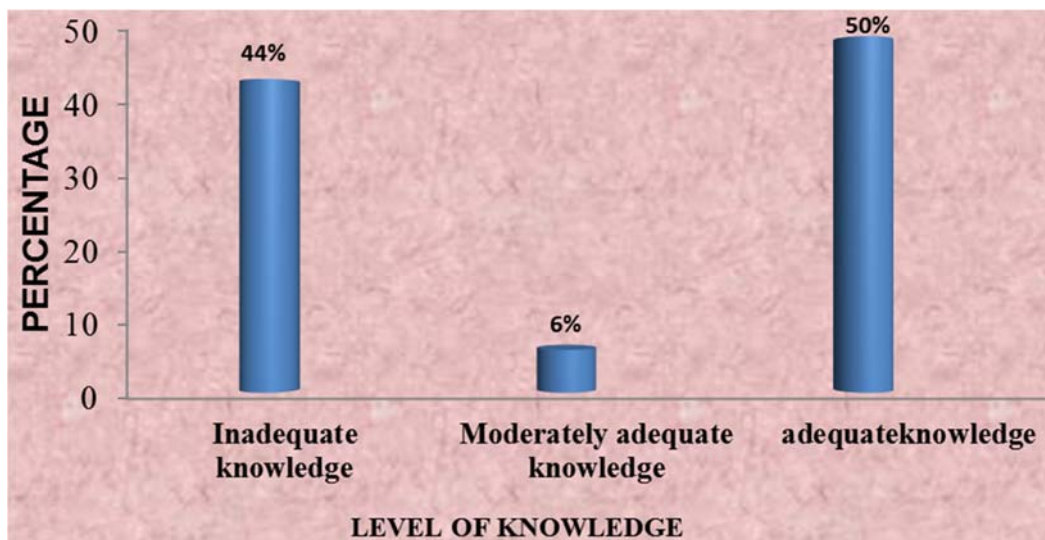
S. No	Level of knowledge	Score	Percentage
1.	Inadequate knowledge	1-10	<50%
2.	Moderately adequate knowledge	11-15	51-75%
3.	Adequate knowledge	16-20	>75%

**Results & Discussion**

**Table 1:** Frequency and Percentage Distribution of Level of Knowledge among Mothers of Under Five Children. (N=50)

Level of knowledge	Frequency (f)	Percentage (%)
Inadequate knowledge	22	44
Moderate knowledge	3	6
Adequate knowledge	25	50
Total	100	100

Table-1 shows that, among 50 mothers of under five children, 22(44%) had inadequate knowledge, 3(6%) have moderate knowledge and 25(50%) had adequate knowledge regarding water borne diseases and its prevention.



**Fig 1:** Percentage distribution of level of knowledge among Mothers of under Five Children.

**Table 2:** Mean and Standard Deviation of Level of Knowledge among Mothers of Under Five Children. (N=50)

S. No	Criteria	Mean	Sd
1.	Level of Knowledge	9.46	2.8227

**Table 3:** Association between Level of Knowledge among Mothers of under Five Children with socio demographic variables. (N=50)

S. No	Socio demographic variables	Inadequate knowledge		Moderate knowledge		Chi square
		F	%	F	%	
1.	Family type					C= 5.172 T=4.30 df=2 P<0.05 S*
	a) Nuclear	66	66	15	15	
	b) Joint	5	5	5	5	
	c)Extended	5	5	4	4	
2.	Occupation					C=13.588 T=3.18 df =3 P<0.05 S*
	a) Home maker	59	59	12	12	
	b) Coolie	11	11	6	6	
	c) Private job	5	5	4	4	
	d) Govt. job	1	1	2	2	
3.	Income (in rupees)					C=5.275 T=3.18 df=3 P<0.05 S*
	a) < 5000	6	6	4	4	
	b) 5001- 7000	40	40	5	5	
	c) 7001- 9000	25	25	14	14	
	d) >9001	5	5	1	1	

Table-3 shows that there was a significant association found between level of knowledge of antenatal mothers with socio demographic variables like family type, occupation and monthly income.

### Major Findings of the Study

- The study reveals that, among 50 mothers of under five children, 22(44%) had inadequate knowledge, 3(6%) have moderate knowledge and 25(50%) had adequate knowledge regarding water borne diseases and its prevention.
- The mean knowledge score of mothers of under five children is 9.46 and standard deviation is 2.8227.
- There was a significant association found between level of knowledge mothers of under five children with socio demographic variables like religion, type of family and monthly income.

### Conclusion

The study concluded that, significant percentage of the mothers of under five children, 25(50%) had adequate knowledge regarding water borne diseases and its prevention. Also there was a significant association between religion, type of family and family income at the level of  $p < 0.05$ .

### Recommendations

- A similar study can be conducted for larger group of samples.
- An experimental design can be done to assess the effectiveness of information booklet on prevention of water borne diseases.
- A similar study can be done by using various methods of imparting knowledge and evaluating their effectiveness.
- A similar study can be conducted with an experimental research approach having a control group
- A similar study can be conducted and educating using other teaching strategies like video assisted teaching.
- A similar study can be replicated on large sample size, in different settings with in different population as longitudinal study.

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