

# A Study to Evaluate the Effectiveness of Planned Teaching Programme on Knowledge Regarding Prevention and Management of Diarrhea Among Mothers of Under Five Children in a Selected Area of Bharuch

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**Abstract:** A nationwide survey reveals that India has the highest infant mortality rate in the world. Diarrhea is a common disease and is one of the major determinants of childhood morbidity and mortality. Diarrhea is one of the main causes of death in children under 5 years of age in India. Roughly 1.5 million children die due to diarrhea and diarrhea related diseases every year. Globally in this age group, acute diarrhea is the second leading cause of death (after pneumonia), and both the incidence and the risk of mortality from diarrheal diseases are greatest among children in this age group, particularly during infancy. The awareness of mothers about health, disease and preventive services is a barometer by which we can measure the progress of the family, the community and the country. Lack of awareness can lead to improper utilization of health services which are available in the society. To evaluate the level of knowledge of mothers of under five children on prevention and management of diarrhea in pre-test. To correlate the level of knowledge of mothers of under five children on prevention and management of diarrhea in pre- test and posttest. To associate the knowledge of mothers of under five children on prevention and management of diarrhea with selected demographic variables in pre-test. This study was conducted to assess the mother's knowledge on prevention and management of diarrhea among under-five children at selected areas of Bharuch city. One of the majority finding was that the mothers of under five children had average knowledge regarding prevention and management of diarrhea among under-five children. This study was conducted to determine the effectiveness of planned teaching programme on mother's knowledge regarding prevention and management of diarrhea. This study was carried out 60 mothers in limbuchhapri Bharuch. Results indicated that the mothers who have higher level nutritional knowledge feed their children more with vegetable, fruit, legumes, and less sugared drinks such as pops, juice and fast foods than the mothers who have lower level of nutritional knowledge. Also, higher nutritional knowledge level mothers avoid giving the foods which contains artificial to their children, and believe more the knowledge about nutrition-health. Mothers' nutrition knowledge level affects children's eating habits. In the present study the statistical analysis showed no relationship between mothers' knowledge on prevention and management of diarrhea among under-five.

**Keywords:** Planned teaching programme, under five children and diarrhea

## 1. Introduction

Mothers' basic knowledge about diarrhea depends on various factors such as educational status, prior experience of managing the disease and even ethnicity. Studies in the literature show that though most of the mothers were familiar with the term oral rehydration salt (ORS), There were knowledge gaps as regards its correct preparation and administration. The signs of dehydration due to diarrhea remain unnoticed by the majority of the mothers. There are certain fluids which are beneficial to give during diarrhea but most mothers in a rural community were unaware of most of these. Mothers' knowledge about diarrhea can be improved through educational interventions but written information only is not enough. It is more effective if pictorials and demonstrations are included along with written material.<sup>1</sup>

Though the government has initiated many health programmes in order to reduce the morbidity and mortality related to diarrheal still the cases are being reported. Hence the investigator is interested to bring forth a difference at least among the lives of handful of children by providing

relevant teaching to the mothers on the same and brings down the incidence of diarrhea among the selected group.<sup>2</sup>

A mother in the family occupies pivotal role. If she is educated and having significant health awareness, she will take the responsibility of increasing the total family awareness which facilitates high standard of living. Healthy practices adopted by the mother can raise the healthful living condition thereby lessens the morbidity and mortality of under one-year children. Mother's knowledge and children's health are correlated factors. Since the child is unable to carry out even his or her daily activities, mothers are the primary health care providers. So, the mother's knowledge regarding causes of diseases, sign and symptoms, prevention and control are very essential. If the mothers are having knowledge, they can save child even in the critical situation. It is well known fact that much of the world's medical care is in the hands of lay people, keeping this in the mind and efforts can be canalized to educate mothers in the treatment and prevention of diarrheal disease.<sup>3</sup>

Mothers' knowledge about diarrhea can be improved through Health education. Diarrhea is one of the leading

causes of death and illness among children under five years of age in the world. It results in billions of cases per year. Diarrhea cause more than 1,30,000 child deaths in 2013, this accounts for roughly one-fourth of all global diarrhea deaths among children.<sup>4</sup>

Diarrhea is the second largest cause of childhood mortality in the world. It is responsible for 4000 million episodes and 2.3 million death each year in under 5 years children in India. According to the report of UNICEF 2012, diarrhea causes 11% of death worldwide and 13% of death in India. It results in billions of cases per year. In Gujarat diarrhea caused more than 13,000 child deaths in 2013, this accounts for roughly one-fourth of all global diarrhea deaths among children.<sup>5</sup>

From the above data and the researcher’s personal experience made them to do this study. This study helps the mothers to get adequate knowledge regarding prevention and management of diarrhoea.

**Statement of the Problem**

“A study to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and management of diarrhea among mothers of under five children in a selected area of Bharuch.”

**Objectives of the study**

- 1) To evaluate the level of knowledge of mothers of under five children on prevention and management of diarrhea in pre-test.
- 2) To correlate the level of knowledge of mothers of under five children on prevention and management of diarrhea in pre- test and posttest.
- 3) To associate the knowledge of mothers of under five children on prevention and management of diarrhea with selected demographic variables in pre-test.

**Assumptions**

- a) There may be significant difference between pretest and post-test level of knowledge regarding management of diarrhea among mothers of under five children
- b) There may be significant association between level of knowledge regarding management of diarrhea with selected demographic variables among mothers of under five children.

**Hypothesis**

**H<sub>1</sub>:** The mean post-test knowledge will be significantly higher than that of their pretest knowledge scores.

**H<sub>2</sub>:** There will be significant association between the pretest level of knowledge regarding management of diarrhea and selected demographic variables among mothers of under five children.

**Limitation**

The study includes only;

- 1) The mothers of under five children who are present at the time of data collection.
- 2) The mothers who are willing to participate in study.
- 3) The mothers who are able to read and write Gujarati.

**Table 1:** Percentage distribution of demographic variables

Demographic variable		Percentage
<b>Age</b>		
a)	18-24	25
b)	25-31	50
c)	32-38	25
<b>Education</b>		
a)	primary school	46.66
b)	secondary school	38.33
c)	higher secondary school	11.66
d)	graduation	3.33
<b>Types of family</b>		
a)	joint family	70
b)	nuclear family	23.33
c)	extended family	6.66
<b>Number of children in the family</b>		
a)	1 Child	36.66
b)	2 Children	45.22
c)	3 Children	18.33
<b>Source of health information</b>		
a)	Teachers	3.33
b)	Mass Media	15
c)	Health Workers	56.66
d)	Family	25

Majority (50%) of the mothers were from age group 25-31 years, 25% of them were from age group 18-24 years and 25% of them were from age group 32-38. Majority 46.66% of them had primary education and 38.33% had secondary school, 11.66% had higher secondary school and only 3.33% had graduation. Majority (93.33%) of them were housewives and only minority of them are employed (6.66%). Maximum number (70%) of mothers belongs to joint family as compare to (23.33 %) of them from nuclear family. There is only few (6.66%) of mothers belongs to extended family, 36.66% of them had single child in the family, (45.22%) of them had two children, (18.33%) of them had three children. Majority (56.66%) of them had health information from health workers, most (25%) of them had health information from family, (15%) of them had information from mass media, (3.33%) of them had information from teacher.

**Table 2:** Levels of mother’s knowledge on prevention and management of diarrhea

Parameters		Percentage (%) (n =100)	
		Pre-test score (%)	Post-test score (%)
Level of knowledge	Inadequate	48.33	0
	Moderate	51.66	35
	Adequate	0	65

Above table 2 shows that in pre-test majority (51.66%) of them had moderate knowledge, and 48.33% of them had inadequate knowledge. In post-test majority (65%) of them had adequate knowledge and 35% of them had moderate knowledge.

**Table 3:** Mean, standard deviation, mean percentage Pretest and Posttest Mean Knowledge score

Aspects	Max. Score	Respondents Knowledge		
		Mean	SD	Mean (%)
Pre test	20	14.91	2.42	49.7
Post test	28	23.33	1.98	77.76
Enhancement	8	8.42	8.6	28.06

**Table 4:** Comparison of pre-test and posttest knowledge level of subjects

Knowledge Level	Category	Classification of Respondents			
		Pre test		Post test	
		Number	Percent	Number	Percent
Inadequate	≤ 50 % Score	29	48.33	00	00
Moderate	51-75 % Score	31	51.66	21	35
Adequate	> 75 % Score	00	00	39	65

**Table 5:** Paired T-test showing the significance of mean difference between pretest and posttest knowledge scores of Respondents

Areas	Max. Score	Respondents Knowledge			Paired 't' Test
		Mean	SD	Mean (%)	
Pre test	20	14.91	2.42	49.7	(Table Value-2.009)
Post test	28	23.33	1.98	77.76	
Enhancement	8	8.42	8.6	28.06	

Calculated 't' value (7.54) is greater than table value (2.009). So, the null hypothesis rejected and research hypothesis H<sub>1</sub> accepted. Teaching programme was effective.

**Table 6:** Chi-square test showing the association between pre-test knowledge score and socio-demographic characteristics

Demographic Variables	Category	Sample	Knowledge Level				χ <sup>2</sup> Value	Table value	Inference
			Inadequate		Moderate				
			N	%	N	%			
Age group (years)	18-24	15	04	26.66	11	73.33	3.07	5.991	NS
	25-31	30	14	46.66	16	53.33			
	32-38	15	03	20	12	80			
Education	Primary school	28	12	42.85	16	57.14	6.94	7.81	NS
	Secondary school	23	10	43.47	13	56.52			
	Higher secondary school	07	03	42.85	04	25			
	Graduation	02	01	50	01	50			
Occupation	Housewife	56	24	42.85	32	57.14	12.49	3.84	S
	Employed	04	01	25	03	75			
Types of family	Joint	42	20	47.61	22	52.38	1.08	5.99	NS
	Nuclear	14	07	50	07	50			
	Extended	04	03	75	01	25			
Number of children in family	1	22	10	45.45	12	54.54	0.31	5.99	NS
	2	27	12	44.44	15	55.55			
	3	11	06	54.54	05	45.45			
Source of information	Teachers	02	01	50	01	50	0.36	7.81	NS
	Mass media	09	05	55.55	04	44.44			
	Health workers	34	15	44.11	19	55.88			
	Family	15	07	46.66	08	53.33			

S-Significant NS-Non-Significant

The above tables 6 show that since calculated values corresponding to occupation are greater than table value that is 12.49 the null hypothesis is rejected and the H<sub>1</sub> is accepted. Demographic variables like age, education, type of family, number of children in family and source of information were found to have no significant association with knowledge.

## 2. Discussion

- Majority, 50% of the mothers were from age group 25 to 31 years and 25% of them were from age group 18 to 24 years and 25% of them from age group 32 to 38 years.
- Majority that is 46.66% of them had primary education, 38.33% of them had Secondary school education, 11.66% of them had higher secondary education and only 3.33% of them had graduation.
- Majority 93.33% of them were housewife and only minority of them is employed (6.66%).
- Maximum number of mothers belongs to joint family that is 70%, 23.33% mothers belong to nuclear family and only 6.66% mothers belong to extended family.
- Majority of mothers (45.22%) having two children in the family, 36.66% of them had one child and only 18.33% of them had three children in the family.
- Maximum number of mothers receiving health information from health workers that is 56.66%, 25% of

mothers receiving health information from family, 15% of mothers receiving health information from mass media and remaining 3.33% of them had information from teachers.

- Calculated 't' value (7.54) is greater than table value (2.009). So the null hypothesis rejected and research hypothesis accepted.
- Since calculated value corresponding to occupation is greater than table value that is 12.49 the null hypothesis is rejected. Demographic variables like age, education, type of family, number of children in family and source of information were found to have no significant association with knowledge.

This study was conducted to assess the mother's knowledge on prevention and management of diarrhea among under-five children at selected areas of Bharuch city. One of the majority finding was that the mothers of under five children had average knowledge regarding prevention and management of diarrhea among under-five children. This study was conducted to determine the effectiveness of planned teaching programme on mother's knowledge regarding prevention and management of diarrhea. This study was carried out 60 mothers in limbuchhapri Bharuch. Results indicated that the mothers who have higher level nutritional knowledge feed their children more with vegetable, fruit, legumes, and less sugared drinks such as

pops, juice and fast foods than the mothers who have lower level of nutritional knowledge. Also, higher nutritional knowledge level mothers avoid giving the foods which contains artificial to their children, and believe more the knowledge about nutrition-health. Mothers' nutrition knowledge level affects children's eating habits. In the present study the statistical analysis showed no relationship between mothers' knowledge on prevention and management of diarrhea among under-five.

The present study findings can be more valid and supported if conducted with more sample size. This study has findings that opens a small window into the health status of the under-five children in urban areas in Bharuch city.

### **3. Ethical Consideration**

Written permission was taken from the Welfare Institute of nursing and midwifery, Bharuch, Gujarat. Written Informed consent was taken from each study samples.

### **4. Conclusion**

Diarrhea has been identified as a major second health problem in India. It not only leads to childhood morbidity and mortality but also leads to permanent impairment of physical and possibly of mental growth of those who survive. Good Knowledge of mothers on prevention and management of diarrhea is most essential for better maintenance of health of under-five year children. Mothers and care takers sound knowledge helps to keep their children healthy. Live demonstration of health information is one method that provides adequate knowledge about prevention and management of diarrhea of under-five year children.

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