

A STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING PREVENTION OF DEHYDRATION AMONG MOTHERS OF INFANT IN SELECTED PEDIATRIC HOSPITALS AT JAIPUR, RAJASTHAN

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ABSTRACT

Nation's most important and precious resource is its children who constitute its hope for continued achievement and productivity. Childhood is the most significant period in every one's life. Every child needs a caring and conducive environment to grow into a potentially healthy human being in every perspective. Family, neighborhoods and the society all together play vital role in contributing to the maximum growth and development of a child. Worldwide study on children shows that a large number of children are in a very unhealthy and intimidating environment.

INTRODUCTION

The human body needs water to maintain enough blood and other fluids to function properly. Along with the fluids, the body also needs electrolytes, which are salts normally found in blood, other fluids, and cells. Dehydration is the loss of water and salts from the body. The usual causes of dehydration are a lot of diarrhoea and vomiting. Dehydration can also occur if anyone do not eat or drink much during an illness or if do not drink enough during or after strenuous exercise. Although anyone can become dehydrated, those who become dehydrated the most easily are children's of under five years of age. In Children dehydration is most often caused by a viral

infection that causes fever, diarrhea, vomiting, and a decreased ability to drink or eat. Common viral infections causing vomiting and diarrhea include rotavirus, Norwalk virus and adenovirus. Sometimes sores in a child's mouth (caused by a virus) make it painful to eat or drink, which helps to cause or worsen dehydration. Fever that often accompanies disease accelerates the amount of water that is lost through the skin. The smaller the child the greater the risk of dehydration. Diarrhea and dehydration kills more children under five than malaria, AIDS and tuberculosis combined. Diarrhea is one of the leading killers of children worldwide, accounting for 16% of deaths of children under five (World Health Organization). In Cambodia, diarrhea is the third leading cause of mortality among children under the age of five. As the majority of childhood deaths from diarrhea are due to dehydration, diarrhea treatment programs have emphasized oral rehydration treatment (ORT), either homemade solution and oral rehydration salts (ORS), accompanying continued feeding and fluid provision as the first line of care for diarrhea. Recent studies have demonstrated the efficacy of zinc in reducing the severity.

Dehydration caused by diarrhea is one of the biggest single killers of children in the modern world and diarrhoea itself is one of the major causes of nutritional loss and poor growth. about 2.2 million children will die of dehydration caused by diarrhea - 80% of them in the first two years of their life. The most common causes of dehydration are rotavirus, enterotoxigenic *Escherichia coli* (ETEC) and, during epidemics, *Vibrio cholera*. Dehydration is the loss of water and salts from the body. The human body needs water to maintain enough blood and other fluids to function properly. Along with the fluids, the body also needs electrolytes which are salts normally found in blood, other fluids, and cells.

2. NEED FOR THE STUDY

“Children should be led into the right paths, not by severity, but by persuasion. Train the parent and spare the child.”

Dehydration is a major cause of infant illness and death throughout the world. Dehydration is often a result of gastrointestinal disease and diarrhea in children. Among children in the United States, short-term diarrhea results in approximately 200,000 hospitalizations and 300 deaths per year. In developing countries, dehydration from illness is a common cause of death in children under five years of age, accounting for about 2 million deaths per year.

The very young are most likely to become dehydrated. Young children are at greater risk because they are more likely to get diseases that cause vomiting, diarrhea, and fever. Worldwide, dehydration is the leading cause of death in children. In the United States, 400–500 children under the age of 5 die every year of dehydration. Worldwide, acute diarrhea accounts for the death of

about 4 million children each year. In the United States, about 220,000 children are hospitalized for dehydration caused by diarrhea 99.5 % of parents whose children were RV+ reported more worries than the 97.7 % of RV- ($p < 0.05$). A higher percentage of RV+ parents and those with a high importance score reported more time dedicated to dehydration treatment ($p < 0.05$).

According to a study of 2200 infants in Venezuela, 3 oral doses of rotavirus vaccine (administered at 2, 4, and 6 months of age) protected 88% of children from becoming severely dehydrated from diarrhea. So by the administration of RV vaccine the children of under five children can be protected from the potential risk of diarrhea and dehydration. An integrated approach to reduce childhood mortality and morbidity due to diarrhoea and dehydration; Maharashtra, India 2013–2018. This project addresses the primary health concerns of the 100 million people in Maharashtra, especially women and children in rural areas and urban slums, who live in very poor health or die young from the diseases of sub-standard health, water, hygiene, and sanitation. 40% and children in Maharashtra are chronically undernourished, and under-five mortality occurs at 58 deaths per 1000 live births, or 1 in every 17 children. A very large number of these deaths are caused by dehydration from diarrhoea, the most easily preventable cause of childhood mortality.¹²

OBJECTIVES

1. To assess the pre test knowledge regarding prevention of dehydration among mothers on infant..
2. To assess the post test knowledge regarding prevention of dehydration among mothers of infant.
3. To determine the effectiveness of planned teaching programme on knowledge regarding prevention of dehydration among mothers of infant in selected pediatric hospitals at jaipur, Rajasthan.
4. To find out the association between the pre test knowledge regarding prevention of dehydration among mothers of infant with selected demographic variables.

4. HYPOTHESES

H₁: There will be significant difference between pre-test and post-test knowledge regarding

prevention of dehydration among mothers of infant.

H₂: There will be significant association between the pre-test knowledge regarding prevention of dehydration among mothers of infant with demographic variables.

5. ASSUMPTION

1. It is assumed that the mothers may have some knowledge regarding prevention of dehydration in infant.
2. Planned teaching programme will increase the knowledge regarding prevention of dehydration among mothers of infant.
3. Mother's knowledge regarding prevention of dehydration which in will help them for early detection & management of dehydration among mothers of infant.

6. REVIEW OF LITERATURE

A prospective observational study was conducted on "Validation of the Clinical Dehydration Scale for Children with Acute Gastroenteritis". was performed in an emergency department at a large pediatric tertiary center in Canada. Children 1 month to 5 years of age with symptoms of acute gastroenteritis who were assessed in the emergency department. The main outcome measures were length of stay, proportion of children receiving intravenous fluid rehydration, and proportions of children with abnormal serum pH values or bicarbonate levels. A total sample of 205 children were enrolled, 103 (50%) were male. The distribution of severity categories was as follows: no dehydration (score of 0), $n = 117$ (57%); some dehydration (score of 1–4), $n = 83$ (41%); moderate/severe dehydration (score of 5–8), $n = 5$ (2%). The 3 dehydration categories were significantly different with respect to the validation hypotheses (length of stay, mean \pm SD: none, 245 ± 181 minutes; some, 397 ± 302 minutes; moderate/severe, 501 ± 389 minutes; treatment with intravenous fluids: none, $n = 17$, 15%; some, $n = 41$, 49%; moderate/severe, $n = 4$, 80%; number of vomiting episodes in the 7 days before the emergency department visit: none, 8.4 ± 7.7 episodes; some, 13 ± 10.7 episodes; moderate/severe, 30.2 ± 14.8 episodes). The clinical dehydration scale and the 3 severity categories were valid for a prospectively enrolled cohort of patients who were assessed in tertiary emergency department. The scoring system was valuable in predicting a longer length of stay and the need for intravenous fluid rehydration for children with

symptoms of acute gastroenteritis.

A study was conducted on “Dehydration associated with gastroenteritis is a serious complication.” The evidence suggests that the three most useful predictors of 5% or more dehydration are abnormal capillary refill, abnormal skin turgor, and abnormal respiratory pattern. In most studies, oral or nasogastric rehydration with an oral rehydration solution was equally efficacious as intravenous (i.v.) rehydration. Many experts discourage the routine use of antiemetic in young children. However, children receiving ondansetron are less likely to vomit, have greater oral intake, and are less likely to be treated by intravenous rehydration. Mean length of Emergency Department (ED) stay is also less, and very few serious side effects have been reported. Conclusions: In the Emergency department, dehydration is evaluated by synthesizing the historical and physical examination, and obtaining laboratory data points in select patients. No single laboratory value has been found to be accurate in predicting the degree of dehydration and this is not routinely recommended. The evidence suggests that the majority of children with mild to moderate dehydration can be treated successfully with oral rehydration therapy. Ondansetron (orally or intravenously) may be effective in decreasing the rate of vomiting, improving the success rate of oral hydration, preventing the need for I.V. hydration.

A case-control study was conducted on “Risk factors for development of dehydration in children aged under five who have acute watery diarrhoea.” The setting is diarrhoea Treatment Unit, Government Medical College Hospital, Nagpur, India. The study included 387 cases of diarrhoea having severe or moderate dehydration and 387 controls suffering from diarrhoea with mild or no dehydration. Multivariate analysis was carried out by unconditional multiple logistic regression (MLR). This study identified the significance of infancy, religion, severe under nutrition, non-washing of hands by mother before preparation of food, frequency of stool >8/d, frequency of vomiting >2/d, history of measles in previous six months, withdrawal of breast feeding during diarrhoea, withdrawal of fluids during diarrhoea and not giving ORS, in the outcome of development of moderate or severe dehydration. Timely intervention in the preventable risk factors included in this study may prevent the development of moderate or severe dehydration in the children suffering from acute watery diarrhoea.

A case-control study was conducted to understand the risk factors for development of life-

threatening dehydration, a total of 379 children comprising 243 cases (moderate or severe dehydration) and 136 controls (non or mild dehydration) up to 2 years of age suffering from acute watery diarrhoea were studied. By univariate analysis, the presence of vibrios in stool, not giving fluids, including oral rehydration solution (ORS), during diarrhoea, frequent purging ($> 8/\text{day}$), vomiting ($> 2/\text{day}$) and undernutrition were identified as risk factors. However, by multivariate analysis after controlling for confounders, not giving ORS during diarrhoea (OR = 2.1, $p <$

0.006) were identified as significant risk factors. The confounding variables which also contributed significantly to increasing the risk were age ($< \text{or} = 12 \text{ months}$; OR = 2.7, $p = 0.001$), frequent purging ($> 8/\text{day}$; OR = 4.1, $p < 0.00001$), vomiting ($> 2/\text{day}$; OR = 2.4, $p = 0.001$).

7. METHODOLOGY

Research methodology is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money. Methodology is the framework used to conduct the study. It includes as research approach, setting, population, sampling technique, sample selection, inclusion and exclusion criteria, development of the tool, collection of data, pilot study, procedure of data collection and plan for data analysis. The present study is aimed to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention of dehydration among mothers of infant in selected pediatric hospitals at Jaipur Rajasthan.

8. ANALYSIS AND INTERPRETATION

DEMOGRAPHIC CHARACTERISTIC OF SCHOOL GOING CHILDREN

TABLE 1: Frequency And Percentage Distribution of mothers of infants By age, education, occupation, family type, monthly family income, religion, area of living, socioeconomic status, previous knowledge about prevention on dehydration in children, and source of knowledge.

Characteristics		Group			
		Experimental		Control	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Age in years	<20	2	6.67	2	6.67
	21-30	26	86.66	25	83.33
	31-40	2	6.67	3	10
	>40	0	0	0	0
Religion	Hindu	28	93.33	25	83.33
	Muslim	2	6.67	5	16.67
	Christian	0	0	0	0
	Others	0	0	0	0
Education	Illiterate Primary education	7	23.33	6	20
	Secondary education	12	40	15	50
	Higher secondary &	6	20	7	23.33
		5	16.67	2	6.67
Occupation	Public Private	1	3.33	2	6.67
	Business	2	6.67	2	6.67
	House Wife	24	80	20	66.66
		3	10	6	20

Type of Family	Joint Nuclear	7	23.33	9	30
	Extended	23	76.67	21	70
	Blended	0	0	0	0
		0	0	0	0
Monthly family income in Rupees	<5000	20	66.66	18	60
	5001-10000	6	20	6	20
	10001-15000	2	6.67	4	13.33
	>15001	2	6.67	2	6.67
Area of living	Urban	7	23.33	9	30
	Rural	23	76.67	21	70
Socioeconomic status	Upper class	1	3.33	2	6.67
	Middle class	2	6.67	2	6.67
	Lower class	24	80	20	66.66
	BPL	3	10	6	20
Previous knowledge about prevention of dehydration in infants	Yes	6	20	8	26.67
	No	24	80	22	73.33
Source of information	Parents	8	26.67	10	33.33
	Friends	2	6.67	3	10
	Siblings	1	3.33	2	6.67
	Electronic media	4	13.33	3	10
	Print media	15	50	12	40

The above table no. 1 shows that Majority of mothers i.e. 86.66 % were from the age group 21 years to 30 years, Majority of mothers i.e. 93.33 % were having Hindu religion. Majority of mothers i.e. 40 % had primary education qualification. Majority of mothers i.e. 80.0% were house wives. Majority of mothers i.e. 76.67 % were nuclear family. Majority of family i.e 66.66 % were having monthly income between 5000 to 10,000 Rs. Majority of mothers i.e. 80% having No previous knowledge about prevention on dehydration in mothers of infant and rest of 20% werehaving previous knowledge about prevention of dehydration. Majority of mothers i.e.

50.0% were having knowledge from newspapers, magazine, and media about prevention of dehydration.

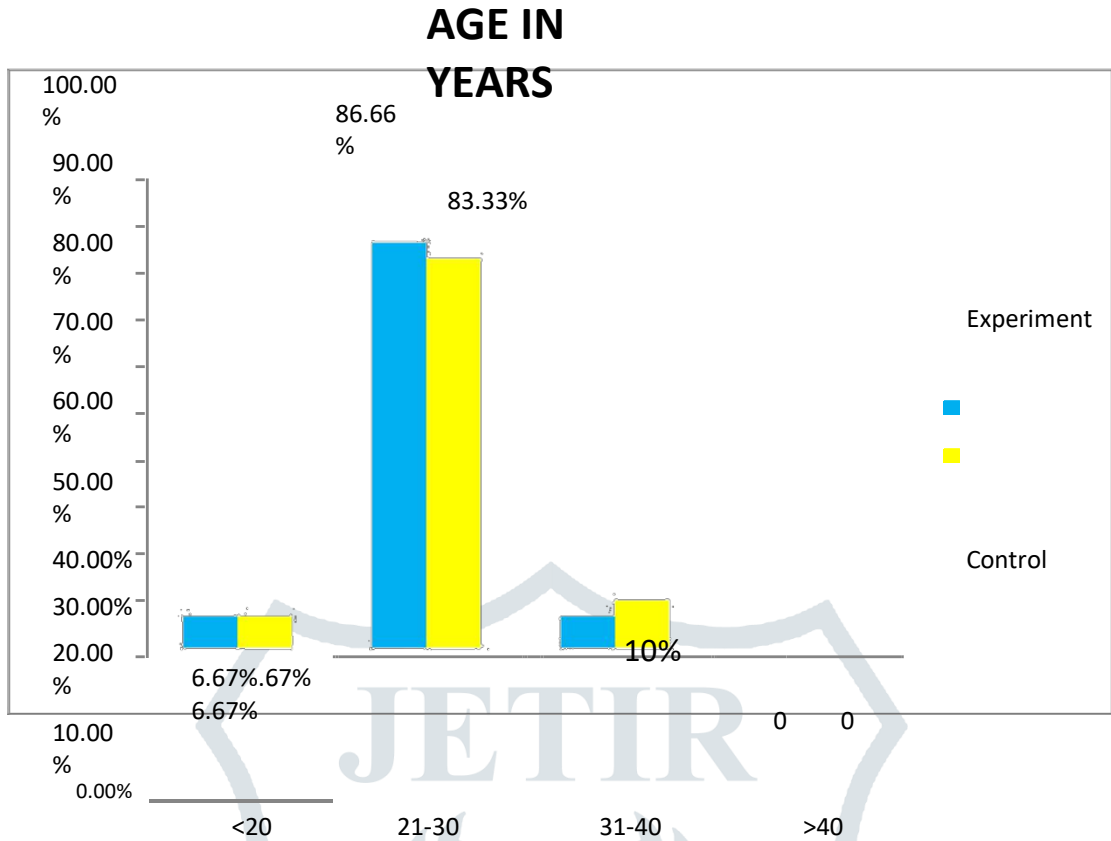


Fig: 2. Multiple Bar diagram showing Age distribution among experimental and control group.

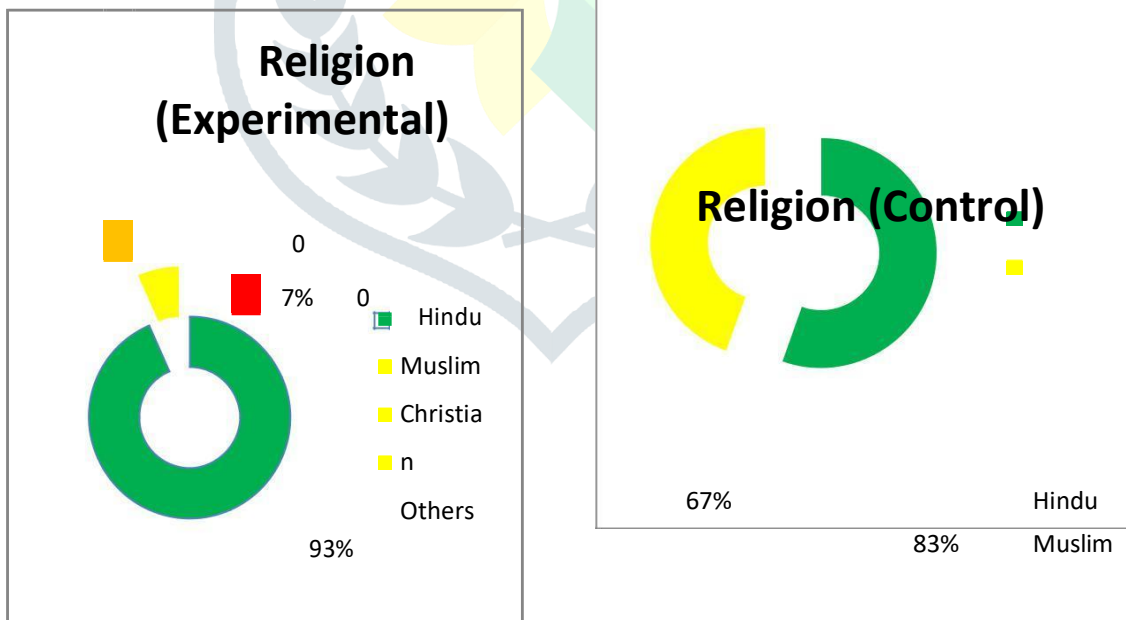


Fig: 3. Doughnut diagram showing Religion among experimental and control group

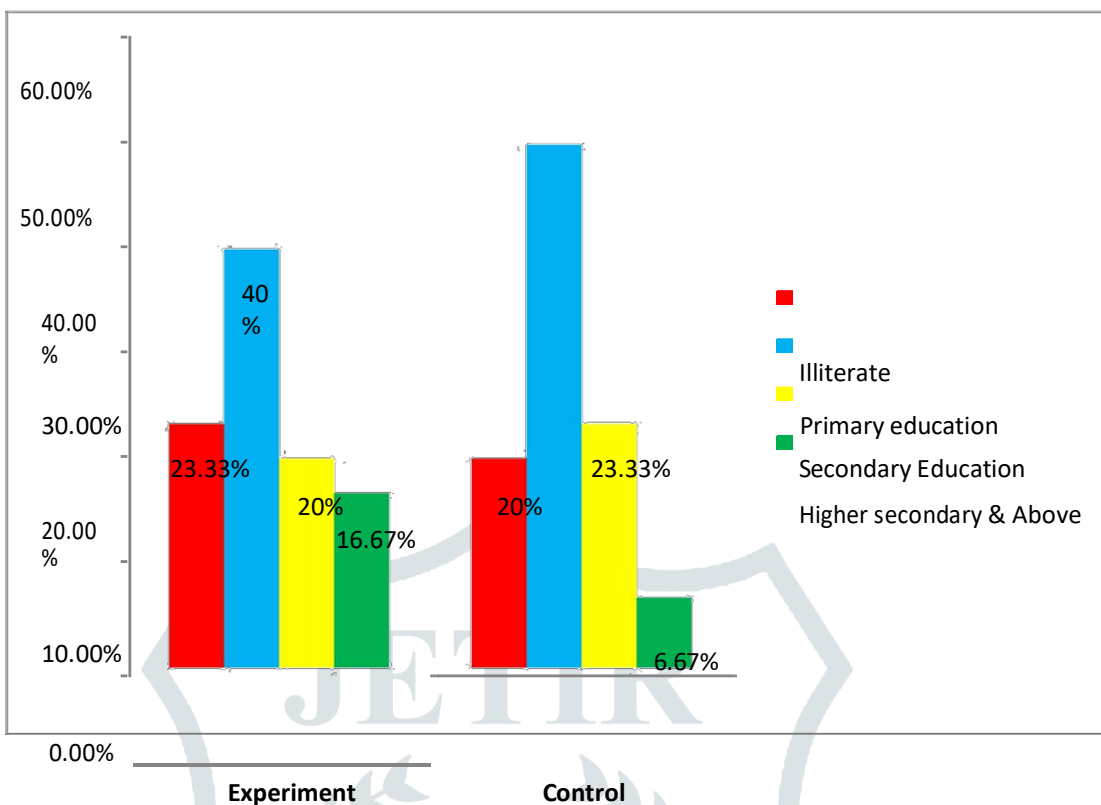


Fig :4 Bar diagram showing Education for mothers of infant among experimental and control group.

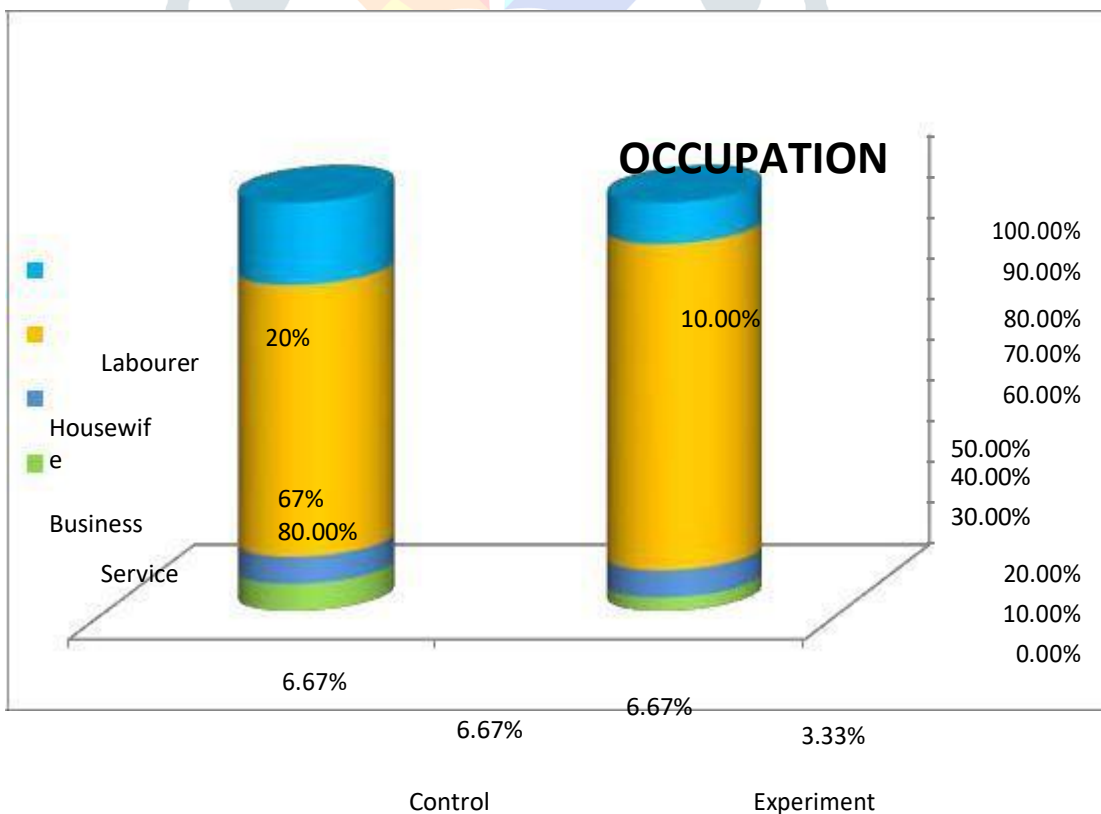


Fig :5 Percentage bar diagram showing parents' Occupation status among experimental and Control group

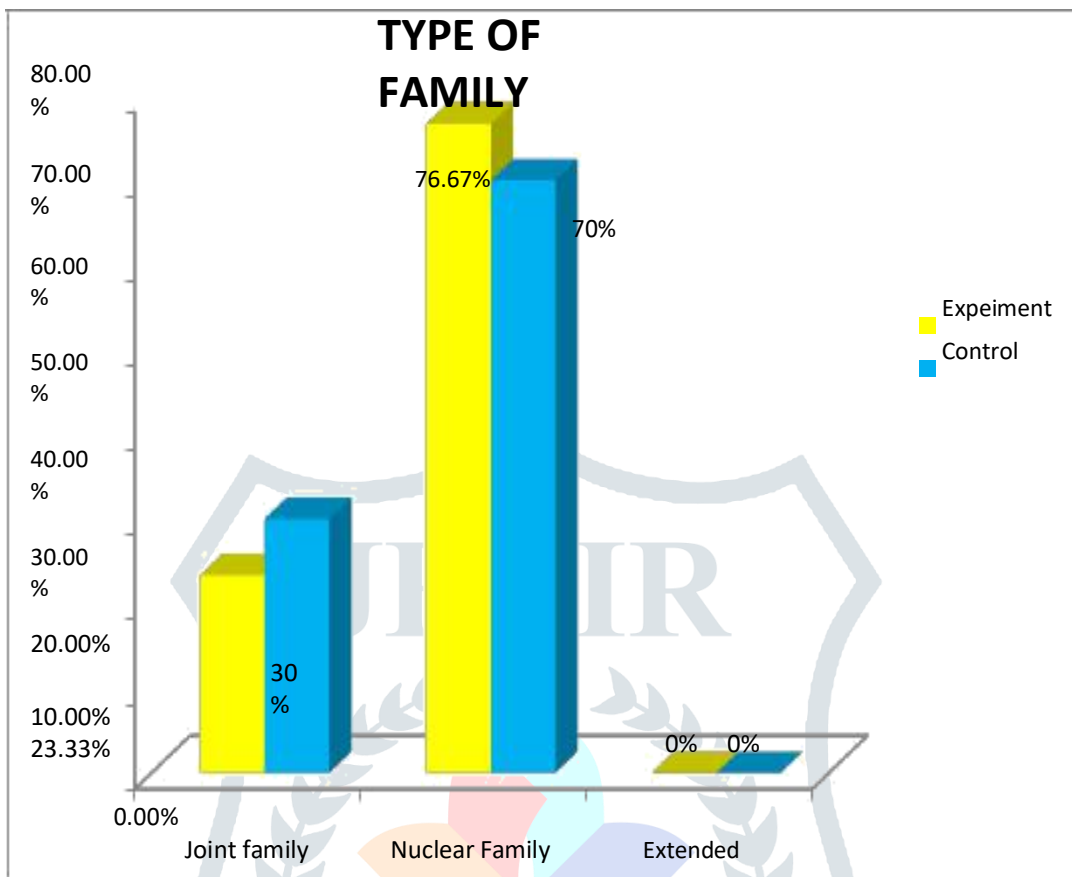


Fig: 6 Multiple Bar diagram showing type of family among experimental and control group

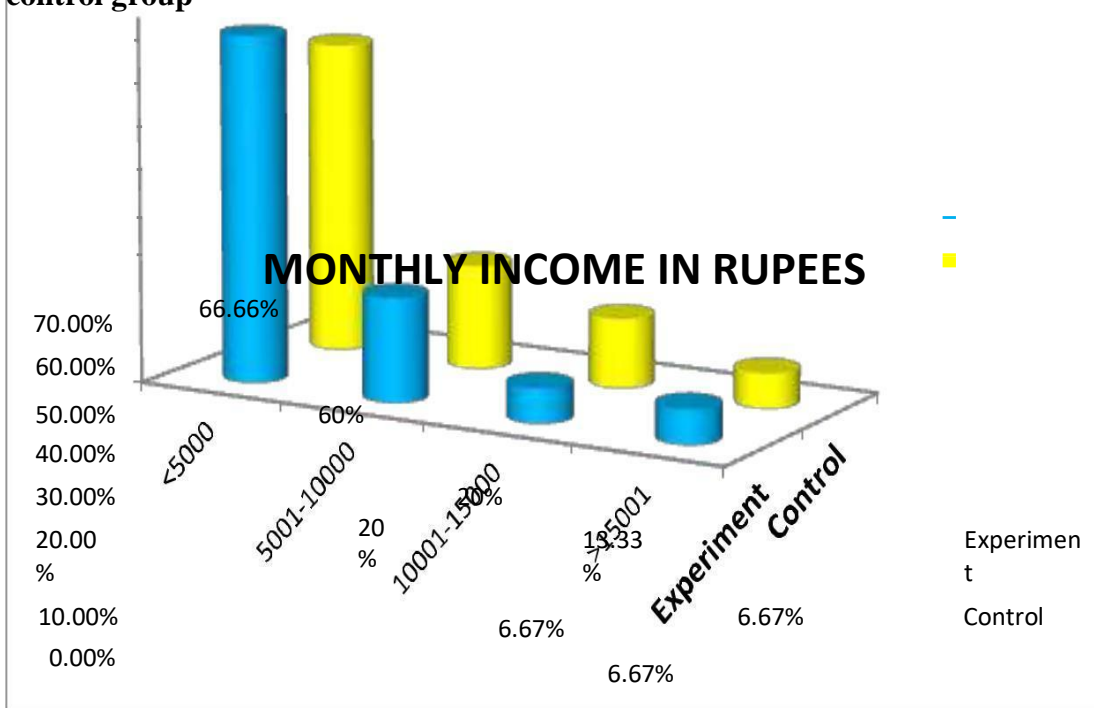


Fig: 7 Multiple Bar diagram showing monthly family income in rupees among experimental and control group

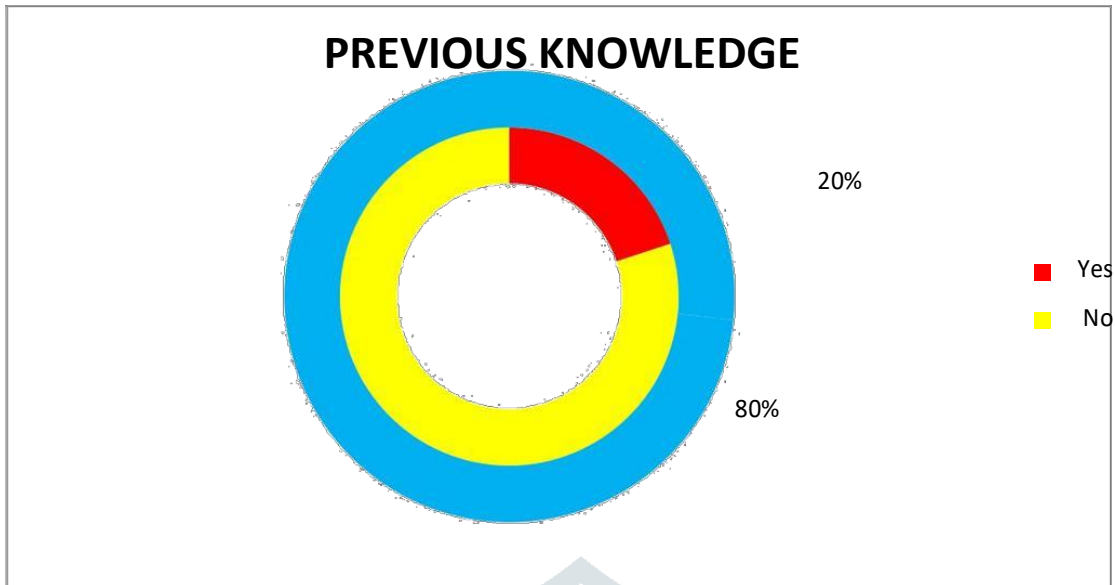


Fig: 8 Pie diagram showing previous knowledge among experimental and control group

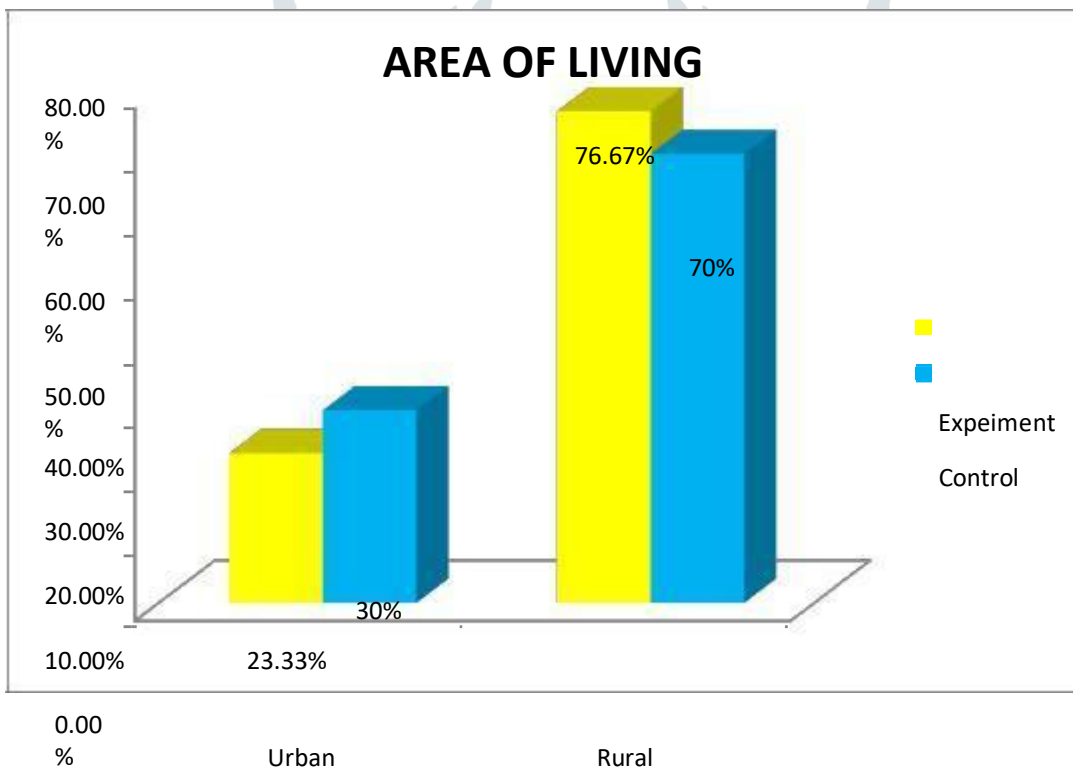


Fig: 9 Multiple Bar diagram showing area of living among experimental and control group

9. MAJOR FINDINGS OF THE STUDY

In the present study the distribution of the subjects by age revealed that Majority of mothers i.e. 86.66 % were from the age group 21 years to 30 years, Majority of mothers i.e. 93.33 % were having Hindu religion. Majority of mothers i.e. 40 % had primary education qualification. Majority of mothers i.e. 80.0% were house wives. Majority of mothers i.e. 76.67 % were nuclear family. Majority of family i.e 66.66 % were having monthly income between 5000 to 10,000 Rs. Majority of mothers i.e. 80% having No previous knowledge about prevention on dehydration in mothers of infant and rest of 20% were having previous knowledge about prevention of dehydration. Majority of mothers i.e. 50.0% were having knowledge from newspapers, magazine, and media about prevention of dehydration.

10. CONCLUSION

This chapter presents the conclusion drawn, implications, limitations and recommendations. The focus of this study was to evaluate the effectiveness of Planned Teaching Programme on knowledge regarding prevention of dehydration among mothers of infant. The collected data was subjected to analysis using descriptive statistics such as frequency, mean and mean percentage, median and standard deviation. Inferential statistical methods like paired „t“ test and Chi- square (χ^2) were used for analysis.

11. RECOMMENDATIONS

1. A similar study can be replicated on a large sample to generate the findings.
2. A similar study can be replicated on the samples with different demographic characteristics.
3. An observational study can be conducted among mothers of infant in a selected paediatric hospital to assess their knowledge regarding prevention of dehydration.
4. An experimental study can be undertaken with control group for effective comparison.
5. A descriptive study can be conducted with a view to develop a Self- Instructional Module (SIM) which includes all the aspects of dehydration.
6. A comparative study can be conducted between rural and urban population to evaluate their knowledge on dehydration.
7. A comparative study can be conducted to assess the knowledge, attitude and practice of mothers of infant regarding dehydration.

12. REFERENCE

1. AS Faruque, “Breast feeding and oral rehydration at home during diarrhoea to prevent dehydration” Archives of Disease in Childhood, Volume 67:1027-1029.
2. The United Nations Children’s Fund and World Health Organization. Diarrhoea: Why

children are still dying and what can be done. Available from; URL:<http://rehydrate.org>

3. AV Hingec, "To review the evidence on the assessment of dehydration, methods of rehydration, and the utility of antiemetic in the child presenting with acute gastroenteritis" Journal of Tropical Pediatrics, Volume 41, 2017, Number 5 Pp. 303-307

4. Borapich D, Warsh M. Improving Child Health in Cambodia: Social Marketing of Diarrhea Treatment Kit, Results of a Pilot Project. Cases in Public Health Communication & Marketing Available from; URL:<http://www.gwumc.edu>

5. Black RE, Merson MH, Eusof A, Huq I, Pollard R. Nutritional status, body size and severity of diarrhoea associated with rotavirus or enterotoxigenic Escherichia coli. J Trop Med Hyg. Available from; URL:<http://www.ncbi.nlm.nih.gov>

6. Basavanthappa BT, "Nursing theories", Jaypee brothers, New Delhi first, edition Pp- 72-76

7. Bhattacharya R, "Impact of education in the knowledge and practices of rural mothers and key family members on diarrhoea and its treatment at home" Journal of Diarrhoeal Diseases Research, 2018, March

8. Daisy Joseph, "A study to assess the knowledge of mothers of children under five years of age, regarding the cause, prevention and management of febrile seizure in Pune city," Pune, 17

9. Deerfield IL. Dehydration is a potentially serious and often misunderstood condition that can lead to medically serious consequences. Available from; URL:<http://www.baxter.com>

10. Dipika Sur, "A comprehensive study regarding the impact of nutritional education on health of the mothers and under five children in an urban slum area in Kolkata," Kolkata 2017

11. How many people a day/week/month/year die of dehydration. Available from: URL:<http://answers.yahoo.com>

12. Dr. Dixit, "Principles and practice of bio-statistics", First edition, 2016, Banarsidas Bhanot, Jabalpur

13. Ghai O.P., Essential pediatric nursing, 6th edition, 2018 CBS publishers & Distribution Pvt. Ltd. Pp: 272-274.

14. Goerge B. Julia, "Nursing Theories", The Base for professional Nursing Practice, 3rd edition, Norwalk, Appleton and Lange