

Research Article**“A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HOMEMADE REHYDRATION METHODS DURING SUMMER AMONG MOTHERS OF SCHOOL AGE CHILDREN AT SELECTED RURAL AREAS OF KANPUR”**

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ABSTRACT

Dehydration is a condition that occurs when the body fluids loses more fluids that it taken in resulting in insufficient water and other essential fluids for normal bodily function .The imbalanced can lead to range of symptoms, from mild thirst and dry mouth to more severe issues like dizziness, rapid heartbeat and even organ failure if left untreated .Children are physiologically more susceptible to dehydration than adults. This study assessed the effectiveness of Structured Teaching Programme on knowledge regarding homemade rehydration methods during summer among mothers of school age children at selected rural areas of Kanpur, U.P. In this study Quasi Experimental Research Design was used as the research design. Non-probability convenient sampling technique was used to select 60 mothers of school age children. The tool used for the study was a structured knowledge questionnaire regarding homemade rehydration methods. The study shows that among 60 mothers of school age children. The result of pretest knowledge consist level 57(95%) inadequate knowledge, 03(5%), moderate knowledge and 00(0.00%) adequate knowledge in the pre-test only 0.00% had adequate knowledge. In the post-test 16.6%

mothers achieved knowledge, 83.4% moderate knowledge and 0.00% had inadequate knowledge regarding rehydration methods. The mean value of pre-test was 8.066 which has been increased to 18.35 in the post-test. The paired t- test value was 23.87 in the post – test and it was significant at $P < 0.05$ level. From the above inference, it is made clear that the Structured Teaching Programme had apposite impact on knowledge among mothers of school age children. This indicates that structured teaching programme is an effective method to improve the knowledge of mothers of school age children regarding homemade rehydration methods during summer.

KEY WORDS- Dehydration, effectiveness, Structured Teaching Programme, homemade rehydration methods, school age children's mothers.

INTRODUCTION

Dehydration occurs when the person loss the excessive fluid then intake and because of that body does not have enough water and other fluid to carry out its normal function and it occurs due to not drinking enough fluid, excessive sweating, vomiting and diarrhoea.^[1]

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According to WHO global incidence rate of dehydration is responsible of approximately 700,000 to 800,000 child death annually accounting for nearly 16% of global child fatalities. In India prevalence of dehydration is 70% children admitted with diarrhoea were diagnosed with severe dehydration.^[2]

A study published in the international journal of environmental research and public health found that 70% of children admitted to a tertiary care hospital in Ujjain, India suffered from severe dehydration. The incidence of dehydration in Kanpur particularly among school going children is a significant concern according to a previous study published in paediatrics and therapeutic dehydration is a leading cause of morbidity and mortality among children in developing countries like India.^[3]

Rehydration method is to restore the fluids and electrolytes loss due to dehydration condition which can occurs from diarrhoea, vomiting, or heart burn feeling. To rehydrate the body drink plenty of water and consider electrolyte rich option like ORS, glucose water and coconut water. Oral rehydration therapy is designed to normalize electrolyte level and if the solution is not prepared or used correctly, it can cause salt toxicity also.^[4]

For maintaining dehydration with or homemade methods, focus on replenishing fluids and electrolytes with homemade solutions like lemon water with some little salt, coconut water on a homemade electrolyte drink with water, citrus juice, honey/maple syrup and salt and the butter milk, fruits and vegetables like watermelon, cucumber, yogurt and cottage cheese, these foods restore sodium and potassium level, which are important for hydration. Homemade rehydration solutions are effective for mild to moderate dehydration and are often used as a first-line treatment. Prevention from dehydration: Drink plenty of

fluids, avoid excessive sweating, eat hydrated foods.^[5]

It is estimated that more than 2 million children under the age of 5 die annually as a result of gastroenteritis with dehydration. Up to 95% of these cases can be treated successfully with oral rehydration therapy. The combination of diarrhoea, pneumonia and malnutrition is well known as an even combination with a poor outcome. It is therefore very appropriate that the D in diarrhoea is described as standing for disaster, disability, distraction and death. A major advance in the treatment of diarrhoea was the development of rehydration therapy. (ORT) has been described as “potentially the most important of the 20th century. Research on ORT started in 1940, but it was only after it was discovered that the absorption of water from the intestine was mediated by a glucose co-transporter that ORT became popular.

There is more than enough evidence to show that an awareness and knowledge of the guidelines improve the use of ORT, as has been demonstrated by ORT programmes in America and Africa.^[6]

NEED FOR THE STUDY

Rehydration is the process of restoring lost fluid and electrolyte to the body typically after dehydration which can occur due to various factors like diarrhoea, vomiting or insufficient fluid intake.^[7]

Simple and cost-effective homemade remedies can be made with clean water, sugar, salt, lemon water is a readily available and affordable solution replenishing fluid and electrolytes lost due to diarrhoea and vomiting. It is an effective treatment of ORS and homemade remedies help the body absorb fluid and electrolytes more efficiently preventing severe dehydration and its complications. Studies show that awareness and understanding of oral rehydration therapies

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are crucial for its proper use to ensure that it is used effectively to treat dehydration.^[8]

Dehydration can lead to serious health problems like kidney stone, kidney failure and seizures so understanding how to prevent it is crucial. If the person is knowing how to prepare and administer rehydration therapy at home allows care givers to provide timely and effective care specially when access to healthcare facilities is limited. Homemade solutions are based on simple ingredient like salt, sugar and water, which are often available even in remote or disaster-stricken areas. This makes it important to study the proper ratio and effectiveness of such ingredient for rehydration.^[16]

The incidence of dehydration in Kanpur particularly among school going children is a significant concern according to the previous study. So, conduct for the rehydration therapy helps to reduce the mortality rate in selected area of Kanpur U.P.^[9]

Oral rehydration therapy (ORT) has dramatically reduced the morbidity and mortality associated with acute infectious diarrhoea. Commercial oral rehydration salt (ORS) solutions with sodium concentrations of 30-90mmol/L are ideal for both the prevention and treatment of dehydration. However, logistic issues impede their universal availability and homemade sugar salt (HSS) solutions are widely used in some areas of the world. The least accurate methods of preparing HSS solutions utilize a three-finger pinch of salt. Health providers should consider the use of selected home available fluids rather than HSS solutions for the prevention of dehydration in children with diarrhoea.^[10]

PROBLEM STATEMENT

**“A Study to assess the effectiveness of
Structured Teaching Programme on
knowledge regarding homemade rehydration**

**methods during summer among mothers of
school age children at selected rural areas of
Kanpur, U.P”.**

OBJECTIVES OF THE STUDY:

- To assess the pre-test level of knowledge regarding homemade rehydration methods during summer among mothers of school age children.
- To evaluate the effectiveness of STP on knowledge regarding homemade rehydration methods during summer among mothers of school age children.
- To determine association between post-test knowledge score regarding homemade rehydration methods during summer among mothers of school age children with their selected demographic variables.

HYPOTHESIS

H₀- There is no significant differences between pre-test and post-test level of knowledge regarding homemade rehydration methods among mothers of school age children at selected areas of Kanpur U.P.

H₀₁ - There is no significant association between the pre-test level of knowledge regarding homemade rehydration methods among mothers of school age children with their selected demographic variables.

H₁ - There is a significant difference between the pre-test and post-test knowledge score after structured teaching programme regarding homemade rehydration method.

H₂ - There is a significant difference between the pre-test and post-test knowledge score regarding homemade rehydration method in selected demographic variable among mothers of school age children.

VARIABLES-

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INDEPENDENT VARIABLE-

In this present study, a Structured Teaching Programme on knowledge regarding homemade rehydration methods during summer was an independent variable.

DEPENDENT VARIABLE-

In this study, Knowledge of mother of school age children regarding homemade rehydration methods during summer was the dependent variables.

Demographic variables-

In this study, Age, sex, income, education, occupation, marital status were the demographic variables.

METHODOLOGY – MATERIALS AND METHODS

SOURCE OF DATA- The Data was collected in rural area of Kukraddev, Mandhna, Kanpur.

Inclusion criteria:

- Mothers of school age children who knew Hindi and English.
- Mothers of school age children were willing to participate in the study.
- Those who know about Homemade Rehydration methods.

Exclusion criteria:

- Mothers of school age children who were not willing to participate in the study.
- Mothers of school age children who were not available at the time of data collection.

RESEARCH DESIGN-

In this study Quasi Experimental Research Design was used as the research design.

SETTING OF THE STUDY-

The study has been conducted in a selected areas of Mandhana and Kukraddev, Kanpur U.P.

Population – In this study population is the mothers of school age of children.

TARGET POPULATION- The target population for the present study comprises the mothers of school age children at selected rural area of Kanpur U.P.

ACCESSIBLE POPULATION: The accessible population in this study were mothers of school age children at selected rural area of Kanpur U.P.

SAMPLE:

In this study, the sample were mothers of school age children at selected rural area of Kanpur U.P. who fulfilled the sampling criteria for the present study.

SAMPLE SIZE:

The sample size in the present study were 60 mothers of school age children.

SAMPLE TECHNIQUE:

Non-probability convenient sampling technique was used to select all mothers of school age children.

TOOL OF RESEARCH-

The tool used for the study was a structured knowledge questionnaire regarding homemade rehydration methods. The structured questionnaire consisted of two parts.

Part-1: This part was designed to collect demographic data which include variables like Age, Income, Education, Occupation, Family status, Knowledge level, Sources of knowledge.

Part -2: This part was designed to assess the studies related to homemade rehydration prevention methods from dehydration among school age children.

RESULT

SECTION-A

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**FREQUENCY AND PERCENTAGE WISE
DISTRIBUTION ACCORDING TO THEIR
DEMOGRAPHIC VARIABLES.**

The majority of mothers 28(47%) were aged between 26-28 years, 15 (25%) were between 23-25 years, 15 (25%) were between 29-32 years, 2(3%) were between 20-22 years age group. The majority of mothers of school age children 27(45%) were the 10,000-20,000, 15(25%) were the 20,000-30,000, 15(25%) were <30,000(15%) and 9(15%) were the 10,000 income. The majority of mothers 28(46.60%) were Housewife, 18(30%) are in private job, 12(20%) are in government

job and 2(3.40%) are entrepreneur. The percentage wise distribution of mothers according to family status. The majority 33(55%) were nuclear family, 9(15%) were from joint family, 14(23.4%) were broken family and 4(6.6%) were single mothers. Percentage wise distribution of mothers according to their previous knowledge. The chart shows that out of 60 mothers of school age children 100.00% were having previous knowledge and 60(0.00%) were not having previous knowledge. The majority mothers 23(38.3%) were having knowledge from health worker, 21(35%) were having from family or friends and 16(26.7%) were having knowledge from Media.

SECTION –B

Table 9 : Percentage wise distribution of mothers of school age children according to pre-test and post-test knowledge level.

(n=60)

S. No.	Knowledge level	Score	Frequency (Pre-test)	Percentage (Pre-test)	Frequency (Post-test)	Percentage (Post-test)
1.	Inadequate	1-12	57	95%	0	0.00%
2.	Moderate	13-20	03	5%	50	83.4%
3.	Adequate	21-60	00	0.00%	10	16.6%

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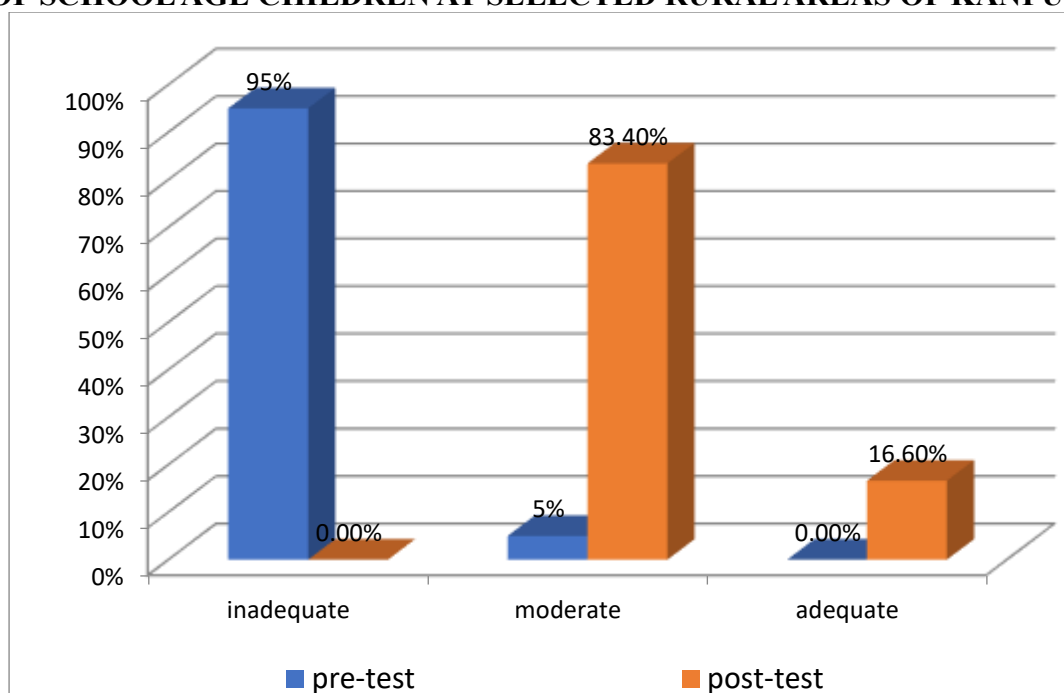


Figure no.8 Bar diagram shows the difference between pre-test and post-test knowledge score.

The above column diagram shows that in the pre-test only 0.00% had adequate knowledge regarding rehydration methods, 5% had moderate knowledge and 95% had inadequate knowledge. In the post-test 16.6% mothers achieved knowledge, 83.4% moderate knowledge and 0.00% had inadequate knowledge regarding rehydration methods.

SECTION-C

Effectiveness of Structured Teaching Programme on rehydration methods among mothers of school age children.

The Structured Teaching Programme has been developed to impart knowledge

among mothers of school age children. The effectiveness of Structured Teaching Programme was tested and found effective. The mean score before and after providing Structured Teaching Programme has shown significant difference. The mean value of pre-test was 8.066 which has been increased to 18.35 in the post-test. The paired t- test value was 23.87 in the post – test and it was significant at $P < 0.05$ level. From the above inference, it is made clear that the Structured Teaching Programme had apposite impact on knowledge among mothers of school age children. Hence H_1 (there is statistical difference between pre-test and post-test) was accepted and H_0 was rejected.

SECTION-D

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Association between the levels of pre-test levels of dehydration on with their selected demographic variables in rural areas.

Table 12: Associated levels of dehydration with their selected demographic variables.

(n=60)

S. N.	Demographic variables	Inadequ - ateknowledge- led-ge	Moderate knowledge	Adequate knowledge	Chi square(x2)	df	Table value	Significant/non -significant
1.	Age in years							
	A) 20-22	3	4	0	$\chi^2=6.7944$	6	0.091	S
	b) 23-25	10	4	0				
	c) 26-28	12	16	0				
	d) 29-32	9	2	0				
2.	Incomes							
	a) $\geq 10,000$	4	10	0	$\chi^2=1.527$	6	.02166	NS
	b)1000-200000	18	10	0				
	c) 20000-30000	9	4	0				
	d) ≤ 30000	5	1	0				
3.	Education							
	a) 10 th pass	9	10	0	$\chi^2=2.1722$	6	0.1405	NS
	b) 12th pass	17	10	0				
	c) Diploma	5	4	0				
	d) degree	4	1	0				
4.	Occupation							
	a) house wife	17	11	0	$\chi^2=4.8045$	6	0.0284	S
	b) private job	10	10	0				
	c) Government job	3	5	0				
	d) Self employed	4	0	0				
5	Type of Family							
	a) Nuclear family	20	12	0	$\chi^2=7.9469$	6	0.0048	S
	b) Joint family	4	3	0				
	c) Extended family	11	5	0				
	d) Single parent family	0	5	0				
6.	Information about Home-made Rehydration therapy							
	a) Yes	34	26	0	$\chi^2=0$	2	1.000	NS
	b) No	0	0	0				
7.	Source of information home-based rehydration therapy							
	a) Media	10	5	0	$\chi^2=0.8483$	4	0.3570	NS
	b) Health worker	15	9	0				

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Reveals that there were significant association between socio demographic variables such as is age, occupation, type of family, There calculated value of chi square was less than table value at 0.05 level of significance so there were significant association with sociodemographic variables. Hence, positive hypothesis (H₂) stating association with selected demographic variables were accepted and Null hypothesis (H₀₂) was rejected

NURSING IMPLICATION:

Nursing Implication-The investigators has drawn the following implications from the studies which are of vital concern in the field of nursing practice involving nursing education, nursing administration and nursing research.

Nursing Practice-The findings of the study could be utilized as a basis for orientation programs and in-service education of the community health nurses so that they constant awareness and clear understanding may be created regarding rehydration methods. This will increase the knowledge and improve the practices of community health nurses regarding various aspects of homemade rehydration methods like hints of mothers, main components, schedule of utility, homemade rehydration solution, visit at various areas and role of nurses that can be practiced by community health nurses.

Nursing Education-A nurse as an educator has a vital role to play in imparting knowledge regarding homemade rehydration methods among community areas mothers of school age children in order to enhance the knowledge regarding rehydration methods to exclude the prevalence of health hazards among school age children and to enhance the knowledge of mothers. The findings of the study can be used by the nurse educator to educate the student

nurses and staff nurses which will help them to provide an effective nursing care and improve the knowledge regarding homemade rehydration methods.

Nursing Administration-In order to achieve this, the nurse as an administrator should focus on the importance of knowledge regarding homemade rehydration methods among mothers of school age children and nursing care in hospitals, nursing homes, and community by planning health programmes and supervision of care at different levels. The nurse can also co-ordinate and discuss about homemade rehydration solution methods and its consequences at various forums and meetings so that health programs are organized at various levels to enhance the knowledge of homemade rehydration methods.

RECOMMENDATION :

- Similar study can be replicated on a large population in different settings.
- A comparative study can be conducted between rural and urban mothers.
- A study can be done using experimental research design.
- Along -term study can be conducted to assess retention to knowledge.

CONCLUSION

The present study was aimed at assessing the effectiveness of structured teaching programme on knowledge regarding homemade rehydration methods during summer among mothers of school age children in selected rural areas of Kanpur, U.P. In pre-test, majority of mothers had inadequate knowledge regarding homemade rehydration methods. After implementation of structured teaching programme, the post-test results revealed that mothers gained adequate knowledge. The findings showed a significant difference between the pre-test and post-test knowledge scores. Hence, the structured teaching

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programme was found to be effective. The study also revealed that there was significant association between knowledge scores and selected socio-demographic variables such as age, occupation and family type. Thus, the hypothesis H₁ (There is a significant difference between pre-test and post-test knowledge scores) was accepted, and H₂ (There is a significant association between post-test knowledge score and selected demographic variables) was accepted. This indicates that structured teaching programme is an effective method to improve the knowledge of mothers of school age children regarding homemade rehydration methods during summer.

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