

# A Pilot Study to Evaluate the Effectiveness of Structured Teaching Programme on Knowledge, Attitude & Practices towards Prevention of Acute Respiratory Tract Infection among the Mothers of Under-Five Children

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## Abstract

In any community, mothers and children constitute a priority group. They comprise approximately 70% of the population of the developing countries. In India women of the child bearing age (15-44yrs) constitute 19% and children less than 15yrs of age about 40% of the total population. The experimental study was conducted to evaluate the effectiveness of structured teaching programme on knowledge, attitude and practices regarding prevention of acute respiratory tract infection among mothers of under-five children.

The study was conducted at Hebballi agasi and Rayapur urban slums, comes under UHC, Dharwad district, Karnataka. Totally 60 mothers of under five children were selected by non-probability convenient sampling technique. The knowledge was assessed by using structured interview schedule.

The study results reveals that the percentage of gain in knowledge, attitude and practice scores was 24.59%, 29.95%, and 34.33% in experimental group and 0.7 %, 0.42%, and 2.6% in control group respectively. There was no significant association between pretest knowledge, attitude and practice and socio-demographic variables. The study concludes that structured teaching programme was effective in improving the knowledge, attitude and practice of mothers of under-five children.

**Keywords:** Mothers of under-five children; Respiratory tract infection; Structured teaching programme.

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## Introduction

The future of any family, community and nation together with its culture and traditions are its children. Their energy and hope inspires the older generation.

It is sad to learn that in our global community, almost 10.5 million children die every year i.e, 30,000 children die a day, means 21 children die in a minute of the everyday before reaching their 5th birthday due to various infections. 90% of these under-five children have died due to ARI.[1]

Acute respiratory tract infection (ARI) in

children less than five years old is the leading cause of childhood mortality in the world. WHO estimated that the annual number of ARI- related deaths in this age group was 2.1 million, accounting for about 20% of all childhood deaths. Acute Respiratory Infection is the most common cause of hospitalization and death in children living in developing countries.[2] In the developing countries out of ten, seven deaths in under 5 children are due to ARI.[3] While the magnitude of the problem of Acute Respiratory infections & its implications were not recognized until recently, major developing countries has now realized the need to focus attention on this

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problem. In our country too, ARI constituent a serious health problem. They are responsible for 20-30% of death amongst under-five years of age & mortality in this age group constitutes nearly 47% of total mortality in India. The morbidity 3-7 attacks of illness per year, due to ARI are already significant. ARI are the cause for 30-50% pediatrics outpatient departments. These figures are the results of complex interplay of socioeconomic, educational, nutritional, environmental factors and 12-35% of in patients.[4,5]

WHO has targeted to reduce global under-five mortality in 1990s from 93 per 1000 children to 15 per 1000 children by 2015.

Acute respiratory infection is the most common cause of hospitalization & death in children living in developing countries. A report by Director General of Health Services, Government of India, indicated that ATI contributes towards about one forth to one third of all under-five deaths in India and stands at 52<sup>nd</sup> rank in the global scenario of under-five mortality in the world.[6]

Lack of appropriate monitoring in control programme has caused death of about 20 to 30 % of its population in Pakistan. Most of the deaths in children of under-five were caused by pneumonia and bronchiolitis.[2]

Pneumonia contributes a major portion of under-five deaths in the global scenario and this mortality is mainly due to inability of mother's knowledge to distinguish pneumonia with other respiratory Infections. Health education on prevention of acute respiratory tract infection helps the mothers to bridge the identified gap of knowledge, attitude and practices towards ARI and in turn reduces the under-five mortality and morbidity.[7] Health education can change health care seeking behaviours and attitudes of parents and other family members to care other family members to take care during acute respiratory infections.[8]

The nurses and allied health care professionals plays an important role to bring global awareness to prevent acute respiratory tract infection among mothers of under-five

by assessing their existing child rearing practices towards prevention of ARI.

## Materials and Methods

The present experimental study was carried out among 60 mothers of under five children who belong to Hebballi, Agasi and Rayapur urban slums, comes under Urban Health Centre, Dharwad district selected through convenient sampling technique and divided in experimental and control group respectively. Evaluative approach was considered the appropriate for the present study. The Independent variable is Structured Teaching Programme and Dependent variables are knowledge, attitude and practice of mothers of under-five children. The data was collected through Structured Interview Schedule to assess the knowledge, attitude and practices regarding prevention of acute respiratory tract infection among the mothers of under-five children. The collected data was coded and entered into statistical package for the social sciences (SPSS). The interpretation of the collected data was done by using appropriate statistical methods like descriptive and inferential statistics.

## Results

Major findings of the study were as follows:

### *The Findings Related to Socio-Demographic Variables of Subjects*

Majority of the subjects 13 (43.33%) belonged to age group 26 to 30 years in both control and experimental group. Majority of the subjects 15 (50%) had only one child in control group and majority of subjects 13 (43.33%) had single child in experimental group. Majority of the subjects 12 (40%) belonged to the extended and nuclear family in control group and maximum number 15 (50%) belonged to the nuclear family in experimental group. Majority of subjects 26 (86.67%) were house wife's in control group

and maximum number 18 (60%) were house wife's in experimental group. Majority of subjects 7 (23.33%) had income between Rs. 3001 to 5000 in control group and maximum number 11 (36.67%) had income less than Rs. 1500 in experimental group. Majority of the subjects 9 (30%) were graduates in control group and majority of subjects 8 (26.67%) had PUC level education in experimental group. Majority of the subjects 19 (63.33%) belonged to the Hindu religion in control group and maximum number 15 (50%) belonged to the Hindu religion in experimental group. Majority of subjects 22 (73.33%) and 27 (90%) were not exposed to any health education programme in control and experimental group respectively.

1. The findings related to Pre-test and post test percentage of knowledge, attitude and practice score of subjects in different items of Acute respiratory tract infection.

Table 1 reveals that the percentage of gain in knowledge, attitude and practice scores was 24.59%, 29.95%, and 34.33% in experimental group and 0.7 %, 0.42%, and 2.6% in control group respectively.

Table 2 reveals that in pre-test majority of subjects 19 (63.33%) had average knowledge; 4 (13.33%) had good knowledge and 07 (23.33%) had poor knowledge, and in post test 21(70%) had good knowledge, 09 (30%) had average knowledge and none of them had poor knowledge in the experimental group. Whereas in control group majority of subjects 16 (53.33%) had average knowledge, 08 (26.67%) had poor knowledge and 6 (20%) had good knowledge in pre-test and in the post-test majority of subjects 18 (60%) had average knowledge and 6 (20%) had good knowledge and 6 (20%) had poor knowledge.

Table 3 reveals that in pre-test majority of subjects 24 (80%) had favourable attitude; 4 (13.33%) had positive attitude and 02 (6.67%) had negative attitude, and in post test 16 (53.33%) had positive attitude, 14 (46.67%) had favorable attitude and none of them had negative attitude in experimental group. Whereas in control group majority of subjects 15 (50%) had favourable attitude, 12 (40%) had negative attitude and 3 (10%) had positive attitude in the pre-test and in the post-test majority of subjects 17 (56.67%) had

**Table 1: Pre-Test and Post Test Percentage of Knowledge, Attitude and Practice Score of Subjects in Different Items of Acute Respiratory Tract Infection**

$$n_1 + n_2 = 60$$

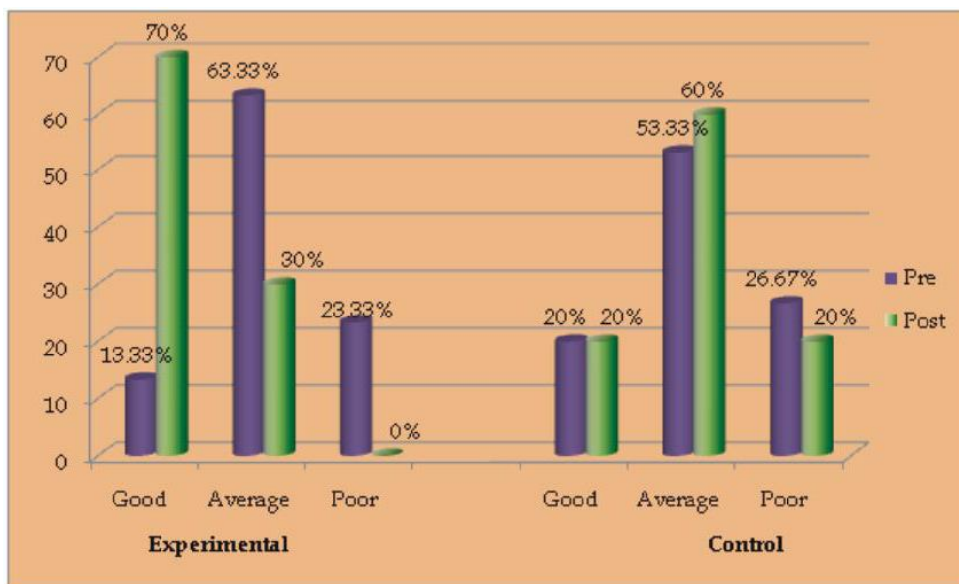
Items	Total	Mean % of scores of subjects					
	Score	Experimental Group		Control Group		Exp. Gp.	Cntl. Gp.
		Pre test (x)	Post test (y)	Pre test (x)	Post test (y)	Gain in knowledge	Gain in knowledge
						(y-x)	(y-x)
Knowledge	720	47.63	72.22	47.36	48.06	24.59	0.7
Attitude	3300	42.78	72.73	40.82	41.24	29.95	0.42
Practice	1500	45.07	79.4	44.93	47.53	34.33	2.6

**Table 2: Frequency and Percentage Distribution of Knowledge Score of Subjects Regarding Acute Respiratory Tract Infection**

$$n_1 + n_2 = 60$$

Knowledge Scores	Experimental Group				Control Group			
	Pre test		Post test		Pre test		Post test	
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
Good	4	13.33	21	70	6	20	6	20
Average	19	63.33	9	30	16	53.33	18	60
Poor	7	23.33	0	0	8	26.67	6	20

**Graph 1: Bar Graph Showing Percentage Distribution of Knowledge Scores of Subjects Regarding Acute Respiratory Tract Infection in Both Experimental and Control Group**

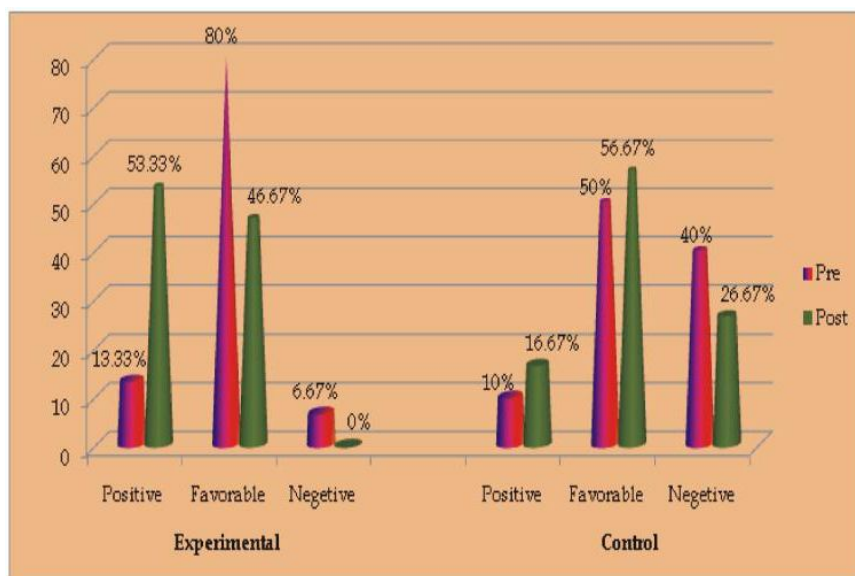


**Table 3: Frequency and Percentage Distribution of Attitude Score of Subjects Regarding Acute Respiratory Tract Infection**

$n_1 + n_2 = 60$

Attitude Scores	Experimental				Control Group			
	Pre test		Post test		Pre test		Post test	
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
Positive	4	13.3	16	53.33	3	10	5	16.67
Favourable	24	80	14	46.67	15	50	17	56.67
Negative	2	6.67	0	0	12	40	8	26.67

**Graph 2: Bar Graph Showing Percentage Distribution of Attitude Scores of Subjects Regarding Acute Respiratory Tract Infection in Both Experimental and Control Group**

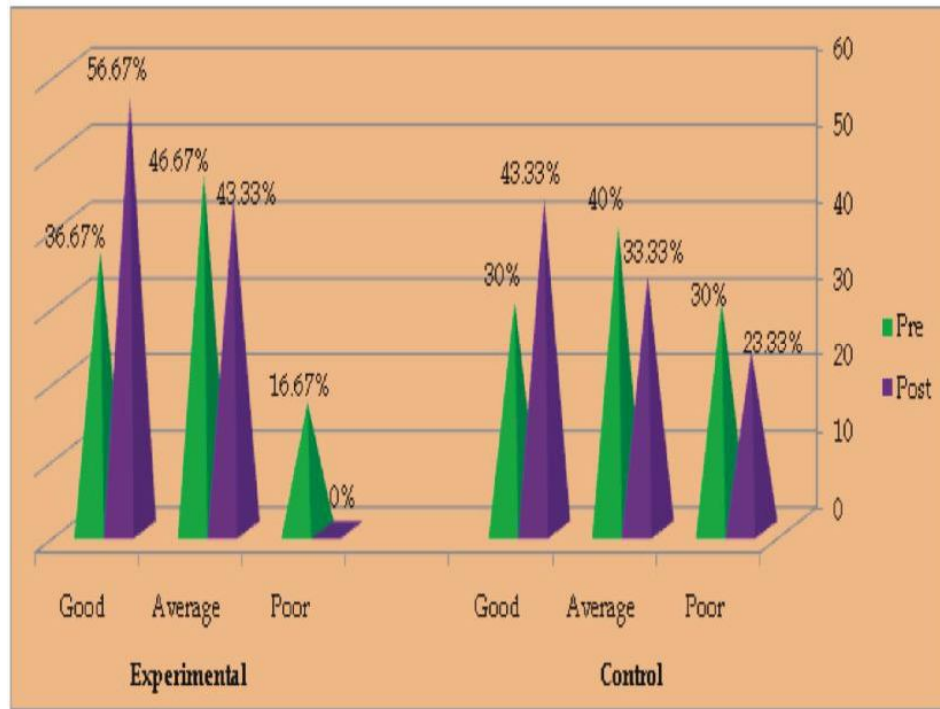


**Table 4: Frequency and Percentage Distribution of Practice Score of Subjects Regarding Acute Respiratory Tract Infection**

$n_1+n_2 = 60$

Practice Scores	Experimental Group				Control Group			
	Pre test		Post test		Pre test		Post test	
	(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)
Good	11	36.67	17	56.67	9	30	13	43.33
Average	14	46.67	13	43.33	12	40	10	33.33
Poor	5	16.67	0	0	9	30	7	23.33

**Graph 3: Bar Graph Showing Percentage Distribution of Practice Score of Subjects Regarding Acute Respiratory Tract Infection in Both Experimental and Control Group**



**Table 5: Mean Difference ( $\bar{d}$ ), Standard Error of Difference (SED) and Paired 't' Values of Knowledge Scores of Subjects of Experimental Group**

$n_1=30$

Domains	Mean difference (d)	Standard Error of difference (SED)	Paired 't' values	
			Calculated	Tabulated
Knowledge	5.93	0.3	107.57	1.96
Attitude	32.93	5.69	31.64	1.96
Practice	17.17	3.86	244.32	1.96

favourable attitude and 8 (26.67%) had negative attitude and 5 (16.67%) had positive attitude.

Table 4 reveals that in the pre-test majority of subjects 14 (46.67%) had average practice, 11 (36.67%) had good practice, and 05 (16.67%) had poor practice, and in the post test 17(56.67%) had good practice, 13 (43.3%) had average practice and none of them had poor practice in experimental group. Whereas in control group majority of subjects 12 (40%) had average practice, 09 (30%) had poor practice, and 9 (30%) had good practice in the pre-test and in the post-test majority of subjects 13 (43.33%) had good practice, and 10(33.33%) had average practice and 07(23.33%) had poor practice scores.

#### *Findings Related to Evaluation of Effectiveness of STP*

$H_1$ : Mothers of under-five children will demonstrate significantly higher mean post test knowledge, attitude and practice scores as compared to their mean pre-test scores at 0.05 level of significance in the experimental group as compared to control group.

Table 5 depicts that the calculated paired 't' test values in knowledge, attitude and practice was greater than the tabulated value i.e 107.57, 31.64 and 244.34 > 1.960 in the experimental group. Hence  $H_1$  is accepted. Hence structured teaching programme was effective in improving knowledge, attitude and practice of mothers of under five children.

#### **Conclusion**

Based on the findings of the study, the following conclusion was drawn:

Overall pre-test knowledge, attitude and practice was average both in experimental and control group, which suggested the need for structured teaching programme for mothers of under five children regarding acute

respiratory infections. Post test results showed that there is a significant improvement in the level of knowledge, attitude and practice in experimental group but no significant improvement in control group. Hence, it can be concluded that structured teaching programme was an effective method of teaching the mothers of under five children regarding prevention of acute respiratory tract infection. Pretest results revealed that the sociodemographic variables didn't have statistical association with knowledge, attitude and practice of mothers of under five children in both in experimental and control group respectively.

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