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A Study to Assess the Effectiveness of Planned Teaching Program on the Knowledge and Practice of Mothers Regarding the Prevention of Acute Respiratory Infections in Under 5-Year Children in Selected Urban Area Dehradun

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ABSTRACT

Materials &Methods: pre-experimental (one group pre-test post-test) research design was used. This study was conducted in urban area of Dehradun (Patel Nagar). The present study sample size was 60 samples of mothers of under five children. A Non Probability; Purposive sampling technique was used to select the samples. A Structured Interview Schedule was used to assess the knowledge. The data obtained was tabulated and analyzed by using descriptive and inferential statistics in terms of objectives framed for the study. Results: The mean, SD, mean difference, and "t" value on the pretest and overall posttest on knowledge among 2nd -year female nursing mothers. The obtained overall post-test means of 21.35 (SD=11.75) was greater than the pretest means of 16.05 (SD=13.93) The obtained mean difference was 5.3 and the "t" value t=2.126 was significant. Conclusion: Overall pre-test knowledge, attitude and practice was average both in experimental and control group, which suggests the need for Structured Teaching Programme for mothers of under-five children regarding Acute Respiratory Infections. Post test results showed that there was a significant improvement in the level of knowledge, attitude and practice in experimental group but there was no significant improvement in control group. Hence, it was concluded that Structured Teaching Programme was an effective method of teaching the mothers of under-five towards prevention of Acute Respiratory Tract Infection.

KEYWORDS: *Acute Respiratory Tract Infections; Mothers of Under-Five Children; Knowledge; Structured Teaching Programme*

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INTRODUCTION

Infections of the upper respiratory tract are the leading cause of disease and mortality among children worldwide. Acute respiratory infections were the cause of up to 20% to 40% of all admissions and 12% to 35% of patients' outpatient attendance in India in 2001. All throughout the world, children frequently get colds and coughs, but in developing nations, these symptoms are frequently linked to potentially fatal pneumonia, which is the primary cause of death for children under five.

More than 10 million children pass away before turning five every year. More than 10 million children die each year from a combination of these five diseases—pneumonia, diarrhea, malaria, measles, and malnutrition-which account for seven out of ten of these deaths. The estimated percentage of mortality for which undernutrition is the primary cause is comparable for pneumonia (52%), measles (45%), malaria (57%), diarrhea (61%), and pneumonia (52%). Under five mortality rate (UMR) is increased by this issue, particularly in South-East Asia.

Acute respiratory infection (ARI) has a significant financial impact and is regarded as one of the main causes of morbidity and mortality in children. It is the primary cause of children's use of health services. Controlling it is extremely important for public health, particularly in developing nations. Upper and Lower Respiratory Infections (URI and LRI) are the

components of it. Common cold symptoms, tonsillitis, sinusitis, and ear infections are the typical presentations of upper respiratory infections (URIs), whereas elevated respiratory rates are the hallmark signs of lower respiratory infections (LRIs).

Researchers attempted to get baseline data in order to better understand the scope of the issue since awareness regarding the knowledge, attitudes, and practices of mothers in acute respiratory tract infections (ARIs) needed to be evaluated in developing nations. That will broaden the body of information already available on ARI. The study's goal was to evaluate mothers' attitudes, knowledge, and practices about acute respiratory tract infections (ARIs) in kids under five.

Common viruses that can cause respiratory infections include:

- influenza virus
- respiratory syncytial virus (RSV)
- rhinovirus
- parainfluenza virus
- adenovirus
- human metapneumovirus
- enterovirus
- SARS-CoV-2, the virus that causes COVID-19.

Common symptoms of acute respiratory infections can include:

- coughing or sneezing
- a sore throat
- a blocked or runny nose
- fever
- facial or ear pain
- red and/or watery eyes
- muscle or body aches
- tiredness
- difficulty breathing
- feeling generally unwell
- vomiting
- diarrhoea

NEED FOR THE STUDY

Infectious illnesses easily prey on young children. The reason the under-five age group is the most significant in all civilizations is not because they make up roughly 30% of the population overall, but rather because there is a growing understanding that the factors that determine infectious disease are established within this age range.

In India, Overall prevalence of ARI was observed to be 59.1%, with prevalence in urban and rural areas being 63.7% and 53.7%, respectively. Bivariate analysis indicated that overcrowding, place of residence, and mother's education were significantly associated with ARI.

OBJECTIVES:

- To assess the level of knowledge regarding prevention of acute respiratory infection among the mothers of under 5-year children
- To assess the level of Practice regarding prevention of acute respiratory infection among the mothers of under 5-year children
- To evaluate the planned teaching program on prevention of acute respiratory infection among mothers of under 5-year children.
- To find out the association of pretest knowledge score regarding acute respiratory infection with their demographic variables.
- To find out the association of pretest Practice score regarding acute respiratory infection with their demographic variables.

ASSUMPTIONS:

- Mother of under 5year children may not have adequate knowledge and practice regarding prevention of acute respiratory infection.
- Mother of under five-year children may have improvement in their knowledge and practice regarding prevention of acute respiratory infections by attending Planned teaching program.
- Multi mothers of under five-year children have more knowledge and practice rather than primipara mothers of under five-year children.

HYPOTHESES:

- Mothers of under-five children will demonstrate significantly higher mean posttest knowledge and practice scores as compared to their mean pretest scores at 0.05 level of significance.
- There will be significant association between the level of pre-test knowledge and practice scores among mothers of under-five children and their selected socio-demographic variables at 0.05 level of significance.

OPERATIONAL DEFINITIONS:

Effectiveness: In this study it refers to the significant reduction in the level of acute respiratory infections among mothers of under-5 children as determined by the differences between pretest and posttest knowledge scores as measured by Planned questionnaire.

Knowledge: Information and awareness acquired through experience and education. This study refers to the level of knowledge of prevention of acute respiratory infections among mothers of under five children which is measured by a Planned interview schedule and its scores

Practice: In this study, practice we mean the application of rules and knowledge that leads to action. Good practice is an art that is linked to the progress of knowledge and technology and is executed in an ethical manner. Of under-five mothers about Acute Respiratory Tract Infection, its treatment and its prevention as measured by observational checklist.

Acute Respiratory Infections: In this study it refers a dangerous infection that impairs breathing normally. Usually, it starts as a viral infection of the lungs, trachea, or nose. The infection has the potential to spread throughout the respiratory system if left untreated.

Under-5 Children: In this study it refers the first five years of life from the foundations of the child's physical and mental growth and development. The mortality and morbidity are high among these age group.

Planned teaching Programme: In this study it refers an educational program designed to impart particular knowledge and practical education through interrelated studies and supervised training.

Urban areas: Urban areas are places where people live in great numbers. Towns and cities contain urban areas. The primary location of employment is frequently an urban region. The majority of structures are human-made in urban settings.

DELIMITATION

- The setting of the study (selected urban areas) is limited to the study.
- The sample size is limited to 60 subjects.
- The period of data collection is limited to 6 weeks.

CONCEPTUAL FRAMEWORK

The investigator adopted Modified Imogene King's Goal Attainment Theory (1981) based on the personal & interpersonal systems including interaction, perception, judgment, Communication and transaction. The investigator adopted goal attainment as a basic theory for conceptual framework, which is aimed at effectiveness of planned teaching programme on prevention of acute respiratory infections.

RESEARCH METHODOLOGY

RESEARCH APPROACH: In the present study quantitative research approach was used.

RESEARCH DESIGN: In the present study pre-experimental (one group pre-test post-test) research design was used.

SETTING OF THE STUDY: This study was conducted in urban area of Dehradun (Patel Nagar)

SAMPLE/POPULATION: In the present study sample are mothers of under five children who has fulfilled the inclusion criteria.

SAMPLE SIZE: In the present study sample size was 60 samples of mothers of under five children.

SAMPLING TECHNIQUES: In the present study Non probability sampling method was done by using purposive sampling.

Independent variable: In the present study independent variable was Planned teaching program for mothers of under five children regarding prevention of acute respiratory tract infection

Dependent variable:. In the present study dependent variable was Knowledge and practice among mothers of under five children regarding prevention of acute respiratory tract infection.

Description of the Tool

The tool for data collection had three sections – part 1,2 and 3

Part 1: Socio – demographic data

This part include age, educational status, occupational status, place of resident, family income, type of family, number of living children, immunization status and family history of respiratory disease.

Part 2: Planned Questionnaire

This part consists of 30 items related to knowledge about anatomy & physiology, causes, sign & symptoms, mode of transmission, clinical features, home management and preventive measures of respiratory tract infection in children.

Scoring of the items

There were 30 items. Each item has four options with one accurate answer. The score for correct response to each item was one and incorrect response was zero, thus for 30 items maximum obtainable score was 30 and minimum was zero.

$$\text{Percentage} = \frac{\text{Obtained Score} \times 100}{\text{Total Score}}$$

Score	Percentage	Level of Knowledge
0-15	0-50%	Inadequate Knowledge
16-23	51-75%	Moderate Knowledge
24-30	76-100%	Adequate Knowledge

Part III – Items on the Practice based Knowledge 25 observational statements. for yes response to each item was one and no response was zero, thus for 25 items maximum obtainable score was 25 and minimum was zero.

Score	Percentage	Level of Practice
0-15	0-50%	Inadequate Practice
16-23	51-75%	Moderate Practice
24-30	76-100%	Adequate Practice

CONTENT VALIDITY: In the present study Content validity of the tool was determined by expert opinion.

RELIABILITY: The reliability of the knowledge was found 0.83 and practice was 0.80, hence the tool was found more reliable.

Inferential statistics: Inferential statistics include paired 't'test and chi square for the assessment of knowledge of mothers and to associate the socio demographic variables is planned.

PILOT STUDY

Pilot study is a small-scale study version done in preparation for a study. -Polit & Hungler. The purpose of the Pilot Study was:

- To evaluate the tool/instrument developed.
- To find out the feasibility of conducting the final study.
- To determine the method of statistical analysis.

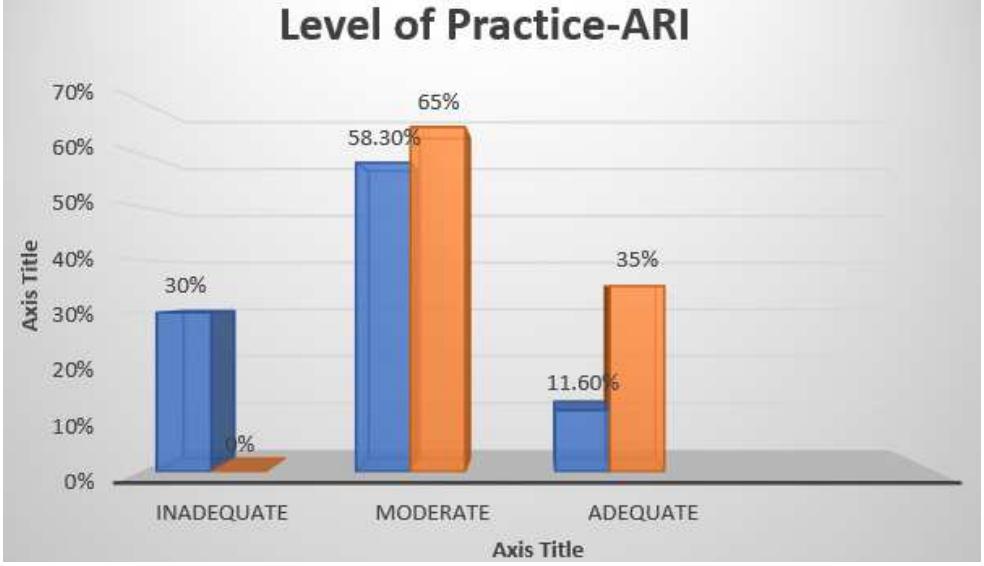
In this study pilot study was conducted in urban areas of Dehradun. The study was carried out after obtaining the permission from Medical Officer CHC and the consent from the mothers of under five children. Six (6) samples were selected for the study. The pretest was conducted for group of mothers of under five children by using Planned Interview Schedule, followed by Planned Teaching Program as an intervention for the mothers of under five children. After 7 days the post-test was conducted by using the same Planned Interview Schedule. The findings of the pilot study revealed that Planned Teaching Program was effective in improving the knowledge of mothers of under five children regarding prevention of acute Respiratory Tract Infection. The pilot study confirmed that the final study is feasible.

DATA ANALYSIS AND INTERPRETATION

Assessment of pre-test and post-test levels of knowledge regarding prevention of acute respiratory infection among the mothers of under 5-year children N=60

Level of Knowledge	Pre-Test		Post-Test	
	Frequency	%	Frequency	%
Inadequate Knowledge	18	30%	0	0%
Moderate Knowledge	34	56.6%	44	73.4%
Adequate Knowledge	8	13.4%	16	26.6%

Assessment of pre-test and post-test levels of Practice regarding prevention of acute respiratory infection among the mothers of under 5-year children N=60



Determine the effectiveness of Planned teaching programme on knowledge regarding prevention of acute respiratory infection among the mothers of under 5-year children

N=60

KNOWLEDGESCORE ON BSE	MEAN	STANDARD DEVIATION(SD)	MEAN DIFFERENCE	T value	P (>0.05)
PRE-TEST	16.05	13.93	5.3	2.126	.0210 S
POST-TEST	21.35	11.75			

Determine the effectiveness of Planned teaching programme on Practice regarding prevention of acute respiratory infection among the mothers of under 5-year children

N=60

KNOWLEDGESCORE ON BSE	MEAN	STANDARD DEVIATION(SD)	MEAN DIFFERENCE	T value	P (>0.05)
PRE-TEST	13.63	11.62	4.6	4.613	0.00003 S
POST-TEST	18.23	9.58			

DISCUSSION

Findings related to assessment of pre-test levels of knowledge regarding prevention of acute respiratory infection.

The knowledge regarding prevention of acute respiratory infection of 60 mothers in pre-test 8(13.3%) of the mothers had adequate knowledge, 34 (56.6%) of Mothers had moderately adequate knowledge, and 18 (30%) of mothers had inadequate knowledge.

Findings related to assessment of pre-test levels of Practice regarding prevention of acute respiratory infection

The Practice regarding the prevention of acute respiratory tract infection of 60 mothers in pre-test 18(30%) of the mothers had adequate Practice, 35 (58.3%) of mothers had moderately adequate Practice, and 7 (11.6%) of mothers had inadequate Practice

Findings related to determine the effectiveness of a Planned teaching program on knowledge and practice regarding prevention of acute respiratory infection among the mothers of under 5-year children

The post-test 16 (26.6%) of the mothers had adequate knowledge, and 44 (73.3%) of the mothers had moderately adequate knowledge. The mean, SD, mean difference, and "t" value on the pretest and overall posttest on knowledge among 2nd -year female nursing mothers. The obtained overall post-test means of 21.35 (SD=11.75) was greater than the pretest means of 16.05 (SD=13.93) The obtained mean difference was 5.3 and the "t" value t=2.126 was significant.

The post-test 21 (35%) of the mothers had adequate Practice, and 39(65%) of the mothers had moderately adequate Practice. The mean, SD, mean difference, and "t" value on the pretest and overall posttest on Practice among mothers of under-five. The obtained overall post-test means of 18.23 (SD=9.58) was greater than the pretest means of 13.63 (SD=11.62) The obtained mean difference was 4.6 and the "t" value t=4.613 was significant. Hence **H_1 was accepted.**

Findings related to association between pre-test knowledge and practice scores regarding prevention of acute respiratory infection and selected demographic variables.

The demographic variables age, religion, education, type of family, monthly income, no. of children, occupation Health education related to ARI and Type of mother had no association with knowledge regarding the prevention acute respiratory Infection.

The demographic variables age, religion, education, type of family, monthly income, no. of children, occupation Health education related to ARI and Type of mother had no association with Practice regarding the prevention acute respiratory Infection.

CONCLUSION: The conclusion drawn on the basis of the findings of the study includes:

1. The knowledge regarding prevention of acute respiratory infection of 60 mothers in pre-test 8(13.3%) of the mothers had adequate knowledge, 34 (56.6%) of Mothers had moderately adequate knowledge, and 18 (30%) of mothers had inadequate knowledge.
2. The Practice regarding the prevention of acute respiratory tract infection of 60 mothers in pre-test 18(30%) of the mothers had adequate Practice, 35 (58.3%) of mothers had moderately adequate Practice, and 7 (11.6%) of mothers had inadequate Practice
3. The post-test 16 (26.6%) of the mothers had adequate knowledge, and 44 (73.3%) of the mothers had moderately adequate knowledge. The mean, SD, mean difference, and "t" value on the pretest and overall posttest on knowledge among 2nd -year female nursing mothers. The obtained overall post-test means of 21.35 (SD=11.75) was greater than the pretest means of 16.05 (SD=13.93) The obtained mean difference was 5.3 and the "t" value t=2.126 was significant.
4. The post-test 21 (35%) of the mothers had adequate Practice, and 39(65%) of the mothers had moderately adequate Practice. The mean, SD, mean difference, and "t" value on the pretest and overall posttest on Practice among mothers of under-five. The obtained overall post-test means

of 18.23 (SD=9.58) was greater than the pretest means of 13.63 (SD=11.62) The obtained mean difference was 4.6 and the "t" value t=4.613 was significant.

5. The demographic variables age, religion, education, type of family, monthly income, no. of children, occupation Health education related to ARI and Type of mother had no association with knowledge regarding the prevention acute respiratory Infection.
6. The demographic variables age, religion, education, type of family, monthly income, no. of children, occupation Health education related to ARI and Type of mother had no association with Practice regarding the prevention acute respiratory Infection.