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To assess the effectiveness of intervention program on knowledge regarding acute respiratory tract infections in children among mothers of under five children at selected rural areas of Kalaburagi

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Abstract

The progress of a nation can be ascertained by assessing the health condition of its children. Children are the primary recipients of health care services. Approximately 35% to 40% of the whole population in India consists of individuals who are below the age of 15.

Objective: To evaluate the effectiveness of interventional program on knowledge regarding acute respiratory tract infections in children among mothers of under five children at selected rural areas of Kalaburagi.

Methodology: A evaluative approach with pre experimental one group pre test post test design was adopted for the study. The samples from the selected hospital were selected using convenient sampling technique. The samples consisted 50 mothers of under five children. The tools used for data collection was structured knowledge questionnaire.

Data collection procedure: Data was collected from 01.03.2024 to 31.03.2024 after obtaining administrative permission from selected hospital, Kalaburagi.

Results: With regard to pre test level of knowledge it shows that, maximum 31(62%) respondents were having average knowledge, 14(28%) respondents were having poor knowledge and remaining 5(10%) of respondents were having good knowledge. During post-test each 23(46%) of respondents were having good and average knowledge and remaining 4(8%) of respondents were had poor knowledge. The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ($p < 0.05$) with a paired 't' value of 17.37. There exists a statistical significance in the difference of knowledge score indicating the positive impact of interventional program. Hence, the research hypothesis H_1 is supported.

Conclusion: The findings revealed that, Knowledge of mothers of under five regarding acute respiratory tract infections in children was moderate and favourable. Since a very few studies have been conducted regarding this topic in India, so the nurse researcher can take further studies on the same topic.

Keywords: Acute respiratory tract infections, mothers of under five children, knowledge, rural areas, interventional program

Introduction

Young individuals are the prospective leaders and successors of any country. It is crucial to safeguard and enhance the well-being of the majority of children in India who reside in rural areas. This can be achieved by taking uttermost precautions to ensure their health and protect them from potential dangers. Historically, the responsibility of caring for children has primarily fallen on mothers, regardless of their level of education, money, or social class.

The well-being of a child is crucial in order to adapt and thrive in a dynamic environment. A child is a distinct individual, distinct from being a scaled-down version of an adult or a small adult. The period of childhood is crucial due to the process of socialisation, in which attitudes, customs, and behaviours are transmitted through the influence of family and community.

The progress of a nation can be ascertained by assessing the health condition of its children. Children are the primary recipients of health care services. Approximately 35% to 40% of the whole population in India consists of individuals who are below the age of 15. This group is classified as a high-risk group due to their susceptibility to a range of health issues. Children require constant attention in order to ensure their survival. A significant majority of

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these children will be younger than five years old, and over 65% of them will have experienced some form of trauma. The majority Frequently, the paediatric department is incorporated inside the general emergency department, equipped with the necessary resources and supplies to assess and treat children. However, there is no dedicated area or staff exclusively allocated to this particular treatment [3].

Acute Respiratory Infection (ARI) is a significant contributor to illness and death in children, and it also results in substantial financial burden. It is the primary factor that leads to the need of healthcare services for children. The management of its control is a significant public health issue, particularly in underdeveloped nations. It consists of Upper Respiratory Infection (URI) and Lower Respiratory Infection (LRI). The primary manifestations of an upper respiratory infection include rhinitis (common cold), tonsillitis, sinusitis, and ear infection. On the other hand, the main symptom of a lower respiratory infection is pneumonia, which is characterized by an elevated respiratory rate.

On a global scale, the average annual incidence of acute respiratory infections (ARI) in children ranges from 6 to 8 episodes per year. In Pakistan, a survey conducted in 2011 revealed that the prevalence of Acute Respiratory Infections (ARI) is 16%. The survey also indicated that Acute Respiratory Infection (ARI) had a higher incidence rate in metropolitan parts of the country. Parents often give their children over-the-counter (OTC) medications to alleviate the discomfort and anguish caused by acute respiratory infections (ARIs). There is a paucity of evidence to support the effectiveness of these medications. Furthermore, these products may pose a potential danger and lack the approval of both the Food and Drug Administration (FDA) and the American Academy of Pediatrics. Under such circumstances, it is primarily advised to use a safe home cure and provide appropriate care.

An auspicious indication of our era is the growing awareness among mothers regarding the needs and entitlements of children, as the mother assumes the role of the child's primary educator. The mother plays a crucial role in the management of a child with cough, cold, and pneumonia, as these conditions do not typically necessitate hospitalization and can be both prevented and cured.

Objectives

1. To assess the knowledge regarding acute respiratory tract infections in children among mothers of under five children
2. To evaluate the effectiveness of intervention program on knowledge regarding acute respiratory tract infections in children among the mothers of under five

children

3. To find the association between the pre-test knowledge scores of mothers of under five children regarding acute respiratory tract infections in children and their selected demographic variables.

Hypothesis

- **H₁:** The mean post test knowledge scores of mothers of under five children regarding acute respiratory tract infections in children, who have undergone the intervention program, will be significantly higher than their mean pre-test knowledge scores at 0.05 level of significance.
- **H₂:** The levels of knowledge of mothers of under five children regarding acute respiratory tract infections in children will be significantly associated with their selected personal variables at 0.05 level of significance.

Methodology

- **Research Approach:** Evaluative research approach.
- **Research Design:** Pre Experimental one group pre-test post- test design.
- **Sampling technique:** Non-Probability; Convenient Sampling Technique.
- **Sample size:** 50
- **Setting of study:** Selected rural areas, Kalaburagi, Karnataka.
- **Population:** Mothers of under five children.

Tool used for data collection

Section I: Demographic data: It consists of 8 items related to demographic data of participants

Section II: Structured knowledge questionnaire: This section consists of 25 structured multiple choice items with the multiple options for each item to assess the knowledge of mothers of under five children regarding acute respiratory tract infections in children.

Procedure of data collection

Data collection procedure for main study began from 01.03.2024 to 30.04.2024, after obtaining permission from concerned authority of selected rural areas, Kalaburagi and consent from subjects the pre-test was conducted to 100 participants using structured knowledge scale; approximately 45 minutes were spent for collecting data.

Results

Section I: Demographic Profile

Table 1: Frequency & Percentage Distribution of Respondents by socio demographic variables, n=50

Sl. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	Age in years		
	18-25	13	26
	26-30	16	32
	31-35	16	32
	36-40	5	10
2.	Education		
	No formal education	03	06
	Primary school	22	44
	High school	19	38
	PUC and above	06	12

3.	Number of children		
	One	15	30
	Two	26	52
	Three	08	16
	More than Three	01	02
4.	Religion		
	Hindu	11	22
	Christian	12	24
	Muslim	23	46
	Other	04	08
5.	Type of family		
	Nuclear	29	58
	a. Joint	21	42
6.	Previous knowledge regarding ARI		
	Yes	23	46
	No	27	54
8.	Sources of information		
	News paper	15	30
	Family and friends	19	38
	Social media	10	20
	Other	6	12

Section II
Distribution Respondent’s Scores according To Their Level of knowledge during pretest and post test

Area wise and total distribution of pre test and post test knowledge scores of respondents.

Table 2: Mean, median, mode, standard deviation and range of pre test and post test knowledge scores of Respondents, n = 50

Area of Knowledge	Number of Items	Mean	Median	Mode	Standard deviation	Range
Pre test	25	10.64	10	12	3.44	4-18
Post test	25	14.86	15	16	3.64	5-21

Table 2 reveals pre test knowledge score of respondents regarding acute respiratory tract infections in children, it shows that; The pretest knowledge scores respondents mean was 10.64, median was 10, mode was 12 with standard deviation 3.44 and score range was 4-18. The post test knowledge scores respondents mean was 14.86, median was

15, mode was 16 with standard deviation 3.64 and score range was 5-21.

Distribution Respondent’s Pretest and Post Test Scores according To Their Level of Knowledge

Table 3: Frequency and Percentage distribution of respondents according to level of Knowledge regarding acute respiratory tract infections in children, n=50

Level of Knowledge					
Pre test			Post test		
Poor f(%)	Average f(%)	Good f (%)	Poor f(%)	Average f(%)	Good f (%)
14(28%)	31 (62%)	5(10%)	4(8%)	23 (46%)	23 (46%)

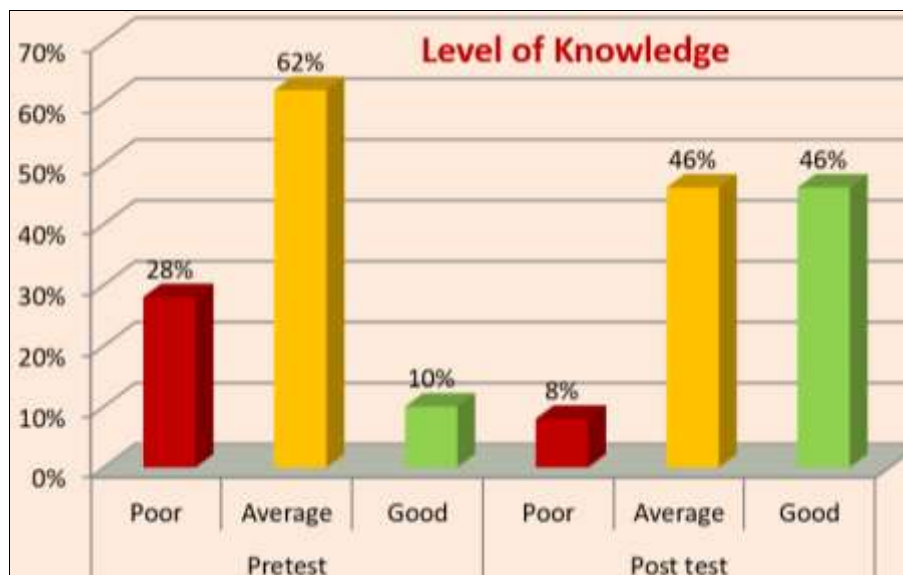


Fig 1: Pre test and post test level of knowledge

The data presented in the Table 3 depicts the respondent's level of knowledge during pretest and post test regarding acute respiratory tract infections in children; With regard to pre test level of knowledge it shows that, maximum 31(62%) respondents were having average knowledge, 14(28%) respondents were having poor knowledge and remaining 5(10%) of respondents were having good knowledge. During post-test each 23(46%) of respondents were having good and average knowledge and remaining 4(8%) of respondents were had poor knowledge.

Effectiveness of Interventional Program

Table 4: Mean, standard deviation, standard error of difference and 't' value of pre-test and post-test knowledge scores, N=50

Area	Aspects	Mean	Sd	SEMD	Paired t Test
Knowledge	Pre-test	10.64	3.44	0.24	17.37*
	Post-test	14.86	3.64		

* Significant at 5% level

Table 4 indicates the overall mean knowledge scores of pre-test and post-test scores.

With respect to knowledge scores of participants, the findings reveal that the post-test mean knowledge scores was found higher [mean=14.86, SD of 3.64] when compared with pre-test mean knowledge score value which was 10.64 with SD of 3.44. The statistical paired 't' implies that the difference in the pretest and post-test value was found statistically significant at 5% level ($P < 0.05$) with a paired 't' value of 17.37. There exists a statistical significance in the difference of knowledge score indicating the positive impact of interventional program.

Association between Level of Knowledge and Selected Socio Demographic Variables

The computed Chi-square value for association between level of knowledge of mothers of under five children regarding acute respiratory tract infections in children and their selected demographic variables is not found to be statistically significant at 0.05 levels for any of the selected socio demographic variables. Therefore, the findings do not support the hypothesis H_2 , inferring that mothers of under five children level of knowledge regarding acute respiratory tract infections in children is not significantly associated with their selected socio demographic variables.

Conclusion

The conclusion brought on the basis of the finding of the study includes:

- The overall pretest knowledge of mothers of under five children regarding acute respiratory tract infections among children was average.
- There was a need for teaching program regarding acute respiratory tract infections among children among mothers of under five children.
- Post test results showed significant improvement in the level of knowledge regarding acute respiratory tract infections among children. Thus, it can be concluded that interventional program was effective to increase and update their knowledge on acute respiratory tract infections among children.
- The results revealed that there was association found between pre-test knowledge scores and education, religion, previous knowledge and sources of

knowledge.

Conflict of Interest

Not available

Financial Support

Not available

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