

A study to assess the knowledge and practice regarding management of acute respiratory infection among mother of children in pediatric ward in Sree Balaji Medical college and hospital, Chennai

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ABSTRACT:

Acute respiratory infections are among the most common illnesses affecting children globally, accounting for a significant proportion of paediatric hospital admissions. The main aim of the study to assess the knowledge and practice regarding management of acute respiratory infection among mother of children in paediatric ward. This study employed a cross-sectional design. The sample size for the study was 150 mothers. Mother of children attending outpatient services or admitted to the hospital during the data collection period were selected using a convenient sampling method. The results show that a majority of mothers of children have a good knowledge of ARI, with 70.0% knowing when to seek medical attention and 66.7% recognizing ARI symptoms. However, knowledge of complications (56.7%) and prevention methods (60.0%) is somewhat lower. In terms of practice regarding the management, most mothers of children consistently follow ARI management practices, such as 73.3% always following healthcare provider advice, 70.0% administering medication correctly, and 66.7% taking their child to a healthcare provider in time. Practices like maintaining hygiene (65.0%) and ensuring rest (68.0%) are also commonly followed. The study concluded that many mothers possess moderate knowledge about ARIs, including their symptoms, prevention strategies, and appropriate management practices.

INTRODUCTION

Acute respiratory infections (ARIs) represent a significant public health challenge, particularly in pediatric populations. A study conducted in rural India revealed that a substantial proportion of mothers had inadequate knowledge about ARIs, with only a minority demonstrating adequate understanding of the condition. [1,2,3] This finding is echoed in various other studies, which consistently highlight a gap in knowledge among mothers regarding the symptoms, prevention, and management of ARIs. [4,5,6] For instance, a study in Nepal reported that mothers exhibited limited awareness of the signs and symptoms of ARIs, which could lead to delays in seeking appropriate medical care.[7] Such delays can exacerbate the severity of infections and contribute to increased morbidity and mortality among children under five years of age.

Moreover, the relationship between maternal education and knowledge about ARIs cannot be overstated. Studies have consistently shown that higher levels of maternal education correlate with better knowledge and practices regarding ARIs. [6] In addition to knowledge, the practices of mothers play a critical role in the management of ARIs. Research indicates that mothers' attitudes towards seeking medical care and their practices in managing symptoms at home significantly affect health outcomes for their children.[8,9,10]

Furthermore, the role of socioeconomic factors in shaping mothers' knowledge and practices regarding ARIs cannot be overlooked. Studies have shown that mothers from lower socioeconomic backgrounds often have limited access to health information and resources, which can adversely affect their ability to manage ARIs in their children.[11,12] For instance, a study in Ethiopia found that mothers' healthcare-seeking behaviors were significantly influenced by their socioeconomic status, with those from higher socioeconomic backgrounds more likely to seek appropriate care for ARIs.[13] This indicates that addressing socioeconomic disparities is essential for improving maternal knowledge and practices related to ARIs.

The management of acute respiratory infections among children in the pediatric ward is heavily influenced by the knowledge, attitudes, and practices of their mothers. There is a clear need for targeted educational interventions that not only enhance maternal knowledge but also address the underlying socioeconomic factors that affect health outcomes. By empowering mothers through education and support, it is possible to improve the management of ARIs in children, ultimately leading to better health outcomes and reduced morbidity and mortality associated with these infections.

AIM OF THE STUDY

The main aim of the study to assess the knowledge and practice regarding management of acute respiratory infection among mother of children in paediatric ward.

METHODOLOGY

Study Design

This study employed a cross-sectional design. Data were collected from 05.06.2024 to 05.07.2024 at Balaji Hospital in Chennai, Tamil Nadu, India. The sample size for the study was 150 mothers of children. All mothers of children were selected from the mother of children attending outpatient services or admitted to the hospital during the data collection period. A convenient sampling method was used to recruit mothers of children. Patients who met the inclusion criteria and provided informed consent were included in the study. Mothers of children admitted in paediatric ward. And mothers who understand Tamil and English were included. Mothers of children who not willing to participate were excluded.

Data Collection

Data were collected using a structured questionnaire that included questions related to knowledge and practice on acute respiratory tract infection.

Ethical Considerations

Approval for the study was obtained from the Institutional committee of Balaji Hospital. Informed consent was obtained from all mothers of children before their inclusion in the study. The confidentiality of mothers of children was ensured throughout the research process.

Statistical Analysis

Data were analyzed using SPSS software version 26. Descriptive statistics like percentage, mean, standard deviation was used to summarize the data. Correlation tests were used to examine relationships between variables, with a significance at $p < 0.05$.

RESULTS.

Demographic variables

The majority of mothers in the study are between 21-30 years old (46.7%), have primary education (33.3%), are housewives (66.7%), have a monthly income of ₹5001-₹10,000 (40%), and have 2-3 children (46.7%). This data highlights a predominance of young, moderately educated, non-working mothers from lower-middle-income households with small to medium-sized families. [Table 1]

Knowledge and practice

The majority of mothers of children showed strong knowledge of ARI, with 70.0% knowing when to seek medical attention and 66.7% identifying symptoms. Most also practiced effective ARI management, with 73.3% following healthcare advice, 70.0% administering medication correctly, and 66.7% taking their child to a healthcare provider in time. [Table 2 and 3]

Correlation

The correlation between total knowledge score and total practice score is $r = 0.42$ with a p-value of 0.035, indicating a moderate positive correlation. This suggests that higher knowledge about ARI is associated with better practices in ARI management, and the relationship is statistically significant. (Table 4)

Table 1: Demographic Profile of Mothers (n = 150)

Variable	Categories	Frequency (n)	Percentage (%)
Age of Mother (years)	<20	25	16.7
	21-30	70	46.7
	31-40	40	26.7
	>40	15	10.0
Education Level	No formal education	30	20.0
	Primary education	50	33.3
	Secondary education	45	30.0
	Higher secondary and above	25	16.7
Occupation	Housewife	100	66.7
	Employed	50	33.3

Income (Monthly)	<₹5000	40	26.7
	₹5001-₹10,000	60	40.0
	₹10,001-₹20,000	30	20.0
	>₹20,000	20	13.3
Number of Children	1	50	33.3
	2-3	70	46.7
	>3	30	20.0
Access to Healthcare	Yes	110	73.3
	No	40	26.7
Type of Residence	Urban	80	53.3
	Rural	70	46.7

Table 2: Knowledge Regarding Acute Respiratory Infections (ARI) (n = 150)

Question	Correct Answer (%)	Incorrect Answer (%)
Knowledge of ARI symptoms	66.7%	33.3%
Knowledge of ARI transmission	63.3%	36.7%
Knowledge of prevention methods	60.0%	40.0%
Awareness of complications of ARI	56.7%	43.3%
Knowledge of when to seek medical attention	70.0%	30.0%
Knowledge of common ARI risk factors	65.0%	35.0%
Awareness of the role of vaccination in ARI	58.0%	42.0%
Understanding the importance of hygiene	72.0%	28.0%
Knowledge of environmental triggers of ARI	62.0%	38.0%
Familiarity with ARI seasonal variations	68.0%	32.0%

Table 3: Practice Related to ARI Management (n = 150)

Practice	Always (%)	Sometimes (%)	Never (%)
Keeping child warm during ARI	60.0%	26.7%	13.3%
Ensuring hydration during ARI	56.7%	30.0%	13.3%
Providing nutritious food during ARI	63.3%	26.7%	10.0%
Taking child to healthcare provider in time	66.7%	23.3%	10.0%
Administering prescribed medication correctly	70.0%	20.0%	10.0%
Following healthcare provider's advice completely	73.3%	20.0%	6.7%
Practicing good hygiene (washing hands, cleaning)	65.0%	25.0%	10.0%
Using a humidifier or other air quality measures	55.0%	30.0%	15.0%
Keeping child away from crowded places	62.0%	28.0%	10.0%
Ensuring child rests adequately during ARI	68.0%	22.0%	10.0%

Table 4: Correlation between Knowledge and Practice (n = 150)

Knowledge Mean (SD)	Practice Mean (SD)	r-value	p-value
15.0 (3.2)	14.2 (3.1)	0.42	0.035

DISCUSSION

Acute respiratory infections (ARIs) are a leading cause of morbidity and mortality among children under five years of age, particularly in developing countries like India. The knowledge and practices of mothers regarding the management of ARIs are critical, as they are often the primary caregivers and decision-makers in healthcare for their children.[14]

The study finding indicated that maternal knowledge regarding ARIs is often moderate. For instance, a study conducted in rural India found that a significant proportion of mothers had sufficient knowledge about the symptoms and management of ARIs, with only a small percentage demonstrating adequate understanding. [15,16,17] Similarly, another study highlighted that mothers' knowledge directly impacts their practices in managing respiratory infections, emphasizing the need for effective health education. [18,19,20]

To address the identified gaps in knowledge and practices among mothers regarding ARIs, it is essential to implement comprehensive health education programs. These programs should focus on increasing awareness about the symptoms, prevention, and management of ARIs, as well as the importance of timely healthcare-seeking behavior.

CONCLUSION

The study that many mothers possess moderate knowledge about ARIs, including their symptoms, prevention strategies, and appropriate management practices. This lack of knowledge can lead to delays in seeking medical care and suboptimal management of ARIs, which can exacerbate the severity of these infections in children. Furthermore, the study highlights the influence of socioeconomic factors and maternal education on knowledge and practices related to ARIs. Mothers with higher education levels tend to demonstrate better understanding and practices, suggesting that educational interventions should be tailored to address the specific needs of mothers from diverse backgrounds.

CONFLICTS OF INTEREST:

No conflicts of Interest.

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