
Knowledge Attitudes, and Practices of Parents on Acute Respiratory Tract Infection in Children Under Five Years

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ABSTRACT:

To assess the parent's knowledge, attitude, and practice regarding childhood acute respiratory Acute respiratory infection is an infection that may interfere with normal breathing. Acute respiratory infections (ARI) are a major cause of pediatric mortality and morbidity, particularly when associated with delays in treatment Control of acute respiratory infections (ARI) is a major public health problem in developing countries. A descriptive cross-sectional survey study design was used in which 150 parents were selected for the study through simple random sampling technique and the sample size was calculated by Rao soft with confidence interval and margin of error. In this study total 150 participants were included in which there were 36 males and 64 females. There were more than half of the participants had poor knowledge related to ARIs. The majority participants had negative attitude toward consulting a physician. This study result shows that half of the participants had poor knowledge and rest had good knowledge regarding childhood acute respiratory infections. Most of the participants had negative attitude towards the consulting a physician

STATEMENT:

A Cross Section Study to assess the Knowledge Attitudes, and Practices of Parents on Acute Respiratory Tract Infection in Children under Five Years in Indore.

INTRODUCTION

The most common cause leading to morbidity and mortality among children under five years old is acute respiratory infection (ARI) that results in high burden of economic costs and the most important cause for children admission to health services among children (Dennonet al., 1994). It is the main reason for utilization of health services for children.

Acute respiratory infection (ARI) is major public health problem in developing countries. More than 12 million children die every year due to acute respiratory illness in developing countries die before they reach their fifth birthday, many during the 1st year of life (Simiyu et al., 2003). Acute respiratory diseases are reported to be the 3rd leading cause of child morbidity and mortality (Krishnan et al., 2015). Acute respiratory diseases continue to affect the developing world causing in more than 3 million deaths, accounting for 15.5% of total childhood deaths, i.e., under 5 years (Mutalik et al., 2017). Respiratory infections constitute both Upper Respiratory Infection (URI) and Lower Respiratory Infection (LRI). Upper respiratory infection presents mainly with Rhinitis (Common Cold), Tonsillitis, Sinusitis and ear infection while main presentations of LRI is Pneumonia which exhibits with increased

respiratory rate. All over the world, average ARI experience of child is 6-8 spells in a year (Ali et al., 2015). The incidence of ARI in Pakistan is 16% as shown by a survey conducted in Pakistan in 2011.2 that survey also revealed that ARI was more prevalent in urban areas in the country.

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In 2018 there were 3529 cases of ARI among children under five in NTT. This study aims to analyze the risk factors of ARI among children under five in Sumba, East Nusa Tenggara. This study was cross-sectional. A total of 324 participants were recruited using convenience sampling. The data were collected using an electronic questionnaire which was distributed online. Data analysis using chi-square. The findings showed that exclusive breastfeeding (p -value = 0.008) and the mother's knowledge (p -value = 0.02) are associated with ARI in the Sumba, East Nusa Tenggara. Recommendations from this study are that mothers are expected to give exclusive breastfeeding for six months, increase knowledge.

In rural areas there are 3-5 episodes of ARI per child per year while in urban areas there are 5-8 episodes per child per year. In Pakistan 19-20% of total deaths occur due to ARI in children under five years of age. Majority of children have about 4-6 episodes of ARI each year in their first five years of life (Kumar et al., 2012). A significant determinant of child health is the attitude and knowledge of the child's mother toward these diseases.

Mother is the main caregiver for the child in almost all societies. Hence, the knowledge, attitude, and health practices of the mothers directly implies on the health status and survival of the child. Most of the morbidity due to acute respiratory diseases is such that, they can adequately manage at home. Several risk factors have been shown to contribute to high mortality from ARI. First are socio economic conditions that have long been known to influence human health. A second measure to assess the health status is education, especially of female. A comprehensive health education on the etiology or causation, its prevention and management have the potential to establish appropriate contact between the health services provided and the society. This will increase the capability of the families to identify the danger signs of acute respiratory diseases in children and to encourage appropriate and early care seeking behaviours.

REVIEW OF LITERATURE:

ARI, particularly pneumonia, need community-based ethnographic research to collect data on community perceptions of its cause and treatment. It is essential to gather information from families on the language, signs, and symptoms they use to detect illnesses that may or may not be pneumonia. In order to prevent the majority of ARI-related fatalities, families must recognize the symptoms of pneumonia and seek medical assistance immediately. It is vital to identify the elements that enable or hinder prompt access to as killed health care practitioner. Due to cultural variations in how mothers recognize and interpret pneumonia symptoms, it may not always be possible to translate these symptoms and signs into a local language. Therefore, research is required to determine if the care seeking instructions provided to women in a particular community are acceptable. It is essential to discover additional cultural

factors and situations that may have a significant impact on the community's response to ARI initiatives.

BACKGROUND

Acute Respiratory Tract Infection (ARTI) is one of the most common illnesses affecting children under five years of age and remains a major public health concern worldwide. ARTI includes infections of the upper respiratory tract, such as the common cold, pharyngitis, and otitis media, as well as lower respiratory tract infections, including pneumonia and bronchiolitis. These infections contribute significantly to childhood morbidity and mortality, particularly in developing countries.

According to the World Health Organization, acute respiratory infections are among the leading causes of death among children under five years of age. Pneumonia alone accounts for a substantial proportion of childhood deaths globally. Factors such as malnutrition, overcrowding, poor ventilation, indoor air pollution, incomplete immunization, and inadequate healthcare-seeking behavior increase the risk of respiratory infections in young children.

Parents play a crucial role in the prevention, early recognition, and management of acute respiratory tract infections. Their knowledge regarding symptoms, risk factors, warning signs, preventive measures, and treatment options directly influences the health outcomes of their children. Positive attitudes toward healthcare services and appropriate practices such as timely medical consultation, adherence to treatment, maintenance of hygiene, exclusive breastfeeding, proper nutrition, and immunization can reduce the incidence and severity of ARTI.

However, misconceptions regarding respiratory infections, inappropriate use of antibiotics, delayed healthcare-seeking behavior, and reliance on traditional remedies continue to be common in many communities. These factors may contribute to complications, prolonged illness, and increased healthcare costs.

Assessing the knowledge, attitudes, and practices (KAP) of parents regarding acute respiratory tract infections is essential for identifying gaps in awareness and healthcare behaviors. The findings can help healthcare professionals, especially nurses, design targeted educational interventions and health promotion programs to improve parental understanding and management of ARTI. Ultimately, enhancing parental knowledge and practices can contribute to reducing the burden of respiratory infections and improving the health and well-being of children under five years of age.

MATERIAL AND METHODS

Study Design

The quantitative cross-sectional survey study design was used in this study. This study was conducted from February 15, 2024 till May 15, 2024 at adopted Urban Community area Indore Madhya Pradesh. As in the current study, data were collected at one point in time from the participants, therefore stated design was chosen (Polit and Beck, 2006). Another reason for choosing the above-mentioned study design was the execution of the study in a short time period due to institutional policy.

Population and Study Setting

The study population included those parents who had children under five years of age in Urban community Indore (M.P)

Exclusion Criteria

Those parents who had more than 5 years of children, those who were not willing, and those who were not present at the time of data collection were excluded.

Inclusion Criteria

Those parents who had less than 5 years of children, those who were willing, and those who were present at the time of data collection were included.

Sampling Technique

A probability simple random sampling technique was used to give equal chances of selection for all parents. This technique gives better results because every participant gets an equal chance of selection (Saunders, 2012). The starting of the data collection was done by the guidelines of WHO.

Sample Size

The total population was 600 and the sample size was 250 which calculated by Raosoft.150 parents out of 250 were respondent during the collection of data.

Data Collection Tool

A modified Questionnaire was used as a data collection tool. First, we conducted a pilot study for testing the validity and reliability of questionnaires.

Questionnaire

The questionnaires were consisted on four parts, first relevant to demographic characteristic, 2nd relevant to knowledge, 3rd relevant to practices, and 4th relevant to attitude.

Ethical Consideration

For conducting the project research committee of one of the tertiary care hospitals included in the study gave permission.

Informed consent was given to each participant with a verbal explanation of the study's purpose. The participants were given a free choice to accept or reject the request for participating in the study. Confidentiality and anonymity were assured throughout the study.

Data Analysis

Data analysis was done using SPSS version 22 and summarized by descriptive statistics and data were presented in tables, graph, and charts with support of mean, percentages and textual explanations. The different tests were used to know the association between the demographic variables and their knowledge level about childhood acute respiratory infections.

**Knowledge Attitudes, and Practices of Parents on Acute Respiratory Tract Infection in
Children Under Five Years: A Cross Section Study**

TABLE NO :1

S.NO	Demographic variables	frequency	Percentage%
1	Gender:	55	36.7
	Male	95	63.3
	Female		
2	Educational status:	77	51.3
	Educated	73	48.7
	Uneducated		
3	Education level:	24	16.0
	Primary	29	19.3
	Matric	21	14.0
	Bachelor	3	2.0
	Master		
4	Employment:	24	16.0
	Employed	126	84.0
	Unemployed		
5	Marital status:	147	98.0
	Married	1	.7
	Widowed	2	1.3
	Divorced		
6	Occupation	26	17.3
	Professional	30	20.0
	Labor	87	58.0
	Housewife	7	4.7
	Farmer		

In our study Regarding the demographic characteristics there were male 36.7% ,female 63.3% .The mean age of participants were 32.00 with standard deviation 9.3, educated 51.3%, uneducated 48.7% ; among the educated participants primary education was 16.0% , majority of the participants were Matriculate 19.3% , Bachelor 14.0% , Master 2.1% , employed 16.0% , unemployed 84.0% , married 98% , divorced 1.3% , widowed only 0.7% professionals 17.3% , labors 20% , housewife 58.0% , farmer 4.7% , 50.7% of the participants had 1-3 Children, 36% had 4-6 Children, and 13.3% had 7-9 children.

**Table 2
Knowledge**

Knowledge Category	Frequency	Percentage %
Poor 1-6	78	51.7
Good >6	72	47.7

Assessment of knowledge of the included subjects regarding Acute Respiratory Infections:

Data presented in table 2 show the knowledge score of the included participants. In our study more than half of the participants had poor knowledge which was 51.7% and 47.7% of the participant had good knowledge regarding ARIs. The mean score of the participants were 5.72 with standard deviation of ± 1.17 . An independent sample T test was applied to find out the association between categorical variable (Gender) and outcome variable (knowledge score). There was significant association between them with the Pvalue 0.03. One-way ANOVA test was applied to check the association between categorical variable (Educational level) and outcome variable (Knowledge score). There was significant association between them with the P-value 0.05. Another Independent sample T test was applied to find out the association between employment and knowledge score, but there was no association between them with P- value 0.21.

Table 3
Practice Pattern of Included Subjects

S No.	Practice Pattern of the Participants	Frequency	Percentage%	
1.	Practicing self-medication in ARI:			
	YES	83	55.3	
	NO	67	44.7	
2.	First action regarding the management of childhood Acute Respiratory Infections:			
	Home remedies	59	39.3	
	Dispenser	50	33.3	
	Physician	41	27.3	
3.	Practice of the participants regarding vaccination:			
	Yes	148	98.7	
	No	2	1.3	

Table 3 demonstrate practice pattern of the participants towards ARIs. 55.3% of the participants practiced self-medication without consulting doctors and 44.7% of the participants don't practice self-medication. 39.3 % participants go for home remedies, 33.3% go to nearest dispenser and only 27.3 % go to physician when their children get disease of ARIs. 98.7% vaccinate their children but 1.3% don't vaccinate their children.

Table 4
Attitude of the participants towards ARIs

S.No		Frequency	Percentage
1.	Every time I would go to the physician if my child has fever and cough: Yes No	40 110	26.7 73.3
2.	Thinking regarding the best way of prevention in ARI: Keeping warm Give boiled water Maintain hygiene Vaccination All	46 13 47 12 32	30.7 8.7 31.3 8.0 21.3
3.	Expectation regarding the prescription of doctor: Yes No	118 32	78.7 21.3

The majority participants 73.3% had negative attitude toward consulting a physician and 26.7% had positive attitude, 78.7% had good expectation about the prescription of physician, 21.3% had no expectation, majority participants 31.3% thought the best way of prevention is maintain hygiene, 30.7% keep warming, 8.0% give boiled water, 8% vaccination, and 21.3% thought that all ways are important for prevention.

DISCUSSION

Parents are the caregivers of children and they are responsible for maintaining good health of their children. Thus, the parental knowledge is very important for the proper care of their children and the prevention of different childhood diseases. The good knowledge was related to ARIs affects both upper and lower respiratory infections. Cough being the most common symptom of Aris. Literature are available on the subject matter; studies have been conducted in different parts of the world. Some studies show different result and some of them are related to the result of the current study. Our study results show that majority of the parents were mothers (63.3%) and less of them were fathers (36.7%), An overall literacy rate of parents being 51.3%. Of these, 19% were secondary than higher education.

This contrasts with another study which was conducted at Tharparkar by R Kumar and et. al in (2012) showing overall literacy of 74% with the urban background. The study showed that majority of the parents (51.7%) had poor knowledge and 47.7% had good knowledge.

Another study ‘Knowledge, attitude and practices of parents regarding acute respiratory infections at primary health care center in the Kingdom of Saudi Arabia “was conducted by Maha Fahad Alluqmani and et. al (2017) in which data were collected from 733 mothers through questionnaire and they were interviewed and asked to fill the predesigned questionnaire. The result showed that majority of the parents had poor knowledge regarding ARIs which is similar with the result of our study.

In cross sectional study titled as “knowledge, attitude and practice of mothers on acute respiratory infection in children under five years” in the department of pediatrics, DarulSehat Hospital in Karachi, was conducted by Shireen QassimBham in (2016), in which data was collected from the parents through self-administered questionnaire. The result showed that 89% of mother had good attitude and practice toward the consultation of good qualified doctors. This result of that study contrasts with our study result due to the higher education of parents over there.

Another study was conducted at King Khalid College of Medicine, Aseer region showed that there was more than one third (37.8%) of the parents had poor knowledge, and less than one fifth (19.5%) had good knowledge due to the low level of education.

Acceptable (10-12) 171 42.8 Good (13-16) 78 19.5 no significant association between knowledge score of parents and their level of education and age.

CONCLUSION

Current study revealed that more than half of the parents had poor knowledge and bad practice of self-medication without consulted physician and negative attitude toward physician rather than home remedies and dispenser. However, mothers had enough knowledge than fathers regarding childhood acute respiratory infection. of mothers had inadequate, knowledge, attitude and practice toward ARI. The better knowledge was significantly correlated with higher education. TV and health care workers are the most important sources of knowledge. Thus, it is concluded that several health preventive and promotive educational programs showed be arranged for parents, give training to community health care worker to improve their knowledge and decrease the childhood acute respiratory infections.

RECOMMENDATION

1. The Federal and provincial health administration should be focused on primary and secondary level of prevention rather than tertiary level of prevention.
2. The government should be making a policy to arrange the workshops for community health care workers to improve the knowledge and methods of parents regarding childhood acute respiratory infections.
3. The government should be produced enough community health care workers to fill the gap.

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