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KNOWLEDGE AND ATTITUDE OF MOTHERS REGARDING TREATMENT OF ACUTE RESPIRATORY TRACT INFECTION IN CHILDREN OF UNDER FIVE YEARS OF AGE: A CROSS SECTIONAL STUDY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Introduction: Acute respiratory tract infections (ARTIs) contribute to around 20% of childhood mortality globally, resulting in an estimated 5.6 million deaths of children before they reach the age of five. Acute Respiratory Infections (ARI), such as pneumonia, are a major cause of illness and death in children

Material and Methods: In this cross sectional study, all the patients of age 1-5 years, of either gender presenting with ARTI were included. Total 100 mothers of children fulfilling the selection criteria were included in the study from OPD of Paediatric Medicine, The Children's Hospital & UCHS, Lahore from November 10, 2020 to November 10, 2021. Demographic information was obtained. Then mothers were interviewed by researcher. Non-Probability Consecutive Sampling was used. Sample size was calculated with 95% confidence level with 7% margin of error and 80% magnitude 100 cases. Data was entered & analysed by using SPSS v25.0. A p-value ≤0.05 was considered as significant.

Results: Among these children, 66(66.0%) were males, while 34(34.0%) were females. Among 100 mothers, 55(55.0%) had good knowledge about ARTI, while 71(71.0%) positive attitude.

Conclusion: Good knowledge and positive attitude of mothers promises protective effect for the prevention and control of acute respiratory tract infection.

Keywords: Knowledge, Attitude, mothers, Acute Respiratory Tract Infection.

Aims and Objectives

1. To find out the frequency of good knowledge and positive attitude of mothers regarding treatment of acute respiratory tract infection in children of under five years of age at tertiary care hospitals.
2. To correlate good knowledge and positive attitude of mothers with socio-economic status.

INTRODUCTION

Acute respiratory tract infections (ARTIs) contribute to around 20% of childhood mortality globally, resulting in an estimated 5.6 million deaths of children before they reach the age of five. Approximately 50% of these fatalities were attributed to infectious illnesses, notably Pneumonia.[1] Acute Respiratory Infections (ARI), such as pneumonia, are a major cause of illness and death in children.[2] In underdeveloped nations, 30% of all patients' consultations and 25% of all paediatric admissions are related to Acute Respiratory Tract Infections (ARTI).[3] According to the UNICEF/WHO Meeting on Child Survival Survey-based Indicators, which took place in New York on 17-18 June 2004, a child with Acute Respiratory Infection (ARI) is defined as someone who has a cough, is breathing at a faster rate than normal with short, quick breaths, or is experiencing difficulty breathing. This definition does not include children who only have a blocked nose.[4] The management of ARTI poses a significant challenge to public health in underdeveloped nations. The IMNCI strategy has been developed according to WHO guidelines for managing Acute Respiratory Infections (ARI). Under this strategy, healthcare professionals categorise each ARI case as severe or very severe pneumonia, pneumonia, or no pneumonia (cough and cold), and provide appropriate treatment based on the classification.[5] Health education programmes must be designed in accordance with the knowledge, attitude, and practice (KAP) of society in order to be effective.[6] Mothers are ignorant of the severity of ARTI symptoms, how to treat them, and when to seek medical attention.[7]

Paediatricians and parents are the primary factors that contribute to the emergence of resistance in children. Parental opinions and expectations have a crucial role in influencing whether a healthcare provider prescribes an antibiotic. Parental anxiety regarding acute illnesses results in an increased frequency of visits to paediatric physicians for upper respiratory tract infections (URTIs), which in turn leads to unnecessary utilisation of antibiotics.[8] Several socio-cultural, demographic, and environmental risk factors contribute to the susceptibility of children under the age of 5 to develop Respiratory Tract Infections (RTIs). Although a significant number of these risk factors can be avoided.[9] A study conducted in Bangladesh identified four characteristics that may contribute to the occurrence of Acute Respiratory Infections (ARIs), including 5.42% of individuals experiencing symptoms and obtaining treatment for 90% of affected newborns. The study identified children's age, gender, wealth index, and location of residence as factors influencing the rate of Acute Respiratory Infections (ARI) among children under the age of five in Bangladesh.[10] Rationale of this study is to analyze the frequency of good knowledge and positive attitude of mothers regarding treatment of ARTI in children of under five years of age. Literature has presented diverse findings concerning the prevalence of awareness and attitudes among mothers regarding Acute Respiratory Tract Infections (ARTI). Furthermore, there is no local evidence available on this matter, and there is a lack of information about the understanding and attitude of mothers towards Acute Respiratory Tract Infections (ARTI). So, through this study we want to know the extent of knowledge and attitude of mothers belong to local population. In order to prepare for the future, we can develop a plan to educate mothers about Acute Respiratory Tract Infections (ARTI) and the significant impact and necessity of its treatment.

PATIENTS AND METHODS

All the patients of age 1-5 years, of either gender presenting with ARTI were included. Children with multiple respiratory disorders including tuberculosis or asthma and having chronic condition (>7days of ARTI) were excluded. Total 100 mothers of children fulfilling the selection criteria were included in the study from OPD of Department of Paediatric Medicine, The Children's Hospital & UCHS, Lahore from November 10, 2020 to November 10, 2021.Permission was taken from hospital ethical committee. An informed written consent was taken. Demographic information (name of mother, age, parity, duration of ARTI, education and socioeconomic status) was obtained. Then mothers were interviewed by researcher herself. Mothers were asked about ARTI and treatment protocols for ARTI in children and their attitude towards treatment of ARTI. Good knowledge and positive attitude was

noted (as per operational definition). All the information was recorded on proforma (attached)Sample size of 100 mothers was calculated with 95% confidence level with 10% margin of error and taking expected percentage of good knowledge as 40.8% regarding ARTI in children under five years of age.[5] Data were entered & analysed by using SPSS v25.0. Mean and SD was calculated for quantitative variables like age of mother and duration of ARTI in children. Qualitative variables like parity, good knowledge and positive attitude were presented as frequency and percentage. Data were stratified for age, parity of mother, socio-economic status and education of mother and duration of ARTI to control the effect of effect modifiers. Post-stratification, Chi-Square test was done to compare the stratified groups. A p-value ≤0.05 was considered as significant.

RESULTS

In this study, 100 mothers of children presenting with ARTI were enrolled. Among these children, 66(66.0%) were males, while 34(34.0%) were females. Maternal age range in this study was from 20 to 50 years with mean age of 35.1±8.1 years. Majority of the mothers 52(52.0%) were 20-35 years of age group. While 48(48.0%) mothers were between 36-50 years age group. Majority of the mothers 61(61.0%) had parity of <2. While 39(39.0%) mothers had parity >2.Majority of the children 52(52.0%) had duration of ARTI >4 days. While 48(48.0%) had duration of ARTI <4 days. According to socio-economic status (SES), 38(38.0%) had low SES followed by middle SES as 47(47.0%) and high SES as 15(15.0%).Majority of the mothers 45(45.0%) were above matric. While 9(9.0%), 32(32.0%) and 14(14.0%) mothers were illiterate, below matric and graduate respectively.Among 100 mothers, 55(55.0%) had good knowledge about ARTI, while 71(71.0%) positive attitude.**(FIG:1)**There is significant relationship was observed between good knowledge and socioeconomic status and with a p-value of 0.0003 (p-value less than 0.05 is considered significant).**(FIG:2).**There is significant relationship was observed between positive attitude and socioeconomic status and with a p-value of 0.0003 (p-value less than 0.05 is considered significant).**(Table:1).**

FIG:1

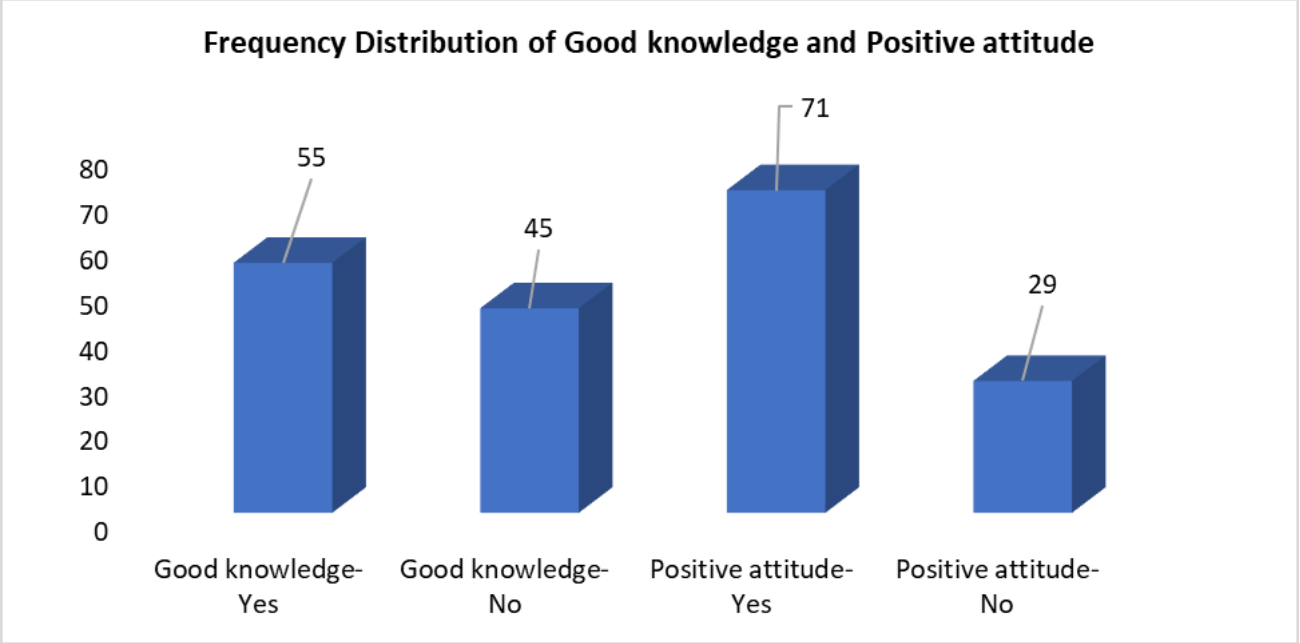
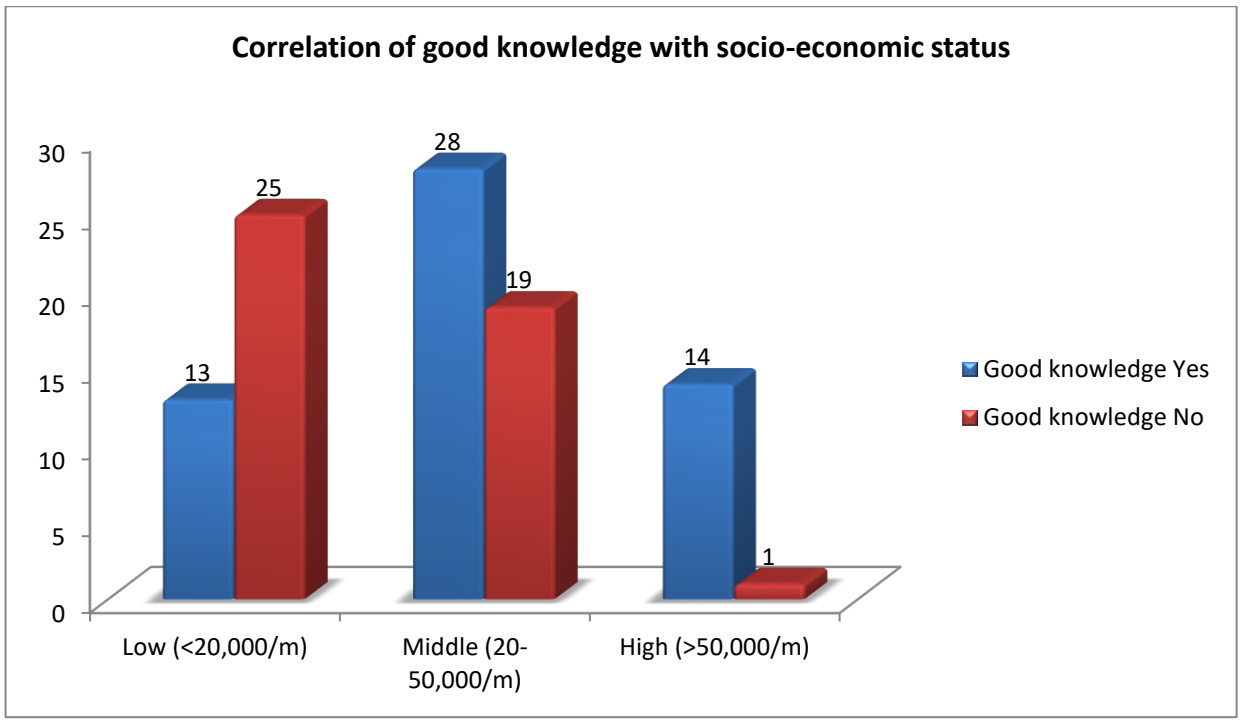


FIG:2



There is significant relationship was observed between good knowledge and socioeconomic status and with a p-value of 0.0003 (p-value less than 0.05 is considered significant).

Table:1Correlation of positive attitude with respect to socio-economic status

Socio-economic status	**Positive attitude**		**Total**	**p-value**
	Yes	No		
Low (<20,000/m)	19	19	38	0.0004
	50.0%	50.0%	100.0%	
Middle (20-50,000/m)	37	10	47	
	78.7%	21.3%	100.0%	
High (>50,000/m)	15	0	15	
	100.0%	0.0%	100.0%	
Total	71	29	100	
	71.0%	29.0%	100.0%	

There is significant relationship was observed between positive attitude and socioeconomic status and with a p-value of 0.0003 (p-value less than 0.05 is considered significant).

DISCUSSION

Since mothers are usually the primary care providers for their children, it is crucial for them to possess the capacity to promptly identify symptoms of Acute Respiratory Infection (ARI) in order to commence timely treatment and thereby decrease infant mortality. Mothers were questioned in this study due to the fact that they are the primary carers who typically accompany their children to the hospital.[11] The majority of the mothers had less than two children. The survey revealed a maternal literacy rate of 91%. Out of these, 59% had education levels beyond secondary education. In contrast, a survey done in Tharparkar revealed that the overall literacy rate of moms with an urban background was 74%.[12] Both findings indicate a correlation between greater levels of education in mothers and an urban background. This highlights the need for the government to take steps to improve the education level of moms in rural areas. Mothers who are literate are more attentive and proactive in

obtaining medical attention for their children. There was a significant correlation between the mother's level of education and the occurrence of Acute Respiratory Infections (ARIs). A study has shown that moms with higher levels of education exhibit lower levels of fatalism regarding their children's diseases, possess more ability to access and utilise healthcare resources, and significantly influence the conventional dynamics of family interactions, thereby impacting childcare in a significant manner. These findings indicate that carers who had a higher degree of education were more inclined to seek suitable medical attention for their kid, aligning with earlier studies.[13] The predominant symptom of Acute Respiratory Infection (ARI) identified in this investigation was cough, with a prevalence of 40%. The prevalence of other symptoms was as follows: Fever (34%), Wheeze (9%), Sneezing (12%), and ear ache (5%). In contrast, a study conducted in Ghana found that the main symptoms were retraction of ribs (22%), fever, cough, and tiredness (57%).[14] A study carried out in Dar us Salam revealed that the most prevalent symptoms were fever (92.5%), cough (85.3%), and reduced capacity to engage in physical activities (83.5%).[15] The average length of acute respiratory infection (ARI) in this study was five days, which differs from a study conducted by Shahzad Munir that reported an average duration of 4.5 days. [16] The relatively short duration of the disease may be attributed to the fact that 317 (94%) mothers sought consultation from skilled medical practitioners for acute respiratory infections (ARI), whereas in a study done in Tehran, only 141 (62%) mothers selected medical practitioners. [17] According to this study, 8% of the mothers had the belief that antibiotics were essential for Acute Respiratory Infections (ARI). The study revealed that the utilisation of self-medication was 18%. A research conducted in Multan also presented a same image, with a prevalence rate of 28%.[18] The self-medication utilised in this study comprises Paracetamol and ibuprofen, which are quite prevalent. The mothers have the belief that these medications are innocuous and can be administered without risk. These medications belong to the over-the-counter class and are commonly used for self-medication due to their lower potential for damage. 6% of the participants in the current study utilised home treatments.

Additional research carried out in Multan[19] and Lahore[20] indicate that 40% and 23% of individuals, respectively, utilise home treatments. A study conducted in New Delhi[21] found that the utilisation of Ginger as a home treatment for Acute Respiratory Infections (ARI) in children was 27%. This may be attributed to cultural disparity. Dust was the predominant exacerbating factor of the condition, accounting for 81% of cases, according to a study conducted in Myanmar where it was found to be 89%.[22] This observation may be attributed to the overall environmental condition of the neighbourhood and the inadequate provision of municipal services. A further study demonstrated that the presence of smokers, maternal age, and insufficient ceiling conditions were identified as potential variables contributing to Acute Respiratory Infections in children under the age of five.[23] Research conducted in Pakistan and other developing nations has revealed that carers in these regions attribute respiratory tract issues to variables other than infection, such as chilly air.

This suggests that the community's understanding of the causes of pneumonia is limited.[17–20] For outpatient treatment, individuals showed a preference for either privately funded treatment or treatment at a main health-care centre. This utilisation pattern is consistent with earlier surveys conducted in a similar situation in Pakistan.[16,17] The utilisation of public sector health facilities, particularly for outpatient treatment, was low. However, they were mostly utilised for hospitalisation purposes. Possible factors contributing to this issue include the lack of adequately trained personnel and the unavailability of necessary medications, which ultimately leads to a reduced standard of healthcare.[8,21,22] The Karachi, Sindh MICs survey of 2014 also observed a public service utilisation rate of 18.7% for acute respiratory illnesses.[12] This utilisation pattern is not exclusive to South Asia or other developing nations, as the majority of outpatient visits take place in the private sector.[17,18] For instance, in Guatemala, 92% of children and in Egypt, over 70% sought medical attention for pneumonia from private clinics.[24] Paediatricians and parents are the primary factors influencing the emergence of resistance in children. Parental opinions and expectations play a significant role in the

decision to administer an antibiotic. Parental anxiety regarding acute illnesses results in an increased frequency of visits to paediatric physicians for upper respiratory tract infections (URTIs), which in turn leads to unnecessary utilisation of antibiotics.[8] A survey revealed that 40.8% of mothers possessed awareness of Acute Respiratory Tract Infections (ARTI) as a severe ailment that necessitates treatment in children below the age of five. Additionally, 71.4% of mothers exhibited a preference for allopathic treatment over home remedies.[25] In a separate survey, over 80% of mothers demonstrated awareness of Acute Respiratory Tract Infections (ARTI) and its associated effects, while 89% expressed a preference for medical treatment by a physician rather than relying on folk remedies.[26]

CONCLUSION

Good knowledge and positive attitude of mothers offer a safeguarding impact in the prevention and management of acute respiratory tract infection. The level of education a mother has is a highly reliable indicator of the likelihood of a child's survival. It empowers women to obtain access to maternal and child healthcare and seek medical care for their children when they become sick. It is necessary to improve the understanding and attitude of mothers about the prevention and management of certain childhood disorders, such as diarrhoea. Effective coordination between healthcare professionals and policy makers is essential for establishing a robust and streamlined health education system. It is crucial to prioritise the poor population by offering cheap treatment alternatives.

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