Original Article

Knowledge and Practices of Mothers regarding acute Respiratory Infection in Children under 5 Years of age in Urban Slums of Multan

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ABSTRACT

Background: Acute Respiratory Infection (ARI) is the leading cause of morbidity and mortality in children under 5 years of age in developing countries. The knowledge of mothers regarding ARI is inadequate which leads to delayed care seeking and other factors contributing to high mortality

Objective: To determine the Knowledge and Practices of mothers regarding Acute Respiratory Infection.

Study Design: Cross-sectional descriptive study.

Place and Duration of Study: Urban slums of Multan, from April 2010 to March 2011.

Material and Methods: A semi-structured questionnaire proforma was used to interview 500 mothers selected by stratified random sampling technique from urban slums of Multan. SPSS software was used to analyze the data.

Results: Mother's description of the causes of ARI in children was mostly exposures to "Thand" (cold), after bathing, sour and cold foods. Mothers also had inadequate knowledge of severity of symptoms of ARI including pneumonia. About 44% showed prompt care seeking response within 24 hours of ARI and rest (55.8%) showed delayed response to health care seeking. Thirty three percent mothers preferred private doctors to get treatment, 27.2 % favored to go to the public sector, and the rest did home remedy i.e. Tea, Honey, Vicks rub and Warm wrapping. The reasonable majority of mothers (58%) did self medication in their children suffering from ARI.

Conclusion: Mothers living in urban slums in Multan have insufficient knowledge and inappropriate health care seeking practices regarding management of ARI in their children.

Key Words: Acute Respiratory Infections, Mothers, Knowledge, Practices, Urban slums, Home Remedies, Multan.

INTRODUCTION

Acute respiratory infections are the major causes of morbidity and mortality in children throughout the world. 1 The majority of the diseases are mild and self-limiting but some are life threatening and serious.[2,3] Moreover, ARI is one of the major groups of diseases of infants and children responsible for deaths worldwide. 4 It is a global health problem as it is estimated that yearly there are 2000 million episodes of ARI, of which one out of fifty are cases of Pneumonia, and among Pneumonia, 10% to 20% die.4 Each year 12.9 million children die, 28% of deaths are caused by ARI.4 Acute respiratory infection rank number one health problem to look for medical advice. Each child in the first 5 years of life approximately suffers from 2-8 episodes of ARI yearly.6 In developing countries, children are more vulnerable to get acute respiratory infections, which carry an elevated mortality rate, and ARI is the second most important cause of the deaths in children under 5 years of age.[7,8] Various risk factors for acquiring respiratory infections in developing countries, such as poverty, limited family income, low mother's education level, low birth weight, and starvation, have been described.1 ARI is the major cause of morbidity and mortality in Peru principally in children under five. 9 About 11-20 million (7-13%) of the children need hospitalization and two millions die each year due to ARI.10 In Pakistan ARI is the major killer disease under 5 years of age. Four million children die every year from acute respiratory infections, 11 and responsible for 20-30 percent of all child deaths under 5 years in Pakistan12

The fundamental reason to carry out this study was to assess the knowledge and practices of mothers regarding Acute Respiratory Infections in children under 5 years of age. The morbidity and mortality in children under five could only be reduced by developing proper knowledge and practices of mothers regarding ARI which is major killer disease

MATERIALS AND METHODS

It was an interview based cross sectional descriptive study of urban slums of Multan.

Inclusion criteria: The study was restricted to the mothers who had at least one child under five years of age having the symptoms of ARI at the time of interview or had suffered from ARI during the preceding two months.

Exclusion criteria: The mothers who had not even one child under five years of age or having the child but not suffering from ARI at the time of interview or had not suffered from ARI during the preceding two months.

The area map of urban slums with house numbers and street numbers were available in Director Health Services Office, which was used to draw a sample of 500 mothers from five slums, randomly selected out of total 17 urban slums of Multan. Stratified Random Sampling Technique was used to carry out the study, based on proportionate sampling i.e. 20% from each urban slums of Multan. Five hundred mothers were interviewed who met the inclusion criteria from the following five urban slums of Multan.

1 Basti Kumharan Bosan Road, Multan. (No. of households 490)
2 Koocha Subhan Singh. (No. of households 474)
3 Kachi abadi shamsabad & mahallah nawazabad. (No. of households 379)
4 Barket Pura near Kabooter mandi. . (No. of households 378)
5 Dewan da Bagh. (No. of households 790)

Method of Data Collection: A semi-structured interview proforma was used to collect the data about knowledge and practices of mothers regarding acute respiratory tract infection in children under 5 years of age. A total of 500 mothers were interviewed after getting consent from them. The sampling frame was used for data collection in each slum; first household and street was selected by the simple random method. Suppose it was household two of the street, so systematically every alternate household i.e. 2, 4, 6, 8 and so on were chosen to fill the proforma till approximately 20% from each urban slum..

Data Analysis: Analysis used in this study was descriptive. Continuous variable like respondent age was expressed as mean ± 2SD. Variables like education of mothers, occupation, disease symptoms etc. were expressed as a frequency and proportion. All data collected was entered in SPSS program version-16 and data was analyzed accordingly.

RESULTS

Mean Age of mothers = 28.68, 2SD = ± 6.148

In our study majority of mothers did not have the proper knowledge regarding the causes of ARI. Exposure to cold, intake of sour or cold food and after bathing was the mother's favorite causes of ARI.

n= (500)

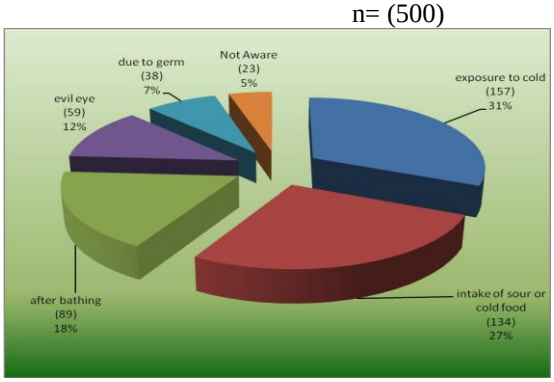

Figure No.1: Mother's Knowledge Regarding Causes of ARI

The majority of mothers identified and narrated symptoms of ARI in their local language. The children were having multiple symptoms of ARI in an episode, so mothers narrated multiple answers to the same question and there was overlap in their response. The most common symptoms were coughing runny nose and sore throat.

Table No.1: Local Terminologies used by Mothers Regarding Symptoms of ARI n = 500

Local Terminologies	Frequency	% age
Naak band (blocked nose)	172	42.57%
Naak bahna (runny nose)	274	67.82%
Galla Kharab (sore throat)	264	65.34%
pasli chalna (indrawing of chest)	66	16.33%
khana kam kar diya (stopped taking feed)	42	10.39%
Khansi (cough)	326	80.69%
chhati per bodge (noisy breathing)	146	36.13%
Sans Taiz (fast breathing)	196	48.51%
NOTE *multiple answers to the same question.		

Mother's Knowledge of "No Pneumonia" symptoms as dangerous or not dangerous

Almost 48% mothers had wrong knowledge of No Pneumonia as "dangerous" and remaining 52% mothers had correct knowledge of symptoms of No Pneumonia as "not dangerous".

Mother's Knowledge of Pneumonia Symptoms as Dangerous or Not Dangerous

One half of the mothers (50%) had wrong knowledge of Pneumonia as "dangerous". And another half of the mothers (50 %) had correct knowledge of symptoms of Pneumonia as "not dangerous". Fast breathing was considered as dangerous symptom.

Mother's Knowledge of "Severe Pneumonia" symptoms as dangerous or not dangerous

About two third of mothers had correct knowledge of symptoms of severe Pneumonia as "dangerous", while about one third of mothers had wrong knowledge of symptoms of severe Pneumonia as "not dangerous"

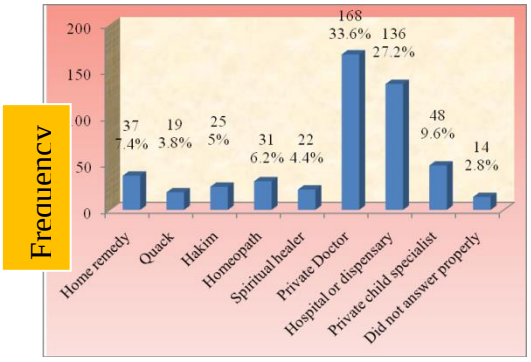

Figure 2: Mother's Health Care Seeking Practices n = (500)

Less than half of mothers (42%) responded promptly at the beginning of acute respiratory infection within 24 hours and rest more than fifty percent did not respond promptly.

Table No.2: Mother's Health Care Seeking Behaviour either Prompt or Delayed n = (500)

When Necessary to get Treatment from Qualified Doctor (promptly or delayed)	Frequency	Percentage
Promptly at the beginning of the disease	221	44.2%
Delayed , when the illness is severe	146	29.2%
Delayed, after trying some other medication	87	17.4%
Delayed, let the flue settle first	18	3.6%
Delayed, never to get treatment	28	5.6%
Total	500	100%

Practices of Mothers: The emerging pattern on care seeking practices of mothers has been studied. It was found that large percentage of mothers (33.6%) consulted private doctors and 27.2% went to govt. hospitals or dispensaries to get treatment for their children suffering from ARI. A very little percentage (7.4%) of mothers did exclusive home remedy and rest went to homeopath doctors, hakims, spiritual healer and quacks for seeking health care of their children suffering from ARI.

Various modalities and totkaas (myths) were used by mothers either alone or in combination to treat the ARI children. In the current study, mother's believed that home remedies could cure ARI within a few days, and believed that tea, honey, Vicks rub and deep warm wrapping were few major modalities to treat the children suffering from ARI.

Table 3: Mother's Home Remedy Practices n = (500)

Home Remedy Practices	Frequency	Percentage
Tea	82	16.4%
Malish with oil	50	10%
Soup	26	5.2%
Soanf / Ajwain water	17	3.4%
Urq	25	5%
Honey	80	16%
Brandy	23	4.6%
Joshanda	47	9.4%
Deep Warm (Wrapping)	74	14.8%
Vicks Rub	76	15.2%
Total	500	100%

Almost 58% mothers did self medication in their children suffering from ARI and the rest of the mothers responded in negation to do self medication in their children of ARI.

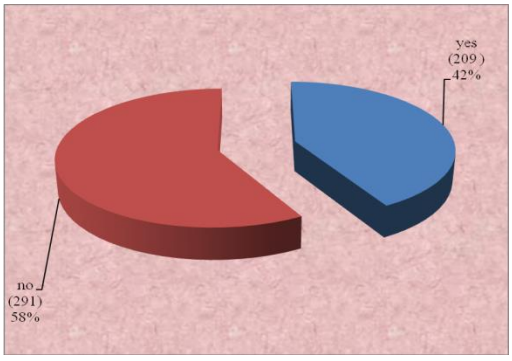

Figure 3: Mother's Self Medication Practices

DISCUSSION

In our study mothers narrated symptoms of ARI in their own local Multani (Saraiki) language. It was beneficial to understand local vocabulary and traditional terms used by mothers about ARI symptoms. Some of the other previous studies also used different vernacular terms to explain symptoms of ARI pertinent to their own regional languages. [13] The study at Multan[14], vernacular terms like Pasli chalna, chhati per bohj, saans taiz, and chhati per balgham were local terms used by the mothers for ARI symptoms. Almost similar vernacular terms were used in the present study. This was due to the fact that both the studies conducted in the same Saraiki population of Multan. In a study in Western Uganda there was no term for rapid breathing. [15] This was in contrast with what was found in the present study. In our study the knowledge about severe pneumonia was same as reported in Mexican study[16] and in the study done in 2008, which found that Knowledge of severe Pneumonia as dangerous was 60% which supported our study.[17] Knowledge awareness was much higher than the level of awareness noted in a study conducted in Bolivia,[18]Athumani Juma study[19] and USAID report[20] in 2005 concerning fatal symptom knowledge in severe Pneumonia, almost all the mothers (96.1%) were aware of one or more fatal symptoms of severe Pneumonia. This awareness was much higher than our study. Which was, possibly, due to better health education and implementation of IMNCI campaign that might lead to increased mother's acquaintance about ARI.

The study done in Iraqi mothers showed that a high percentage of mother's knowledge regarding symptoms of ARI as dangerous that paid attention for seeking medical advice were fever and cough, while a small percentage of mothers considered chest indrawing convulsion, drinking difficulties, sleep disturbance as a dangerous symptom of ARI. This may indicate that Iraqi mothers were not different from mothers of our population who had considered fever and cough as an important symptom that needed medical attention and this might be due to the defect in implication of the IMNCI campaign by the ministry of health regarding dangerous symptoms.[21]

The result of the present study showed correlation with the study done in the Mexican population, [16] and a study done at Multan. [14] in which firstly very small numbers (6%) of mothers incriminated germs as the cause of ARI, secondly the idea of cold (Thand) was so strong that the breast feeding mothers feeling cold (Thand) thought that this cold would transfer to the breast feeding children. The belief of supernatural influences causing ARI was also there in our study; this was supported by the study done by Mrs. Sarojamma[22] which showed that most of the mothers had a traditional belief of supernatural influence as to the cause of ARI. .

The current study showed emerging pattern on care seeking practices of mothers which was a similar pattern to the studies done in Uganda[23] which showed that mother's prompt response to seek health care in their children suffering from ARI was less as compared to delayed response due to any reason. This similar pattern might be due to the similar socio- economical condition of the mothers living in developing countries. While a high percentage of promptly behaving mothers to seek health care were recorded from studies in Kenya and Nigeria.[24] This could be again due to differences to get access to health care facilities, educational backgrounds.

Home remedy practices include not only identification of symptoms of Pneumonia but also the administration of safe home remedies, taking care of feeding and fluid requirement of the child. [25] In a study of New Delhi, [26] it was found that Honey and ginger were the two most popular home remedies, which did not show correlation with the present study in which, honey and tea were the two most popular home remedies used by the mothers for ARI in children. This could be due to the geographical and cultural differences.

The present study showed correlation with the study done by Awad, [27] which showed that 55% households used self medication. Lack of consultancy practices in mothers for rational drug use in children suffering from ARI might be the major reason for this increased frequency of self medication,

Conclusion:

The majority of mothers of under 5 years children had poor knowledge of causes of ARI, they did not differentiate between simple and dangerous symptoms of ARI. There was a lack of knowledge of medically significant terms such as fast breathing and chest in drawing (Pasli Chalna). They also had inappropriate care seeking practices. There is the need to develop effective messages which could be delivered to the mothers to increase their understanding and to improve their practices. Our study offers sensible insights regarding baseline knowledge and practices of mothers regarding ARI in their children.

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