

# Knowledge on acute respiratory infection among Mothers of under five year children of Bhaktapur District, Nepal

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**Abstract- Background:** Acute respiratory infections (ARIs) continue to be the leading cause of acute illnesses worldwide and remain the most important cause of infant and young children mortality in developing countries like Nepal.

**Objectives:** To find out the level of knowledge about acute respiratory infection among the mothers of under five children.

**Methodology:** A cross-sectional study was conducted to find out the status of knowledge about acute respiratory infection (ARI) among 384 respondents through direct face to face interview schedule. Non probability purposive sampling technique was used to select the sample of the study.

**Results:** Most of the respondents 52.3% were in between the age group of 25 - 35 years. Majority of respondents 94.5% follows the Hindu religion. Most of the respondent 26.6% worked at private organization and 49.2% respondent had completed their secondary level of education. In the study it showed that 77.9% of women had no opportunity to take part in any training related to ARI. Statistically significant relationship was found on level of knowledge with education of mother ( $p=0.002$ ). The current study revealed that 83.9% of respondent had satisfactory level of knowledge and 10.7% had poor level of knowledge and only 5.5% had excellent level of knowledge regarding ARI.

**Conclusion:** As mothers are the main caretakers of children and under- five year children are in close contact with their mother, any deviation in the health of children is first recognized by their mothers. Our study shows that mother has significantly better knowledge on ARI with their educational status. So awareness program using appropriate intervention i.e. radio, television, health campaign is necessary to increase the level of knowledge of mother.

**Index Terms-** Awareness, Acute Respiratory Tract Infection, Mortality, Morbidity

## I. INTRODUCTION

Acute respiratory infection is acute inflammatory changes in any part of respiratory tract, from nasal mucosa to the alveoli with an alteration in respiratory physiology (1).

Acute respiratory infections (ARIs) continue to be the leading cause of acute illnesses worldwide and remain the most important cause of infant and young children mortality, accounting for about two million deaths each year. The populations most at risk for developing a fatal respiratory infection are the young, the elderly. The incidence of ARIs in

children aged less than 5 years is estimated to be 0.29 and 0.05 episodes per child-year in developing and industrialized countries, respectively, which translates into 151 million and 5 million new episodes each year, respectively (2). Pneumonia is responsible for about 19% of all deaths in children aged less than 5 years, of which more than 70% take place in sub-Saharan Africa and south-east Asia (3).

Lung infections cause more disease than better-recognized threats to the public's health such as cancer, heart attacks, strokes, HIV/AIDS, tuberculosis, or malaria. This persistent and pervasive burden of lung infections receives proportionately little attention from the biomedical and public health communities. Lung infections are especially common and severe among the poor (4). Only about 1 in 5 caregivers knows the danger signs of pneumonia; only about half of children sick with pneumonia receive appropriate medical care; and, according to the limited data available, less than 20 per cent of children with pneumonia received antibiotics, the recommended treatment. (5)

In Nepal under-five mortality rate is 76 per 1000 live births, and among them 19% death is due to Pneumonia (WHO, 2001). The Ministry of Health (MoH) has recognized that Acute Respiratory Infection (ARI) is one of the major public health problems in Nepal among children under-5 years (60 months) of age. The National Control of ARI Programme is an integral part of primary health care. The programme focuses on children under five years because the majority of deaths in this age group are ARI-related. The programme has recognized the important role of mothers and other caretakers in identifying the difference between the need for home care and the need for referral to health facilities. To fulfill its objective, its strategy is to educate mothers and child caretakers in supportive care strategies and in recognizing the signs and symptoms of ARI and pneumonia. But still very few mothers are aware about ARI, its sign and symptoms, home care and need for referral to health facilities for treatment. As a result under-five mortality is very high. (6)

## II. OBJECTIVES

To find out the level of knowledge about acute respiratory infection among the mothers of under five children.

## III. METHODOLOGY

A cross sectional study was carried out to find the level of knowledge about acute respiratory infection among mothers with children under five. Study area was Bhaktapur district,

Kathmandu, Nepal. The duration of the study was 3month start from May 2011 to August 2011. The study population comprises mothers with children less than five year at Bhaktapur district. Multi stage probability sampling method was applied for this study. At Bhaktapur district there were 16 Village Development Committee (VDC) and 2 Municipality (MC). Both the municipality was excluded. From 16 VDC, 5 VDC were selected (Purposive) and from those 5VDC, 77 respondents were selected by simple random technique. Semi structured questionnaire” was used for face to face interview. The calculated sample size was 384.

The instruments was modified after reviewing literature, pretesting and reliability of the instruments as well as consulted with supervisor. Level of knowledge was classified as Excellent (12-9), Satisfactory (8-5) and Poor (4-0) based on the score get by the responses to the questionnaire. The study was conducted after receiving permission from, research committee of Nepal Institute of Health Science (NIHS), Nepal Health Research Council (NHRC) and Bhaktapur District Office, Bhaktapur. Informed written consent was obtained from the participants and the confidentiality of the received information was maintained. The collected data was tabulated and analyzed using SPSS.

#### IV. RESULTS

Table (1) shows out of 384 participants most of the respondents (52.3%) were in between the age group of 25-35 years. Majority of respondents (94.5%) follows the Hindu religion and (26.6%) respondent had completed their secondary level education. 51% respondents belonged to nuclear family. (26.6%) of the respondents obtained secondary level of education. Most of respondents (49.2%) were house wife.

Table (2) shows that mother excellent level of awareness related to ARI among children was achieved by only 5.5%, while 10.7% mother had poor level of awareness regarding ARI.

Table (3) shows mothers have lacking knowledge. Area of knowledge deficiency includes causes of ARI, likely to get ARI, what is the action taken for common cold, similarly type of food given to ARI child(15%, 11%, 13% 20%)Most of the mother correctly answered the questions related to affecting organ, mode of transmission, about common cold (91%, 72%).

**Table 1: Demographic Information of respondents (n=384)**

<b>Variables</b>	<b>Frequency(f)</b>	<b>Percentage (%)</b>
<b>Age</b>		
15-25yrs	64	16.7
25-35yrs	201	52.3
35-45yrs	91	23.7
45-55yrs	28	7.3
<b>Religion</b>		
Hindu	363	94.5
Buddhist	13	3.4
Christian	6	1.6
Muslim	2	.5
<b>Occupation of respondents</b>		
Housewife	78	20.3
Government	83	21.6
Private organization	102	26.6
Business	77	20.1
Labour	44	11.5
<b>Type of family</b>		
Nuclear family	197	51
Joint family	187	49
<b>Education of respondents</b>		
Illiterate	189	49.2
Primary	51	13.3
Secondary	35	9.1
Higher secondary	3	.8
Bachelor or above	106	27.6

<b>Ventilation condition at their house</b>		
>2 window / room	318	82.8
1 window/ room	66	17.2
<b>Participate in ARI training program</b>		
Yes	85	22.1
No	299	77.9

**Table 2: Distribution of respondents according to the level of knowledge (n =384)**

Level of awareness	Frequency(n)	Percentage (%)
Poor	41	10.7
Satisfactory	322	83.9
Excellent	21	5.5

**Table 3. Frequency of correctly answered from knowledgeable questions of the knowledge of mother.**

Knowledge aspects	Frequency(n)	Percentage (%)
What is ARI	223	58.1
Cause of ARI	56	14.6
Symptoms for ARI	173	45.1
Affecting organ	348	90.6
Mode of transmission	336	87.5
Who are likely to get ARI	42	10.9
What is common cold	281	72.3
Action for common cold	50	13
Safe home remedy for Common cold	166	43.2
Action mother takes for ARI	232	60.4
Whom to contact first for ARI	248	64.6
Type of food can be given	77	20.1

Table (4) shows that there is significant association between level of knowledge with selected demographic variables; education of mother and knowledge about ARI ( $\chi^2=12.458$ ,  $p>0.05$ ). There is no association between other variables like age of mother, occupation and type of family.

**Table 4: Association of level of knowledge with selected demographic variables. (n = 384)**

Variables	Total score	Chi Square	DF	P-value
<b>Age</b>				
Less than 25	265(69)	5.699	2	.058
More than 25	119(31)			
<b>Education</b>				
Illiterate	86(22.4)	12.458	2	.002
Literate	298(77.6)			
<b>Occupation</b>				
Housewife	78(20.3)	3.580	2	.167
Service holder	306(79.7)			
<b>Type of family</b>				
Nuclear	197(51.3)	4.128	2	.127
Joint	187(48.7)			

## V. DISCUSSION

Our study revealed that 52.3% respondents were within age 25-35 years. According to religion, majority of mothers were Hindu (94.5%). According to education status of mother 49.2% were illiterate where as 27.6% has completed their bachelor or above. In our study 26.6% of mothers were working in a private organization followed by 21.6% in government job holder. Regarding their living style 49% mothers have the opportunity to stay with join family. 61.2% mothers use gas stove as their cooking methods, where as majority of mothers 91.4% were non smokers. 82.8% mothers had good ventilation condition at their house. 75% mothers have heard about ARI where as only 77.9% said they did not participate in any health education program related to ARI.

This study result shows that interviewed mothers have lacking knowledge about ARI. Area of knowledge deficiency includes causes of ARI, symptoms of ARI, what is the action taken for common cold, similarly type of food given to ARI child.

Our study result shows that only 14.6% of the respondent answered correctly that microorganism, virus is the main cause of ARI and 10.9% of respondent considered fast breathing and chest indrawing as sign and symptoms of ARI. A hospital based cross sectional study conducted at Nakhon Pathom General Hospital, Thailand showed only few mothers answered all the questions correctly in terms of signs and symptoms of pneumonia (7%) and around 21% of the mothers answered correctly in terms of cause of ARI (7).

Our study shows that more than forty percent respondent give ginger- honey to eat was common home practice for the management of ARI. This finding was similar to the study of Denno et al.(1994), where Common health care practice for treating running nose included ephedrine or other types of nasal drops, herbal medicines, antipyretics, and antibiotics. Honey and cough syrup were often used to treat cough and fever (8).

Our study shows that 64.6% mothers contact medical professional for the treatment of ARI where as only 3.6% mothers said that they seek traditional healer. A study conducted in Baringo District, Kenya showed 87.1% of mother said that they contact health care center for ARI (9). Another study conducted in Gondar Ethiopia showed that 35.6% mothers took their children to traditional healer (10). More than fifty percent respondents said breast feeding must be usually given to child in such condition. About action taken after ARI, our study showed that 51.8% mothers said that taking child to health care centre immediately will help to minimize the complication.

## VI. CONCLUSION

The study revealed that mother's knowledge on causes of ARI, symptoms of ARI, action taken for management and types of food given to the child are poor.

Above data shows that mother has significantly better knowledge with their educational status. Knowledge about ARI of less educated mother is low. Health education can helps to increase the knowledge to understand the sign and symptoms and management of ARI. So to reduce the child mortality and

morbidity need to educate mother which might be through different intervention like awareness program, street drama, from TV etc.

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