Original Article

Awareness Regarding Acute Respiratory Tract Infection among Mothers of Under Five Children in a Tribhuvan University Teaching Hospital, Kathmandu

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ABSTRACT

Background: Acute respiratory tract infection is the second leading cause of childhood morbidity and mortality among under-five years children and its prevalence is still high in Nepal. Awareness among parents regarding acute respiratory infection is important. The objective of the study was to find out awareness regarding acute respiratory tract infection among mothers of under-five children in maternal and child health clinic.

Methods: A descriptive cross-sectional study was carried out at maternal and child health clinic of Tribhuvan University Teaching Hospital. Total 106 sample were selected by using non-probability purposive sampling technique. A face-to-face interview using semi- structured questionnaire was used to collect data. Collected data was analyzed by using descriptive and inferential statistics.

Results: This study found that two third (62.3%) of respondents had an adequate level of awareness and more than one third (37.7%) had moderately adequate level of awareness of acute respiratory tract infections. More than two-thirds (75.5%) of respondents answered virus/bacteria as the main cause. Noisy breathing, difficulty breathing, cough, fever, runny nose, sore throat. ear discharge/ear pain was signs and symptoms. Almost one third (32.1%) of respondents knew cyanosis is a danger sign. The significant association was found between age (at p=0.026) and family size (at p=0.002) with level of awareness on acute respiratory tract infections.

Conclusion: The study concluded that nearly two-thirds of mothers have an adequate level of awareness regarding acute respiratory tract infections. This study might be useful to carry out different health promotion-related activities and intervention by concerned stakeholder.

Keywords: Awareness, Acute Respiratory Tract Infection, Mothers of Under five children

INTRODUCTION

Acute respiratory tract infection (ARTI) was the most frequent cause of childhood morbidity in Nepal. It was the second leading cause of childhood morbidity and mortality in the world.[1] Prevalence of ARTI was 2% among under five-year children in 2016 in Nepal.[2] A recent studyfound that 28% of children (1-5 years) were suffering from ARTI out of total children admitted to Nepalgunj Medical College.[3] The total ARTI- related deaths at health facilities were reported to be 176, which is more compared to 155 in 2072/73 and 168 in 2070/71.[4]

A study conducted in India to assess the knowledge, attitude and practice about ARTI among mothers found that 68.9% of respondents have a poor knowledge level on ARTI.[5] A study conducted to assess the risk factors of ARTI in Nepal found that poor socioeconomic status, sex, educational status of mother, crowding, ARTI in family members, rural environment, under-nutrition were found to be significant risk factors.[6] Similarly, study conducted in Bangladesh found that the prevalence of ARTI symptoms appeared to be higher among malnourished children. Furthermore, maternal age, maternal and paternal education, and parental occupation were

significantly associated with ARTI.[7]A cross-sectional study conducted in Dar-es-Salaam, India found that 92.5% of children experienced convulsions followed by difficulty breathing in 90%, breastfeeding or eating difficulties in 88.0%, unconsciousness in 89.8%, and drowsiness in 88% as fatal symptoms of ARTI.[8]

A study conducted in South India to assess the prevalence of ARTI and their determinants in under five children found that prevalence of ARTI was 27% with ARTI risk occurrence in illiterate mothers (37.8%), those having primary schooling (21.5%) and those with more than 12 years of schooling(8.9%).[9]The study conducted to assess knowledge, attitudes, and practices about ARTI among mothersat Civil Hospital Mithi of Tharparkar Desert of Pakistan by Kumar Rajesh showed that 28% had no knowledge about ARTI.[10] A study conducted to assess the knowledge and practice of management of ARTI among mothers of under five years children in Chitwan district found that 48% of the respondents have knowledge on signs of seriousness of ARTI. Similarly, 7% mothers provided modern medicines by themselves, 90% provided supportive treatment at home, 56% of mothers seek health care from nearby health post and 26% from private nursing home.[11]

In the Nepalese scenario, mother is regarded as a caretaker of their children so mother can easily find about the altered health status of their children. Although the incidence of ARTI isin increasing trend and is the serious problem of Nepal, very few studies were done to evaluatethe awareness level of mothers regarding acute respiratory tract infections. So the study was conducted to assess the awareness level of mothers regarding ARTI, to identify its association with different independent variables.

METHODS

A descriptive cross-sectional research design was used. The research was conducted in the Maternal and Child Health Clinic of Tribhuvan University Teaching Hospital (TUTH). The study population weremothers of under-five years children and those who attended in Maternal and Child Health Clinic for any cases of the childhood disorders. Mothers willing to participate in the study were included. Non-probability purposive sampling technique was used to select sample. Questionnaire was prepared by the author consulting with subjectexperts, advisors, and literature in Nepali Version. The questionnaire consists of 2 parts. Part 1 consists of socio-demographic information, part 2 consists of questions related to awareness on acute respiratory infection among mothers having under five children. The questionnaire was pretested among 10% of the respondents. Face to face interview was carried out among 106 respondents from July 6 to July 21, 2019 in Maternal and Child Health Clinic of TUTH. Ethical approval was obtained from the Institutional Review Board, IOM (IRC reference number 493 (611|) 075/76). Permission was obtained from TUTH before data collection. Informed consent was taken prior to data collection. Collected data was kept confidential. The collected data was organized, edited, coded, and entered in SPSS. The data was tabulated and analyzed according to the nature of variables using descriptive statistics which include frequency, percentage, mean, median and standard deviation and inferential statistics including chi-square and Fischer's exact test.

RESULTS

Table 1 shows that more than half (57.5%) of respondents were from the age group 25-35 years with mean age 27.87 (SD= ± 4.496) years. 92.5% of the respondents were Hindu. Two-third were housewives and from a nuclear family. More than two-thirds (79.2%) of respondents were from the urban areas.

Table 1: Socio-demographic Characteristics of Respondents (n=106)

Characteristics	Number	Percentage
Age of Respondent (years)		
15-25	34	32.1
25-35	61	57.5
35-45	11	10.4
Mean age± SD = 27.87± 4.496 years		
Religion		
Hinduism	98	92.5
Non-Hinduism	8	7.5
Ethnicity		
Brahmin/Chhetri	60	56.6
Others*	46	43.4
Level of Education		
Primary	9	8.5
Lower secondary	13	12.3
Secondary	47	44.3
Graduate and above	37	34.9
Occupation		
Housewife	70	66.0
Others[b]	36	44.0
Types of family		
Nuclear	66	62.3
Joint	29	27.3
Extended	11	10.4
Size of a family member		
≤4	61	57.5
5-8	38	35.8
≥9	7	6.6
Place of residence		
Urban	84	79.2
Rural	22	20.8

* Janajati, Dalit, Madhesi, Muslim, [b]=services, agriculture, business, labour

Table 2 shows that everyone have heard about ARTI and responded smoking by family members is associated with the ARTI of the child. 98% of respondents explained environmental pollution followed by 93.4%, 86.8%, 82.1%, 62.3%, 54.7% and 37.7% of them said attached kitchen with bedroom, overcrowding, family history of ARTI, lack of immunization, poorly breastfeeding and poor socio-economic status as the risk factor of ARTI.

Table 3 shows that 97.2% of the respondents said noisy breathing as a sign and symptom of ARTI. 85.8% of the respondents were aware that severe chest in-drawing as a danger signs whereas nearly one-third (32.1%) of them were aware of cyanosis as a danger sign of ARTI.

Table 2: Awareness of Meaning, Risk Factors, and Cause of ARTI among Respondents (n=106)

Variables	Number	Percentage
Meaning of ARTI*		
Infections of any parts of the respiratory tract Pneumonia,	76	71.7
bronchitis	18	17.0
Common cold, cough, tonsillitis	12	11.3
The age group most likely to get ARTI		
Under-five children	55	51.9
Risk factors of ARTI*		
Smoking by family members	106	100
Environmental pollution Attached kitchen	104	98.1
with bedroom	99	93.4
Overcrowding	92	86.8
Family History of ARTI	87	82.1
Lack of Immunization Poorly	66	62.3
breastfeed	58	54.7
Poor socio-economic status	40	37.7
Types of fuel mostly increase incidence		
Firewood, animal dung	99	93.4
The main cause of ARTI		
Virus/Bacteria	80	75.5

*Multiple Response, #Correct Answer

Table 3: Awareness on Mode of Transmission, Signs and Symptoms and Danger Signsof ARTI (n=106)

Variables	Number	Percentage
Mode of transmission		
Air/droplets	66	62.3
Signs and symptoms *		
Noisy breathing Difficulty	103	97.2
breathingCough	101	85.3
Fever	99	93.4
Runny nose	89	84.0
Sore throat	88	83.0
Ear discharge/Ear pain	82	77.4
Danger signs of ARTI *		
Severe chest in-drawingLethargy	15	14.2
Not able to drink	91	85.8
Convulsion	88	83.0
Cyanosis	84	79.2
	74	69.8
	34	32.1

*Multiple Response, #Correct Answer

Table 4: Awareness on Prevention, Home Management and Complications of ARTI (n=106)

Variables	Number	Percentage
Prevention of ARTI*		
Protecting children from colds	106	100
Avoiding exposure of children to dust	105	99.1
Smoking away from the child	105	99.1
Having a clean environment in the house	103	97.2
Exclusive breastfeeding	100	94.3
Taking the child to the hospital for immunization	92	86.8
Not taking the child to the cooking area	88	83.0
Home management*		
Keeping the child warm Cleaning	104	98.1
the nasal passages	101	95.3
Steam inhalation	98	92.5
Providing Tulsi water/neem patta water/ginger withwater	93	87.7
Provide more fluid	82	77.4
Complications	78	73.6
Respiratory failure #Heart	26	24.5
problem	2	1.9
Kidney failure		

*Multiple Response, #Correct Answer

Table 5: Level of Awareness Regarding Acute Respiratory Tract Infection amongRespondents (=106)

Level of Awareness	Number	Percentage
Adequate (>75%)	66	62.3
Moderately adequate (50-75%)	40	37.7
Inadequate (<50%)	–	–
Total	106	100

Table 6: Association between Level of Awareness and selected variables (n=106)

Variables	Level of Awareness		Chi-square value	P-value
	Moderately adequate No. (%)	Adequate No. (%)		
Age of respondent				
≤25 years	18 (52.9)	16(47.1)	4.926	**0.026***
>25 years	22 (30.6)	50(69.4)		
Religion				
Hindu	38 (38.8)	60(61.2)		0.707#
Non-Hindu	2(25.0)	6(75.0)		
Ethnicity				
Brahmin/Chhetri	23(28.3)	37(61.7)	0.021	0.885
Others[a]	17(37.0)	29(63.0)		
Level of Education				
Secondary level and below	27(39.1)	42(60.9)	0.126	0.686
Graduate and above	13(35.1)	24(64.9)		
Occupation				
Housewives	29(41.4)	41(58.6)	1.196	0.274
Others[b]	11(30.6)	25(69.4)		
Size of family				
Less than 5	35(47.3)	39(52.7)	9.538	**0.002***
More than and equal to 5	5(15.6)	27(84.4)		
Place of residence				
Urban	34(40.5)	50(59.5)	1.294	0.255*
Rural	6(27.3)	16(72.7)		

*[a]Janajati, Dalit, Madhesi, Muslim, [b]services, agriculture, business, labour, P-value in boldletters *Statistically significant at P-value<0.05, # Fisher Exact test*

Table 4 represents that 106 respondents were aware on protecting a child from cold prevents ARTI. Almost all of respondents (99.1%) said both avoiding exposure of a child to dust and smoking away from child prevents ARTI. More than two third (73.6%) of respondents answered correctly the complication of acute respiratory tract infections is respiratory failure. Table 5 shows that 62.3% of the respondents had an adequate level of awareness on ARTI with37.7% of the respondents had a moderate awareness level on ARTI. Table 6 explains that there is significant association between age (p=0.026) and family size (p=0.002) with level of awareness on ARTI.

DISCUSSION

A study conducted by Alluqmani et al[12] found that 52% of the respondents were aware on ARTI which is slightly lower (71.7%) than our study. A study conducted in Saudi Arabia by Alluqmani et al. [12], in Bhaktapur by Gyawali, Pahari, Maharjan, & Khadka,[13] and in Bangalore by Ramegowda, Prakruthi, & Rajanna,[14] found that 19.8%, 14.6%, and 40% said microorganisms as the main cause of ARTI respectively which was lower than (75.5%) our study.

A study conducted by Javed, Sidique, &Kanju found difficulty in eating, convulsions, lethargy, and chest in-drawing occurs in ARTI which is similar to the study conducted by Athumani. Similarly, study conducted by Challa &Krushuri,[16] found that 0.3%, 1.2%, and 1.2% of respondents'were aware of chest in-drawing, convulsions, and lethargy as a danger signs of ARTI which are contradicted to present study.A study conducted by Ramegowda, Prakruthi, &Rajanna, (2018)[14] found that exclusive breastfeeding, protection from colds, and avoidance of passive smoking can prevent ARTI which is similar to our study. Similarly, in a study conducted in by Challa& Krushuri[16] respondents answered vaccinations against disease is useful to prevent ARI which is similar toour study.

A study conducted by Mutalik & Raje[5] found good and average knowledge level on ARI to be 24.3% and 6.8% respectively which is lower than our study i.e. 62.3% of respondents had an adequate level of awareness and 37.7% had a moderate awareness level.

Significant association between the age of mothers and awareness level (p-value=0.026) was found in our study. This finding is similar to the study conducted by Javed, Sidique, &Kanju[15] in Pakistan (p-value= <0.001). However, Socio-demographic characteristics like religion, literacy rates, and occupation were not significantly associated with awareness level in our study and the study conducted by Javed, Sidique, &Kanju[15].

LIMITATION

The findings lacks generalizability as the purposive sampling technique was used .Data was collected at only one of the tertiary level hospital of Nepal.

CONCLUSION

Nearly two-thirds of mothers are adequately aware of acute respiratory tract infection and there is a significant association between mothers'age and size of the family with level of awareness.

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