Knowledge, attitude and practices about acute respiratory infection among mothers of under 5 children in an urban area of Tamil Nadu

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ABSTRACT

Acute respiratory infection (ARI) is one of the major public health problems in developing countries and in India, ARI is considered as one of the major killer diseases and leading cause for morbidity and mortality in children below five years. Knowledge, attitude and practice of mothers play a major role in the decrease of morbidity in under 5 children. The objective is to evaluate the health-seeking behaviour of mothers and to assess knowledge, attitude and practices of mothers regarding ARI. Using pre-tested semi-structured pro-forma, a descriptive study on 204 mothers was done and information on knowledge of ARI, attitude and practice regarding consulting physician, antibiotic use were collected and results were analysed using SPSS 22. Questionnaire regarding knowledge preferred that 61.8% of mothers preferred private set up as a place of choice of treatment and the commonest aggravating factor was infection (36.8%), most common complication was Pneumonia (32.4%), and most mothers opted for the medical practitioner (86.3%) for treatment. Self-medication was seen to be practiced by (52.5%). The younger age, a short period of time since marriage, and higher educational level were found to be significantly correlated with the good knowledge, attitude and practice and this could be due to that younger women with a lower duration of marriage have more time as well as being aware of new media and internet. They would gain knowledge easily compared to older women.

INTRODUCTION

Acute respiratory infection is defined as “inflammation of the respiratory tract anywhere from nose to alveoli with a wide range of combinations of signs and symptoms”. It may interfere with the normal breathing of the individual and is communicable in nature (Healthline, 2017). ARI is a major public health problem in our country and one of the leading causes of morbidity and mortality in children below 5 years of age. Every year ARIs account for over 12 million hospital admissions among children below five years of age (Nair et al., 2013; WHO, 2019). India ranks 2nd for three-quarters of death due to ARI in under 5 population in developing regions of the world (Bhanderi and Chowdhary, 2006). Socioeconomic conditions influences human health and measure to assess the health status is education, especially of a female as a mother is the main caregiver for the child. ARI there is a lack of basic health service availability, lack of awareness and other factors associated like over-crowding, environmental factors, defects in immune system, over use and misuse of antibiotics, poverty, absence of ventilation.
Table 1: Socio-demographic details of the Study participants

| Variables                        | Frequency (N) | Percentage (%) |
|----------------------------------|---------------|----------------|
| **Type of family**               |               |                |
| Nuclear                          | 168           | 82.4%          |
| Joint                            | 30            | 14.7%          |
| Three generation                 | 6             | 2.9%           |
| **Income of family per month**   |               |                |
| Less than 20000                  | 16            | 7.8%           |
| 20000-50000                      | 114           | 55.9%          |
| Above 50000                      | 74            | 36.3%          |
| **Educational status**           |               |                |
| Primary                          | 23            | 11.3%          |
| Middle school                    | 36            | 17.6%          |
| High school                      | 47            | 23%            |
| Graduate                         | 98            | 48%            |
| **Occupation**                   |               |                |
| Unemployed                       | 70            | 34.3%          |
| Unskilled                        | 21            | 10.3%          |
| Skilled                          | 32            | 15.7%          |
| Semi profession                  | 20            | 9.8%           |
| Profession                       | 61            | 29.9%          |
| **Immunisation status of a child**|             |                |
| Partially immunised              | 19            | 9.3%           |
| Immunised till date              | 185           | 90.7%          |

and indoor air pollution however majority of associated factors are preventable (Prajapati et al., 2012). This study observes knowledge on home management practices of ARI, which is useful in the prevention and management of the disease. The need for this study is to assess the knowledge, attitude and practices of mothers on ARI in children under 5 years and to evaluate the association between KAP based on their education and age.

MATERIALS AND METHODS

A cross-sectional descriptive health survey conducted for 5 months in the 2018 at a semi-urban part of Chennai, Tamil Nadu using pretested, validated and a structured questionnaires to assess the demographic data and knowledge, attitude and practices among mothers of under 5 children. Based on a study done in Tamil Nadu, the prevalence of acute respiratory infection was found to be 59.1% (Kumar et al., 2015). Using the formula $4pq / L^2$ and considering 12% of relative precision, the sample size was calculated as 192. The final sample of 204 was taken after considering a non-response rate of 5%. The mothers who were willing to participate in the study were selected from four Anganwadis in the Thirumazhisai area in Chennai by a convenient sampling method. Informed and written consent was taken before interviewing the study subjects and after-explaining the purpose of the study. Data was entered and descriptive and inferential statistics was used for data analysis. Chi-square ($\chi^2$) test was applied to measure the association between the level of KAP and selected demographic variables done on SPSS version 22.

RESULTS AND DISCUSSION

Socio-demographic details

It was observed that among 204 mothers, 77.5% were between the age of 20 – 30 years, 60% of them had total family income between Rs. 20,000 to 50,000, 48% of the mothers had an educational status of intermediate and above. It was observed that 20.6% of the family members were suffering from a respiratory infection and 13.7% had overcrowding in their homes during the time of the study. A high proportion of boys (59.3%) were observed as compared to with-girls (40.7%). 6.9% of the mothers reported inadequate ventilation in their houses (Table 1).

The KAP among mothers was observed based on their age, which revealed that the mothers between...
the age of 20-30 years reported that the infection is more common during the rainy season (40.7%). 37.3% use home remedies during the time of infection. Subjects prefer private hospitals (61.8%) than Government hospitals (38. 2%) (Table 2). 86.3% were consulting a physician during an acute respiratory infection. 91.3% were following the medication prescribed by the doctor regularly.52.5% was taking self-medication without doctors’ consultation and 59.3% were using home remedies (Table 3).

In our study, the proportion of boys (59.3%) reported to have ARI more when compared to girls (40.7%) and this finding was significant statistically and similar to various studies (Choube et al., 2014; Prajapati et al., 2012; Goel et al., 2012). The probable reason that there is predominance among male children could be because of the tendency of male children to play outside home gets them exposed to infected aerosols from the surrounding outdoor environment when compared to female children. Majority of the subjects belonged to the age group between 20-30 years, 48% were graduated and belongs to upper-middle-class socioeconomic status scale, 82.4% belong to nuclear family and 34.3% were home maker whereas study done by Meena et al. revealed mean age group between 25-30 years, majority 94.5% about 26.6% were educated up to secondary level of education, 51%
Table 3: Assessment of KAP on ARI among mothers based on their Educational qualification

| Variables                          | Educational status | p-value |
|------------------------------------|--------------------|---------|
|                                    | Primary (N (%))    | Middle school (N (%)) | High school (N (%)) | Graduate (N (%)) |
| Seizures complicates ARI           | 10(4.9%)           | 2(1.0%) | 16(7.8%) | 33(16.2%) | 0.018 |
| Don't know                         | 4(2.0%)            | 8(3.9%) | 4(2.0%) | 13(6.4%) |
|                                   | 9(4.4%)            | 26(12.7%) | 27(13.2%) | 52(25.5%) |
| Ear discharge complicates ARI      | 7(3.4%)            | 2(1.0%) | 17(8.3%) | 38(18.6%) | 0.006 |
| ARI                                 | 3(1.5%)           | 10(4.9%) | 4(2.0%) | 10(4.9%) |
| Don't know                         | 13(6.4%)           | 24(11.8%) | 26(12.7%) | 50(24.5%) |
| Measles complicates ARI            | 7(3.4%)            | 2(1.0%) | 13(6.4%) | 36(17.6%) | 0.018 |
| No                                 | 3(1.5%)            | 10(4.9%) | 6(2.9%) | 12(5.9%) |
| Don't know                         | 11(5.4%)           | 24(11.8%) | 28(13.7%) | 50(24.5%) |
| Child have excessive drowsiness    | 7(3.4%)            | 4(2.0%) | 20(9.8%) | 42(20.6%) | 0.014 |
| during ARI                         | 3(1.5%)            | 12(5.9%) | 9(4.4%) | 14(6.9%) |
| Don't know                         | 13(6.4%)           | 20(9.8%) | 18(8.8%) | 42(20.6%) |
| Physician Consultation             | 13(6.4%)           | 22(10.8%) | 43(21.1%) | 98(48.0%) | 0.000 |
| Yes                                | 3(1.5%)            | 14(6.9%) | 4(2.0%) | 0(0.0%) |
| No                                 | 10(4.9%)           | 16(7.8%) | 18(8.8%) | 42(20.6%) |
| Completion of a full course of     | 21(10.3%)          | 20(9.8%) | 43(21.1%) | 98(48.0%) | 0.000 |
| treatment                          | 2(1.0%)            | 2(1.0%) | 2(1.0%) | 0(0.0%) |
| Preference                         | 11(5.4%)           | 26(12.7%) | 32(15.7%) | 52(25.5%) | 0.016 |
| Home remedies                      | 2(1.0%)            | 2(1.0%) | 2(1.0%) | 0(0.0%) |
| Ayurvedic                          | 0(0.0%)            | 2(1.0%) | 0(0.0%) | 2(1.0%) |
| Homeopathy                         | 10(4.9%)           | 6(2.9%) | 13(6.4%) | 44(21.6%) |
| Allopathy                          | 11(5.4%)           | 26(12.7%) | 28(13.7%) | 42(20.6%) | 0.015 |
| Self-medication                    | 12(5.9%)           | 10(4.9%) | 19(9.3%) | 56(27.5%) |

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belongs to nuclear family and about 49.2% were of housewife (Gyawali et al., 2016) which shows that mostly mothers are being educated among study subjects.

An article observed (Simiyu et al., 2004) that about 87.5% reported that cold weather was the major reason for ARI whereas our study states that only 40.7% who were exposed to cold weather had ARI. This may be due to the varying climatic changes observed in different places where the study was conducted. Only 32.4% of mothers were aware of complications regarding ARI; among them, the most common complication is Pneumonia when compared to a study which showed about 83% of mothers said the most common complication is pneumonia (Bham et al., 2016).

A study reported that 29.9% were only aware of vaccines available for the prevention of ARI (Simiyu et al., 2004), which also revealed about 60.2% of mothers knew measles was preventable by immu-
nisation. (Prajapati et al., 2012) showed that 21.8% used household remedies and another study (Bham et al., 2016), only 6% of mothers used home remedies. Whereas in the present study, nearly 37.3% used home remedies for ARI, 52.4% gave antibiotics without doctor consultation. Whereas, a study observed by (Farhad et al., 2014) revealed that only 5% of them gave antibiotics without consultation. These varying changes must be mostly due to the different levels of education and awareness observed between mothers from different study locations.

CONCLUSIONS

It was observed that younger the age of the mother and shorter the period of marriage, there was a significant association with good knowledge about ARI prevention and its management. It was observed that male children were affected more with ARI than female children, probably due to the male children play mostly outdoor.

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