

Original Research Article

A study to assess the level of knowledge regarding prevention and management of acute respiratory infection among mothers of children 0-5 years in selected hospital in Siliguri

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ABSTRACT

Background: In developing countries like India acute respiratory infection (ARI) contributes in child mortality upto 75% and out of 10, 7 deaths are due to ARI. The knowledge of the mothers towards the disease is a significant determinant of child's health.

Methods: A descriptive cross-sectional study included 100 mothers of children 0-5 years admitted in pediatric ward and postnatal ward in selected hospital Siliguri during the year 2022 in the month of March. Data was collected using structured interview method.

Results: 20% of mothers have good knowledge in prevention and 33% had good knowledge in management of ARI.

Conclusions: As the leading cause of death among children, knowledge assessment about ARI among the mothers is very important, which helps for better understanding of the intensity of the problem.

Keywords: ARI, Knowledge, Children

INTRODUCTION

Infection to the respiratory system is more common than other part of the body specially in the children less than 5 years of age.¹

Children are more susceptible to cold because they have not yet developed resistance to many type of microorganism. Infection is invasion of any kind of microorganism, it may be bacteria virus, fungi. Acute respiratory infection (ARI) comprises of infection in any part of the respiratory system (upper or lower) lasting less than 30 days. It is one of the major causes of child's mortality and morbidity and the leading cause of

hospitalization, approximately 30-40%.² The primary caregiver in almost all society is the mother. The knowledge of the child's mother towards the disease is a significant determinant of child's health. The objective of this study was to assess knowledge regarding prevention and management of ARI among mothers of children 0-5 years and to find out association of knowledge with the demographic variables.

METHODS

The study was a descriptive cross-sectional study and convenient sampling method was used. The data was collected in the month of March 2022 at pediatric ward and

postnatal ward in Siliguri District Hospital, Siliguri, Darjeeling, West Bengal, India. 100 mothers of children of age 0-5 years were included in this study. Prior to the data collection informed written consent was obtained from the participants by taking signature or thumb impression. The study was approved by institute ethical committee, Anandaloke Institute of Nursing Education, Siliguri.

Exclusion criteria

Mothers who were sick during the data collection period, children having other chronic disease and critically ill children on comfort devices were excluded from the study.

Study instruments

The data collection tool was self-structured questionnaire and was divided into 3 sections- section A, section B and section C. demographic data such as age of the mother, age of the child, religion, education of the mother, type of family, area of residency, occupation and number of children were included in this section. Section B and C consist of 10 multiple choice question regarding knowledge about prevention and management of ARI respectively. And each item in the questionnaire was provided with one correct response and among four responses, correct response was rewarded with one mark and incorrect answer no marks is provided.

Data analysis

Data was analyzed using statistical package for the social sciences (SPSS) version 21. categorical variables were expressed in terms of frequency and percentage, mean and standard deviation and the association between categorical variables has been expressed by using Chi square or Fisher exact test.

RESULTS

A total of 100 mothers of children 0-5 years of age were enrolled in this study admitted in pediatric ward, postnatal ward and attended pediatric outpatient department (OPD). 59 (59%) mothers belonged to 18-25 years of age whereas 41 (41%) mothers belonged to 26-40 years of age. Majority of the mothers has children 0-1 years of age (32%) followed by children belonged to 1-2 years of age (29%), (25%) belonged to 3-4 years of age and (14%) of children belonged to 4-5 years of age, 68% mothers were Hindu, 20% mothers belonged to Muslim religion and 12% mothers belonged to Christian religion. Majority of the mothers were having primary education (53%). About type of family, 50% mothers belonged to nuclear family whereas 50% belonged to joint and extended family. Moreover, most of the participants belonged to urban area (61%) and belonged to rural area. Pertaining to the occupation of the mothers, 92% mothers were housewife and 8% mothers were working mothers. Regarding

number of children a mother has, 90% mothers were having children less than 2 years of age and 10% mothers were having children 3 to 5 years of age. Demographic data of the sample were summarized in Table 1.

Table 1: Demographic characteristics of the study sample (n=100).

| Sl. no | Demographic variables | Frequency (%) |
|--------|-----------------------------------|---------------|
| 1 | Age of the mothers (years) | |
| | 18-25 | 59 (59) |
| | 26-40 | 41 (41) |
| 2 | Age of child (years) | |
| | 0-1 | 32 (32) |
| | 1-2 | 29 (29) |
| | 3-4 | 25 (25) |
| | 4-5 | 14 (14) |
| 3 | Religion | |
| | Hindu | 68 (68) |
| | Muslim | 20 (20) |
| | Christian | 12 (12) |
| 4 | Education | |
| | Illiterate | 14 (14) |
| | Able to read and write | 21 (21) |
| | Primary education | 53 (53) |
| | Secondary education | 12 (12) |
| 5 | Type of family | |
| | Nuclear | 50 (50) |
| | Joint | 50 (50) |
| 6 | Area of residence | |
| | Urban | 61 (61) |
| | Rural | 39 (39) |
| 7 | Occupation | |
| | Housewife | 92 (92) |
| | Working | 08 (08) |
| 8 | No. of children | |
| | <2 | 90 (90) |
| | 3-5 | 10 (10) |

The level of knowledge of the mothers regarding prevention and management of ARI, 20% mothers were having good knowledge in prevention whereas 33% in management. Majority of the mothers were having average knowledge in both prevention and management of ARI, 66% and 61% respectively. 14% and 6% mothers had poor knowledge regarding prevention and management respectively (Table 2).

Association of demographic variables with knowledge of mothers regarding prevention and management of ARI, religion, type of family, area of residency and number of children was significantly associated with knowledge regarding prevention ($p<0.05$) whereas in knowledge regarding management only type of family was associated ($p<0.05$).

Table 2: Distribution of the level of knowledge among mothers between 0-5 years children regarding prevention and management of ARI.

| Level of knowledge | Knowledge on prevention, N (%) | Mean±SD | Knowledge on management, N (%) | Mean±SD |
|--------------------|--------------------------------|-----------|--------------------------------|-----------|
| Good | 20 (20) | | 33 (33) | |
| Fair | 66 (66) | 33.3±6.52 | 61 (61) | 33.3±5.52 |
| Poor | 14 (14) | | 06 (06) | |

DISCUSSION

Worldwide nearly 12 million children die every year due to ARI and most of the children have 4-8 episodes of Acute respiratory infection per year. Countries like India, which are still in developing, under five mortality rate is 34 deaths per thousand live births and every 6th child in the world is Indian and every fourth child who dies is an Indian. Among which 29% is related to acute respiratory tract infection.¹⁶

As the primary care giver in almost all the society is the mother. Most of the morbidity due to acute respiratory diseases is such that they can adequately managed at home. Mothers' knowledge towards the disease condition can reduce the mortality and morbidity rate if identified earlier.

Socio-demographic variables like area of living, occupation, literacy, type of family, number of children plays important role in level of knowledge of mothers.

In the present study regarding knowledge on prevention and management of ARI among mothers of children between 0-5 years, it was seen that only 20% and 33% mothers had good knowledge, 66% and 61% had fair knowledge and 14% and 6% had poor knowledge in prevention and management of ARI respectively.

A study in Mithi, among 1000 mothers to evaluate the health seeking behavior of mothers regarding acute respiratory tract infections in children under 5 years and to assess the knowledge regarding prevention of acute respiratory tract infections of mother. The result showed 72% mothers have knowledge about ARI and recognize it 28% had no knowledge about acute respiratory infection (ARI).⁶

A study conducted in Villupuram district, among mothers of 5 years children to assess the level of knowledge regarding home management of ARI among 30 mothers of under 5 children. Among all the mothers of under 5 children has moderately adequate knowledge (43%) and 56.6% mothers has inadequate knowledge.³ Whereas in the present study 33% mothers had good knowledge, 61% had average knowledge and 6% had poor knowledge.

Another study conducted in JIPMER outpatient department (OPD), Puducherry, south India to assess the knowledge on prevention and management of ARI among mothers of under 5 children, result showed that only 5%

mothers had adequate knowledge 48% had inadequate and 47% had moderately adequate knowledge.⁸

About association between demographic variables with knowledge of mothers regarding prevention and management of ARI, the present study showed that there was a significant association between religion of the mother, type of family mother belonged to, area of residency and number of children with the knowledge regarding prevention on ARI whereas knowledge of mothers regarding management of ARI only type of family was having significant association ($p < 0.05$).

A study conducted in Bangladesh among 290 mother to assess the knowledge, attitude and practice of rural mothers towards acute respiratory tract infection in under five-year children. Association between demographic variables with knowledge of the mothers showed that there were no significant association between their demographic variables except age of the child and type of feeding ($p < 0.05$).⁵

Another study conducted in Northeast Ethiopia among 422 mothers to assess the prevalence and associated factors of ARI among under 5 years children. Study showed that maternal and child age, residence and maternal hand hygiene information were significant factors identified to be associated with ARI.¹⁴

From the present study with comparison to above mentioned references, it showed that majority of the mothers had fair knowledge regarding prevention (66%) and management (61%) of ARI as compared to other areas of country and developing countries and area of residency had impact on knowledge of mothers as present study and study conducted in Northeast Ethiopia showed significant association.

Limitations

The study was a cross-sectional study limited to only one centre with limited number of patients.

CONCLUSION

Good knowledge of the mothers towards ARI prevention and management plays a vital role in reducing the risk and hospital stay of the child. From the present study it can be concluded that mothers residing in Siliguri need to improve their knowledge in prevention and management

of ARI. The study helped us to understand the intensity of the knowledge in the Siliguri area.

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