

Original research article**Assessment of effect of health education on parental knowledge on acute respiratory infections in urban health training centre, Bangalore****¹Dr. Prakruthi RA, ²Dr. Chethana R, ³Dr. Lakshmi H, ⁴Pushpa**¹Assistant Professor, Department of Community Medicine SABVMCRI, Bangalore, Karnataka, India²Associate Professor, Department of Community Medicine, KIMS, Bangalore, Karnataka, India³Assistant Professor, Department of Community Medicine, AIMSRC, Bangalore, Karnataka, India⁴Medico Social Worker, Department of Community Medicine, KIMS, Bangalore, Karnataka, India**Corresponding Author:**

Dr. Prakruthi RA (ra.prakruthi@gmail.com)

Abstract

Background: Acute respiratory tract infection is a major cause of morbidity and mortality in developed and developing countries in under five years. However, the knowledge regarding acute respiratory infections and its management is low among parent of under five children. Hence the present study was undertaken to assess effectiveness of health education on parental knowledge on acute respiratory infections among under five children.

Materials and Methods: A cross sectional study on 120 under five children's parents were done after taking informed consent. Study was done for a period of 3 months. Information on knowledge on acute respiratory infections were collected and health education was given regarding the same using flip charts and two-weeks later post-test evaluation was done for the same questionnaire and results were analysed using Microsoft excel and SPSSV20.

Results: Among 120 study subject majority 58.3% belonged to the age group of 25-30 years, 52.5% of respondents follow Muslim religion and about 51.6% were educated up to secondary high school. About 84.1% were house maker. The paired t test was applied and the p value was 0.001 and it is found to be statistically significant. It represents those effects of health education on parental knowledge were found to be statistically significant.

Conclusion: Majority of parents had good knowledge and after health education interventions the knowledge score was significantly high among parents.

Keywords:ARI, knowledge, parent, mother

Introduction

Acute respiratory tract infection is one of the major causes of morbidity and mortality in developing and also in developed countries among under five years. Acute respiratory infections are inflammation of the respiratory tract anywhere from nose to alveoli, with a wide a range of combination of signs and symptoms. ARI is classified into upper respiratory tract infections (AURI) and lower respiratory tract infections (ALRI)^[1]. Upper respiratory tract infections are more common among upper and lower respiratory tract infections^[2]. Both in developed and developing countries, every child has five episodes of ARI per year, nearly 3.9 million deaths occur world-wide whereas 90% of the ARI deaths are due to pneumonia and in a community-based study states that about 70% of the childhood morbidities were among children aged less than five years was due to ARI^[3]. There are many risk factors which are more prone towards acquiring of respiratory infections which include illiteracy among parents, low socioeconomic status, overcrowding, malnutrition, lack of breast feeding, prelacteal feeds, partial immunization, indoor air pollution, early weaning^[4]. Certain study reported that problem of ARI is more in urban slums than in rural area^[5]. ARI has become major public health mortality and morbidity in India. Hence the present study was undertaken to assess effectiveness of health education on parental knowledge on acute respiratory infections among under five children.

Objectives

1. To assess the effects of health education on parental knowledge on acute respiratory infections among under five children.
2. To describe socio demographic profile of study subjects.

Methods and Methodology**Inclusion criteria**

- Parent of Under five children who are residents of urban field practice area of KIMS Bangalore.

- Those who give consent to participate in the study.

Exclusion criteria

- Those who are seriously ill.

Sample size

Based on NFHS-4 data, Prevalence of Children with fever or symptoms of ARI in the last 2 weeks preceding the survey taken to a health facility (%) for urban was 77.8% [6]. Sample size was calculated by using $4pq/d^2$ formula with $P=77.8$, $d=10\%$, $q=22.2$ and sample size was found to be 114 and rounding off to 120.

After taking institutional ethical clearance a cross sectional study on 120 parents of under five children attending Urban Health Training Centre of KIMS, Bangalore were enrolled by convenience sampling after taking verbal consent and fulfilling inclusion and exclusion criteria. Study was conducted for period of 3 months (December 2017-February 2018). Using pre structured and pre tested questionnaire proforma, information on knowledge of ARI caused by, symptoms, risk factors and also preventive aspects, vaccines available for respiratory infections details were collected. Total of 12 questions were asked to assess. Health education was given for the study subjects in urban health training centre of Kempegowda Institute of Medical Sciences Bangalore, by using flip charts. The same study subjects were called up for post-test evaluation after 2 weeks of health education and again the same questionnaire was used to assess parental knowledge regarding ARI. Knowledge was assessed by giving a score of 1 to correct and 0 for wrong responses. Data was analysed using MS Excel and SPSSV20.

Results

Table 1: Sociodemographic profile of study subjects (N=120)

Characteristics	Variables	Frequency (Percentage)
Age	20-24	41 (34.2)
	25-30	70 (58.3)
	31-35	09 (7.5)
Religion	Muslim	63 (52.5)
	Hindu	57 (47.5)
Education	Illiterate	10 (8.4)
	Primary school	06 (5.0)
	Middle school	27 (22.5)
	High school	62 (51.6)
	Intermediate	11 (9.1)
	Graduate	4 (3.4)
Occupation	House Maker	101(84.1)
	Teacher	5 (4.1)
	Wage worker	14(11.6)
Socio Economic Status Scale	Upper middle	65 (54.2)
	Lower middle	39 (32.5)
	Upper lower	15 (12.5)
	Upper	1(0.8)
Type of Family	Nuclear	75 (62.5)
	3 rd generation	32 (26.7)
	Joint family	13 (10.8)

Among 120 study subject majority 58.3% belonged to the age group of 25-30 years, 52.5% of respondents follow Muslim religion and about 51.6% were educated up to secondary high school. About 84.1% were house maker, majority 54.2% belongs to upper middle-class socio-economic status scale according to modified Kuppaswamy classification and about 62.5% belonged to nuclear type of family [Table 1].

In pre-test data all the study subjects knew about ARI, Majority 96% said ARI is caused due to cold weather, 64% is from germs. About 85% of them said dust is the risk factor for ARI, 89% passive smoking, 72% low immunity, 69% inadequate ventilation. Only 10% of study subject were aware of ARI complications and 3 % were aware of vaccines which prevent acute respiratory infections. About 79% responded exclusive breast feeding prevents ARI, 90% said avoidance of cold can prevent ARI, and 88 % said avoidance of passive smoking can prevent ARI.

Table 2: Paired t test of pre- and post-parental knowledge on acute respiratory infections

Study subjects	Mean	N	SD	t Value	P Value
Pre-test knowledge	19.85	120	6.85	-11.857	0.0001
Post-test knowledge	25.96	120	3.60		

In the present study the mean score has increased significantly and the paired t test was applied and the p value was 0.001 and it is found to be statistically significant. It represents those effects of health education on parental knowledge were found to be statistically significant [Table 2]

Discussion

In the present study majority of study subjects belonged to the age group between 25-30years, most of them followed Muslim by religion ,majority respondents were educated up to secondary high school and belongs to upper middle class socio economic status scale whereas in meena et.al study revealed mean age group between 25-30years, majority 94.5% were Hindu by religion, about 26.6% were educated up to secondary level of education, 51% belongs to nuclear family and about 49.2% were of house wife.⁷In the present study majority of subjects responded that ARI is caused by cold weather and by germs. In other study done by Chan et .al showed that 59% due to bad weather and main cause of ARI, 13% due to food and 27% due to germs^[8]. Study done by D.E Simiyu *et al.* reported 87.5% exposure to cold weather was the main cause and also study done by DMDenno *et al.* depicted about 73.4% said exposure to cold air was the main cause and about 6.3 % said that dust, car fumes/smokes were cause^[9-10]. In mutalik et.al study depicts that mean scoring of knowledge among study groups pre-test was 1.20 ± 1.45 and after an health education mean scoring was 2.72 ± 1.32 and paired t test was found to be statistically significant. In contradictory to Mutalik et.al study which was done on high school children's parents, whereas the present study was done on under five children's parents and the pre-test mean score knowledge was found to be 19.85 ± 6.85 and after health education mean score was 25.96 ± 3.60 and paired t test was found to be statistically significant^[11].

Conclusion and Recommendations

Parent's knowledge on health directly impacts children health. Majority of parents had good knowledge and after health education interventions the knowledge score was significantly high among parents. Child wellbeing is the most important determinant of parents towards diseases. The present study had effective health education on parental knowledge to generalise these results, further studies have to be done on larger sample size.

References

1. Park K. Park textbook of preventive and social medicine. 24th ed. Jabalpur. Banarasidas Bhanot publishers, 2017, 177-83.
2. Cough and cold remedies for the treatment of acute respiratory infections in young children. WHO. (Online). (Cited on 2017 Aug 13). Available from: (www.who.int/iris/bitstream/10665/66856/1/WHO_FCH_CAH_01.02.pdf)
3. Bham SQ, Saeed F, Shah MA. Knowledge, Attitude and Practice of mothers on acute respiratory infection in children under five years. Pak J Med Sci. 2016;32(6):1557-1561.
4. Bhalla K, Gupta A, Nanda S, Mehra S, Verma S. Parental knowledge and common practices regarding acute respiratory infections in children admitted in a hospital in rural setting. J Family Med Prim Care. 2019;8:2908-11.
5. Vinod K. Ramani, Jayashree Pattankar, Suresh Kuralayanapalya Puttahonnappa. Acute Respiratory Infections among Under-Five Age Group Children at Urban Slums of Gulbarga City: A Longitudinal Study. Journal of Clinical and Diagnostic Research. 2016 May;10(5):LC08-LC13.
6. Ministry of Health and Family Welfare. National Family Health Survey, state fact sheet, Karnataka, 2015-16, International Institute for Population Sciences, Mumbai.
7. Gyawali M, Pahari R, Maharajan S, Khadka RR. Knowledge on acute respiratory infections among mothers of under five children of Bhaktapur.Int. J Sci.Res Publ.2016;6(2):85-9.
8. Chan G, Tang S. Parental knowledge, attitudes and antibiotic use for acute upper respiratory tract infection in children attending a primary healthcare clinic in Malaysia. Singapore medical journal. 2006;47(4):266-270.
9. Simiyu DE, Wafula EM, Nduati RW. Mothers' knowledge, attitudes and practices regarding acute respiratory infections in children in Baringo District, Kenya. East African Medicine Journal. 2003 Jun;80(6):303-7.
10. Denno DM, Bentsi-Enchill A, Mock CN, Adelson JW. Maternal knowledge, attitude and practices regarding childhood acute respiratory infections in Kumasi, Ghana. Ann Trop Paediatr. 1994;14(4):293-301.
11. Mutalik AV, Raje VV. Child to parent education in prevention of acute respiratory infections in rural school under rural health training center. Public health Rev: Int. J training public health Res.2017;4(4):104-111.