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EFFECT OF EDUCATIONAL INTERVENTION ON MATERNAL KNOWLEDGE IN USE OF ANTIBIOTICS IN ACUTE RESPIRATORY INFECTIONS AMONG UNDER FIVE CHILDREN IN URBAN FIELD PRACTICE AREA OF MEDICAL COLLEGE BANGALORE

R. A. Prakruthi ^{* 1} and Chethana Ramegowda ²

Department of Community Medicine, SABVMCRI, Bangalore - 560001, Karnataka, India.

Department of Community Medicine, KIMS, Bangalore - 560070, Karnataka, India.

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Correspondence to Author:

Dr. R. A. Prakruthi

Assistant Professor,
Department of Community Medicine,
SABVMCRI, Bangalore - 560001,
Karnataka, India.

E-mail: ra.prakruthi@gmail.com

ABSTRACT: Background: Acute respiratory infections are the most important cause of mortality and morbidity among under-five children in developed and developing countries in the world. There is lack of awareness/ knowledge among parents regarding antibiotic use in children for minor respiratory ailments. Hence, the present study was undertaken. **Methods and Methodology:** After taking institutional ethical clearance a Descriptive study on 100 mothers of under-five children attending Urban Health Training Centre of KIMS, Bangalore, is enrolled by convenience sampling. Using pre-structured and pre-tested questionnaire proforma, socio-demographic details, a few questions related to acute respiratory infections were collected. After the pre-test, health education was given to the urban health training center participants using flip charts. Followed by 2 weeks of health education, the same questionnaire was given to the subjects, and details were collected. Descriptive statistics and SPSS V20 were used for statistical analysis. **Results:** Pre and post-test knowledge and attitude were analyzed using wilxon sign rank test, which showed the effect of health education was found to be statistically significant with z value and p-value of -1.926 & 0.054, respectively. **Conclusion & Recommendation:** The effect of educational intervention on maternal knowledge in antibiotics was good. Similar studies should be done in a larger scale by using larger sample size.

INTRODUCTION: Acute respiratory infections are inflammation of the respiratory tract anywhere from nose to alveoli, with a wide range of signs and symptoms. Acute respiratory infections are the most important cause of mortality and morbidity among under-five children in developed and developing countries in the world ¹. The most common symptoms of AURI are running nose or common cold and sore throat, whereas ALRI includes bronchitis, epiglottitis, laryngitis and pneumonia.

ARI is mainly causing distress to the parents or caretakers ². For management of ARI, there is a lack of basic health service availability, factors associated with overcrowding, environmental factors, defects in the immune system, overuse and misuse of antibiotics, poverty, absence of ventilation, and indoor air pollution; however, the majority of associated factors are preventable ³.

Management of ARI mainly focuses on case detection and proper treatment, most of the AURI are of viral origin and symptomatic treatments are preferable; however, some bacterial infections are self-limiting, and treatment with antibiotics is certainly not required ⁴. Parents or caretakers often request the treating doctor for antibiotics, where antibiotic is not required; sometimes, physician is forced to accept parents' request and parents also use antibiotics on children without the knowledge

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of the physician, and they also have lack knowledge regarding the use of antibiotics and its adverse side effects⁵. Proper use of antibiotics reduces mortality and morbidity, whereas improper use of antibiotics leads to the growth of resistant strains and reduced efficacy of drugs⁶. Still, there is a lack of awareness among parents regarding antibiotic use in children for minor respiratory ailments and very few studies regarding antibiotic use. Hence, the present study was undertaken to assess the effect of educational intervention on maternal knowledge, attitude, and practice on antibiotic use among under-five children.

METHODS AND METHOD: After taking institutional ethical clearance, a descriptive study was conducted with a purposive sample of 100 mothers of under-five children attending the Urban Health Training Centre of KIMS, Bangalore. Participants were enrolled by convenience sampling after taking informed consent. Parents of Under five children who were residents of urban field practice area of KIMS Bangalore and those who consented to participate in the study were included in the study.

Those who were seriously ill were excluded from the study. After fulfilling the criteria, a study was conducted for a period of 3 months (Oct-Dec 2018). Using pre-structured and pre-tested questionnaires, details regarding socio-demographics and a few questions related to acute respiratory infections were collected. Fourteen questions were included, such as heard about antibiotics, demanding doctor for antibiotics, given without consultation, side effects and antibiotic resistance etc. The correct response was scored as 1 and the wrong response as 0. After pre-test, health education was given to the participants at urban health training centre using flip charts. Followed by 2 weeks of health education the same questionnaire was given to the subjects and details were

collected. Descriptive statistics and SPSS V20 was used for statistical analysis.

RESULTS: The majority 60% belonged to the age group of 25-30 years, 53% of respondents followed the Muslim religion, 45% were Hindus, and about 55% were educated up to secondary high school. About 91% were housewife, 2% were teachers, and 7% were wage workers. The majority 55% belong to the upper-middle-class socioeconomic status scale according to the modified Kuppaswamy classification. About 67% belonged to the nuclear type of family, 25% 3rd generation family, and 8% were from joint family. Pre-test knowledge data - 96% of them knew about antibiotics. Among 96 study subjects, 59.4% of them gave antibiotics without doctor consultation, the majority were following the previous prescription. Only 11.5% were aware of side effects of antibiotics and only 3.1% were aware of antibiotic resistance. Post health education intervention knowledge data - 98% of them knew about antibiotics. Among 98 study subjects, 40.5% of them gave antibiotics without doctor consultation; the majority followed the previous prescription. Only 20.5% were aware of antibiotics' side effects, and only 10% were aware of antibiotic resistance.

TABLE 1: SOCIO-DEMOGRAPHIC PROFILE OF STUDY SUBJECTS (N=100)

Characteristics	Variables	Percentage
Age (years)	20-24	33
	25-30	60
	31-35	7
Education	Illiterate	5
	Primary school	4
	Middle school	24
	High school	52
	Intermediate	11
Socio economic Status scale	Graduate	4
	Upper middle	55
	Lower middle	34
	Upper lower	10
	Upper	1

TABLE 2: WILCOXON SIGN RANK OF PRE- AND POST-TEST ON MATERNAL KNOWLEDGE ON ANTIBIOTICS(N=100)

	N	Minimum	Maximum	Median	IQR [Q3-Q1]	Z value	P value
Total score Pre test	100	0	6	3	4-2	-1.926	0.054
Total score Post test	100	0	5	3	4-3		

Educational intervention on maternal knowledge was found to be significant with a p value of 0.054.

DISCUSSION: The majority, 60% belonged to the age group of 25-30 years, 53% of respondents

followed the Muslim religion, and about 55% were educated up to secondary high school. About 91%

were housewives, the majority, 55% belonged to the upper-middle-class socioeconomic status scale according to the modified Kuppaswamy classification and about 67% belonged to the nuclear type of family. Meena *et al.*; study revealed mean age group was between 25-30 years; the majority (94.5%) were Hindu by religion, about 26.6% were educated up to the secondary level of education, 51% belong to a nuclear family, and about 49.2% were of housewife⁷. Another study done by Esraa Ali Mahjoub Saeed *et al.* study; depicts that 75.7% were housewives and 42.7% were educated up to University level⁸. In the present study, 14.6% demanded antibiotics, whereas a study done by Chan *et al.* says about 28% requested antibiotics⁹. Zyoud *et al.* study had contrasting features that are 38% never demanded a doctor for antibiotics¹⁰.

In the present study, 59.4% gave antibiotics without doctor consultation, whereas a study done by Farhad *et al.*; revealed that only 5% of them gave antibiotics without consultation¹¹. The present study showed that among 59.4% given antibiotics without consultation, among the majority, 96.5% gave antibiotics that were previously prescribed. In contrast, similar findings were seen in Saad Siddique *et al.* study and revealed that the most common reason to use prescribed antibiotics was the same antibiotic being given by a physician earlier⁵. In another study done by Zyoud *et al.* main source was physicians 61.6%, followed by pharmacists 34.3%¹⁰. Only 11.5% knew that antibiotics had side effects in this study, and 3.1% were aware of antibiotic resistance. In the Andreas Roussounides *et al.* study, about 93% of participants said antibiotics have side effects, and 90% said overuse of antibiotics leads to antibiotic resistance¹². The effect of educational intervention was assessed by the Wilcoxon sign rank test; it was found to be statistically significant with a p-value of 0.054 and after thorough research

CONCLUSION: The effect of educational intervention on maternal knowledge of antibiotics was good. Similar studies should be done on a

larger scale by using a larger sample size to avoid antibiotic misuse.

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CONFLICT OF INTEREST: NIL

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