ORIGINAL RESEARCH ARTICLE
pISSN 0976 3325 | eISSN 2229 6816
Open Access Article
www.njcmindia.org

A Study on Parental Knowledge and Pattern of Medicine Use in Acute Respiratory Infections among Under Five Children in Urban Field Practice Area of Kempegowda Institute of Medical Sciences, Bangalore

Chethana Ramegowda[1], Prakruthi R A[2], Pushpa Rajanna[3]

Financial Support: None declared
Conflict of Interest: None declared

How to cite this article:
Ramegowda C, Prakruthi RA, Rajanna P. A Study on Parental Knowledge and Pattern of Medicine Use in Acute Respiratory Infections among Under Five Children in Urban Field Practice Area of Kempegowda Institute of Medical Sciences, Bangalore. Natl J Community Med 2018;9(7):496-500

Author's Affiliation:
[1]Associate Professor; [2]PG Cum Tutor; [3]Medical Social Worker, Dept of Community Medicine, Kempegowda Institute of Medical Sciences, Bangalore

Correspondence
Dr. Prakruthi R A
ra.prakruthi@gmail.com

Date of Submission: 18-01-18
Date of Acceptance: 23-07-18
Date of Publication: 31-07-18

ABSTRACT

Introduction: Acute respiratory infections is one of the most important cause of morbidity and mortality in developing and developed countries among under five children and has a public health issue in India. But the knowledge among parents about ARI and its management is low. Hence the present study has been taken up to assess the parental knowledge and pattern of medicine use in acute respiratory infections (ARI).

Materials and Methods: Using pre-tested semi-structured proforma, a decriptive study on 100 parents were done after taking informed consent. Information on knowledge of ARI , antibiotics usage and attitude regarding antibiotic use were collected and results were analysed Microsoft excel.

Results: 96 % of them said ARI was caused due to exposure to cold, and 60% by Germs.51% used home remedies, 97%subjects were not of aware any vaccines which prevent ARI. 96% heard about antibiotics, among them 59.3% use antibiotics without consultation. 1.25% had least attitude regarding antibiotic resistance.

Conclusion: Majority had reasonable good knowledge regarding ARI, but lack of knowledge regarding complications of ARI and vaccines available for prevention of ARI. Subjects had unfavourable knowledge and attitude on antibiotic use.

Key words: Knowledge, Antibiotic, Home remedies, Parent.

INTRODUCTION

Acute respiratory tract infection is a major cause of morbidity and mortality in developing and also developed countries in under five years. Acute respiratory infections is 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] Most common is acute upper respiratory infections and most serious one is acute lower respiratory tract infections. Running nose or common cold , sore throat are common symptoms of AURI , whereas ALRI includes bronchitis, epiglottitis, laryngitis and most common being pneumonia. Acute respiratory tract infections mainly causes distress to the parents or care takers.[2]Nearly 3.9 million deaths occur world-wide, in that 90% of the ARI deaths are due to pneumonia. Both in developed and developing countries, every child has five episodes of ARI per year, it almost accounts for 30-50% of visits to health facilities and 20-30% for hospital admissions and also recent community based study states that 70% of the childhood morbidities were among children aged less than five years was due to ARI.[3] According to NFHS-4 Kar-

nataka prevalence of symptoms of ARI in the last two weeks preceding urban survey was 1 % and children with fever or symptoms of ARI in the last preceding the survey taken to a health facility was 77.8%.[4]In general for management of ARI there is a lack of basic health service availability, lack of awareness and other factors associated like overcrowding, environmental factors, defects in immune system, over use and misuse of antibiotics, poverty, absence of ventilation and indoor air pollution however majority of associated factors are preventable.[5] ARI management mainly focuses on case detection and proper treatment, majority of AURI are of viral origin and symptomatic treatments are preferable, however even some bacterial infections are self-limiting and treatment with antibiotics is unnecessary. Parents often request the treating doctor for an antibiotics, where antibiotic is not required, sometimes physician tends to accept parents request and parents also administer antibiotics to children without the knowledge of physician and they also have wrong conception regarding the use of antibiotics and its adverse side effects.[6]It has been reported that problem of ARI is more in urban slums than in rural area.[7]ARI has become major public health morbidity and mortality in India. Hence the present study was undertaken to assess the parental knowledge and pattern of medicine use among under five children

METHODOLOGY

After taking Institution Ethical Committee clearance, a descriptive study on 100 mothers of under five children attending Urban Health Training Centre of KIMS, Bangalore are enrolled by purposive sampling after taking informed consent and by fulfilling inclusion and exclusion criteria. Inclusion criteria includes parent of under-five children and resident of urban field practice area and those who give consent to participate in study and seriously ill were excluded from the study. Using pretested semi-structured proforma, socio demographic profile, information on knowledge of ARI and pattern of medicine use in ARI was collected, it includes knowledge regarding ARI and Antibiotics and also information regarding attitude towards antibiotic use was also collected. Knowledge was assessed by giving a score of 1 to correct and 0 for wrong response. Attitude was analysed using 5 point Likert scale. Knowledge and attitude were graded as unfavourable (< 50%) and as favourable (>50%).Data was analysed using MS Excel and descriptive statistics.

RESULTS

Table [1] shows socio demographic profile of study subjects. Among 100 study subjects majority 58% belonged to the age group of 25-30 years, 53% of respondents follow Muslim religion and about 52% were educated up to secondary high school. About 91% were house wife, majority 55% belongs to upper middle class socio economic status scale according to modified Kuppuswamy classification and about 65% belonged to nuclear type of family.

Table [2] depicts knowledge responses regarding ARI in that all 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. Majority 55% respondent that breast feeding can be given during ARI and about 55% denied of giving regular normal diet. 51% gave home remedies. About 44% took child to a doctor after 3 days. Only 10% 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-1 Socio demographic profile of the subjects (n=100)

Variables	Percentage
Age (years)	
20-24	33
25-30	58
31-35	9
Religion	
Muslim	53
Hindu	47
Education	
Illiterate	5
Primary school	4
Middle school	24
High school	52
Intermediate	11
Graduate	4
Occupation	
House Maker	91
Wage worker	7
Teacher	2
SES	
Upper middle	55
Lower middle	34
Upper lower	10
Upper	1
Type of family	
Nuclear	65
3rd generation	27
Joint family	8

Table 2: Knowledge responses regarding ARI (n= 100)

Variables	Yes (%)	No (%)
Cause		
Cold	96	4
Spread from others	74	26
Junk	84	16
Germs	60	40
Risk factors		
Dust	85	15
Pollen	33	67
Inadequate ventilation	69	31
Over crowding	64	36
Low immunity	72	28
Underweight	59	41
Unimmunized	75	25
Wood fuel	48	52
Passive smoking	89	11
Pets at home	73	27
Breast feeding	55	45
Regular food	45	55
Aware of complications	10	90
Aware of vaccines	3	97
Homemade remedies	51	49
Action after 3days for ARI	44	56
Prevention knowledge		
Exclusive BF prevents ARI	79	21
Avoidance of cold	90	10
Avoidance of allergens	84	16
Good ventilation	68	32
Avoidance of passive smoking	88	12

Table 3 – Knowledge and management regarding Antibiotic use in ARI

Variable	Frequency(%)
Heard of Antibiotics **(n=100)**	96 (96.0)
Given antibiotic without doctor consultation **(n=96)**	57 (59.4)
From Pharmacist	02 (3.5)
Previous prescription	55 (96.5)
Demanded a doctor for antibiotics	14 (14.6)
Change over doctor	51(53.2)
Side effects of antibiotic over use	11(11.5)
Aware of antibiotic resistance	3(3.1)

Table 4: Attitude regarding Antibiotic use (n=96)

Attitude questions	Average score(%)
Is it antibiotics required every time the child falls sick with respiratory infections	29.58
One can use antibiotics without doctor consultation	49.37
Antibiotics do not have any side effects	18.33
Completing the course of antibiotics is necessary	59.00
Antibiotics use can prevent complications from ARI	12.5
Over usage of antibiotics causes antibiotic resistance	1.25

Table [3] shows knowledge and management regarding ARI. Among 100 mothers 96% knew about antibiotics. Among 96 study subjects 59.4% of them give antibiotic without doctor consultation, majority were following previous prescription. Only 11.5% were aware of side effects of antibiotics and only 3.1% were aware of antibiotic resistance. Table[4] After taking average percentages of attitude score, among 96 study subjects about 59% had favourable attitude regarding completion of antibiotic course, 29.58% had unfavourable attitude regarding antibiotic requirement, 49.37% had unfavourable attitude regarding use of antibiotics without consultation, about 18.33%, 12.5%, 1.25% had unfavourable attitude regarding side effects, use of antibiotics can prevent complications and antibiotic resistance respectively.

DISCUSSION

In this 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 upto secondary high school and belongs to upper middle class socio economic status scale whereas study done by meena et.al 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. [8]

In present study, subjects most commonly responded that ARI is caused by cold weather and by germs. In other study done by Chan et .al revealed that 59% of responders said that bad weather main cause of ARI, 13% due to food and 27% due to germs.[9] Study done by D.E Simiyu et.al said that about 87.5% exposure to cold weather was the main cause and also study done by D.M.Denno et.al reveals that about 73.4% said exposure to cold air was the cause and about 6.3 % said that dust, car fumes/ smokes was also cause.[10-11]In this study majority said dust and passive smoking was common risk factors for ARI. In Shireen Qasim Bham et.al study describes about 81% responders said dust was most common aggravating factor and least risk factor was unimmunized 3%.[2] Only 55% said that breast feeding given during ARI whereas in Kapoor et.al study showed that about 89.6% mothers continued breast feeding during ARI, where as 74.5% said they give regular food during pneumonia.[12] Shireen Qasim Bham et.al study revealed that 69% continued breast feeding during ARI.[2]In present study only 10% of mothers were aware of complications regarding ARI, among them most common complication is Pneumonia i.e. 80% (n=10)when compared to Shireen Qasim Bham et al study about 83% mothers said most common complication is pneumonia.[2]In present study only 3% of study subjects

were aware of vaccines available for prevention of ARI, in D.E Simiyu et.al revealed about 60.2% mothers knew measles was preventable by immunization.[10] A study done by prajapathi et.al showed that 21.8% used house hold remedies, in another study Shireen Qasim Bham et.al only 6% mothers used home remedies, in Kapoor et.al study reveals that 51.9%managed ARI using home remedies.[5, 2, 12]whereas in present study nearly 51% used home remedies for ARI.Study done by Sadaa Siddique et.al says about 53% took children to doctor in less than 3 days following episodes of ARI.[6]In present study 44% took children to doctor after 3 days of ARI. A study done by D.M. Denno et.al revealed that about 60.8% said prevention of exposure to cold is the most common preventive measure and 1.4% said due to prevention of dust inhalation.[11] Another study done by D.E Simiyu et.al depicts that about 87.5% responders said avoidance of cold weather is one of the preventable measure.[10]In present study majority 90% said avoidance of cold weather was the most common preventable measure for ARI.

In present study 14.6% demanded for antibiotics , in study done by Chan.et.al says about 28% requested or demanded for antibiotics.[9] In Zyoud et.al study about 38% never demanded doctor for antibiotics.[13]In present study 59.4% gave antibiotic without doctor consultation, whereas in study done by Farhad et.al revealed that only 5% of them gave antibiotics without consultation.[14]A Study done by Andreas Rouusounides et.al here main source of antibiotic information was from paediatrician, another study done by Saad Siddique et.al revealed that most common reason to use prescribed antibiotic was same antibiotic being given by a physician earlier.[15, 6]In present study among 59.4 % majority about 96.5% gave antibiotics which were previously prescribed. Another study done by zyoud et.al main source is physician 61.6%, followed by pharmacist 34.3%. In same a study about 76% don't change the doctor for not prescribing antibiotics.[13]In this study only 11.5% knew that antibiotics had side effects and 3.1% aware of antibiotic resistance whereas in Andreas Rouusounides et.al study revealed that about 93% responders said antibiotics have side effects and about 90% said over use of antibiotics leads antibiotic resistance.[15]In another study done by Saad Siddique et.al revealed about 51% knew antibiotics have side effects.[6]

A Study done by Saad Siddique et.al about 31.3 % have attitude that antibiotics must be used in all ARI cases in contrast to this Zyoud et.al revealed that about 63.5% of parents agreed that not to give antibiotics in simple ARI. About 51.8% agreed that antibiotics have their side effects.[6, 13] In Chan et.al study about 29% had an attitude that there child require antibiotic whenever URTI occurs.[9]

LIMITATIONS

Present study have limitations of parents recall bias, they might not remember the actual chronological events of the episodes of the child illness. Present study is based on purposive sampling technique.

CONCLUSION

Majority of mothers had reasonable good knowledge regarding ARI, but there was lack of knowledge regarding complications of ARI and vaccines available for prevention of ARI. In spite of good knowledge of ARI they had unfavourable knowledge and attitude on antibiotic use and frequency.

RECOMMENDATION

As in this study we identified there is unfavourable knowledge and attitude regarding antibiotic use, in spite of majority were educated mothers. More of health educational intervention should be more towards use of unprescribed antibiotics and thus helps to reduce the emergency of antibiotic resistance. Also avoid irrational use of antibiotics in children. Also create more awareness regarding vaccines available for ARI prevention. Similar study should be done by using larger sample size.

ACKNOWLEDGMENTS:

The authors express many thanks and sincere gratitude to the staffs of Department of Community medicine, Kempegowda Institute of Medical Sciences, Bangalore. I would also extend my whole hearted thanks to my fellow post graduates for the immense support, help and encouragement during the study. We also thank all the study participants for their co-operation during the study.

REFERENCES-

1. Park k. park textbook of preventive and social medicine. 24th ed. Jabalpur. Banarasidas Bhanot publishers; 2017. P: 177-83.
2. 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.
3. Kalaiselvi Selvaraj, Palanivel Chinnakali, Anindo Majumdar, Iswarya Santhana Krishnan.Acute respiratory infections among under-5 children in India: A situation analysis.J Nat Sci Biol Med 2014; 5(1):15-20.
4. National Family Health survey-4, Karnataka Fact sheet. Ministry of Health and family welfare. Govt of India 2015-2016. Available

at:http://rchiips.org/NFHS/pdf/NFHS4/KA_FactSheet.pdf. Accessed on Nov13th, 2016.

5. Prajapati, B.J, Talsania, N.J, Lala M.K., Sonalia, K.N. Knowledge, Attitude and Practices of Mothers Regarding Acute Respiratory Infection (ARI) in Urban And Rural Communities of Ahmedabad District, Gujarat. NJIRM 2012;3(2):101-3.
6. Saad Siddiqui, Mubeen Sultan Cheema, Romana Ayub, Noreen Shah, Ameer Hamza,Sheraz Hussain, Muhammad Hamza Khan, Syed Musa Raza. Knowledge, attitudes and practices of parents regarding Antibiotic use in children. J Ayub Med Coll Abbottabad 2014;26(2):170-3.
7. 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, Vol-10(5): LC08-LC13.
8. 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.
9. 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): P. 266-270.
10. 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.
11. 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.
12. Kapoor, SK Reddaiah, V P Murthy and G V. Knowledge, attitude and practices regarding acute respiratory infections. Indian Journal of Pediatrics 1990, Jul-Aug: 57(4): 533-5.
13. Zyoud SH, Abu Taha A, Araj KF, Abahri IA, Sawalha AF, Sweileh WM, Awang R, Al-Jabi SW.Parental knowledge, attitudes and practices regarding antibiotic use for acute upper respiratory tract infections in children: a cross-sectional study in Palestine.BMC Pediatrics. 2015; 15:176.
14. Farhad J, Malihe A, Azami Fatemeh A, Mahmood S.The Knowledge, Attitude and Practice of Mothers Regarding Acute Respiratory Tract Infection in Children. Biosci Biotech Res Asia. 2014;11(1):343-348.
15. Rouusounides A, Papaevangelou V, Hadjipanayis A, Panagakou S, Theodoridou M, Syrogiannopoulos G. Descriptive study on parents' knowledge, attitudes and practices on antibiotic use and misuse in children with upper respiratory tract infections in Cyprus. Int J Environ Res Public Health 2011; 8:3246-62.