

Knowledge and attitude of mothers towards acute respiratory infections: a cross sectional study at Al-Kadhimiya Pediatric Hospital in Baghdad.

Taha Noori Sadeq¹

¹ M.Sc. Community medicine, Department of Public Health at Al-Kadhimiya Pediatric Hospital, Baghdad, Iraq.

Corresponding Author: Taha Noori Sadeq, Department of Public Health, Al-Kadhimiya Pediatric Hospital, Baghdad, Iraq. E mail: contactdrtaha@yahoo.com.

ABSTRACT

INTRODUCTION: Acute respiratory infections (ARIs) are important under-five morbidities, causing lots of discomfort, frequent visits to a health care provider, admission to an indoor facility, and even mortality. Mother's role cannot be denied with regards to ARI as she represents the most important figure in the management of ARI of her children. Mother's beliefs may also hinder or support the management of the ARI.

OBJECTIVE: To assess the knowledge and attitude of mothers with children under five years of age complaining of Acute respiratory tract diseases, and find out the relationship between mother's socioeconomic characteristics and their overall knowledge and attitude.

METHODS: A cross sectional study was conducted at Al Kadhimiya Paediatric Hospital in Baghdad, Iraq from 3rd December 2014- 5th January 2015. Participants were women whom their children were under age of 5 years and presented to our hospital as acute respiratory infection. Interviewer-administered questionnaire was used for data collection.

RESULTS: The sample size was 318 women, two-hundred and eighty three women (89%) were in the range of fair-good overall knowledge and attitude scores. There was a weak, negative correlation between age of mothers and overall Knowledge and attitude score and a weak, positive correlation between number of children and overall Knowledge and attitude score.

CONCLUSION: Majority of mothers have shown a fair-good overall Knowledge and attitude score.

Key words: Knowledge, attitude, acute respiratory infections, children under 5 years old.

INTRODUCTION

Acute respiratory infections (ARI) are infections of any part of respiratory system from para-nasal sinuses to pleural cavity lasting less than a month. According to the World Lung Foundation, ARI is the leading cause of morbidity and mortality among children under age of five years worldwide.¹ ARI is classified into upper and lower respiratory tract infections depending on part of respiratory tract mainly affected and the anatomical localization (nose, sinuses, middle ear, larynx and pharynx, trachea, bronchi, and lung). Upper respiratory tract includes the area from the nasal cavity to the larynx, whereas the lower tract includes trachea, bronchi and lungs.² In developing countries, a quarter of all paediatric hospital admissions are due to ARI. Twenty to forty percent of

all hospitalizations of children under five years of age worldwide are due to ARI.¹

Acute respiratory infections (ARIs) are important under-five morbidities causing lots of discomfort, frequent visits to a health care provider, admission to an indoor facility, and even mortality.^{3,4} ARI poses a major challenge to the health system in developing countries because of high morbidity and mortality.⁵

Acute respiratory infections and diarrhoea remain the two biggest killer diseases of children in Iraq.⁶ In young children, ARI is responsible for an estimated 3.9 million deaths worldwide, with 90% deaths due to bacterial pneumonia. In the developing countries, seven out of 10 deaths happen due to ARI in under 5-year age group.⁷ ARI contributes 2- 4% of deaths in children <5 years of age in developed

countries, and 19- 21% in the Eastern Mediterranean, Africa, and South East Asia regions.⁸

Viral infections are the most frequent aetiological agents for acute respiratory infections, and are responsible for a significant morbidity and mortality in children.⁹ Acute respiratory infections are also the main causes of disability-adjusted life-years (DALYs) lost in developing countries.¹⁰ If mothers are taught to recognize signs and symptoms, which accompany these dangerous episodes and to seek appropriate care, most of ARI will be treated and cured easily. Mother's role cannot be denied with regards to ARI as she represents the most important figure in the management of ARI of her children. Mother's beliefs may also hinder or support the management of ARI.¹¹ One out of five mothers cannot distinguish pneumonia from other diseases because of their similar symptoms such as fever, cough and hypertension.¹²

This study was conducted to assess the knowledge and attitude of mothers of children under age of five years who are complaining of acute respiratory infections and to find out the relationship between mother's socioeconomic characteristics and their overall knowledge and attitude.

METHODS

Settings of the study: A cross sectional study was conducted at Al-Kadhimiya Paediatric Hospital in Baghdad, Iraq from 3rd December 2014-5th January 2015.

Inclusion and exclusion criteria: Mothers of children whom have all the followings were the target of this study:

1. Under the age of five years
2. Presenting to Al-Kadhimiya Paediatric Hospital; in-patient and/or out-patient departments.
3. Their children have a diagnosis of acute respiratory infections.

Participants in this study were selected conveniently and all have been asked to provide their agreement to participate after explaining the aims and steps of the study. Mothers who have a child diagnosed with congenital and chronic diseases were excluded from the study.

Procedure: Interviewer administered questionnaire was used for data collection. A question-

naire format with items structured, adapted and modified from a Vardanyan Lilit.¹³ It consists of two parts. *Part 1:* A list of 12 items covered socio demographic variables. *Part 2:* A list of (26) items testing mother's knowledge and attitude regarding Acute respiratory infections in children under age of 5 years. Verbal consent was taken before starting the interview from each mother.

Statistics: The obtained data was analysed using SPSS 16.0 [Statistical Package for Social Sciences]. Alfa level was set at 0.05. Descriptive statistics and cross-tabulations was used to analyze the data and to assess relationships. The chi-square test was used to test the association between mother's level of education and their overall knowledge and attitude score. Pearson correlation was used to measure the strength and direction of association between age of mothers, number of children and their overall knowledge and attitude score.

RESULTS

Table 1 and 2 summarize the main descriptive statistic of the sample's main socio-demographic variables. Eighty-nine % of the sample (N=283) were in the range of (fair-good) overall knowledge and attitude score. Chi square test was used to test for the association between mothers level of education and knowledge and attitude KAP score; the test showed that there was no statistical significance ($p=0.537$). A Pearson product-moment correlation was used to determine the relationship between Age of mother in Years, Number of children and overall knowledge and attitude score. There was a weak, negative correlation between age of mothers and overall knowledge and attitude score, which was statistically not significant ($r = -.035$, $n = 318$, $p = 0.537$). The test also showed that there was a weak, positive correlation between number of children and overall knowledge and attitude score, which was statistically not significant ($r = 0.017$, $n = 318$, $p = 0.764$).

DISCUSSION

This study has shown that 10 % of mothers (N=32) were employed. This result can be attributed to the fact that employed mothers have no time in the morning to go to the outpatient clinics in the hospitals instead they do prefer to go to private clinics afternoon. About one third

(table 1) of husbands usually smoke in front of their children, this means that many husbands are either unaware about the harmful effect of smoking on their children or their indifference to this harm. For both reasons we need a plan and campaign of education.

Only 43.7% (N=139) of the mothers practiced exclusive breast feeding during the first 6 months of their children's life. This low percentage can be attributed to either wrong belief about child weaning practices or lack of knowledge on the benefits of exclusive breast feeding during the first six month of children's life or both.

This study has shown that 283 (89%) of the mothers had fair-good overall score. This study is in agreement with a study from Iran (N=255).¹⁴ A study from Kenya¹⁵ (N=309) has shown that mothers had good knowledge of the mild form of Acute respiratory infections but not of the severe form. A study from Pakistan (N=1000) has shown that 72% percent of mothers had knowledge about ARI and could recognize it.¹⁶ The similarities in overall knowledge and attitude score of mothers across different countries could be due to the obvious and alarming signs and symptoms of ARI in children; for example, coughing of blood could be easily recognized by mothers as an alarming sign for ARI. Having more than 89% of the sample with above success in overall knowledge and attitude score could be attributed to massive health education campaigns, mass media awareness campaigns, interviews with health professionals on TV channels. All of them have contributed to raising awareness of mothers about acute respiratory infections in children.

This study has shown that there was a correlation between number of children and their mothers' overall knowledge and attitude score; although, this correlation was not significant as other studies had shown.¹⁷ Having more than one child mean more referral to health care services for treatments; consequently more personal experience for mothers about childhood illnesses. This can be reflected positively mothers' overall knowledge and attitude score.

Despite of what may be logical thinking, our study has failed to show significant association between mothers' level of education and overall knowledge and attitude score. This result can be attributed to the low number of educated mothers in our study as only 26 mothers

Table 1: Shows frequencies and percentages distribution of socio-demographic and score levels of the participants.

Characteristics	State	Frequency	%
Type of delivery	Normal	244	76.7
	Caesarean	74	23.3
	Total	318	100
Place of delivery	Home	28	8.8
	Hospital	290	91.2
	Total	318	100
Employment status	Employed	32	10.1
	Unemployed	286	89.9
	Total	318	100
Mother's level of education	Read & write	107	33.6
	Primary school	105	33.0
	Intermediate school	50	15.7
	Secondary school	30	9.4
	Institute graduate	2	7.2
	College	3	0.9
	Total	318	100
Place of delivery	Home	28	8.8
	Hospital	290	91.2
	Total	318	100
Husband smoke in front the child	Yes	104	32.7
	No	214	67.3
	Total	318	100
Exclusive breast feeding during the first 6 months	No	179	56.3
	Yes	139	43.7
	Total	318	100.0
Overall knowledge and attitude score level	Low Score	17	5.3
	Fair Score	140	44
	Good Score	143	45
	Very good Score	18	5.7
	Total	318	100

(N=318) were either institute or college graduate.

This study has shown that there was a negative correlation between age of mothers and overall correlation between number of children and their mothers' overall knowledge and attitude score, which was statistically not significant. This result can be explained by the fact that mother age is not the sole factor in determining correlation between number of children and their mothers' overall knowledge and attitude overall score. The age of older mothers does not necessarily means having more children or having higher education in comparison to mothers of lower age.

Table 2: Shows means and standard deviations of the sample related characteristics.

	No.	Mean	Std. Deviation
Age of mother in Years	318	24.86	5.910
Age of child in months	318	21.69	17.980
Number of children in the family	318	2.61	1.447
Total number of people living in the house	318	8.07	4.037
Total number of rooms in the house	318	2.72	1.317
Knowledge Score	318	9.59 (out of 14)	1.119
Attitude Score	318	3.86 (out of 7)	1.099
Practice score	318	3.04(out of 5)	0.977
Overall Knowledge and attitude score	318	16.49(out of 26)	1.927

CONCLUSIONS

Majority of mothers had shown a fair to good overall knowledge and attitude score. Having more than one child is positively correlates to overall knowledge and attitude score, while age of mother is negatively correlated to the same score; however, both have no statistical difference.

RECOMMENDATION

Increase the awareness of the mothers about the importance of exclusive breast feeding during the first six month of child life and proper weaning practice. Increase the public awareness about wrong adult behaviour such as smoking in front of children.

REFERENCES

- Schluger N W. Acute Respiratory Infections: Making inroads against a forgotten pandemic. New York NY: World Lung Foundation; 2010- p 48.
- Jeremy PT, Ward JW, Richard M Leach. The respiratory system at a glance. Singapore: Wiley-Blackwell; 2010.
- World Health Organization. Report of consultative meeting to review evidence and research priorities in the management of acute respiratory infections, Tech. Rep. Geneva, Switzerland: World Health Organization; 2003.
- Rudan I, Boschi-Pinto C, Biloglav Z, Mulholland K, and Campbell H. Epidemiology and aetiology of childhood pneumonia. *Bulletin of the World Health Organization* 2008;86(5): 408–416.
- Frese T, Klaus S, Herrmann K, Sandholzer H. Children and adolescents as patients in general practice - the reasons for encounter. *J Clin Med Res* 2011;3:177-82.
- The Situation of Children and Women in Iraq. Highlights from the Multiple Indicator Cluster Survey 4 (MICS 4). 2011. Available from: <https://www.hightail.com/download/WUJaMFhVYXlSM-HIVQU1UQw>. Accessed on 15th January 2015.
- Park K. Park's Textbook of Preventive and Social Medicine. 21 st Ed. Jabalpur: M/S Banarsidas Bhanot Publishers; 2011-p. 156.
- Emmelin A, Stig W . Indoor air pollution: a poverty-related cause of mortality among the children of the world. *Chest* 2007;132(5):1615-1623.
- Costa LF, Yokosawa J, Mantese OC, Oliveira TF, Silveira HL, Nepomuceno LL, and et al. Respiratory viruses in children younger than five years old with acute respiratory disease from 2001 to 2004 in Uberlândia, MG, Brazil. *Mem Inst Oswaldo Cruz* 2006; 101:301-6.
- WHO. Acute respiratory infections. Initiative for Vaccine Research (IVR)]. Available from: http://www.who.int/vaccine_research/diseases/ari/en/.
- Shadia F. AboulAzam, Azza M. Darwish, Mahasen Okasha. Mother's knowledge and beliefs about management of acute respiratory infection (ARI) among children in Alexandria city. Departments of Family & Community Health Nursing, Faculty of Nursing, Alexandria University, Egypt, 1998.
- UNICEF. The state of the world's children 2008: Child survival. 2007: Unicef.
- Vardanyan Lilit. Risk Factors Related to Complications of Acute Respiratory Infections among Children under Five Years Old in Yerevan, Armenia. Master of Public Health Integrating Experience Project Research Grant Proposal Framework. School of Public Health. American University of Armenia. Yerevan, Armenia. 2013.p.21-27.
- Jafari Farhadi, Aminzadeh Malihe, Azami Fatemeh and Samadpour Mahmood. The Knowledge, Attitude and Practice of Mothers Regarding Acute Respiratory Tract Infection in Children. *Bio-sciences Biotechnology Research Asia* April 2014 ;11(1):343-348.
- Simiyu DE, Wafula EM, Nduati RW. Mother's Knowledge, Attitudes and Practices regarding Acute respiratory infections in children in Baringo district, Kenya. *East African Medical Journal* June 2003 ;80(6):303-307.
- Kumar R, Hashmi A, Soomro JA, Ghouri A .Knowledge Attitude and Practice about Acute Respiratory Infection among the Mothers of Under Five Children Attending Civil Hospital Mithi Tharparkar Desert. 2012 Primary Health Care 2:108. doi:10.4172/2167-1079.1000108
- Simiyu, D., E. Wafula, and R. Nduati, Mothers' knowledge, attitudes and practices regarding acute respiratory infections in children in Baringo District, Kenya. *East African Medical Journal* 2004;80(6):303-307.