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Research Article

**A CROSS-SECTIONAL RESEARCH ON MOTHER'S
KNOWLEDGE ABOUT ACUTE RESPIRATORY INFECTION
(ARI) SIGNS, COMPLICATIONS, AGGRAVATING FACTORS
& ENVIRONMENTAL FACTORS**¹Maha Aulakh, ²Zartasha Munir Khan, ³Dr Azwa Sana¹Hospital Services Hospital Lahore²Bhatti International Teaching Hospital Lahore³DHQ Hospital Kasur**Abstract:**

Objective: Objective of our research was the assessment of mother's Knowledge, Attitude & Practices about Acute Respiratory Tract Infection (ARI) in the under five years children.

Methods: Our cross-sectional research was carried out at Services Hospital, Lahore in the time span of March 2016 to April 2017. Local 335 mothers were included in the research having one child under 5 years age. They visited the hospital for various medical disorders. We did not include all the mothers who were not able to comprehend the questionnaire. The questionnaire was framed in both English and Urdu. The questionnaire was administered to the mothers by two qualified physicians.

Results: We carried out our research on a total of 335 children, among these 228 children (68%) were diagnosed with ARI. Children were selected in the mean age and birth weight of (20 ± 17) months and (2.7 ± 1.8) kilograms. A cough was mostly observed sign in 303 children (40%), the situation was even worse in 255 children (87%) in the winter season, dust was observed as a factor in 174 children (81%) and Pneumonia in 135 children (83%). Most of the mothers (268) went for the treatment to a medical practitioner (89%). Frequent self-medication was observed in 192 mothers (58%) and paracetamol by 117 mothers (42%).

Conclusion: It was observed in the research that mothers possessed sound knowledge about the symptoms of ARI such as complications, aggravating factors and worsening conditions. They practised appropriate knowledge about ARI while consulting the medical officers. Positive influence can be obtained about awareness through better rate of literacy.

Keywords: Expanded Program of Immunization (EPI), Acute Respiratory Infection (ARI), Mother's KAP on ARI, Cough and Pneumonia.

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INTRODUCTION:

Child mortality and morbidity are very much associated with ARI as its treatment is costly. Children use healthcare services because of the healthcare issues like ARI. To control ARI in the underdeveloped countries is a real concern for the healthcare department. ARI takes both the upper and lower respiratory infections. Rhinitis, Sinusitis, Tonsillitis and ear infection are the main causes of upper respiratory infections; whereas, increased respiration and pneumonia represents the lower respiratory infection.

A child faces almost six to eight spells of this infection per year all over the world [1]. Back in 2011, ARI was observed as 61% in Pakistan [2]. Urban areas were more affected than rural regarding ARI. Stress is faced by both parents and children because of ARI. Medicines of ARI are also available over the counter; whereas, their efficacy is in question and they may pose hazards as they are not permitted by the Drug authorities [3 – 6].

Underdeveloped countries lack in the ARI awareness and practice especially mothers. Better comprehension is very much required in mothers about the ARI. The objective of our research was the assessment of mother's Knowledge, Attitude & Practices about Acute Respiratory Tract Infection (ARI) in the under five years children.

METHODS:

Our cross-sectional research was carried out at Services Hospital, Lahore in the time span of March 2016 to April 2017. Local 335 mothers were included in the research having one child under 5 years age. They visited the hospital for various medical disorders. We did not include all the mothers who

were not able to comprehend the questionnaire. The questionnaire was framed in both English and Urdu. The questionnaire was administered to the mothers by two qualified physicians. Sampling technique was purposive in nature. The ethical review committee was approached for research permission and participants were also asked for verbal consent before research commencement. Confidentiality was also considered as a prime factor during all the research period. Completed questionnaires were scrutinized well. Major independent variables were mother's education, weight and gender; whereas, mother's awareness about ARI was taken as the dependent variable with complications and worsening factors. Categorical variables included mother's parity, socioeconomic status, occupation and education. Self-medication types and practice were also included independent variables. Outcomes analysis was made on SPSS software.

RESULTS:

We carried out our research on a total of 335 children, among these 228 children (68%) were diagnosed with ARI. Children were selected in the mean age and birth weight of (20 ± 17) months and (2.7 ± 1.8) kilograms. A cough was mostly observed sign in 303 children (40%), the situation was even worse in 255 children (87%) in the winter season, dust was observed as a factor in 174 children (81%) and Pneumonia in 135 children (83%). Most of the mothers (268) went for the treatment to a medical practitioner (89%). Frequent self-medication was observed in 192 mothers (58%) and paracetamol by 117 mothers (42%). Detailed outcomes about mother's and children's demographic data including mother's awareness and practice are shown in tabular data.

Table – I: Mother's Demographic Characteristics (335)

Mothers Characteristic		Frequency	Percentage
Education (328)	No education	10	3
	Non-formal education	4	1
	Primary	5	2
	Secondary	11	3
	Matriculate	33	10
	Higher	265	81
Occupation (323)	House wife	297	92
	Working women	26	8
Number of children (329)	< 2 children	216	66
	3-4 children	106	32
	5 or more children	7	2
Monthly household income per month (262)	< Rs. 10,000	6	2
	Rs. 10,000 to Rs.20,000	36	13
	> Rs. 20,000	220	85
Type of family (326)	Joint	201	62
	Nuclear	125	38

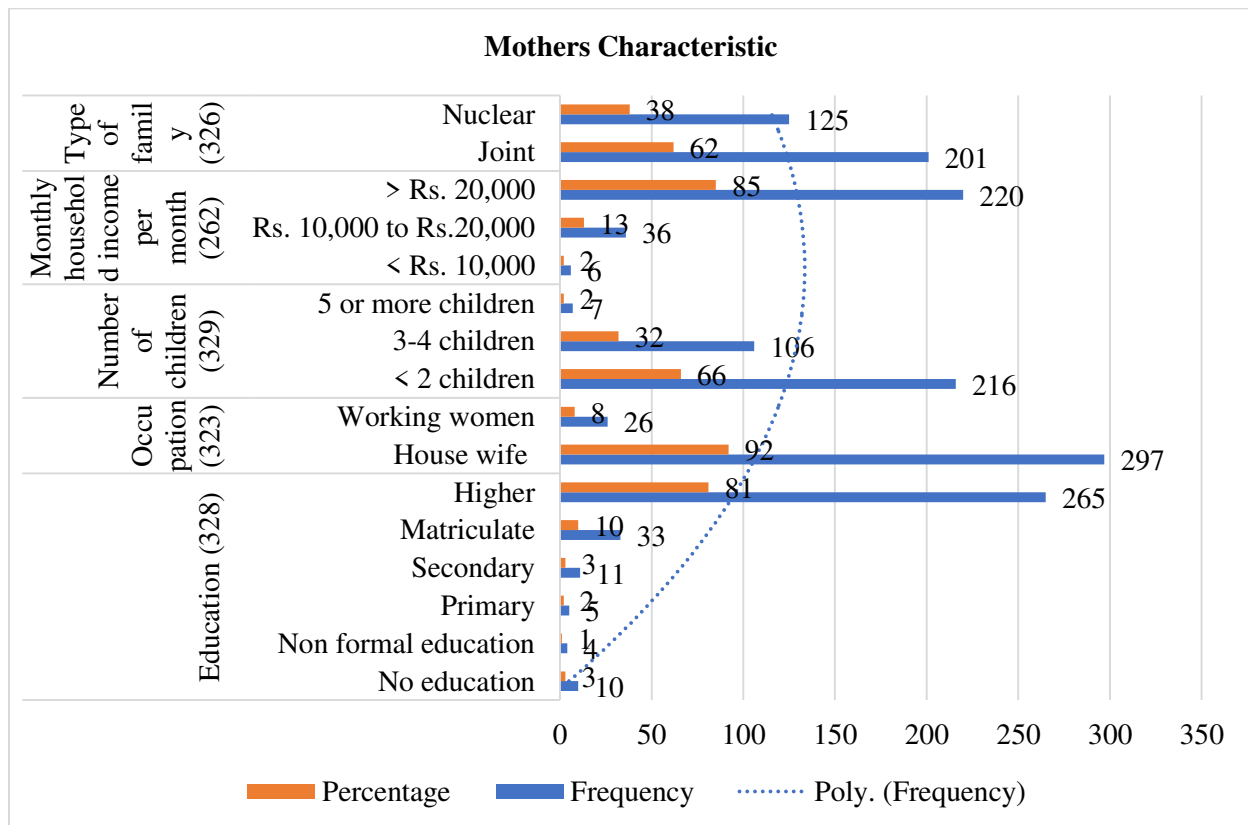
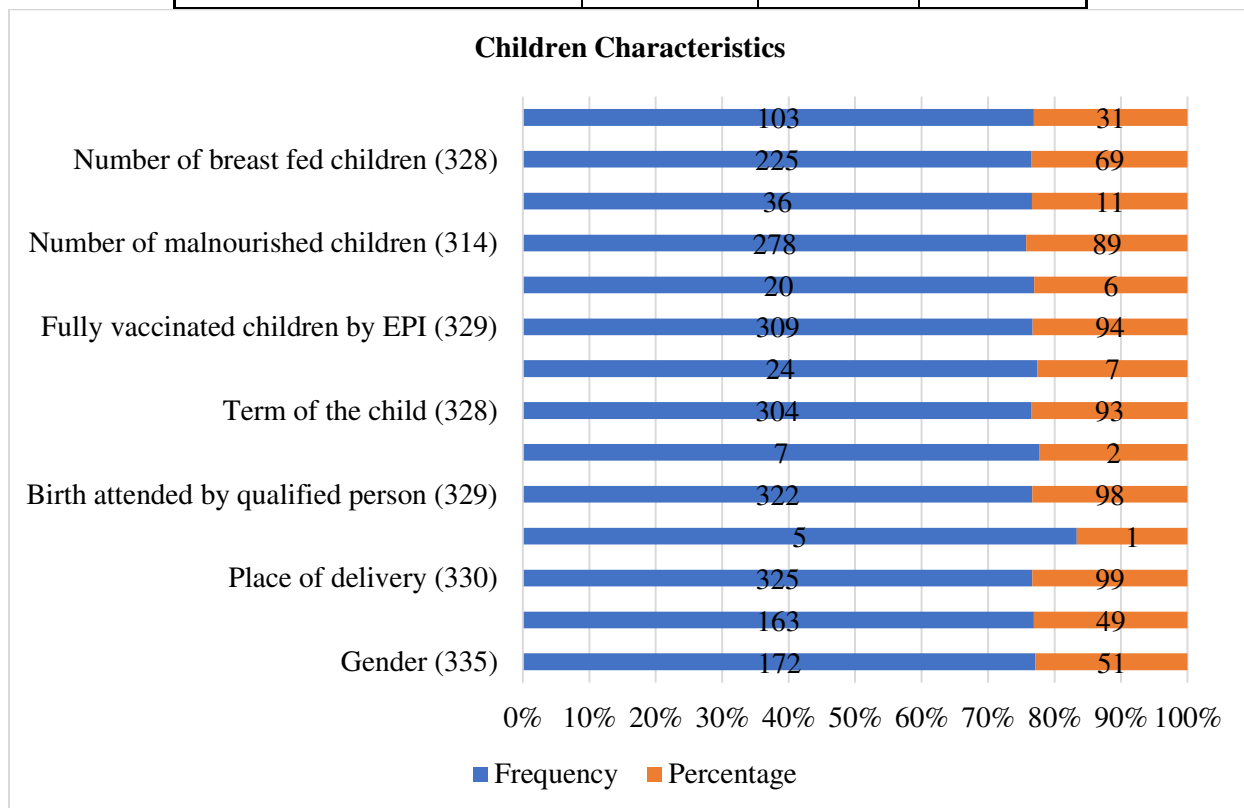


Table – II: Children's Demographic Characteristics (335)

Children Characteristics		Frequency	Percentage
Gender (335)	Male	172	51
	Female	163	49
Place of delivery (330)	Hospital	325	99
	Home	5	1
Birth attended by a qualified person (329)	Yes	322	98
	No	7	2
The term of the child (328)	Full term	304	93
	Pre-term	24	7
Fully vaccinated children by EPI (329)	Yes	309	94
	No	20	6
Number of malnourished children (314)	No	278	89
	Yes	36	11
Number of breastfed children (328)	Yes	225	69
	No	103	31



Symptoms, worsening environment, aggravating factors and complications are mentioned in the table given below.

Table – III: Knowledge of mothers on ARI (335)

Knowledge Characteristics		Frequency	Percentage
What are the symptoms of ARI?	Cough	303	40
	Fever	255	34
	Wheezing	67	9
	Sneezing	88	12
	Pain in the ear, nose, throat	41	5
Disease worsening the environmental condition	Summer	21	7
	Winter	255	87
	Autumn	13	4
	Rain	5	2
Aggravating factors of the disease	Dust	174	81
	Over crowding	29	13
	Poverty	6	3
	No immunization	7	3
Complications of ARI	Fits	14	9
	Pneumonia	135	83
	Ear discharge	10	6
	Measles	4	2
Treatment options for ARI	Consulted qualified doctor	268	89
	Did not consulted doctor	17	6
	Bed rest	9	3
	Home remedy	19	6
	Don't know	6	2

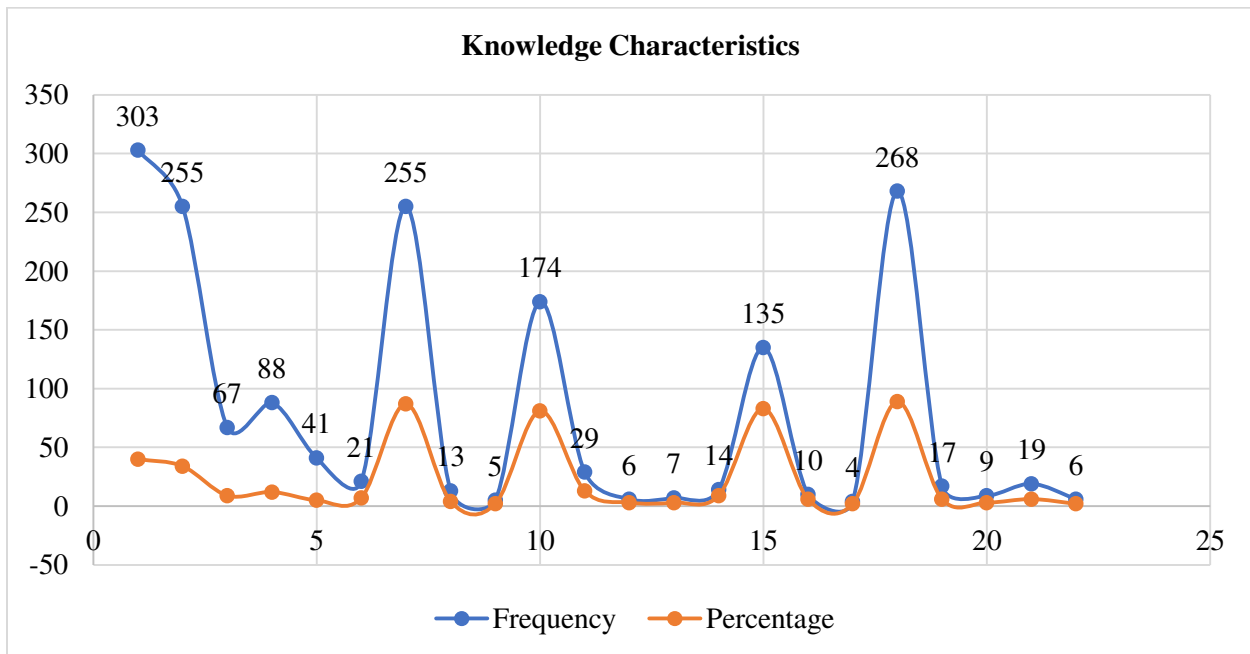
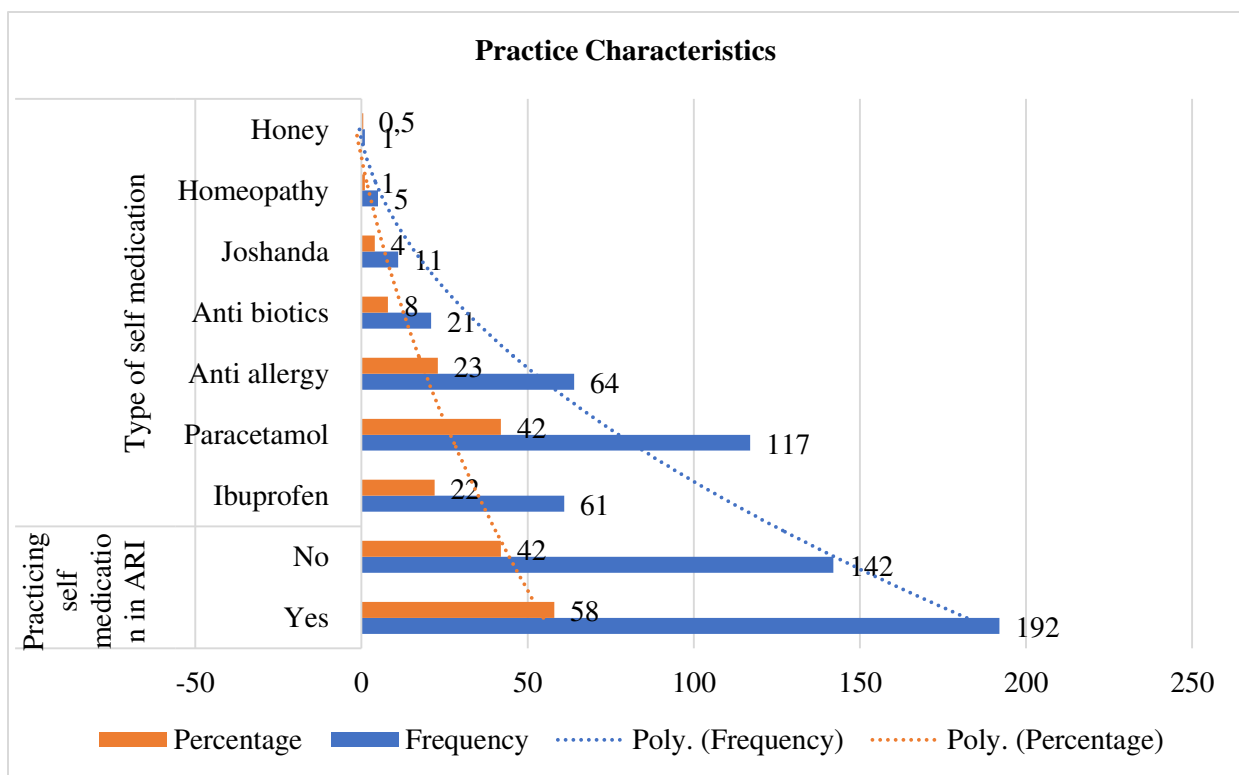


Table – IV: Practice of mothers on ARI (335)

Practice Characteristics		Frequency	Percentage
Practising self-medication in ARI	Yes	192	58
	No	142	42
Type of self-medication	Ibuprofen	61	22
	Paracetamol	117	42
	Anti-allergy	64	23
	Anti-biotics	21	8
	Joshanda	11	4
	Homeopathy	5	1
	Honey	1	0.5

**DISCUSSION:**

We included a mother who accompanied children under five years with ARI [7, 8]. Majority of the mothers had two or under two children. Almost ninety-seven percent others were literate. Various percentage of various literacy levels was observed in the research sample. Another author also reported the same literacy rate as reported in our research outcomes as mentioned in demographic data table [9]. A higher level of literacy was observed in both the research studies, rural population needs an increase in the literacy of the mothers. Medical care is much sought by literate mothers.

EPI coverage was observed as 94%; whereas, in a

Kenyan research the EPI rate was observed about 85% [10]. Breastfeed children were diagnosed with ARI as 69%; whereas, another author observed the same as 65% [11]. A total of 36 children (11%) were under-nutrition; whereas, a research in Nepal observed 23 children (38%) [12]. Nutritional education needs the real attention of the responsible authorities. Higher level literacy programs should be launched in order to eradicate such loopholes especially targeting the working and labour class. A cough was reported as a most common symptom in the ARI affected children (40%) with related symptoms such as Fever, Wheeze, Sneezing and Ear Ache with respective proportions as 34%, 9%, 12%

and 5%. A research held in Ghana reported symptoms like Rib retraction, Lethargy, Cough and Fever with respective proportion of 22% and 57% [13]. Another research reported Fever, Cough and Playing inability respectively as 92.5%, 85.3% & 83.5% [14].

ARI mean duration was five days with a standard deviation as (2.1) which is not comparable with the research of Shahzad Munir as he observed mean duration of four and half days with a standard deviation of (3.1). We can attribute this short sickness duration to the fact that 317 mothers (97%) consulted qualified medical practitioners. In Tehran, 141 mothers (64%) preferred to consult medical practitioners. Antibiotics were prescribed to eight percent of the patients who suffered from ARI. Higher antibiotic use has been reported by Chan and Bhanwra respectively as 68% and 46% [16, 17]. Our population was literate and had better knowledge of antibiotic use which makes our outcomes different. Fahad and Panagakau reported antibiotic use respectively as 5% and 10% [18, 19]. These outcomes are comparable with the outcomes of this particular research. Restricted antibiotic use is encouraged and healthy symptom which reflects better mother's awareness.

We reported 58% self-medication trends. Same has been reported in a local research conducted in Multan [20]. Common drugs like ibuprofen and paracetamol were used as self-medication, which is easily available over the counter. These medicines are considered safe and harmless. Six percent of the participants utilized home remedies; whereas, research studies conducted in Lahore and Multan reported home remedies as 23% and 40% respectively [20, 21]. Use of Joshanda was reported in four percent of the research participants. An Indian research reported that 27% of children were given Ginger as a home remedy in ARI [22]. Cultural difference cannot be overruled in terms of home remedies. Dust was reported as 81% as a contributing factor; whereas, in a research held in Myanmar a total of 89% children were reported being affected by dust [23]. The general environment may be taken as a contributing factor because of the services extended by the municipality.

CONCLUSION:

It was observed in the research that mothers possessed sound knowledge about the symptoms of ARI such as complications, aggravating factors and worsening conditions. They practised appropriate knowledge about ARI while consulting the medical officers. Positive influence can be obtained about

awareness through better rate of literacy.

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