

Assessment of Knowledge and Stated Practice Regarding Care and Prevention of Acute Respiratory Tract Infection Among Mothers of Under Five Years Children in Selected OPD of District Darjeeling, West Bengal

Salma Sultana¹, Nivedita Saha², Mani Nandy Mitra³

¹Clinical Instructor, College of Nursing, North Bengal Medical College & Hospital Darjeeling, Pin-734012

²Reader, College of Nursing, North Bengal Medical College & Hospital Darjeeling, Pin-734012,

³Senior Lecturer, College of Nursing, North Bengal Medical College & Hospital, Darjeeling, Pin-734012

Corresponding Author: Salma Sultana

DOI: <https://doi.org/10.52403/gijash.20250309>

ABSTRACT

Background: Acute Respiratory Tract Infections (ARI) are the most common cause of illness, hospitalization and death among under five years children in the world. A descriptive study was conducted on Assessment of knowledge and stated practice regarding care and prevention of Acute Respiratory Tract Infection among mothers of under five years children in selected OPD of District Darjeeling, West Bengal, to assess the knowledge and stated practice of mothers, correlation between knowledge and stated practice, finding association between knowledge of mothers with selected demographic variables.

Methods: In this descriptive study population was mothers of under five years children. Non probability purposive sampling technique was used to select 216 mothers. The Structured interview schedule was administered to assess the knowledge and stated practice and semi-structured interview schedule to assess the demographic characteristics of mothers.

Results: Result shows that 76% (164) mothers having average knowledge, and 69% (150) having average stated practice.

The study findings show moderately positive ($r=0.70$) correlation between knowledge and stated practice of mothers. There was also significant association between knowledge of mothers with demographic variables i.e. age, education, type of habitat and type of house at 0.05 and 0.001 level of significance.

Conclusion: The study has implications in nursing practice through the awareness of the mothers about the care and prevention of ARI among the under five years children. The investigator recommended in future a planned teaching program regarding care and prevention of ARI among the mothers of under five years children to enhance their knowledge and practice.

Keywords: Knowledge, Stated Practice, care and prevention, Acute Respiratory Tract Infection, mothers of under five years children.

INTRODUCTION

Acute respiratory tract infections (ARI) are the very commonest problem of childhood in many countries including India. ARI is the acute infection of respiratory tract and related structures involving nasopharynx,

lungs, trachea bronchial tree, paranasal sinuses, middle ear, and pleural cavity. The incidence is higher in children below 5 years of age Except during the neonatal period, ARIs are the most common causes of both illness and mortality in children under 5 years of age, who get about three to six episodes of ARIs annually regardless their socio-economic condition.^[1]

Acute respiratory infections (ARI) can induce respiratory tract inflammation everywhere from the nose to the alveoli and present with a variety of symptoms and indications. According to the site of infection, ARI is categorised into upper (AURI) and lower (ALRI) respiratory tract clinical symptoms. The AURI include common cold, pharyngitis and otitis media. Epiglottitis, laryngitis, laryngotracheitis, bronchitis, bronchiolitis and pneumonia are the examples of ALRI.^[2]

The clinical features include running nose, cough, sore throat, difficult breathing and ear problem. Fever is also common in ARI. Maximum children with these infections have only mild infection, such as cold or cough. However, many of the children may have pneumonia which is a major cause of death. Measles and whooping cough are important causes of severe respiratory tract infection in many less developed countries.

Morbidity in the children is mostly due to ARI. Children below 5 years of age suffer about 5 episodes of ARI per child per year on average. So accounting for about 238 million attacks.

Even though the majority of attacks are minor, self-limiting events, ARI nevertheless accounts for roughly 30 to 50 percent of visits to healthcare institutions and for 20 to 40 percent of hospitalizations. ARI can also cause disabilities, such as deafness as a result of otitis media.^[2]

Pneumonia is very fatal disease and it kills more children than any other disease (more than AIDS, malaria and measles combined). Every year more than 2 million children death are due to Pneumonia, accounting for almost one in 5 under-five deaths

worldwide. But still a very less attention is paid to this disease. A major cause of illness and death in children is Streptococcus Pneumonia, as well as in aged person. According to WHO, 1.6 million instances of deadly pneumococcal illness occur globally, with newborns and the elderly making up the majority of these cases. 3 million cases of severe pneumonia and meningitis are caused by Haemophilus Influenza type B bacteria, and approximately 386,000 deaths per year in children under 5 years of age.

Acute respiratory infection (ARI) is a disease of public health significance in many developing countries and it is caused by a heterogeneous group of organisms that affects the human airways. ARI can affect all ages, but the effects are particularly life-threatening among under-five children.^[3]

ARIs (predominantly pneumonia) have a 20% of mortality among children under 5 years of age. Neonatal Pneumonia is also considered, the mortality increases to 35-40% among under-five children, and it accounting for 2.04 million deaths per year. The highest incidence of ARI is in Southeast Asia and it is followed by the sub-Saharan African countries; They contribute to more than 80% of the total global cases. The morbidity and mortality of ARI in childhood are affected by multiple social and environmental factors. The factors include poverty, poor nutrition, poor housing conditions, indoor air pollution (including parental smoking), poor ventilation, overcrowding industrialization, sociocultural values, overuse and misuse of antibiotics, lack of basic health services, and lack of awareness among the peoples. A quarter of ARI deaths in children are related to passive smoking, so keep that in mind as well.^[3]

The National Family Health Survey 5 was done in 2019–2020 and found that the prevalence of ARI in the two weeks prior was 2.4% in urban areas and 3.8% in rural areas in the Indian state of Maharashtra. In the slum areas, more than two-thirds of all childhood illnesses is due to ARI. The cause of approximately 265,000 paediatric

hospital mortality in 2010 was ARI, with developing nations accounting for 99% of all cases., Over two-thirds of all paediatric illnesses in urban slum areas are caused by ARI. 14.3% of the deaths among infants and 15.9% of the deaths among children between 1 and 5 years of age are due to ARIs and most of these deaths are preventable in India. Due to the high morbidity and mortality rates associated with ARIs, its control continues as a major challenge to the healthcare system. [3]

Hasan Md Masud et al (2022) conducted a study on prevalence of ARI among children in India, India's six regions, there were notable disparities in the prevalence of childhood ARI. [4]

The Andhra state showed relatively high prevalence of ARI among children. Kashmir and Jammu (6.4%). Among the states with a comparatively high prevalence of ARI are Uttarakhand (4.9%), Uttar Pradesh (4.7%), and Punjab (4.6%). Among the states in the east region, the highest percentage of children suffering from ARI (3.3%) is in West Bengal. Meghalaya (5.8%) had the highest prevalence in the northeast region of India, whereas Sikkim, Assam and Nagaland exhibited a relatively lower prevalence. The low prevalence of ARI presented in the south and west regions of India, and the highest prevalence occurring in Tamil Nadu (2.8%).

A comprehensive understanding of the prevalence and associated factors of ARI is very essential. To control acute respiratory infection (ARI) is a major public health problem in developing countries. To reduce mortality from ARI, case management methods must be implemented with community involvement. Health education programs can only be effective when designed to take into account the prevailing knowledge, attitude and practices of community, (especially mothers and caregivers) towards ARI in their children.

Need of the study:

Respiratory illness is very common and often found in children, especially the

respiratory infections. This is among one of the leading causes of morbidity and mortality in children below 5 years of age. A large proportion of pediatric admissions and outpatient attendance are due to Respiratory problems. [5]

Malnutrition, low birth weight, climate changes, especially during the winter and rainy season, crowded housing, inadequate ventilation, air pollution, a lack of environmental sanitation, and poor socioeconomic conditions are among the significant risk factors linked to respiratory disorders.

The most common acute illnesses in infants and children are acute respiratory infections (ARI) and its consequences. ARI is one of the leading causes of child fatalities in India. It is also one of the main causes for which paediatric patients are admitted to hospitals and other healthcare institutions. About 13 percent of inpatient death in pediatric wards is due to ARI As many kids pass away at home, the percentage of deaths attributable to ARI in the community is substantially higher. Most children have 3 to 5 attacks of ARI in each year. Many of these infections run their natural course without specific treatment and without complication. [5]

ARI is a universal problem found in all age group and in all countries. According to WHO, LRTI are the second major cause of illness (429.2 million episodes) worldwide annually. In developing countries, a quarter of all pediatric hospital admissions are due to ARI. 20%-40% of hospitalization of children under five years of age worldwide are due to ARI. Each year, 3% of infants younger than 12 months old require hospital admission due to a moderate or severe viral lower respiratory tract infection. [5]

Worldwide, it is estimated that ARI in young children causes 3.9 million fatalities per year. The majority of ARI deaths—about 90%—are caused by pneumonia, which is typically bacterial in origin. Both developed and developing nations experience the same level of ARI incidence. However, while the incidence of pneumonia in developed countries may be as low as 3-4

per cent, its incidence in developing countries range between 20 to 30 percent. The high prevalence of hunger, low birth weight, and indoor air pollution in underdeveloped nations are to blame for this discrepancy.

In estimated 156 million new cases of pneumonia, the leading complication of ARI are registered annually, with 97% of them residing in the developing countries. In estimated 7%-13% of all pneumonia cases are severe enough to require emergency hospitalization.

Acute respiratory infection and its complications are most frequency condition of acute illness in infants and children.

Acute respiratory tract infection is also one of the most major reasons for which children are brought to the hospital. Over all prevalence of ARI was observed to be 59% in urban area and rural area being 53.75% 63.7% respectively. According to a research analysis, ARI was substantially correlated with overcrowding, housing, and mothers' education. Additionally, there were high rates of ARI among 41.36% of children who lived in households that used firewood or other fuel, and 35.5% of children who had pets living with them, 34.82% of children with delayed mile stone, 58.85% of children with grade 4 and 66.7% children with grade 5 malnutrition. More episodes occurred during winter month. Many of this risk factors

are amenable if corrective measures taken. It has been reported that the problem of ARI is more in urban area, slum in particular again children under five years of age regarding prevention of acute respiratory tract infections.

In the treatment of children with upper respiratory tract infections, mothers are crucial. Mother must comprehend the need of making wise decisions, identifying mild, moderate, and severe respiratory tract illnesses, and providing prompt at-home treatment for upper respiratory tract infections in order to stop the infection from spreading. The ignorance and inadequate knowledge are important factors which

affect health of child. If upper pericarditis respiratory infections are not treated in early stage it may lead to certain complications like, empyema, pneumothorax and staphylococcal pneumonia, which increases the child mortality. Therefore, accurate information about prevention and domiciliary management of upper respiratory tract infection to the mothers to help them to provide effective home management to children, suffering from upper respiratory tract infection. [6]

So, investigator felt need to identify knowledge and stated practice regarding care and prevention of ARI among mothers who have children of under five years of age.

Statement of Problem:

Assessment of knowledge and stated practice regarding care and prevention of Acute Respiratory Tract infection among mothers of under five years children in selected OPD of District Darjeeling, West Bengal.

Objectives of the Study:

- i. To assess the level of knowledge regarding care and prevention of Acute Respiratory Tract Infection among mothers of under five years children in selected OPD of District Darjeeling, West Bengal.
- ii. To evaluate the stated practice regarding care and prevention of Acute Respiratory Tract Infection among the mothers of under five years children in selected OPD of District Darjeeling, West Bengal.
- iii. To determine the correlation between knowledge and stated practice of mothers regarding care and prevention of Acute Respiratory Tract Infection among mothers of under five years children in selected OPD of District Darjeeling, West Bengal.
- iv. To find out the association between knowledge of mothers with selected demographic variables regarding care and prevention of Acute Respiratory

Tract Infection in selected OPD of District Darjeeling, West Bengal.

$$n = \frac{z^2 pq}{e^2}$$

n = sample size

The value for Z is found in statistical tables which contain the area under the normal curve e.g. Z=1.96 for 95% level of confidence.

e= is the desired level of precision (0.05)

p= prevalence

q= 1-p

MATERIALS & METHODS

Research Approach: The selection of research approach is the basic procedure for collecting data, the research approach refers to general set of orderly disciplined procedures used to acquire dependent and useful information. It refers to the way the researcher plans and structures the research process. The research approach adopted in the study is quantitative research approach, as the investigator intended to assess the knowledge and stated practice regarding care and prevention of acute respiratory tract infection.

Research Design: Research design adopted for present study is Non Experimental Descriptive Research Design.

Settings of the study:

Pilot Study:

Pilot study has been conducted on 40 samples of Phansidewa Rural Hospital (OPD), District Darjeeling, West Bengal.

Main study: Final study has been conducted on 216 samples from Pediatric OPD of North Bengal Medical College & Hospital, Darjeeling. OPD of Matigara BPHC, Darjeeling. OPD of Naxalbari Rural Hospital, Darjeeling.

Population: All the mothers of under five years children attending OPD of District Darjeeling.

Sample: The mothers of under five years children attending Pediatric OPD of North Bengal Medical College & Hospital, OPD of Naxalbari Rural hospital & Matigara BPHC, District Darjeeling of under five years children.

Sampling Technique:

In this study Non probability purposive sampling technique is adopted.

Sample Size:

For final study sample size is 216. Sample size calculation was done using the formula of Cochran.

Inclusion Criteria:

- Mothers who are willing to participate at the time of data collection attending pediatric OPD of selected Hospitals of District Darjeeling, West Bengal
- Mothers having one or more under five years children who can communicate and understand English & Bengali.

Exclusion Criteria:

- Mothers of under five years children who are present during the period of data collection but not willing to participate in the study.
- Mothers of under five years children who are attached with any health care settings.

Description of tool:

Tool-I

Socio-demographic profile comprised of 13 items, these are including as,

- Age of mother.
- Education.
- Occupation.
- Monthly family income.
- Religion.
- Place of residence.
- Number of children.
- Number of under five children.
- Type of house.
- Type of chulla used.
- Duration of breastfeeding.
- Age of weaning.
- Presence of smoker within the family.

Description of Tool-II

Structured Interview Schedule for the collection of data about knowledge of mothers regarding care and prevention of ARI among under five children.

The interview schedule is comprised with 18 items having 04 option.

- Areas:
 - Concept of disease and risk factors.
 - Exclusive breastfeeding and nutrition.
 - Hygiene.
 - Environmental factor
 - Immunization.

Description of Tool-III

Structured Interview Schedule for the collection of data about stated practice.

The structured interview schedule is comprised with yes /no option (Dichotomous).

Total 20 items.

- Areas:
 - Care during ARI.
 - Nutrition & exclusive breastfeeding.
 - Prevention.

STATISTICAL METHODS

Descriptive statistics:

The data was organized, tabulated and analyzed by using descriptive statistics and inferential statistics.

Section-I

Socio-demographic variables- Analyzed by frequency and percentage distribution.

Section-II

The knowledge of the mothers was analyzed using mean, standard deviation, frequency percentage and mean percentage distribution.

Section-III

The stated practice of the mothers was analyzed using mean, standard deviation, frequency percentage and mean percentage distribution.

Inferential statistics:

Section-IV

The correlation between knowledge and stated practice of mother was analyzed by correlation coefficient (r).

Section V

Findings related to the association between knowledge of mothers with selected demographic variables were analyzed by using chi square test.

RESULTS

In this study majority 122 (56%) number of mothers were belong to age group between 24-28 years. Data depict that majority of mothers 194(90%) were residing at rural area. Data present that most of mothers 108(50%) were lives in kuchha houses. Academically maximum 82(38%) mothers were belonged to primary education. Data revealed that majority of mothers 192(89%) were housewives. Data also depict that majority of mothers 136(63%) were belongs to religion Hindu. Maximum 114(53%) family had monthly family income of upto Rs 10000/. Majority of families 98(45%) had 1 child at home. Majority of families 170(79%) had 1 child of under 5 years of age at home. About 99(46%) of the mothers uses smokeless chulla for cocking. Majority 186(86%) of mothers had duration of exclusive breastfeeding upto 6 months of age. About 128(59%) of mothers started weaning between 6months to 1 year of age. Majority 120(56%) of the families had no smokers within the family.

n=216

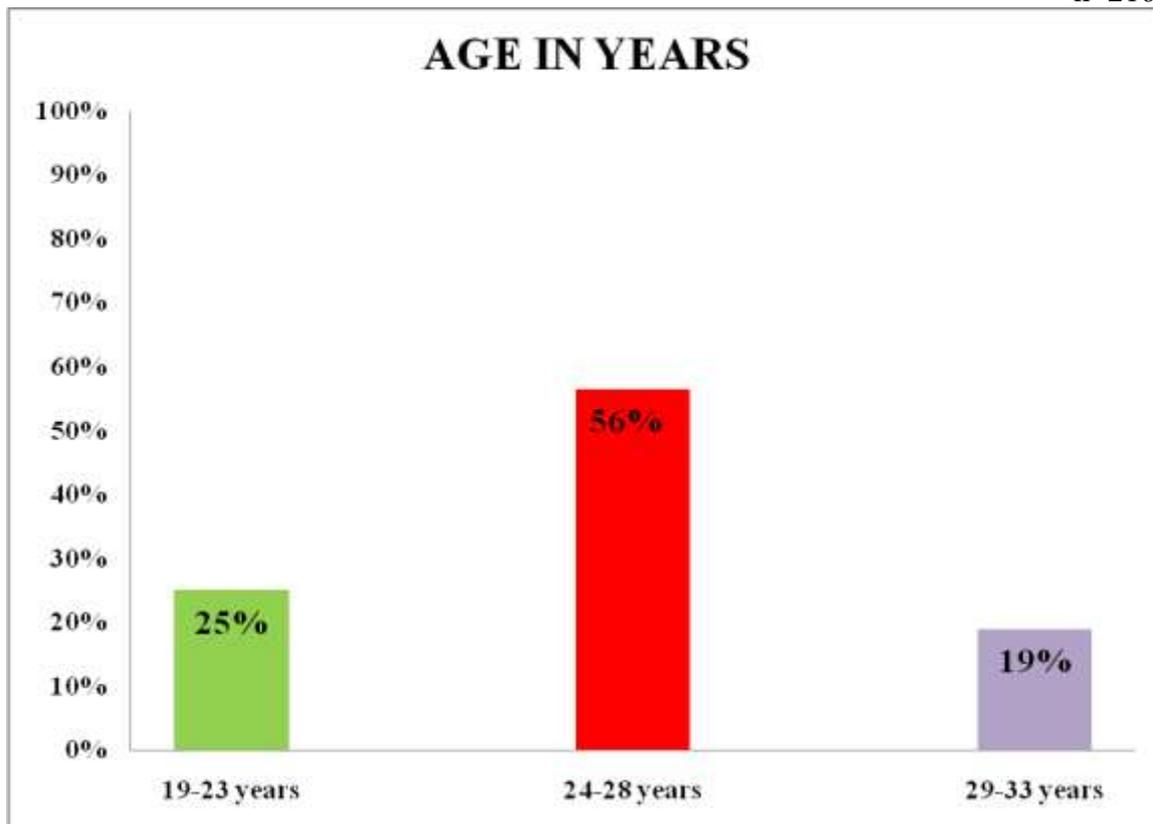


Figure 1 Bar diagram showing distribution of mothers according to age.

The data presented in the fig- 1 depicted that 56% mothers belonged to the age group 24-28yrs, 25% mothers belonged to the age group 19-23 yrs. and 19% belongs to age group 29-33yrs.

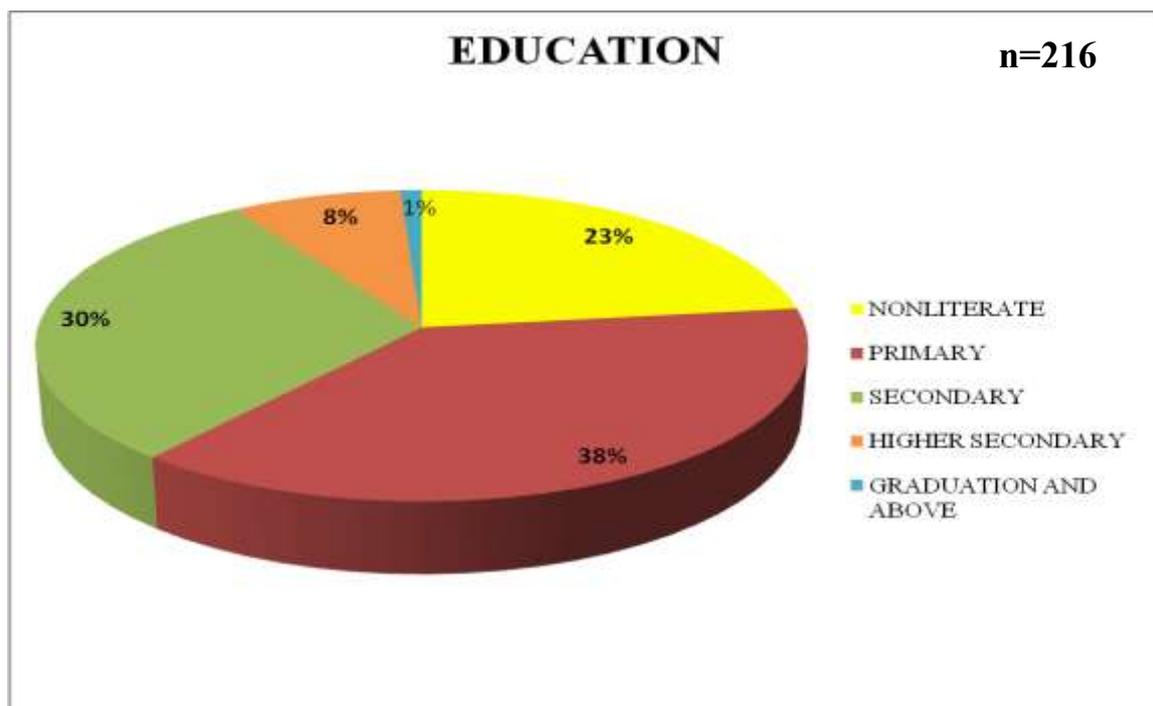


Figure 2 Pie diagram showing distribution of mothers according to educational status.

The data presented in the fig- 2 depicted that 38% mothers have Primary Education, 30% mothers have Secondary Education, 23% mothers were Nonliterate, 8% mothers have Higher Secondary Education and 1% mothers are Graduate and above.

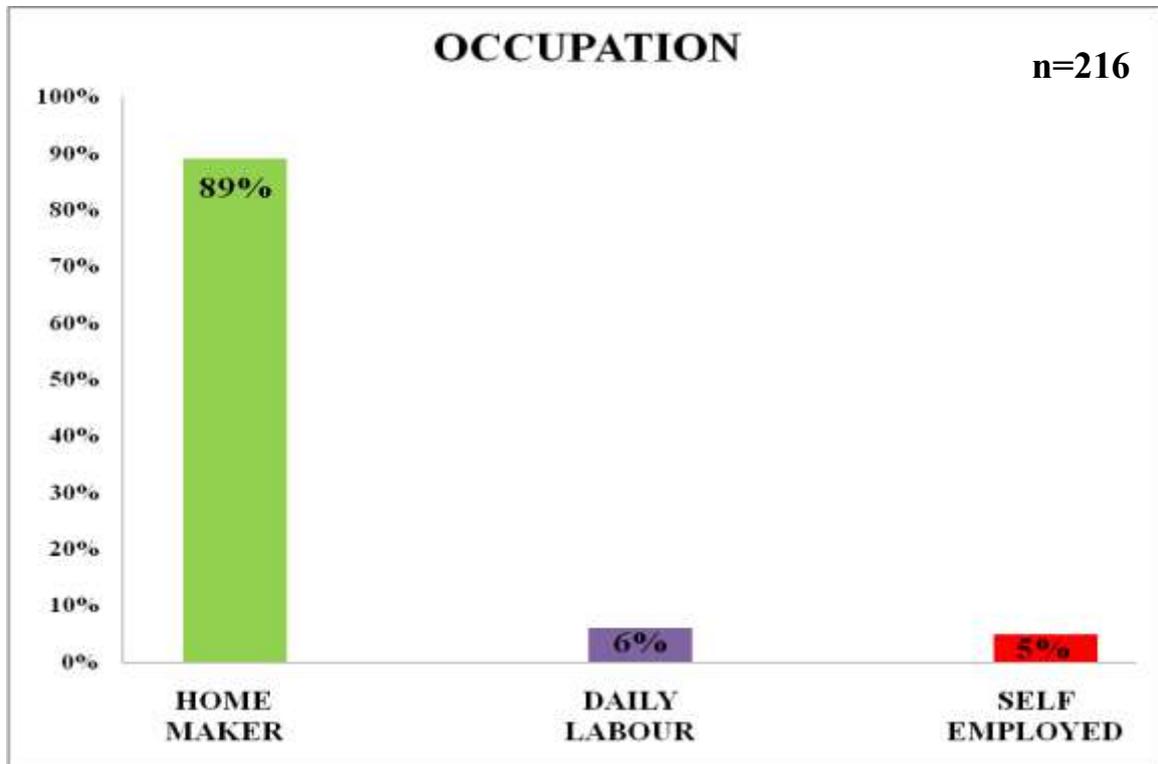


Figure 3 Bar diagram showing distribution of mothers according to occupation.

The data presented in the fig- 3 depicted that 89% mothers are homemaker 6% are daily labour and only 5% are self employed.

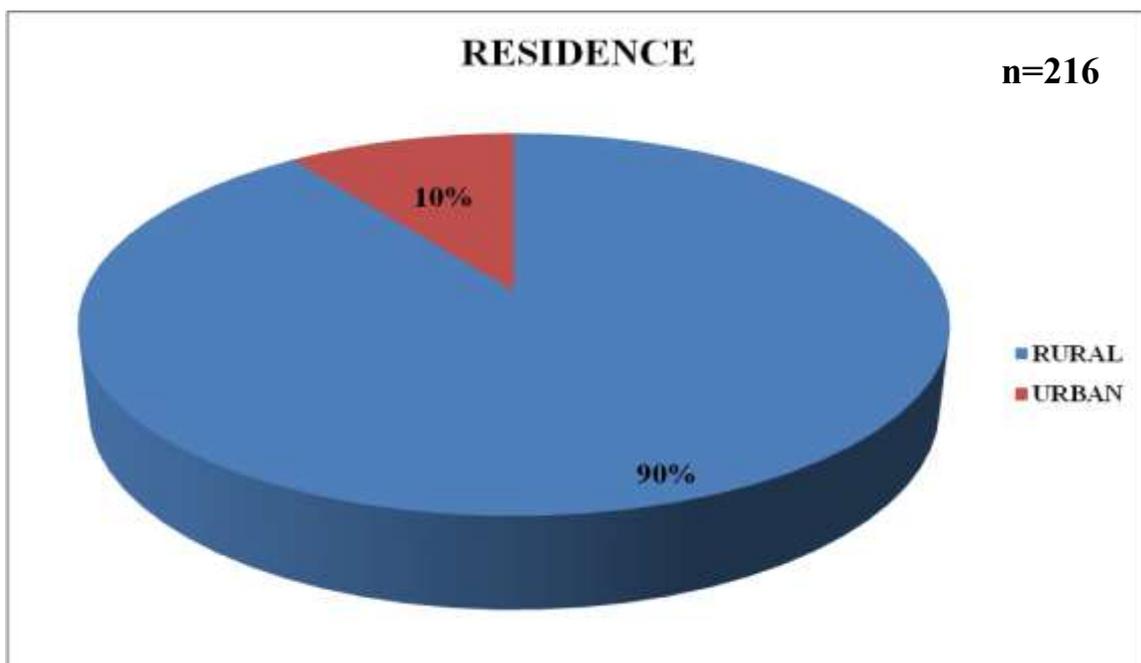


Figure 4 Pie diagram showing distribution of mothers according to their area of Residence.

The data presented in the fig- 4 depicted that 90% mothers are belongs to Rural area and only 10% are from Urban area.

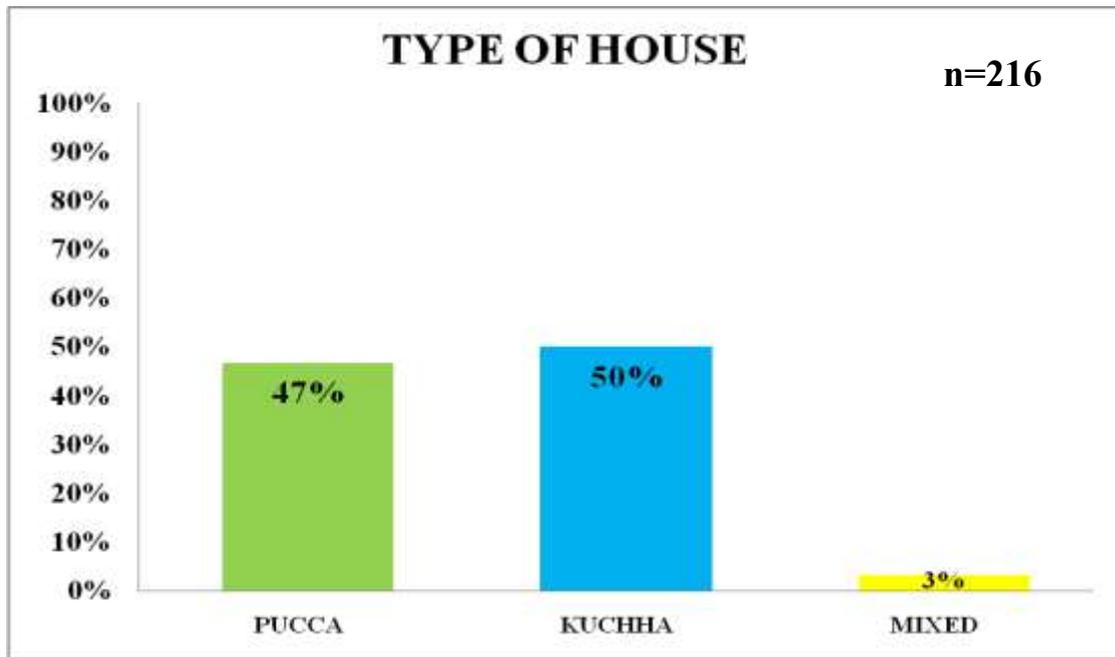


Figure 5 Bar diagram showing distribution of mothers according to the type of house they lived.

The data presented in the fig-5 depicted that 50% mothers' lives in kuchha house 47% mother lives in pucca house and 3% lives in mixed house.

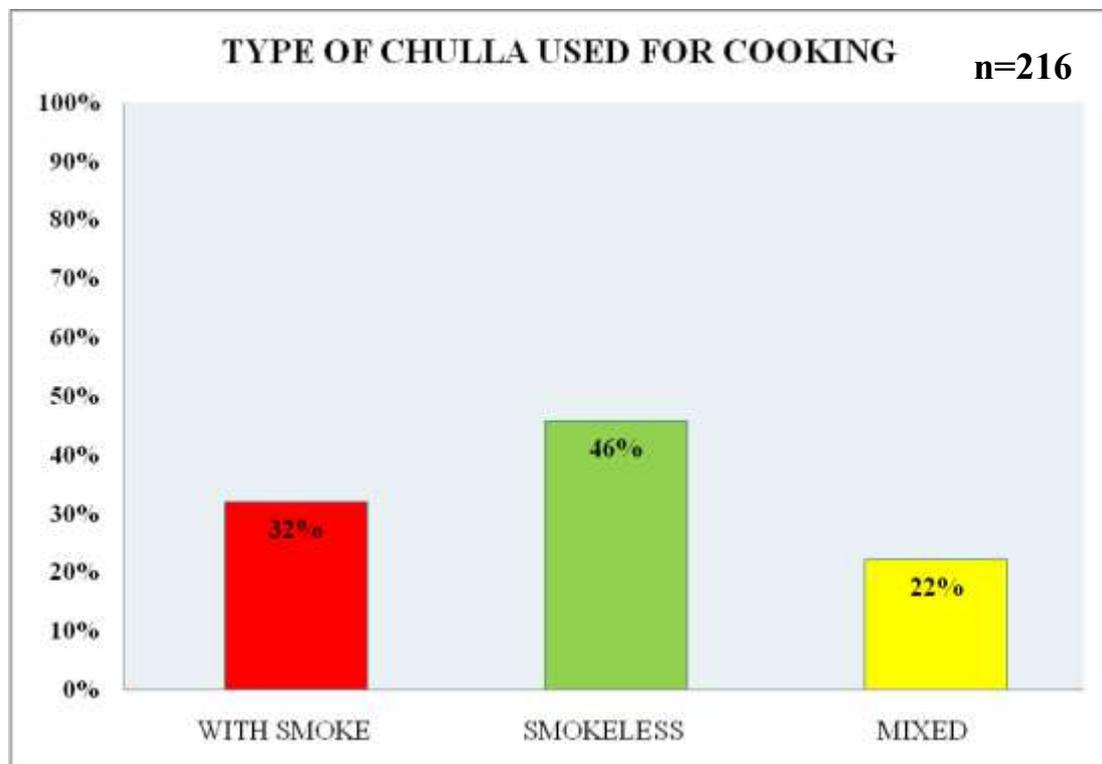


Figure 6 Bar diagram showing distribution of mothers according to the type of chulla they used for cooking.

The data presented in the fig-6 depicted that 46% mothers uses Smokeless chulla 32% uses with Smoke chulla, and 22% mothers uses mixed chulla for cooking food.

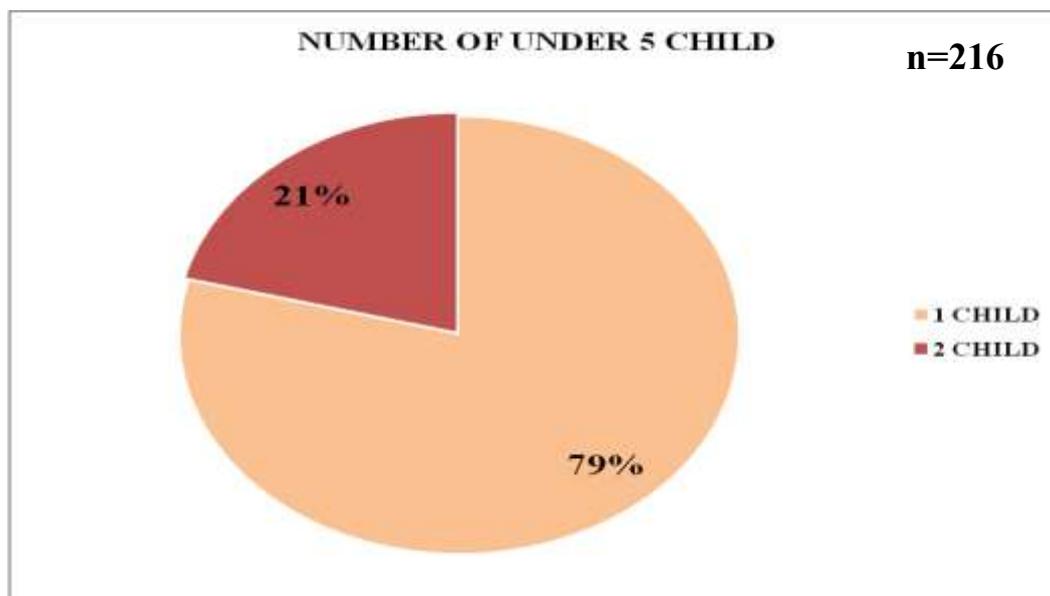


Figure 7 Pie diagram showing distribution of mothers according to the number of under five children.

The data presented in the fig-7 depicted that 79% mothers have 1 under 5 children, 21% mothers have 2 under 5 children.

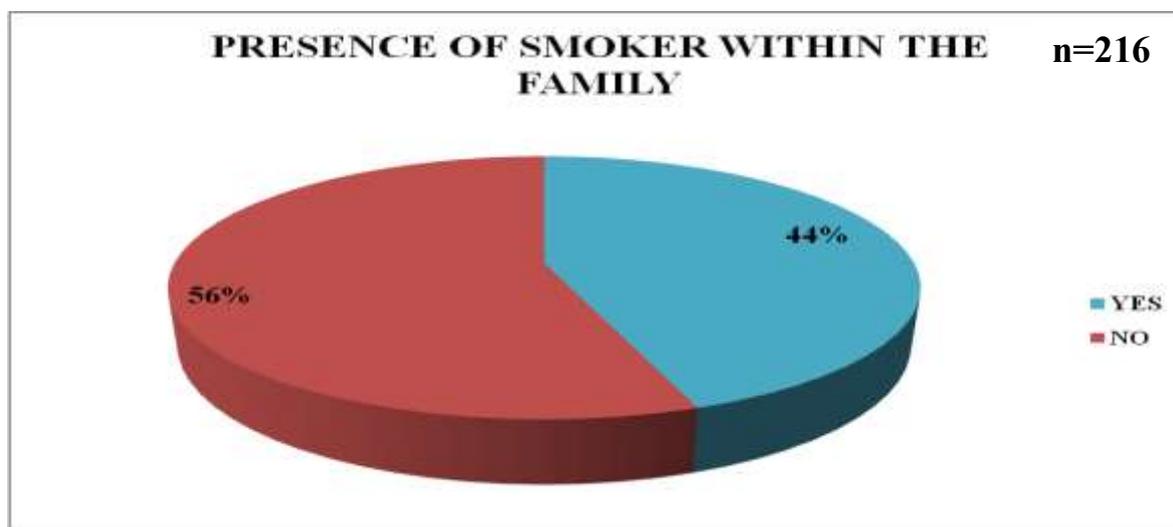


Figure 8 Pie diagram showing distribution of mothers according to Presence of smoker within the family.

The data presented in the fig-8 depicted that 56% of the Mothers family have no smoker in the family and 44% family have smoker in the family.

Table 1 Mean, Median and Standard Deviation of knowledge of mothers of under-five years children regarding care and prevention of Acute Respiratory Tract Infection. n=216

Variable	Range of possible score	Range of obtained score	Mean	Median	Standard deviation
Knowledge Score of mothers regarding care & prevention of ARI	0 - 18	6 - 14	8.39	9	1.70

Data presented in table 1 revealed that regarding knowledge mothers' range of obtained score 6-14, mean was 8.39, Median was 9, and Standard Deviation was 1.70.

Table 2 Frequency and percentage distribution of knowledge of mothers of under-five years children regarding care and prevention of Acute Respiratory Tract Infection. n = 216

Levels of Knowledge	Score	Frequency	Percentage (%)
Good	>10.1	29	13
Average	6.68 - 10.1	164	76
Poor	<6.68	23	11

Maximum score = 18

Minimum score = 0

Data presented in table 2 showed that 76% mothers had average knowledge, 13% mother's knowledge regarding care and prevention of acute respiratory tract infection was good, and 11% mothers' knowledge was poor.

FINDINGS RELATED TO AREA WISE (DOMAIN WISE) KNOWLEDGE SCORE:

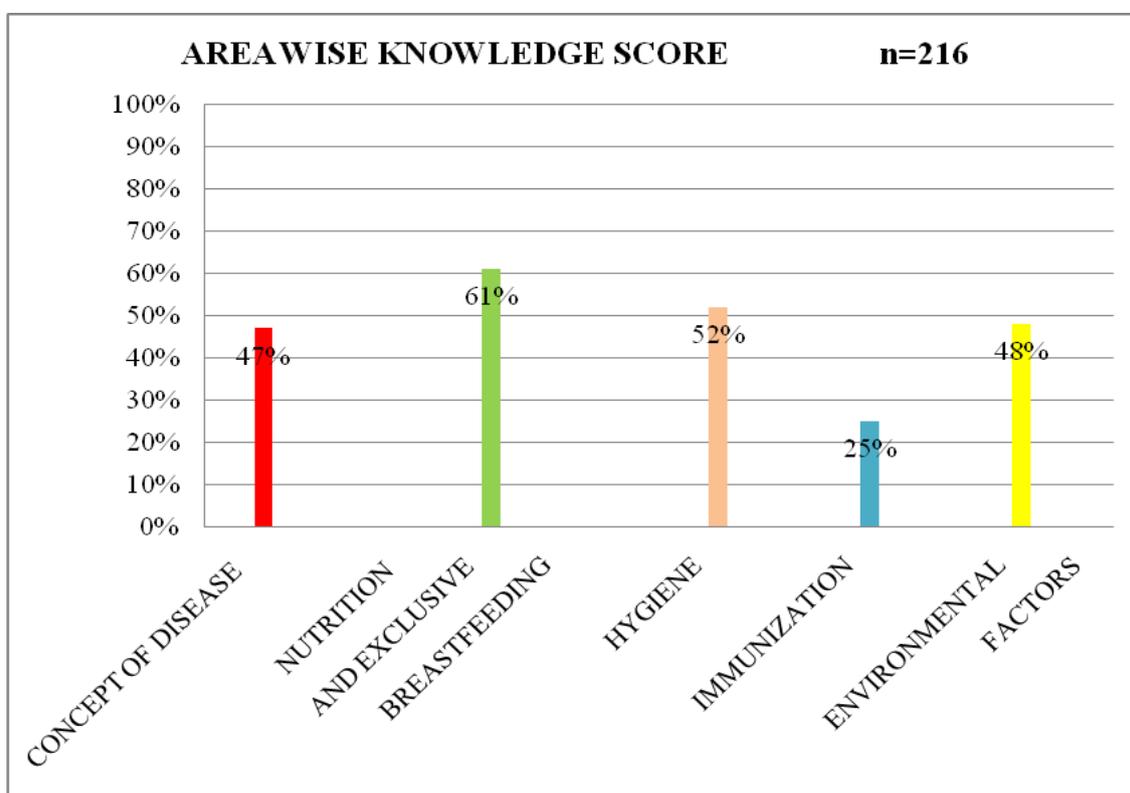


Figure 9 bar diagram showed that area wise mean knowledge score of mothers is maximum in the area of nutrition and exclusive breastfeeding 61% and minimum 25% mean knowledge score in the area of immunization.

Table 3 Mean, Median and Standard Deviation of stated practice of mothers of under-five years children regarding care and prevention of Acute Respiratory Tract Infection. n=216

Variable	Range of possible score	Range of obtained score	Mean	Median	Standard deviation
Stated practice score of mothers regarding care & prevention of ARI	0 – 20	7 – 14	9.73	9.5	1.47

Data presented in table 3 depicted that regarding stated practice of mothers of under five children, range of obtained score 7-14, Mean was 9.73, Median was 9.5 and Standard Deviation was 1.47.

Table 4 Frequency and percentage distribution of stated practice of mothers of under-five years children regarding care and prevention of acute respiratory tract infection. n=216

Levels of practice	Score	Frequency	Percentage (%)
Good	>11.2	26	12
Average	8.2 11.2	150	69
Poor	<8.2	40	19

Maximum score = 20

Minimum score = 0

Data presented in table 4 showed that 69% mothers stated practice was average, 12% mothers stated practice was good and 19% mothers stated practice was poor.

FINDINGS RELATED TO AREA WISE (DOMAIN WISE) PRACTICE SCORE:

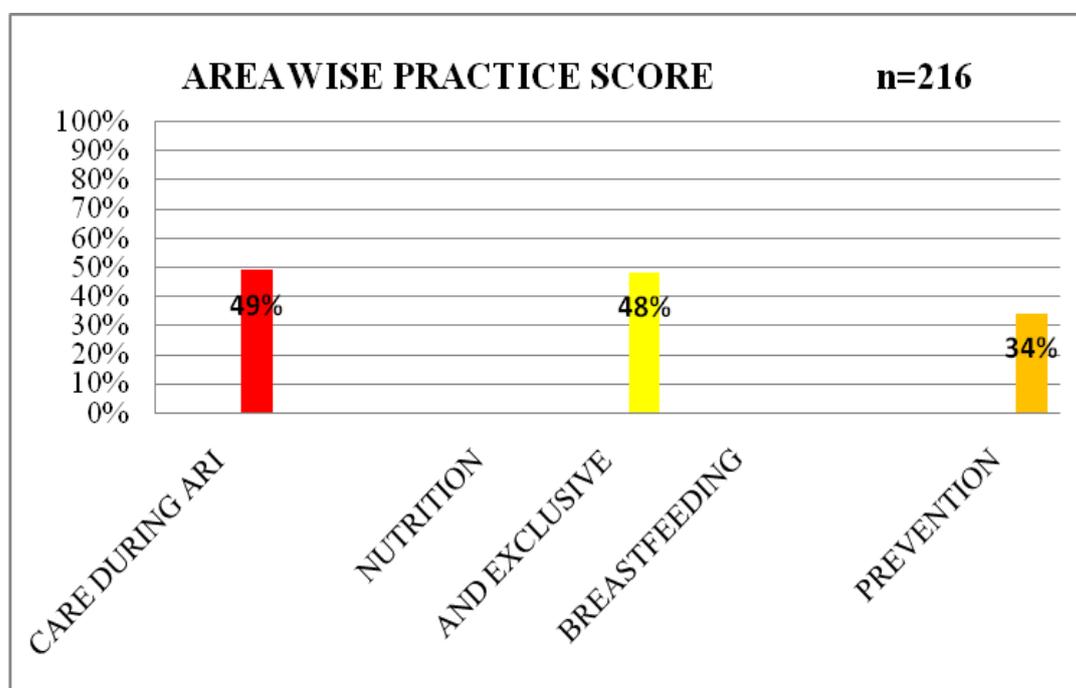


Figure 10 bar diagram showed that area wise mean stated practice score of mothers is 49% is in the area of care during Acute Respiratory Tract Infection and 34% mothers stated practice is in the area of prevention of Acute Respiratory Tract Infection.

Table 5 Relationship between knowledge and stated practice of mothers regarding care and prevention of Acute respiratory tract infection among mothers of under five years children. n=216

Variables	Mean	SD	Score of 'r'	't'
Kk				
Knowledge Regarding care & prevention Of ARI	8.39	1.70	0.70	14.71***
Stated practice Regarding care & prevention of ARI	9.73	1.47		

df (214) =3.37; p<0.001

The data presented in the table 5 shows that there is a moderately positive correlation between knowledge and stated practice regarding care and prevention of Acute Respiratory Tract Infection among mothers

of under five children. The correlation coefficient ($r=+0.30$ to 0.70) that is moderately positive correlation and calculated value is 0.70 .

Table 6 Shows association between knowledge score of mothers with selected demographic variables i.e. Age. n= 216

Demographic variable	Knowledge score on care & prevention of ARI		Total	Chi square value
	≥ median	<median		
Age in years				11.26***
19-25years	25	27	52	
26-33years	120	44	164	
Total	145	71	216	

χ^2 df (1) = 10.83; P<0.001*** Highly Significant

Data presented in table 6 depicts that obtained value of χ^2 at df (1) is 11.26 at 0.05 level of significance. The table value of χ^2 at df (1) is 10.83 at p<0.001 level of significance. Therefore, the obtained value is more than the table value, so it can be concluded that there is statistically highly significant association between Knowledge

score of mothers and the age of the mothers regarding care & prevention of ARI. So here the calculated value is more than table value hence the null hypothesis is rejected and research hypothesis is accepted. So the associations is true association and not by chance.

Table 7 Shows association between knowledge score of mothers with selected demographic variables i.e. Education. n= 216

Demographic variable	Knowledge score on care & prevention of ARI		Total	Chi square value
	≥ median	<median		
Education				17.03***
Non literate	21	29	52	
literate	122	44	164	
Total	143	73	216	

χ^2 df (1) = 10.83; P<0.001*** Highly Significant

Data presented in table 7 depicts that obtained value of χ^2 at df (1) is 17.03 at 0.001 level of significance. The table value of χ^2 at df (1) is 10.83 at p< 0.001 level of significance.

Therefore, the obtained value is more than the table value and therefore the null hypothesis rejected and research hypothesis

accepted, so it can be concluded that there is statistically significant association between Knowledge score of mothers and educational qualification of the mothers regarding care & prevention of Acute Respiratory Tract Infection and is not by chance.

Table 8 Shows association between knowledge score of mothers with selected demographic variables i.e. Type of house. n= 216

Demographic variable	Knowledge score on care & prevention of ARI		Total	Chi square value
	≥ median	<median		
Type of house				12.54***
Pucca	80	21	101	
Kachha & mixed	65	50	115	
Total	145	71	216	

χ^2 df (1) = 10.83; P<0.001*** Highly Significant

Data presented in table 8 depicts that obtained value of χ^2 at df (1) is 12.54 at 0.001 level of significance. The table value of χ^2 at df (1) is 10.83 at $p < 0.001$ level of significance.

Therefore, the obtained value is more than the table value therefore the null hypothesis

is rejected and research hypothesis accepted, so it can be concluded that there is statistically true significant association between Knowledge score of mothers and type of house they lived regarding care & prevention of Acute Respiratory Tract Infection and it is not by chance.

Table 9 Shows association between knowledge score of mothers with selected demographic variables i.e. Place of habitat. n= 216

Demographic variable	Knowledge score on care & prevention of ARI		Total	Chi square value
	\geq median	<median		
Habitat				
Rural	126	68	194	4.10*
Urban	19	03	22	
Total	145	71	216	

χ^2 df(1) = 3.841; $P < 0.05$ * Significant

Data presented in table 9 depicts that obtained value of χ^2 at df (1) is 4.10 at 0.05 level of significance. The table value of χ^2 at df (1) is 3.84 at $p < 0.05$ level of significance.

Therefore, the obtained value is more than the table value therefore the null hypothesis is rejected and research hypothesis is accepted, so it can be concluded that there is statistically significant association between Knowledge score of mothers and type of habitat regarding care & prevention of Acute Respiratory Tract Infection.

***Yates correction done.**

Findings related to knowledge score of mothers regarding care and prevention of Acute Respiratory Tract Infection among under five years children.

- Knowledge score ranged from 6-14 out of 18.
- Mean knowledge score of samples was 8.39 ± 1.70 .
- The maximum mean percentage score was obtained in the area of Nutrition and exclusive breastfeeding 60.64%.
- The minimum mean percentage score was obtained in the area of immunization (25.46%).

Findings related to stated practice score of mothers regarding care and prevention of Acute Respiratory Tract Infection among under five years children.

- Stated practice score ranged from 7-14 out of 20.
- Mean knowledge score of sample was 9.73 ± 1.47
- The maximum mean percentage score was obtained in the area of care during ARI 49.24% and minimum score in the area of prevention 33.95%

Findings related to correlation between knowledge and stated practice of mothers regarding care and prevention of Acute Respiratory Tract Infection among mothers of under five years children.

The study findings shows that there is a moderately positive correlation between knowledge and stated practice regarding care and prevention of ARI among mothers of under five children. The correlation coefficient between +0.30-0.70 is moderately positive correlation and the calculated value of r (correlation) in this study is 0.70, so the correlation is moderately positive correlation.

Findings related to the association between knowledge of mothers with selected demographic variables regarding care and prevention of Acute Respiratory Tract Infection.

The chi square (χ^2) values computed between knowledge score of mothers regarding care and prevention of Acute Respiratory Tract Infection with selected

variables like type of habitat, type of house used and age, education were significant at $p < 0.001$ level of significance because the computed value is greater than table value (χ^2) 10.83 of df (1). On the other hand, selected variables like type of chulla used, duration of breastfeeding, age of weaning and presence of smoker within the family was not significant because in this case computed value was less than table value (χ^2) 3.841 of df (1) where $p < 0.05$. So it can be concluded that the selected variables like duration of breastfeeding and type of chulla used were not significantly associated with knowledge score of mothers. But age, type of habitat, type of house and educational status was significantly associated with knowledge score of mothers.

DISCUSSION

Discussion related to other studies:

The study findings were discussed under the following headings those supported by the following studies.

With regards to findings related to knowledge score of mothers regarding care and prevention of Acute Respiratory Tract Infection among under five years children.

Present study revealed that 13% mother's knowledge regarding care and prevention of acute respiratory tract infection was good, 76% mothers had average knowledge and 11% mothers' knowledge was poor.

The obtained findings in this area are supported by a study conducted by Ahmed N, Khan K S, Khan A, et al (2018), a cross-sectional study to assess the KAP of mothers having child less than 5 years of old regarding ARI at Dr. Ruth KM Pfau Civil Hospital Karachi, Pakistan. The study disclosed insufficient knowledge of mothers regarding ARI that is 12.54% had poor knowledge and 87.46% had good knowledge. (n=252). [7]

With regards to findings related to stated practice score of mothers regarding care and prevention of Acute Respiratory Tract Infection among under five years children. Present study revealed that 69% mothers stated practice was average, 12% mothers

stated practice was good and 19% mothers stated practice was poor.

The obtained findings in this area are supported by a study conducted by Malla C. (2020) Knowledge regarding ARI and its management among mothers of under five children attending pediatric OPD of teaching hospital, Birgunj. The study concluded that the knowledge regarding ARI and its management among mothers was not satisfactory and had to improved significantly. [8]

With regards to findings related to the association between knowledge of mothers with selected demographic variables regarding care and prevention of Acute Respiratory Tract Infection.

The present study revealed that mother's educational status, place of residence and type of house they lived are significantly associated with Acute Respiratory Tract Infection among under five children.

The obtained findings in this area are supported by a study conducted by A.K Savitha, S. Gopalakrishnan Determinants of ARI among under five children in rural area of Tamil Nadu, India a community-based cross-sectional study was carried among 380 samples. The study revealed a significant association between history of parental smoking and with type of house they lived. (n=380). [9]

The obtained findings in this area are supported by a study conducted by S Kumar Ganesh, Majumdar A, Kumar V (2015) et al a community based cross sectional study on prevalence of ARI among under-five children in urban and rural areas of Puducherry, India. The study consists 509 mothers of under five children. The study concluded that improvement of leaving condition in houses may help in reduction of ARI. [10]

The obtained findings in this area are supported by a study conducted by Ndjadi A, Kasongo W, Mukuku O, et al a study on maternal knowledge and practice regarding childhood ARI in Lubumbashi, DRC. The study concludes that the mothers' knowledge of modes of transmission,

symptoms and danger signs of ARIs was good, Knowledge level was associated with age and level of education regarding modes of transmission. [11]

The obtained findings in this area are supported by a study conducted by Dange H, Andulam Z, Dagneu B et al an institution-based cross-sectional study on ARI and its associated factors among children of under five years attending pediatric ward at University of Gondar CS Hospital, N. Ethiopia: from May 01/2019 to July 10/2019. The study consists of 422 mothers. The study concluded maternal age, residence and maternal hand hygiene information were significant factors identified to be associated with an ARI. [12]

Limitation

- The time period of data collection was limited according the sample size. So generalization of the study findings was restricted.
- The study was conducted only on mothers of under five years children.
- As the study conducted only in the selected OPD(Hospital) of District Darjeeling generalization of the study findings is limited.
- Non-probability purposive sampling technique was used for selecting sample which reduce the scope of generalization.
- The structure interview schedule was used to collect the data. So the response was restricted
- Assessment of knowledge and stated practices of mothers were based on self reports by the mothers. Physical observations should have given the much more accurate data.
- The study was conducted only to assess the knowledge and stated practice of mothers did not measure the attitude of the mothers of under five years children towards their practice.

Recommendation

- A similar study can be replicated on larger sample of mothers of under five years children at a sufficient time.
- A study can be conducted to show the effectiveness of a planned teaching program regarding care and prevention of ARI among the mothers of under five years children.
- A study can be conducted to find out the difficulties in practicing proper care and prevention to the under five years children.
- A comparative study can be conducted between the mothers of under five years children on different rural and urban community settings.
- A study can be conducted to find out the association with the knowledge and practices of mothers regarding care and prevention of ARI among under five years children.
- A similar study can be conducted with random sampling technique.

CONCLUSION

The aim of the present study is to reveal the knowledge and stated practice of mothers attending Pediatric OPD regarding care and prevention of Acute Respiratory Tract Infection among under five years children.

From the above discussion, it can suggest that the knowledge and stated practice on care and prevention of ARI among mothers are average and poor. Most of the mother's maximum mean percentage of knowledge was in the area of nutrition and breastfeeding and most of the mother's maximum mean percentage of stated practice was in the area of care during Acute Respiratory Tract Infection among under five children.

The present study showed that there is a moderately positive relationship ($r=0.70$) between knowledge and stated practice and there is significant association between knowledge score of mothers and demographic variables i.e. age, educational status, type of habitat and type of house used but other maximum demographic

variables i.e. type of chulla used, monthly family income, breastfeeding, age of weaning, number of under five children and presence of smoker within the family are not associated with the knowledge of mothers. Therefore, it is important to enhance the knowledge of mothers regarding care and prevention of ARI by providing plan teaching programme and health education related to care and prevention of ARI among under five children in the OPD and also in the community level.

Declaration by Authors

Ethical Approval: Approved

Acknowledgement: Md. Saddeque Ali and Anowara Begum (Parents).

Source of Funding: None

Conflict of Interest: The authors declare no conflict of interest.

REFERENCES

1. Pal, Panchali. Textbook of paediatric nursing.1st edition; New Delhi; Paras Medical Publishers. 2016.page no-(257-60).
2. Park K, Park's Textbook of Preventive and Social Medicine: 21st Edition: Jabalpur; M/S Banarsidas Bhanot publishers. 2011.page no (156-58).
3. Murarka S, Gothankar J, Doke P et al (2021) prevalence of the Acute Respiratory tract infections and Associated Factors in the rural areas and urban slum areas of western Maharashtra, India: A community-based cross sectional study. Front public Health./www.frontiersin.org
4. Hasan Md Masud et al (2022) conducted a study on prevalence of ARI among children in India: Regional inequalities and risk factors.³ Available from <http://doi.org/10>
5. Dutta, Parul. Pediatric Nursing, 3rd Edition New Delhi; Jaypee Brothers Medical Publishers(P) LTD. Page no (259-60).
6. Post Basic B.Sc Nursing 2nd year students Group B (Batch 2018-2020): A study to assess the knowledge and knowledge of practice of mothers having children under 5 years of age regarding prevention and

management of ARI in selected hospitals of Darjeeling District. West Bengal.

7. Ahmed N, Khan K S, Khan A, et al (2018) Knowledge Attitude and Practice of mothers having child less than 5 years of old regarding Acute Respiratory Tract Infection. Available from DOI: <http://dx.doi.org/10.2437/23956429.ijcmpr201906668>
8. Malla C. (2020) Knowledge regarding ARI and its management among mothers of under five children attending pediatric OPD of teaching hospital, Birgunj. Nepal. Int J Health Sci Res.2020;10(7):112-5
9. Savitha AK, Gopalakrishnan S. (2018) determinants of acute respiratory infections among under five children in a rural area of Tamil Nadu, India. J Family Med Prim Care 2018; 7:1268-73. Available from <http://www.jfmpr.com>, Doi: 10.4103/jfmpr_131_18.
10. Kumar SG, Majumdar A, Kumar V (2015) et al a community based cross sectional study on prevalence of ARI among under-five children in urban and rural areas of Puducherry, India. J Nat Sc Biol Med 2015; 6:3-6 Available from www.jnsbm.org
11. Kasongo ANW, Mukuku O, et al maternal knowledge and practice regarding childhood Acute Respiratory Infectio in Lubumbashi, DRC. Lubumbashi (DRC). Theory Clin Pract Pediatr, 2020, 2(1):44-51. Available from <http://DOI:10.25082/TCPP.2020.01.005>.
12. Dange H, Andulam Z, Dagnev B et al ARI and its associated factors among children under five years attending pediatric ward at University of Gondar CS Hospital, N. Ethiopia, 2019. Available from <http://doi.org/10.1186/s12887-020-1997-2>.

How to cite this article: Salma Sultana, Nivedita Saha, Mani Nandy Mitra. Assessment of knowledge and stated practice regarding care and prevention of acute respiratory tract infection among mothers of under five years children in selected OPD of district Darjeeling, West Bengal. *Galore International Journal of Applied Sciences & Humanities*. 2025; 9(3): 84-100. DOI: [10.52403/gijash.20250309](https://doi.org/10.52403/gijash.20250309)
