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A Study to Assess the Knowledge and Practices on Homecare Regarding Acute Respiratory Infection Among Mothers in Mizoram

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ABSTRACT

Acute Respiratory Infections provide a challenge to the healthcare systems of developing nations as they are one of the leading causes of sickness and mortality for children under the age of five. This study adopted Descriptive survey design, the objective is to study assessed mothers' knowledge and practices regarding homecare management of Acute Respiratory Infections (ARI) in Mizoram, India, and examined associations with socio-demographic factors. The study was carried out at all Anganwadi center in Bawngkawn and Thuampui area. The sample consists of 200 mothers who have under 5 years of age, samples were selected using convenient Sampling technique, random test was conducted using knowledge questionnaire and practice checklist. The questionnaire consists of 9 demographic variables, 13 structured questionnaire and 16 practice checklists. Chi square test was used to find out the association of the knowledge and the practice regarding ARI. The sample, largely young to middle-aged, educated, and middle-class, demonstrated excellent outcomes: 98.5% showed outstanding knowledge and 76% demonstrated excellent practices. A strong positive correlation ($r = 0.7245$, $p < 0.001$) indicated that higher knowledge corresponded with better practice. Interestingly, mean practice scores exceeded knowledge scores, suggesting that caregiving competence may be reinforced by direct experience. Knowledge was significantly associated with maternal education ($p = 0.0001$), while practice was shaped by experiential factors such as number of children ($p = 0.044$) and frequency of ARI episodes ($p = 0.042$). The findings highlight that education strengthens theoretical knowledge, while practical caregiving experience enhances applied skills.

Keywords: Assess, Knowledge, Practice, ARI. Mothers of under 5years.

Background: Acute Respiratory Infection (ARI) is a major contributor to morbidity and mortality among under-five children, particularly in developing countries like India. Appropriate homecare practices and early recognition of symptoms by mothers can significantly reduce disease severity and complications. Nurses play a vital role in educating mothers at the community level.

Objectives: To assess the knowledge and homecare practices regarding ARI among mothers of under-five children, to examine the relationship between knowledge and practices, and to determine their association with selected socio-demographic variables.

Methods: A quantitative descriptive survey design was adopted. The study was conducted among 200 mothers of under-five children attending selected Anganwadi centres in Mizoram. Convenience sampling technique was used. Data were collected using a structured knowledge questionnaire and a

homecare practice checklist. Data were analyzed using descriptive statistics, Pearson's correlation coefficient, and chi-square test.

Results: The study revealed that 98.5% of mothers had excellent knowledge and 76% had excellent homecare practices regarding ARI. A strong positive correlation was found between knowledge and practice scores ($r = 0.724$, $p < 0.001$). Maternal education was significantly associated with knowledge, while homecare practices were associated with number of children and frequency of ARI episodes.

Conclusion: Adequate maternal knowledge significantly improves homecare practices related to ARI. Strengthening continuous community-based nursing education can further reduce ARI-related morbidity among under-five children.

Keywords: Acute Respiratory Infection, Knowledge, Homecare Practices, Mothers, Under-five children

INTRODUCTION

Acute Respiratory Infection (ARI) is one of the most prevalent health problems affecting children under five years of age and continues to be a major public health challenge, particularly in low- and middle-income countries. ARI encompasses a broad range of infections involving the upper and lower respiratory tract, including common cold, pharyngitis, bronchitis, bronchiolitis, and pneumonia. Among these, pneumonia remains the leading cause of mortality in under-five children worldwide.

In India, ARI accounts for a substantial proportion of childhood morbidity, frequent outpatient visits, and hospital admissions. Factors such as malnutrition, overcrowded living conditions, indoor air pollution due to biomass fuel use, poor ventilation, and delayed health-seeking behavior significantly increase the risk and severity of ARI. National health programs emphasize early identification and prompt management of ARI to reduce preventable deaths.

Mothers play a pivotal role in child health as they are the primary caregivers and decision-makers in most households. Their knowledge regarding early symptoms such as fast breathing, chest indrawing, fever, and cough, as well as appropriate homecare practices including maintaining warmth, adequate nutrition, fluid intake, and timely referral, are crucial in preventing disease progression. Community health nurses, Accredited Social Health Activists (ASHAs), and Anganwadi workers serve as key resources in educating mothers at the grassroots level.

Assessing maternal knowledge and homecare practices related to ARI is essential to identify existing strengths and gaps. Such assessment provides evidence for planning effective nursing interventions and strengthening community-based child health programs.

STATEMENT OF THE PROBLEM

A Study to Assess the Knowledge and Practices on Homecare Regarding Acute Respiratory Infection Among Mothers in Mizoram.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding homecare of Acute Respiratory Infection among mothers of under-five children.
2. To assess the level of homecare practices regarding Acute Respiratory Infection among mothers of under-five children.

3. To determine the relationship between knowledge and homecare practices regarding Acute Respiratory Infection.
4. To find the association between knowledge regarding homecare of Acute Respiratory Infection and selected socio-demographic variables.
5. To find the association between homecare practices regarding Acute Respiratory Infection and selected socio-demographic variables.

HYPOTHESES

H1: There is a significant association between knowledge regarding homecare of Acute Respiratory Infection and selected socio-demographic variables.
H2: There is a significant association between homecare practices regarding Acute Respiratory Infection and selected socio-demographic variables.
H3: There is a significant positive relationship between knowledge and homecare practices regarding Acute Respiratory Infection among mothers of under-five children.

REVIEW OF LITERATURE

In this study the Review Of Literature , 29 studies were reviewed and it is divided into two sections, which are:

1. **Review of Literature in international settings**

- Homecare of ARI among international settings.
- Prevelence of ARI among International settings.

2. **Review of Literature in Indian settings.**

- Homecare of ARI among Indian settings.
- Prevelence of ARI among International settings.

Across international settings, studies show that although caregiver awareness of ARI is generally high, accurate knowledge of symptoms, danger signs, and appropriate treatment remains low. ARI prevalence is substantial among under-five children, influenced by socioeconomic status, environment, and caregiver practices, with persistent reliance on traditional remedies and inequitable care-seeking behaviors.
ndian studies show that ARI remains a major childhood health problem, with prevalence ranging from 2.7% to over 50% across settings. Home care and treatment-seeking are influenced by maternal education, caregiving practices, breastfeeding, immunization, nutrition, and exposure to smoke or biomass fuels. Poor ventilation, overcrowding, malnutrition, and low socioeconomic status consistently increase risk, while appropriate home care, improved living conditions, and accessible healthcare services reduce ARI burden.

RESEARCH METHODOLOGY

A quantitative descriptive survey research design was adopted to assess the knowledge and homecare practices regarding Acute Respiratory Infection among mothers of under-five children. The study was conducted in selected Anganwadi centres located in Bawngkawn and Thuampui areas of Mizoram, which cater to a large population of under-five children and their mothers.
The target population consisted of mothers of under-five children residing in the selected areas. A total of 200 mothers were selected using a convenience sampling technique. Inclusion criteria included

mothers who had at least one child below five years of age, were available during the period of data collection, and were willing to participate in the study. Mothers of children suffering from chronic respiratory illnesses or congenital anomalies were excluded.

The data collection instruments included a structured knowledge questionnaire and a homecare practice checklist developed by the investigator based on literature review and expert consultation. The knowledge questionnaire covered areas such as causes, symptoms, danger signs, prevention, and home management of ARI. The practice checklist assessed homecare measures followed during episodes of ARI. Content validity of the tools was established by experts in community health nursing and pediatrics. Reliability of the tools was ensured using appropriate statistical methods.

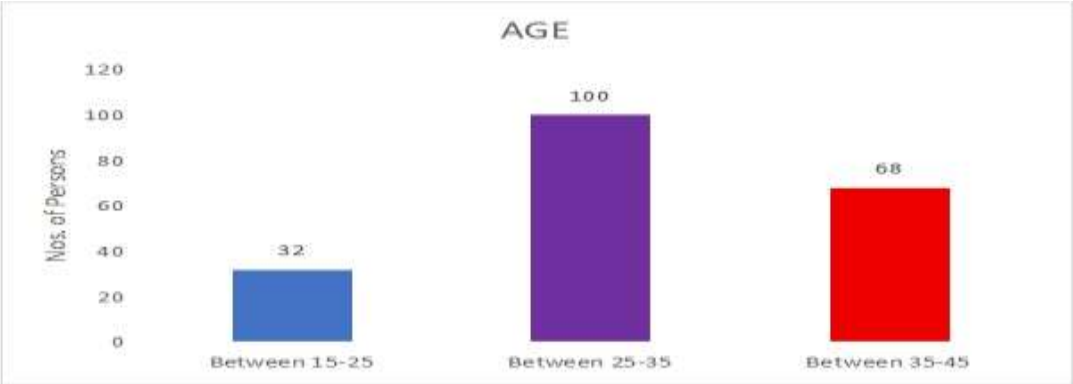
Prior to data collection, ethical clearance was obtained from the Institutional Ethics Committee. Permission was taken from the concerned authorities, and written informed consent was obtained from all participants. Confidentiality and anonymity of the participants were maintained throughout the study. Data were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation, and inferential statistics including Pearson's correlation coefficient and chi-square test.

RESULTS

FINDINGS OF THE STUDY

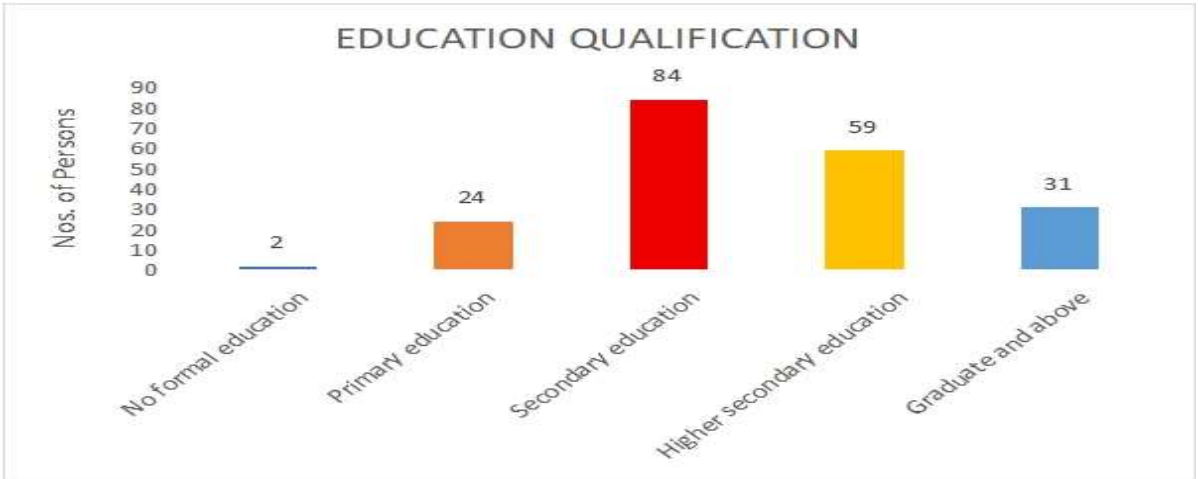
AGE DISTRIBUTION OF MOTHERS UNDER 5 YEARS

Fig 1 : Frequency Distribution of Participants by Age.



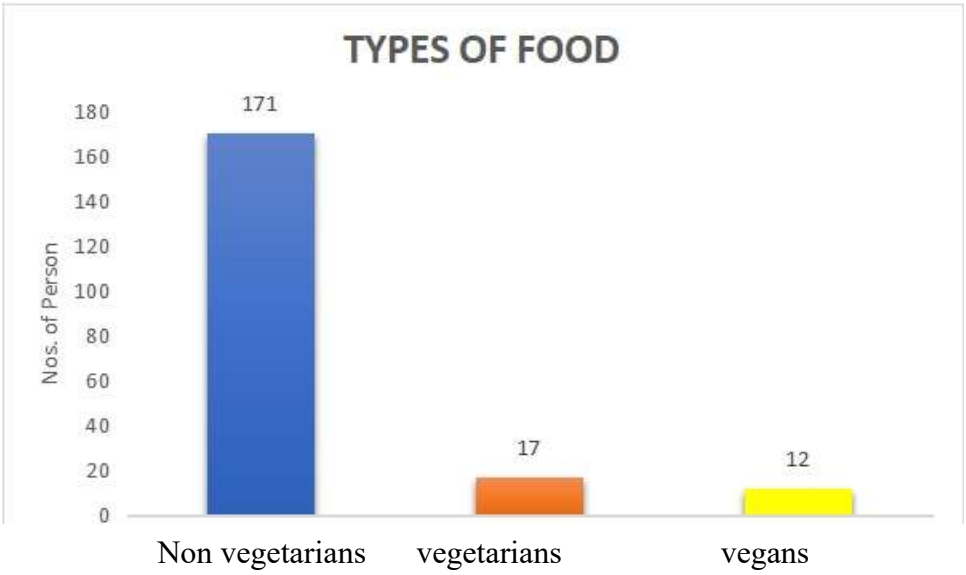
EDUCATIONAL QUALIFICATION OF MOTHERS UNDER 5 YEARS

Fig 2 : Frequency Distribution of Participants by Educational Qualification.



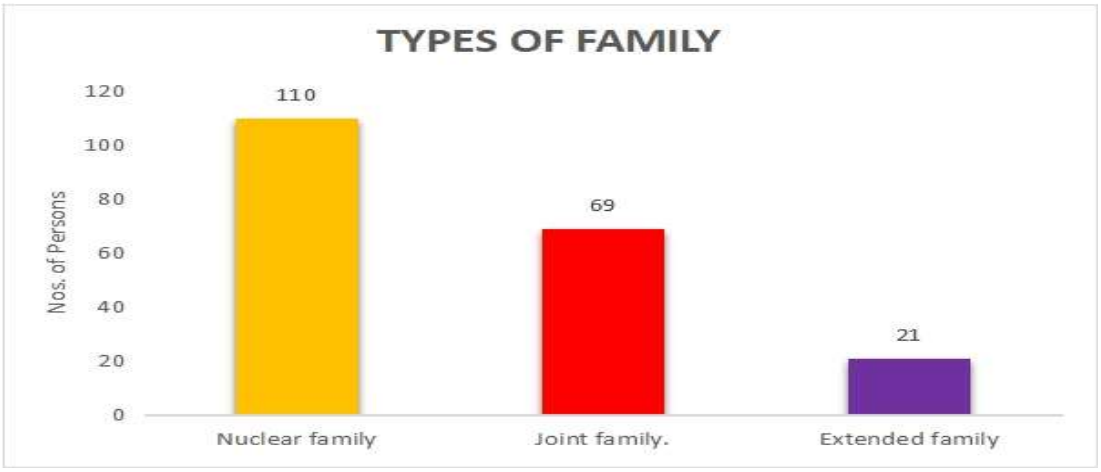
TYPES OF FOOD BY MOTHERS OF UNDER 5 YEARS

Fig 3: Frequency Distribution of Participants by Types of Food.



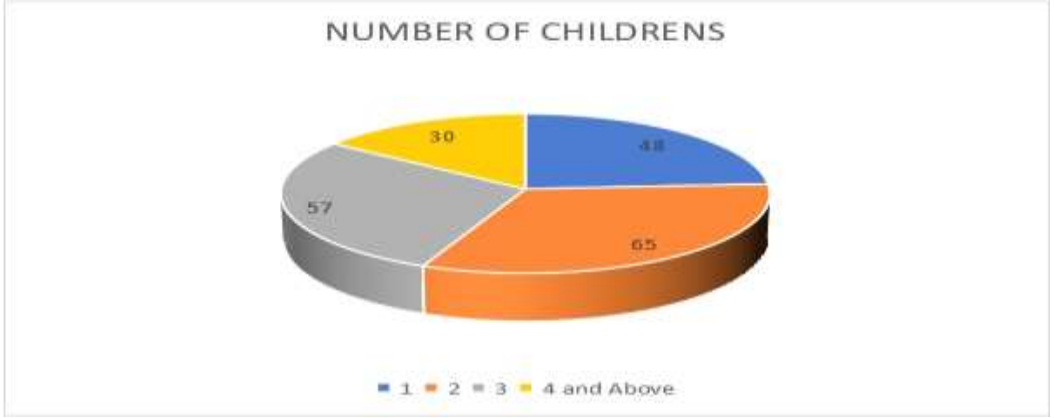
TYPES OF FAMILY OF MOTHERS UNDER 5 YEARS.

Fig 4 : Frequency Distribution of Participants by Types of Family.



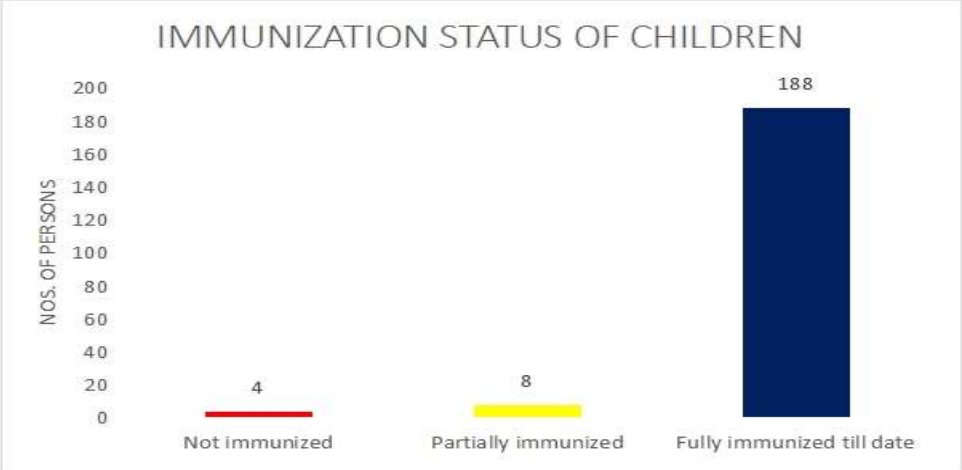
NO OF CHILDREN HAVE BY MOTHERS IN MIZORAM.

Fig 5 : Frequency Distribution of Participants by Number of Children.



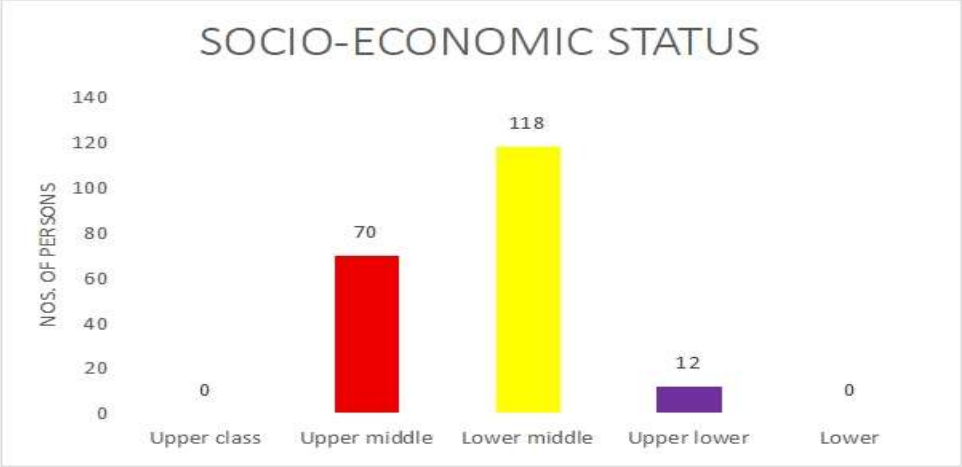
IMMUNIZATION STATUS OF CHILDREN UNDER 5 YEARS OLD IN MIZORAM

Fig 6 : Frequency Distribution of Participants by Immunization of Children.



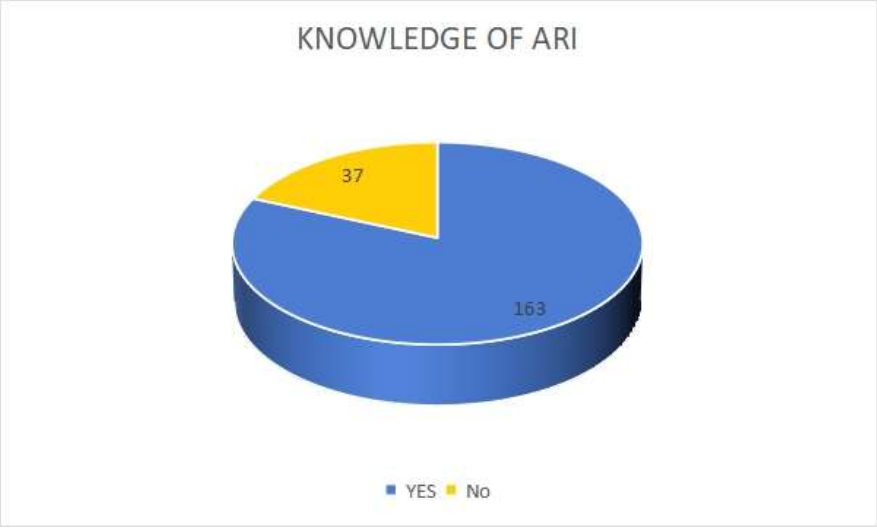
SOCIO- ECONOMIC STATUS OF MOTHERS UNDER 5 YEARS OF AGE.

Fig 7: Frequency Distribution of Participants by Socio-economic Status.



LEVEL OF KNOWLEDGE OF MOTHERS OF UNDER 5 REGARDING ARI.

Fig 8 : Frequency Distribution of Participants by Knowledge of ARI.



OCCURRENCE OF ARI IN ONE YEAR UNDER 5 YEARS OF CHILDREN.

Fig 9: Frequency Distribution of Participants by the frequency of ARI in one year.

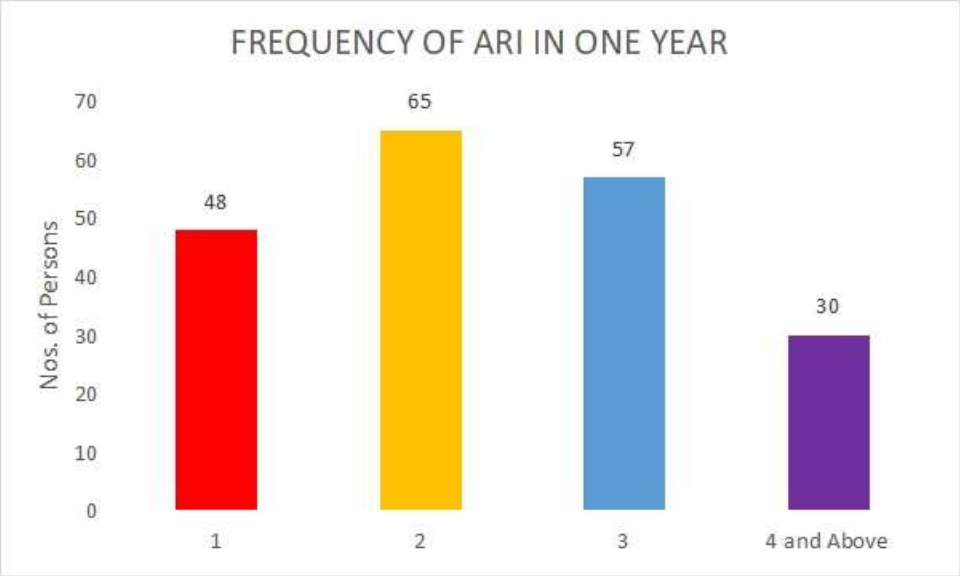


Table 1: Distribution of Mothers According to Level of Knowledge on ARI (n = 200)

Level of Knowledge	Frequency	Percentage
Excellent	197	98.5%
Good	3	1.5%
Poor	0	0%

Table 2: Distribution of Mothers According to Level of Homecare Practices on ARI (n = 200)

Level of Practice	Frequency	Percentage
Excellent	152	76%
Good	48	24%
Poor	0	0%

Figure 1: Correlation Between Knowledge and Homecare Practice Scores

PEARSON CORELATION BETWEEN KNOWLEDGE SCORE AND PRACTICE SCORE REGARDING CARE OF ARI AMONG THE MOTHERS IN MIZORAM.

Table 3 : Correlation of Knowledge Scores and Practice Scores Using Pearson Correlation in home care regarding care of ARI among the mothers in Mizoram.

n=200

Variables	Pearson Correlation
Knowledge	
Practice	0.7245

A strong positive correlation was observed between knowledge and practice scores ($r = 0.724$, $p < 0.001$), indicating that higher knowledge levels were associated with better homecare practices.

Knowledge regarding ARI was significantly associated with maternal education ($p < 0.05$). Homecare practices were significantly associated with number of children and frequency of ARI episodes among under-five children ($p < 0.05$).

CHI SQUARE TEST OF ASSOCIATION BETWEEN KNOWLEDGE REGARDING ARI WIRH SELECTED SOCIO-DEMOGRAPHIC VARIABLES.

Table 4 : Findings related to association between knowledge regarding prevention of ARI with selected socio-demographic variables.

n=200

Demographic Variables		Knowledge Score			Chi-square	d.f	P-value
		Poor (0-6)	Good (7-9)	Excellent (10 - 13)			
Age	Between 15-25	0	1	31	1.777	2	0.411
	Between 25-35	0	2	98			
	Between 35-45	0	0	68			
Education	No formal education	0	1	1	32.748	4	0.0001
	Primary education	0	0	24			
	Secondary education	0	1	83			
	Higher secondary education	0	1	58			
	Graduate and above	0	0	31			
Types of Food	Vegetarian	0	3	168	0.517	2	0.772
	Non vegetarian	0	0	17			
	Vegans	0	0	12			
Type of family	Nuclear family	0	1	109	1.493	2	0.474
	Joint family.	0	2	67			
	Extended family	0	0	21			
Number of Children	1	0	0	48	7.166	3	0.067
	2	0	0	65			
	3	0	1	56			
	4 and more	0	2	25			
Immunization status of the children	Not immunized	0	0	4	0.194	2	0.907
	Partially immunized	0	0	8			
	Fully immunized till date.	0	3	185			

Socio economic class	Upper class	0	0	0	0.223	2	0.738
	Upper middle	0	1	69			
	Lower middle	0	2	116			
	Upper lower	0	0	12			
	Lower	0	0	0			
Prior information regarding ARI	Yes	0	3	160	0.691	1	0.406
	No	0	0	37			
Frequency of ARI in one Year.	1 – 3 times	0	2	119	4.026	2	0.134
	4 – 6 times	0	0	65			
	>6 times	0	1	13			

There is no statistically significant association with knowledge scores. The p-values for age, dietary type, family structure, number of children, immunization status, socio-economic class, prior information on ARI, and the frequency of ARI episodes in a year are all greater than the standard significance level of 0.05.Therefore, there is no significant between the knowledge with socio demographic variables, therefore the null hypothesis is accepted. The alternative hypothesis is rejected.

CHI SQUARE TEST OF ASSOCIATION BETWEEN PRACTICE CARE OF ARI AT HOME AND SOCIO-DEMOGRAPHIC VARIABLES.

Table 5 : Findings related to association between Practice regarding prevention of ARI with selected socio-demographic variables.

n=200

Demographic Variables		Knowledge Score			Chi-square	d.f	P-value
		Poor (0-8)	Good (9-12)	Excellent (13 - 16)			
Age	Between 15-25	1	9	2	6.123	4	0.190
	Between 25-35	0	24	76			
	Between 35-45	0	14	54			
Education	No formal education	0	1	1	6.078	8	0.639
	Primary education	0	6	18			
	Secondary education	1	21	62			
	Higher secondary education	0	16	43			
	Graduate and above	0	3	28			
Type of food	Vegetarian	1	41	129			
	Non vegetarian	0	2	15	2.156	4	0.707
	Vegans	0	4	8			
Type of family	Nuclear family	1	25	84	1.144	4	0.887
	Joint family.	0	16	53			

	Extended family	0	6	15			
Number of children's	1	1	13	34	12.380	6	0.044
	2	0	7	58			
	3	0	17	40			
	4 and more	0	10	20			
Immunization status of the children	Not immunized	0	0	4	1.958	4	0.744
	Partially immunized	0	1	7			
	Fully immunized till date.	1	46	141			
Socio economic class	Upper class	0	0	0	5.73	4	0.278
	Upper middle	1	12	57			
	Lower middle	0	30	88			
	Upper lower	0	5	7			
	Lower	0	0	0			
Prior information egarding ARI	Yes	1	36	126	1.173	2	0.556
	No	0	11	26			
Frequency of ARI in one Year.	1 – 3 times	0	23	98	9.253	4	0.042
	4 – 6 times	1	17	47			
	>6 times	0	7	7			

There is no significant between the practices with socio demographic variables, therefore the null hypothesis is accepted. The alternative hypothesis is rejected.

DISCUSSION

The present study assessed the knowledge and homecare practices regarding Acute Respiratory Infection among mothers of under-five children and revealed encouraging findings. The majority of mothers demonstrated excellent knowledge and satisfactory homecare practices. This may be attributed to higher literacy rates, improved access to primary healthcare services, and effective functioning of Anganwadi centres and community health workers in Mizoram.

The strong positive correlation between knowledge and homecare practices observed in the study indicates that increased awareness directly influences caregiving behavior. Mothers who possessed better knowledge were more likely to adopt appropriate home management practices such as maintaining warmth, ensuring adequate fluid intake, and seeking timely medical care. These findings are consistent with similar studies conducted in other parts of India, which reported that maternal education and exposure to health education programs significantly improved homecare practices.

The significant association between maternal education and knowledge highlights the importance of female education in improving child health outcomes. Furthermore, the association of homecare practices with number of children and frequency of ARI episodes suggests that experiential learning also plays a role in enhancing caregiving skills. These findings underscore the need for continuous reinforcement of health education by nurses, especially for first-time mothers.

MAJOR FINDINGS OF THE STUDY

The study conducted among 200 mothers in Mizoram highlights a predominantly young to middle-aged population, with most participants (84%) falling between 25 and 45 years. Educational attainment was generally high, as nearly nine out of ten mothers had at least secondary education. The majority followed a non-vegetarian diet, lived in nuclear families, belonged to the lower-middle socioeconomic class, and had one to three children. Immunization coverage was excellent, with 94% of children fully immunized, and most mothers reported prior awareness of ARI.

Findings revealed exceptionally high levels of knowledge regarding home care of ARI, with 98.5% of mothers demonstrating excellent knowledge and none categorized as having poor knowledge. Home-care practices were also strong, though slightly lower than knowledge levels, with 76% exhibiting excellent practice and only one mother showing poor practice. Statistical analysis demonstrated a highly significant difference between knowledge and practice scores, as well as a strong positive correlation, indicating that higher knowledge translated into better caregiving behaviors.

Further analysis showed that maternal education was the only socio-demographic factor significantly associated with knowledge of ARI prevention. In contrast, practice was significantly influenced by the number of children and the frequency of ARI episodes, suggesting that caregiving experience and effective home care may reduce recurrence. Overall, the findings indicate strong maternal capacity for ARI home management in Mizoram, while underscoring the importance of education and experiential learning in sustaining effective practices.

LIMITATIONS OF THE STUDY

Convenience sampling limits the generalizability of findings.

The study relied on self-reported practices, which may introduce response bias.

The study was confined to selected Anganwadi centres of Mizoram.

IMPLICATIONS FOR NURSING

Community health nurses should reinforce health education on ARI during home visits and clinic sessions.Nurses can collaborate with Anganwadi workers to conduct regular awareness programs for mothers.Nursing curricullum should emphasize community-based child health education strategies.

Implications for Nursing Practice

Nurses play a key role in improving maternal homecare for ARI prevention through education, demonstrations, and follow-up support. Special focus should be given to first-time mothers to recognize danger signs, apply preventive measures, and manage ARI at home. Community platforms like Anganwadi centers can strengthen these efforts.

Implications for Nursing Education

Nursing education should emphasize practical teaching skills, counseling, and community-based approaches to ARI prevention. Training should prepare nurses to support inexperienced mothers and help translate knowledge into effective homecare practices.

Implications for Nursing Administration

Nursing administrators should develop structured community programs, ensure adequate resources, and support training and supervision of health workers to strengthen ARI prevention and child health outcomes.

Implications for Nursing Research

Future research should focus on effective strategies to convert maternal knowledge into practice, evaluate community-based and nursing-led interventions, and assess their long-term impact on ARI prevention across diverse settings.

RECOMMENDATIONS

- A similar study can be generalize to other Mizoram, other states or countries with different healthcare systems, literacy levels, or cultural practices.
- Comparative studies can be conducted to assess the knowledge and practice done in homecare regarding ARI between rural and urban community.
- Similar studies can be carried out using other methods of teaching aids like, information booklet, video-based structure teaching programs.
- A follow-up study can be conducted to evaluate changes in attitude, practices and lifestyle behavior regarding ARI prevention after knowledge enhancement.
- A modified similar study can be conducted regarding prevention of ARI among under 5 years with a modified lifestyle like implementing smoke free home, improving ventilation in home and reducing air pollution etc.

CONCLUSION

This study assessed the knowledge and homecare practices of 200 mothers in Mizoram regarding acute respiratory infections (ARI) in under-five children. Using a descriptive quantitative design guided by J.W. Kenny's open system model, data were collected through validated questionnaires and practice checklists from Anganwadi centers. Findings showed a strong positive correlation between maternal knowledge and practice. Education was significantly associated with knowledge, while parity and frequency of ARI episodes influenced practice. Overall, mothers demonstrated good knowledge and effective homecare practices. The study highlights the importance of targeted educational interventions to further reduce ARI-related morbidity and mortality among young children.

REFERENCE

3. Ali DA, Hussein KH. Practices of mothers toward home care of acute respiratory infection of their children under five. **Microbes Infect Dis**. 2025;0(0):0. doi:10.21608/mid.2025.375345.269
4. Asghar AS, Tariq P, Hussain S. Acute respiratory infections in children: magnitude, determinants, and management. **J Infect Dis Ther**. 2017;5(2):1–6. doi:10.4172/2332-0877.1000316
5. Bindhiya R, Sarathi S, Hemavathy V. A study to assess the knowledge and practice regarding management of acute respiratory infection among mothers of children in pediatric ward in Sree Balaji Medical College and Hospital, Chennai. **South East Eur J Public Health**. 2025:769–777. doi:10.70135/seejph.vi.5555
6. Correia W, Guarra RD, Sanches M, Semedo CJBA, Valladares B, Araujo IIMP, et al. Study of the etiology of acute respiratory infections in children under 5 years at the Dr. Agostinho Neto Hospital, Praia, Santiago Island, Cabo Verde. **Front Pediatr**. 2021;9:716351. doi:10.3389/fped.2021.716351
7. Kumar V, Singh P, Sharma R. Knowledge and home care practices of mothers regarding acute respiratory infections in under-five children. **Indian J Pediatr**. 2018;85(5):394–9. doi:10.1007/s12098-018-2642-3

8. Lokesh LK, Mahajan S, Padda P, Kaur J, Jyoti K. Prevalence and associated factors of acute respiratory infections among children aged 1–5 years residing in district Amritsar. **Int J Community Med Public Health**. 2024;12(1):231–7. doi:10.18203/2394-6040.ijcmph20244024