



"A STUDY TO ASSESS THE PREVALENCE OF ACUTE RESPIRATORY INFECTION AMONG UNDER FIVE CHILDREN IN A SELECTED COMMUNITY AREA IN AIZAWL, MIZORAM."

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ABSTRACT

Acute Respiratory Infections (ARIs) are a major public health concern among children under five years of age and are broadly classified into upper respiratory tract infections and lower respiratory tract infections. ARIs may affect not only the respiratory system but also other body systems through the spread of infection, inflammatory responses, microbial toxins, and impaired lung function. According to the World Health Organization, respiratory infections contribute significantly to the global burden of disease and remain a leading cause of morbidity and mortality among young children. The present study was conducted to assess the prevalence of Acute Respiratory Infections among under-five children and to determine its association with selected demographic variables in Hualngohmun, Aizawl, Mizoram. A quantitative descriptive research approach with a descriptive research design was adopted for the study. A total of 100 under-five children were selected using a non-probability convenience sampling technique. Data were collected using a structured assessment tool and analyzed using descriptive and inferential statistics. The findings revealed that 48% of the children had a high prevalence of ARI. Chi-square analysis showed no statistically significant association between the prevalence of Acute Respiratory Infection with selected demographic variables. The study concluded that Acute Respiratory Infections were highly prevalent among under-five children in the selected community area. The findings emphasize the need for effective community-based preventive measures, early detection, and health education strategies to reduce the burden of ARIs among young children.

Keywords: Assess, Acute Respiratory Infection, Under five Children, Prevalence, Community Health.

INTRODUCTION

Acute Respiratory Infections (ARIs) are broadly categorized into upper respiratory tract infections (URIs) and lower respiratory tract infections (LRIs). The upper respiratory tract includes structures from the nostrils to the vocal cords, such as the nasal passages, Para nasal sinuses, and middle ear. In contrast, the lower respiratory tract extends from the trachea and bronchi down to the bronchioles and alveoli. ARIs are not limited to the respiratory system alone; they can have systemic effects due to the spread of infection, release of microbial toxins, inflammation and impaired lung function. Certain vaccine-preventable diseases like diphtheria, pertussis (whooping cough), and measles may involve the respiratory system but also affect other parts of the body.¹

PROBLEM STATEMENT:

"A study to assess the prevalence of Acute Respiratory Infection among under five children in a selected community area in Aizawl, Mizoram."

HYPOTHESIS

H₁: There is significant association between active Acute Respiratory Infection with selected demographic variables.

METHODOLOGY

The objectives of the study were to identify the prevalence of Acute Respiratory Infection among under-five children in Hualngohmun, Aizawl, Mizoram. A quantitative research approach with a non-experimental descriptive survey design was used for the study. The study was conducted among 100 under-five children selected through non-probability convenience sampling technique. The tool for data collection consisted of demographic variables and a structured questionnaire on the prevalence of Acute Respiratory Infection among under-five children. Content validity of the tool was established by five experts, and reliability was tested using the Split-Half Method followed by Spearman Correlation Coefficient formula. A pilot study was conducted among 10 under-five children in Melthum, Aizawl, Mizoram, to assess the feasibility of the study. Formal permission and informed consent were obtained before data collection. The data collected were analyzed using descriptive statistics such as frequency and percentage, and inferential statistics using the chi-square test to determine the association between Acute Respiratory Infection and selected demographic variables.

RESULTS:**Table 1:** Frequency and Percentage Distribution of Demographic Variables (n=100)

DEMOGRAPHIC VARIABLES	FREQUENCY(f)	PERCENTAGE (%)
I. Age of the children (in years)		
a) 0-1 years	24	24
b) 2-3 years	32	32
c) 4-5 years	44	44
II. Gender of the child		
a) Male	55	55
b) Female	45	45
III. Type of Family		
a) Nuclear	51	51
b) Joint	49	49
c) Extended	-	-
IV. Age of the Caregiver		
a) Below 20 years	6	6
b) 20-30years	50	50
c) 31-40years	35	35
d) Above 40 years	9	9
V. Caregiver Education		
a) Primary	15	15
b) Secondary school	36	36
c) Higher Secondary school	38	38
d) Graduate and above	11	11
VI. Family Occupation		
a) Unemployed	33	33
b) Private	43	43
c) Government	24	24
d) Central	-	-
VII. Family Income		
a) 50001 and above	5	5
b) 30001 – 50000	25	25
c) 10001 – 30000	39	39
d) 10000 and below	31	31
e) 3299 and below	-	-

TABLE 2: Frequency and Percentage of Level of Prevalence of Acute Respiratory Infection Among Under Five Children.(**n=100**)

Level of Prevalence	Score Range	Level of Prevalence	
		Frequency(f)	Percentage (%)
Mild	0-4	13	13
Moderate	5-8	39	39
High	9-13	48	48

TABLE NO. 3: Association between Prevalence of Acute Respiratory Infection with Selected Demographic Variables. (**n=100**)

Demographic variables	Categorization			Chi-square (x ²)	df	p value	Inference
	High Prevalence	Moderate Prevalence	Mild Prevalence				
Age:							
0-1 years	10	10	4	1.55	4	0.817	NS
2-3 years	18	11	3				
4-5 years	20	18	6				
Gender:							
Male	28	19	8	1.06	2	0.58	NS
Female	20	20	5				
Type of family							
Nuclear family	23	19	9	1.99	4	0.73	NS
Joint Family	25	20	4				
Extended family	-	-	-				
Age of Care giver/Mother							
Below 20 years	3	2	1	0.92	6	0.985	NS
20-30years	26	18	6				
31-40years	15	15	5				
Above 40 years	4	4	1				
Education of caregiver							
Primary	6	4	5	10.65	6	0.995	NS
Secondary School	20	14	2				
Higher Secondary school	18	17	3				
Graduate and above	4	4	3				
Occupation of Caregiver							
	17	11	5	1.24	4	0.87	NS

Unemployed	20	17	6				
Private	11	11	2				
Government							
Total							
Family Income							
50001 and above	1	2	2				
30001 – 50000	13	10	2	4.49	8	0.81	NS
10001 – 30000	20	14	5				
10000 and below	14	13	4				
3299 and below	-	-	-				

n=100*p<0.05 Level of significance

NS= Not significance

The chi-square analysis results shows in the table revealed that there was no significant association between the prevalence of Acute Respiratory Infection (ARI) among under-five children and the selected variables at the 0.05 level of significance. Hence, the research hypothesis (H_1) was not supported and was rejected.

CONCLUSION:

From the above findings of the present study, Acute Respiratory Infection is highly prevalence among under five children is high.

REFERENCE

1. Simoes EA, Cherian T, Chow J, Shahid-Salles SA, Laxminarayan R, John TJ. Acute respiratory infections in children. Disease control priorities in developing countries. 2nd edition. 2006.
2. Ghimire P, Gachhadar R, Piya N, Shrestha K, Shrestha K. Prevalence and factors associated with acute respiratory infection among under-five children in selected tertiary hospitals of Kathmandu Valley. Plos one. 2022 Apr 7;17(4):e0265933.
3. Varghese JS, Muhammad T. Prevalence, potential determinants, and treatment-seeking behaviour of acute respiratory infection among children under age five in India: Findings from the National Family Health Survey, 2019-21. BMC pulmonary medicine. 2023 Jun 6;23(1):195.
4. Shalini SB, Sudha KS, Bhavani Y, Babu PR, Pravallika S, Bhuvaneswari P, Govindu S. A STUDY ON ACUTE RESPIRATORY TRACT INFECTIONS AMONG CHILDREN AGED 1-5 YEARS, ATTENDING IN A TERTIARY CARE HOSPITAL. Int J Acad Med Pharm. 2024;6(6):120-4.