

A Study to Assess the Knowledge Regarding Prevention of Pneumonia Among Mothers of Under-Five Children

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Abstract—Background: Pneumonia remains a leading cause of morbidity and mortality in children under five, especially in developing countries. Mothers play a crucial role in the early recognition and prevention of pneumonia.

Objective: To assess the knowledge of mothers of under-five children regarding the prevention of pneumonia and to determine the association between knowledge and selected demographic variables.

Methodology: A descriptive study was conducted among 40 mothers of under-five children residing in Panikhaiti-Assam. A structured questionnaire was used to assess knowledge related to pneumonia prevention. Data were analyzed using descriptive and inferential statistics.

Results: The majority of participants (60%) had moderate knowledge, 25% had poor knowledge, and only 15% had good knowledge. A significant association was found between knowledge scores and the mothers' educational level ($p < 0.05$).

Conclusion: The study revealed that a considerable number of mothers lack adequate knowledge about pneumonia prevention. Health education initiatives focusing on maternal awareness are essential for improving child health outcomes.

Index Terms—Pneumonia, under-five children, prevention, knowledge, mothers, health education.

I. INTRODUCTION

According to World Health Organization Pneumonia continues to be the biggest killer worldwide of children under five years of age. One fifty million new cases of pneumonia occur yearly among children under five year worldwide in 2023. This accounts for approximately 10-20 million hospitalizations.

The risk of developing pneumonia is especially high in children. Weak immunity leads to diabetes, kidney problems or cancer, also means the higher risk. Lung disorders such as asthma, heart disease, smoking and

other viral infections such as the flu can create the chances of pneumonia.

Pneumonia remains a significant health concern for under-five children in Assam, with preventable risk factors like socioeconomic status, maternal education, indoor air pollution, and incomplete immunization playing a crucial role.

Objectives

1. To assess the knowledge of mothers of under-five children regarding the prevention of pneumonia.
2. To determine the association between the knowledge score and selected demographic variables such as age, education, occupation, income, and number of children.

Operational Definitions

Knowledge: Refers to the correct responses given by mothers to questions related to pneumonia prevention, measured using a structured questionnaire.

Mothers of under-five children: Women who have at least one child aged between 0-5 years.

Pneumonia Prevention: Measures taken to avoid the occurrence of pneumonia including immunization, exclusive breastfeeding, adequate nutrition, hygiene, and awareness of early symptoms.

II. MATERIALS AND METHODS

Research Design: Descriptive study.

Setting: Panikhaiti village, Guwahati, Assam.

Population: Mothers of under-five children visiting the pediatric outpatient department.

Sample Size: 40 mothers.

Sampling Technique: Non-probability convenience sampling.

Inclusion Criteria:

- Mothers of children aged 0–5 years.
- Willing to participate and give informed consent.

Exclusion Criteria:

- Mothers who are healthcare professionals.
- Mothers of critically ill children.

Data Collection Tool: A structured questionnaire consisting of two sections:

- Section A: Demographic data.
- Section B: 20 multiple-choice questions assessing knowledge on causes, symptoms, risk factors, prevention, and treatment of pneumonia.

Scoring:

- Poor Knowledge: 0–7
- Moderate Knowledge: 8–14
- Good Knowledge: 15–20

Ethical Considerations:

- Informed consent taken from participants.
- Confidentiality maintained throughout the study.

Data Analysis:

- Descriptive statistics: frequency, percentage, mean, and standard deviation.
- Inferential statistics: Chi-square test to determine association between knowledge scores and demographic variables.

III. RESULTS

Demographic Characteristics:

- Majority of mothers (40%) were aged 26–30 years.
- 50% had completed secondary education.
- 70% were homemakers.
- 60% had monthly family income between [Currency] 10,000–20,000.
- 65% had 1–2 children.

Knowledge Scores:

- Good knowledge: 15%
- Moderate knowledge: 60%
- Poor knowledge: 25%

Association with Demographics:

- Significant association between knowledge score and mother's education level ($p=0.03$).

- No significant association with age, occupation, income, or number of children.

IV. DISCUSSION

The study findings indicate that most mothers possess moderate knowledge about pneumonia prevention. This aligns with previous studies conducted in similar settings. Education level was found to be a key determinant in maternal knowledge, emphasizing the importance of female literacy in promoting child health.

Despite efforts by public health authorities, awareness gaps still exist. Strengthening health education programs during antenatal and postnatal visits can bridge this gap.

V. CONCLUSION

There is a need for enhanced awareness programs targeting mothers of under-five children to improve their understanding of pneumonia prevention. Health education should focus on improving literacy, promoting immunization, encouraging exclusive breastfeeding, and maintaining hygienic living conditions.

Recommendations

- Regular health education sessions in community settings.
- Inclusion of pneumonia prevention in routine maternal and child health programs.
- Future studies to evaluate the effectiveness of educational interventions.

Limitations

- Small sample size may limit generalizability.
- Use of convenience sampling may introduce selection bias.

Conflict of Interest

None declared.

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