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# Knowledge of Mothers of Under Five Children Regarding the Prevention of Bronchial Asthma

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## ABSTRACT

**Background:** Bronchial asthma is a chronic respiratory condition characterized by inflammation and narrowing of the airways, leading to recurrent episodes of wheezing, breathlessness, chest tightness, and coughing. Mothers, as primary caregivers, play a crucial role in the management and prevention of asthma in children.
**Materials & Methods:** It was a nonexperimental descriptive research study among 60 mothers of under five children. Sampling was convenient sampling and data collected using structured knowledge questionnaire.
**Results:** In this study majority of subjects have average level of knowledge and their knowledge is associated with factors like mother's age, mother's educational status and source of knowledge with p-values ≤ 0.05.

***Keywords:*** *Knowledge, bronchial asthma, prevention*

## INTRODUCTION

"It is easier to build strong children than to repair broken men" -Fredrick Douglas
A child is valuable to the entire world in addition to the parent, family, community, and country. Children are the future of our country citizens, and as only healthy citizens can successfully lead the nation to achieve national progress, they shouldn't be afflicted with any illnesses.
Asthma is a chronic lung disease with airway obstruction and airway inflammation. From 1990 to 2019, the incidence of asthma decreased from 601.20 per 1,00,000 to 477.92 per 1,00,000, and the mortality of asthma decreased from 8.60 per 1,00,000 to 5.06 per 1,00,000(1). Still the problems and complications increase correlated with change in the demography such as increase in industries, automobile and density of the population. While comparing age, 77.7% of asthma in childhood begin in children less than 5 year of age (2). Males suffer 2-3 times more than girls. since boys are born with small size airway than girls (3). After eight years of the age they suffer equally when earlier reaches an adult size. Often there is a family history of bronchial asthma.
Because of its effects on quality of life, school attendance, and healthcare use, it is one of the most prevalent chronic diseases affecting children globally and is a serious public health concern. Those with asthma develop irreversible airway remodeling, if these asthma attacks are not adequately controlled (4). As medical professionals, it is our responsibility to determine the current statistics on the level of community awareness regarding asthma prevention.
As the child's primary providers, mothers are essential in managing and preventing

asthma. The frequency and intensity of asthma flare-ups are greatly influenced by their practices, attitudes, and knowledge. Preventing acute attacks and fostering improved health outcomes need a thorough awareness of asthma triggers, medication adherence, environmental control, and early symptom assessment.

A study was conducted to evaluate the knowledge, attitude, and practice of mothers of children with asthma regarding the use of inhalers, compliance with preventers, and the impact of these practices on the severity of the disease in their children. A sample of 100 consecutive mothers of children with asthma was enrolled. Seven percent of respondents thought that asthma was contagious. According to 17% of the mothers, a vaccine could prevent asthma. Inhaler use was deemed unsatisfactory by 21%. Fifty percent of the mothers did not use the inhaler properly. When their symptoms were minor, the majority of moms (69%) did not use the inhaler. Mothers' attitudes and practices were shown to be significantly correlated with the severity of their asthma ($P < 0.05$) (5).

**Knowledge gap**

Despite the availability of guidelines and educational resources, studies have shown that gaps in knowledge and misconceptions about asthma prevention still exist among caregivers. This highlights the need for continuous assessment and education tailored to the needs of parents, particularly mothers, who are often the first responders during an asthma attack.

This study aims to assess the level of knowledge among mothers regarding the prevention of bronchial asthma in children. By identifying knowledge deficits and associated factors, the findings may inform the development of targeted interventions and educational programs to enhance asthma management at the household level.

**Statement of the problem:** "A descriptive study to assess the knowledge of mothers of under five children regarding the prevention of bronchial asthma among children"

**Objectives**

Objectives were to assess the knowledge of mothers of under five children regarding the prevention of bronchial asthma and to find the association between knowledge and base line variables of mothers of under five children.

## MATERIALS & METHODS

The research approach adopted for this study is non experimental approach and research design is descriptive design. Study was conducted among the mothers of under five children, attending pediatric departments in a tertiary care hospital selected by convenient sampling. Data was collected using structured questionnaire. The questionnaire consists of two sections- section A- Demographic data and section B- Structured questionnaire to assess the knowledge regarding prevention of bronchial asthma. The questionnaire consisted of 20 questions and scoring was done in such a way that for correct response 1 and for wrong response 0.

After getting authority permission data was collected by interviewing mothers of under five children using questionnaire in pediatric wards and OPD of a tertiary care hospital. Data collection period was 2 weeks.

## STATISTICAL ANALYSIS

Data analysis was done based on objectives using descriptive and inferential statistics.

## RESULT

**Demographic data of subjects**

Data shows majority of subjects (36%) belong to the age group of 21-25 years. Most of them (53.3%) have degree/diploma education. Majority of them (83.3%) were housewives. According to monthly family income, majority of subjects (60%) were with Rs.10000-20000. Most of the subjects (60%) were living in panchayath. Majority of subjects (36.7%) reported that source of their knowledge is health magazine. About 56.6% of the subjects have one child.

**Level of knowledge of mothers regarding prevention of bronchial asthma**

**Pie diagram showing Level of knowledge of mothers regarding prevention of bronchial asthma**

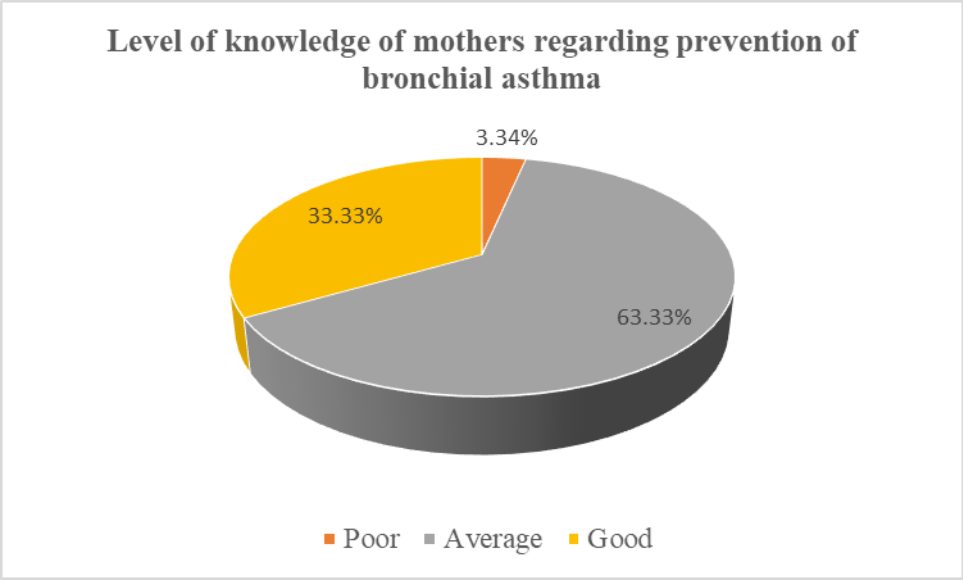


Figure shows that most of the subjects had average knowledge about the prevention of bronchial asthma. Among the 60 samples 38 (63.33%) were having average knowledge and only 2(3.33%) had poor knowledge about the prevention of bronchial asthma.

**Association between knowledge and demographic variables of mothers of under five children**

| Demographic variable | Subcategory | Test value | p-value | Interpretation |
|---|---|---|---|---|
| Mother's age in years | <20 | 16.05 | 0.01 | Significant association with mothers age knowledge (p <0.05). |
| | 21-25 | | | |
| | 26-30 | | | |
| | >31 | | | |
| Educational status | Primary education | 15.08 | 0.01 | Significant association with educational status and knowledge of mothers (p <0.05). |
| | Degree/diploma | | | |
| | Postgraduation | | | |
| Occupation | Housewife | 0.55 | 0.19 | No significant association with knowledge (p <0.05). |
| | Govt employee | | | |
| | Private employee | | | |
| Monthly income | <10,000 | 4.43 | 0.23 | No significant association with knowledge (p <0.05). |
| | 10,001-20,000 | | | |
| | >20,001 | | | |
| Source of knowledge | Health magazine | 6.58 | 0.05 | Significant association with source of knowledge and knowledge of mothers (p <0.05). |
| | TV & mass media | | | |
| | Friends and relatives | | | |
| Area of living | Corporation | 1.25 | 0.975 | No significant association with knowledge (p <0.05). |
| | Municipality | | | |
| | Panchayath | | | |

The Fisher's exact test results indicate that several demographic factors have significant associations with the knowledge of mothers. Test results reveal that factors such as mother's age, mother's educational status and source of knowledge are significantly

associated with knowledge of mothers, with p-values ≤ 0.05.

## DISCUSSION

The findings of the current study were in line with a study by Mohammed S. E. et al. which evaluated mothers' knowledge and practice related to bronchial asthma in preschool-aged children. The study revealed that majority of mothers had moderate level of knowledge about bronchial asthma in addition most of the studied mothers had improper practices regarding to prevention of bronchial asthma attack (6).

Results from another study is also consistent with present study. Vaishanv P and Ameta G conducted a study on the knowledge, attitude and practices among parents of Asthmatic children. In this study 68% parents know that their child has asthma while 32% parents did not know. Also 26.4% parents were ignorant about etiology, 32% believed it to be allergy and 39.62% believed it to be hereditary. 1.9% had misconception of contagious. Majority (52.1%) attributed it to cold air and rainy season followed by Dust mite and pollution in (42%).

## CONCLUSION

The findings of this study highlight the critical role that mothers play in the prevention and management of bronchial asthma in children. While some mothers demonstrated a satisfactory level of knowledge, notable gaps still exist in understanding asthma triggers, proper use of medications, and environmental control measures. These knowledge gaps can contribute to poor asthma control and increased risk of exacerbations. Improving maternal knowledge through targeted health education and awareness programs is essential in reducing the burden of asthma among children. Strengthening mothers' knowledge empowers them to take proactive steps in managing their child's condition, ultimately leading to improved health outcomes and quality of life for children living with bronchial asthma.

### *Declaration by Authors*

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

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