International Journal of Science, Strategic Management and Technology
Volume **02** Issue **03** March-**2026** | ISSN: **3108-1762 (Online)** | Impact Factor: 3.8
An International, Peer-Reviewed, Open Access Scholarly Journal Indexed in recognized academic databases

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A Descriptive Study to Assess the Level of Knowledge on Bronchial Asthma Among the Mothers of Children in the Age Group of 0 – 12 Years at Selected Areas, Puducherry

Author- **Jawahar.V, Manya.V.P, Mahalakshmi.R**, B.Sc (Nursing)–Iv Year, College Of Nursing,Mtpg&Rihs
Guide-**Dr.V.Revathy,**Associate Professor In Nursing, College Of Nursing,Mtpg & Rihs, Puducherry.
Mail id:revapediatric@gmail.com

https://doi.org/10.55041/ijsmt.v2i3.371

Cite this Article: Jawahar.V,, , Manya.V.P,, & Mahalakshmi.R, (2026). A Descriptive Study to Assess the Level of Knowledge on Bronchial Asthma Among the Mothers of Children in the Age Group of 0 – 12 Years at Selected Areas, Puducherry. International Journal of Science, Strategic Management and Technology, *02*(03). https://doi.org/10.55041/ijsmt.v2i3.371

ABSTRACT

Childhood bronchial asthma is a multifactorial disease influenced by a complex interplay of genetic, environmental, and perinatal factors. In children, asthma presents unique challenges due to their dependency on caregivers for disease management. Among paediatrics patients, mothers are often the primary caregivers, playing a central role in administering medication, recognizing symptoms, avoiding triggers and seeking timely helpThe study was undertaken to assess the knowledge and attitude regarding bronchial asthma ency disorders among mothers of children in the age group of 0-12 yearse. Quantitative research approach and Descriptive research design was adopted for the study. Convenience sampling technique was used and the sample size was 100 mothers . The study was conducted in Gorimedu area at Puducherry. Self administered structured closed ended knowledge questionnaire was used to assess the knowledge and attitude scale was used to assess regarding bronchial asthma among mothers. The study revealed that Majority of the mothers, 48(48%) had adequate knowledge, 42(42%) had moderate knowledge and 10(10%) had inadequate knowledge. The mean and standard deviation on the level of knowledge on bronchial asthma among mothers was (13.89 $\pm$ 4.09) respectively.

INTRODUCTION:

Children, especially those in the early stages of development (0-12 years), are highly vulnerable to various illnesses due to their immature immune systems and increased exposure to environment risk factors. Common childhood illnesses include respiratory infections, gastrointestinal disturbances, nutritional deficiencies, skin conditions and chronic diseases such as asthma and diabetes. Among these, respiratory diseases are a major concern worldwide and are a leading cause of morbidity and hospitalization in children. One of the most prevalent chronic respiratory disorders affecting children globally is bronchial asthma.

According to the **Global Initiative for Asthma and Indian Academy of Paediatrics (2023)**, Bronchial asthma is a chronic inflammatory disorder of the airways, characterized by episodes of wheezing, breathlessness, chest tightness, and coughing, particularly at night or in the early morning. These symptoms are due to variable and reversible airway obstruction and bronchial hyper responsiveness.

Childhood bronchial asthma is a significant public health concern in India and globally. It is one of the most common chronic diseases among children and is associated with recurring respiratory symptoms, frequent school absenteeism, poor quality of life, and increased healthcare utilization. Although asthma is a controllable condition with proper management, its effective control largely depends on the knowledge, awareness, and practices of caregivers especially mothers, who play a central role in managing their children's day-to- day health.

STATEMENT OF THE PROBLEM:

A descriptive study to assess the level of knowledge on Bronchial asthma among the mothers of children in the age group of 0 – 12 years at selected areas, Puducherry.

OBJECTIVES:

1. To assess the level of knowledge on Bronchial asthma among the mothers.
2. To associate the level of knowledge on Bronchial asthma among the mothers with their selected demographic variables.
3. To distribute pamphlets on care of children with Bronchial asthma.

RESEARCH APPROACH:

The study adopted a quantitative research approach to accomplish the objectives of the study appropriate.

RESEARCH DESIGN:

Descriptive research design

RESEARCH VARIABLES:

In this study the research variables was assessment of knowledge and attitude regarding bronchial asthma

RESEARCH STUDY SETTING

The present study was conducted in gorimedu area at Puducherry.

POPULATION:

In this study, population refers to all the mothers of children (age group of 0-12 years) in Gorimedu, Puducherry.

SAMPLE:

Mothers of children in the age group of 1 to 12 years in Gorimedu , Puducherry who fulfilled the inclusion criteria.

SAMPLE SIZE:

70 mothers

SAMPLE TECHNIQUE:

Covenience sampling technique

CRITERIA FOR SAMPLE SELECTION:

Inclusion criteria:

MOTHERS

- Who were willing to participate in the study
- who had children in the age group of 1 to 12 years
- who were able to read and understand English or Tamil language.

Exclusion criteria:

- Mothers who are from health professionals

DEVELOPMENT OF DATA COLLECTION TOOL:

Section A:

It consists of socio – demographic variables such as age, gender, educational qualification and occupation of mother, family income, and locality and family members with history of Bronchial asthma and previous source of information about bronchial asthma.

Section B:

It consists of self structured knowledge questionnaire regarding bronchial asthma.

Scoring technique:

- There are 20 items in total
- Each item has options with one correct answer
- Each question carries "1" mark for correct response
- Incorrect response was given "0" mark

Scoring key for knowledge:

The overall score of the tool was 20. Based on the obtained score, the knowledge of the mother were interpreted as follows,

Level of knowledge	**Score**
Adequate knowledge	>75%
Moderate knowledge	50-75%
Inadequate knowledge	<50%

RESULTS

Table 1: Frequency and percentage distribution of demographic variables among the mothers (N=100)

S.no	**Demographic variables**	**Frequency (n)**	**Percentage (%)**
1	**Age of the mother in years**		
	Below 20 years	1	1
	21-30 years	52	52
	31-40 years	38	38

	Above 40 years	9	9
2	**Education of mother**		
	No formal education	1	1
	Primary school	18	18
	High school	43	43
	Graduate and above	38	38
3	**Occupation of mother**		
	Government job	2	2
	Private job	12	12
	Home maker	71	71
	Others	15	15
4	**Monthly family income**		
	Below Rs 20,000	32	32
	Rs21,000 – 30,000	41	41
	Rs31,000 – 40,000	17	17
	Above Rs 40,000	10	10
5	**Age of children**		
	0-2 years	44	44
	3-5 years	31	31
	6-8 years	12	12
	9-12 years	13	13
6	**History of bronchial asthma**		
	Yes	0	0
	No	100	100
7	**Source of information**		
	Health care professional	10	10
	Social media	46	46
	Television/Radio	20	20
	Family/Friends	24	24
8	**Non veg in a week**		
	Once	48	48
	Twice	28	28

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	Thrice	21	21
	Not at all	3	3
9	**History of tobacco smoking**		
	Yes	0	0
	No	100	100
10	**Method of cooking**		
	Domestic fuel	0	0
	Gas stove	100	100
	Kerosene stove	0	0
	Others	0	0

Table 2: Frequency and percentage distribution of level of knowledge among the mothers (N=100)

Level of knowledge on bronchial asthma	**Frequency (n)**	**Percentage (%)**	**Mean ± standard deviation**
Adequate knowledge	48	48%	13.89±4.09
Moderate knowledge	42	42%	
Inadequate knowledge	10	10%	

Table 2: shows frequency and percentage wise distribution of level of knowledge on bronchial asthma among mothers. Majority of the mothers, 48(48%) had adequate knowledge, 42(42%) had moderate knowledge and 10(10%) had inadequate knowledge. The mean and standard deviation on the level of knowledge on bronchial asthma among mothers was (13.89 ± 4.09) respectively.

Table: 3 Association between the level of knowledge on Bronchial asthma with their selected demographic variables

(N=100)

DEMOGRAPHIC VARIABLES	**LEVEL OF KNOWELDGE ON BRONCHIAL ASTHMA**							
	ADEQUATE		**MODERATE**		**INADEQUATE**		**X^2 VALUE**	**P VALUE**
	N	**%**	**N**	**%**	**N**	**%**		
AGE OF MOTHER (IN YEARS)								
Below 20	1	100	0	0	0	0		
21 - 30	25	48.1	22	42.3	5	9.6	**X^2** = 2.850	0.415
31 - 40	18	47.4	15	39.5	5	13.2	df = 3	**(NS)**
Above 40	4	44.4	5	55.6	0	0		

EDUCATION								
No Formal education	2	9.5	12	57.1	7	33.3		
Primary school	8	44.4	7	38.9	3	16.7	X^2= 12.240	0.041
High school	20	52.6	15	39.5	3	7.9	df = 3	**(S)**
Graduate above	18	69.2	8	30.8	0	0		
OCCUPATION								
Government job	1	50	1	50	0	0		
Private job	6	50	5	41.7	1	8.3	X^2 = 1.960	0.58
Home maker	34	47.9	30	42.3	7	9.9	df = 3	**(NS)**
Others	7	46.7	6	40	2	13.3		
MONTHLY INCOME								
Below 20000	14	43.8	15	46.9	3	9.4		
21000-30000	18	43.9	16	39	7	17.1	X^2 = 3.220	0.358
31000-40000	10	58.8	5	29.4	2	11.8	df = 3	**(NS)**
Above 40000	6	50	6	50	0	0		
AGE OF CHILDREN (IN YEARS)								
0 - 2	22	50	18	40.9	4	9.1		
3 - 5	13	41.9	11	35.5	7	22.6	X^2 = 3.220	4.86
6 - 8	7	58.3	3	25	2	16.7	df = 3	**(NS)**
9 - 12	6	35.3	10	58.8	1	5.9		
HISTORY OF BRONCHIAL ASTHMA								
Yes	0	0	0	0	0	0	X^2 = 0.00	1
No	48	48	42	42	10	10	df = 1	**(NS)**
SOURCE OF INFORMATION								
Healthcare professional	3	30	6	60	1	10		
Social media	22	47.8	20	43.5	4	8.69	X^2 = 9.350	0.025
Television/Radio	12	60	7	35	1	5	df = 3	**(S)**
Family/Friends	11	45.8	9	37.5	4	16.7		

NON-VEG IN A WEEK								
Once	25	52.1	18	37.5	5	10.4		
Twice	10	35.7	13	46.4	5	17.8	X^2 = 5.880	0.152
Thrice	8	38.1	9	42.9	4	19	df = 3	**(NS)**
Not at all	5	71.4	2	28.6	0	0		
HISTORY OF TOBACCO								
Yes	5	50	4	40	1	10	X^2 = 2.680	0.102
No	43	47.8	38	42.2	9	10	df = 1	**(NS)**
METHOD OF COOKING								
Domestic fuel	0	0	0	0	0	0		
Gas stove	48	48	42	42	10	10	X^2 = 0.00	1
Kerosene	0	0	0	0	0	0	df = 1	**(NS)**
Others	0	0	0	0	0	0		

S – Significant (P>0.005)

NS – Not Significant (P<0.005)

INFERENCE:

The above table 3 depicts that education status and source of information have a significant association with the mother's level of knowledge on bronchial asthma whereas there was no significant association found with the remaining demographic variables.

CONCLUSION

The present study concluded that the level of knowledge regarding bronchial asthma among mothers varied from adequate to inadequate. The analysis revealed that education status of the mother had a statistically significant association with the level of knowledge on bronchial asthma ($\chi^2 = 12.240$, $p < 0.05$), indicating that higher educational status was associated with better knowledge.

RECOMMENDATIONS:

1. A similar study can be conducted with a larger sample size to generalize the findings
2. Comparative studies can be carried out between rural and urban populations.
3. An experimental study can be conducted to assess the effectiveness of structured teaching programs on bronchial asthma.
4. Longitudinal studies can be conducted to assess long term retention of knowledge among mothers.
5. Health education interventions should be strengthened through mass media and health care professionals.

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