

# “Assess the effectiveness of Health Education Programme on Knowledge Regarding Home Management of Children Suffering from Asthma Among Mothers at Rural Area of Pune District”.

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## Abstract

Asthma is one of the common diseases of childhood, both in developed and developing countries like India. Asthma may have its onset at any age. 30% of children are symptomatic by one year of age, where as 80 – 90% of asthmatic children have their first symptoms before 4- 5 years of age.

**Purpose:-**The purpose of the study was to assess the Knowledge of Mothers Regarding Home Management of Children Suffering from Asthma at Rural area of Pune district, with a View to Develop an Information Booklet. **Material &Method:** The Descriptive survey design was used 50 mothers of asthmatic children from asthma at Rural area of Pune district. Purposive sampling methods was used to collect data. Knowledge was assessed by using structured interview Purposive sampling technique was used to select the sample The data was collected and analyzed based on the objective using both descriptive and inferential statistic. **Results:** The study shows that majority of 10 mothers (20%) were in the age group of 20-25 years .majority of 38 mothers (76%) were Hindus. Majority of 15 mothers (30%) studied secondary education. Majority of 34 mothers (68%) were housewives. Majority of 5 mothers (10%) were in the range of 1000-5000 Rs .majority of 42 mothers (84%) belonged to nuclear Family. Majority of 10 mothers (20%) had 3 members in their family. Majority of 10 mothers (20%) had one child. Majority (84%) of respondents family members are not suffering from asthma. Majority of 42 mothers (84%) were used gas. Findings of the study revealed that The overall mean knowledge score was found to be 14.68 percent. The Highest mean knowledge was in aspect of causes (26.66), the mean knowledge score about general information was (26.33), mean knowledge score in clinical manifestations, diagnosis and complications (21.33) and mean knowledge score on management of asthma 26.33..ANNOVA test was used to find association and reveal that there is significant association between education, family history, type of fuel. **Conclusion:-**It is important to assess the Knowledge of Mothers Regarding Home Management of Children Suffering from Asthma and knowledge of mothers regarding management of children suffering from asthma was not adequate. Mothers had misconception, false belief, which influenced the need for formulating health education package regarding asthma management.

**Keywords:-**Assess, Knowledge, Home management, Asthma

## Introduction

Asthma is the most prevalent major chronic lung disease, which constitutes a serious public problem all over the world. Asthma affects people of all age, the disease is most common in children. Recent large scale population surveys suggest a mean prevalence of 4 to 8 percent; however the prevalence is particularly high in certain population. A recent study in India estimates that 11-12 per cent of school children are having asthma. The morbidity is of alarming nature and number of man-days lost is unimaginable with a huge financial implication. The WHO estimate that there are 15-20 million asthmatic in India alone. This provides basis for the use of anti-inflammatory drugs like inhaled and oral corticosteroids, inhaled chromolyn sodium or nedocromil, and the new class of drugs i.e. oral leukotriene antagonists. Improved communication of the patient with doctors and achieving the goals

of asthma management with specific modules along with relevant worksheet from important tools of providing asthma care. These are comprehensive guidelines for the diagnosis and management of asthma. This will make the resources for conducting a training of doctors on asthma care and Management. A study conducted on barriers in asthma care for pediatric patient in primary care. The result show Caregivers ( $n = 62$ ) were primarily mothers (85.5%). Children with uncontrolled asthma missed 33.3% more days of school. The caregivers of the children with controlled asthma answered more questions on the Asthma Knowledge Test correctly and had a lower score on the Asthma Barrier Questionnaire A study was conducted at Cario University on knowledge of mothers of children with bronchial asthma with the aim of assessing the mothers' knowledge regarding bronchial asthma. The result show the mean age of children was  $3.08 \pm 1.35$  year, less than two thirds of children were males. The mean age of mothers was  $29.4 \pm 5.2$  years. More than half of mothers reported that the main source of their information was the physician. The majority of mothers did not know the definition of asthma. Two fifth of mothers mentioned incompletely clinical picture as cough and shortness of breathing. Less than two thirds of mothers mentioned incompletely asthma triggers as allergen and irritants. More than half of mothers know that avoid allergens and irritants can prevent asthma attack. More than one third of mothers mentioned asthma medications as bronchodilators. Regarding to medication's devices which can help during attack, more than two thirds of mothers mentioned neutralizer. There was no statistically significant correlation between socio demographic characteristics of children's and mothers with knowledge Respiratory tract infection is a frequent cause of acute illness in infants and children. Many pediatric infections are seasonal. Cough and cold are very common in children. However, there are some children who have frequent or persistent cough, particularly children living in slums or overcrowded areas. The commonest cause of a frequent or persistent cough in an otherwise healthy child is bronchial asthma. Airway inflammation is the primary problem in asthma. An initial event in asthma appears to be the release of inflammatory mediators (e.g., histamine, striptease, leukotrienes and prostaglandins) triggered by exposure to allergens, irritants, cold air or exercise. The mediators are released from bronchial mast cells, alveolar macrophages, T-lymphocytes and epithelial cells. Some mediators directly cause acute bronco constriction, termed the "early-phase asthmatic response." The inflammatory mediators also direct the activation of eosinophils and neutrophils, and their migration to the airways, where they cause injury. This so-called "late-phase asthmatic response" results in epithelial damage, airway edema, mucus hyper secretion and hyper responsiveness of bronchial smooth muscle. Varying airflow obstruction leads to recurrent episodes of wheezing, breathlessness, chest tightness and cough.

## Material & Method

In present study, researcher adopted Descriptive survey design research design It assess the Knowledge of Mothers Regarding Home Management of Children Suffering from Asthma at Rural area of Pune district. The researchers also described the association with demographic variables. The population of present study comprises of Mothers of Children Suffering from Asthma at Rural area of Pune district. 50 sample was taken by using purposive sampling techniques. Inclusion criteria: Mothers who are residing in wagholi, rural area of Pune district, Mothers who are willing to participate in the study, In exclusion criteria: Mothers who are not willing to participate in the study, Mothers of critically ill children, Mothers who are not present at the time of data collection. Description of Tool The structured interview schedule was constructed into two sections. Section A: Consisted of demographic data Section B: Consisted of knowledge related items of asthma management Plan For Data Analysis: Analysis is the strategy used in theory development in which concepts, statements or theories are clarified or refined. The data was planned to include descriptive and inferential statistics. The following were developed. 1. Frequency and percentage of the background factors. 2. Frequency and percentage distribution to assess existing knowledge regarding asthma management. 3. Mean, standard deviation and 't' test to find out the association between knowledge of mothers with selected demographic variables.

## Result

Majority of 10 mothers (20%) were in the age group of 20-25 years followed by 30 mothers (60%) were in the age group of 26-30 years and 10 mothers (20%) in the age group of 31-35 years. Regarding religion, majority of 38 mothers (76%) were Hindus, 12 mothers (24%) were Muslims. Regarding educational status majority of 15 mothers (30%) studied secondary education, 11 mothers (22%) studied primary, 9 mothers (18%) were illiterate, 15 mothers (30%) studied graduation. About the occupation of mothers, majority of 34 mothers (68%) were housewives, 6 mothers (12%) were a agriculture workers, 6 mothers (12%) were professional. About family income per month a majority of 5 mothers (10%) were in the range of 1000-5000 Rs. 10 mothers (20%) were in the range of 5001-10000 Rs. And only 35 mothers (70%) had an income between Rs.10000-15000. About type of family majority of 42 mothers (84%) belonged to nuclear family and only 8 mothers (16%) belonged to joint family. Regarding family size majority of 10 mothers (20%) had 3 members in their family followed by 35 mothers (70%) whose family size was 4 members and 5 mothers (10%) family size was between 5-6 members. About the number of living children a majority of 10 mothers (20%) had one children, 36 mothers (72%) had two children and only 4 mothers (8%) had three living child. Regarding the family members suffering from asthma majority (84%) of respondents family members are not suffering from asthma (16%) of respondent mothers, suffering from asthma. About the type of fuel used at home, majority of 42 mothers (84%) were used gas, While 8 mothers (16%) were used firewood. A similar study conducted by Homer SD (2004) shows that improvement in asthma management point to the need for ongoing asthma education to address learning needs of the children and family. This study was supported by another study by Moosa Henley LD (1997). The study underscores the need for systemic asthma education, especially with regard to acute attack management and preventive medications. In addition parents must acquire confidence and practical skills to cope with acute attacks.

TABLE – 1 Frequency and age distribution of mother's according to their baseline characteristics

Characteristics	Category	Respondent	
		Number	(%)
Age	20-25	10	20
	26-30	30	60
	31-35	10	20
Religion	Hindu	38	76
	Muslim	12	24
Education	Illiterate	09	18
	Primary	11	22
	Secondary	15	30
	Graduate	15	30
Occupation	Housewife	34	68
	Professional	10	20
	Agriculture	06	12
Family income	1000-5000	05	10
	5001-10000	10	20
	10001-15000	35	70

Type of Family	Nuclear	42	84
	Joint	08	16
No. of family members	3members	10	20
	4members	35	70
	5-6members	05	10
No. of living children	One	10	20
	Two	36	72
	Three	04	08
Family history of asthma	Yes	08	16
	No	42	84
Type of fuel used	Gas(LPG)	42	84
	Firewood	08	16
<b>Total</b>		<b>50</b>	<b>100</b>

Assess the knowledge of mothers regarding management of children suffering from asthma.

The findings of the study revealed that overall mean knowledge score of mothers 14.68 was found to be inadequate, regarding management of children suffering from asthma. But in the areas of general information 60% knew the organ of respiration, 50% correctly responded to common respiratory problems, 50% knew the difference between asthmatic child and other children 60% correctly responded type of category asthma belonged and 56% knew period at which asthma started. In the area of causes of asthma 70% of respondents responded for triggering factors of asthma, 60% knew the effect of passive smoking and 30% correctly responded to common pets that cause asthma. Findings of the study in the area of clinical manifestations, and complication revealed that in majority of areas knowledge was found to be inadequate, 38 percent. The knowledge in the area of common symptoms of asthma was 50%, where as complications of asthma were found 30%.

III. Findings related to association between the knowledge of mothers on Demographic variables.

The mean knowledge was found to be highest (60%) among the respondents belonging to 26-30 years. Further statistical F-test implies there is no significant association between age of respondent and knowledge of asthma management ( $F=0.520$  NS,  $P= 0.599$ ).

The mean knowledge score was found to be highest among Hindus (76%). The statistical 't' – test results non-significant association between religion and knowledge of asthma management ( $t= 0.007$  NS,  $P= 0.995$ ). The mean knowledge score was found to be highest (44.50%) among the respondents belonging to other group compared to the mean knowledge score of housewife (68%) statistical t-test implies there is no significant association between occupation and knowledge of asthma management ( $f= 1.110$  NS,  $P= 0.338$ ). The mean knowledge score of respondents with nuclear family (84%) was found higher, compared to joint family (16%). The statistical t-test results no significant association between type of family and knowledge of asthma management ( $f= 1.063$  NS,  $P= 0.293$ ). The mean knowledge score was highest (60%) of educational level. The F-test implies there is a significant association between education level and knowledge of asthma management ( $F= 0.990$ ,  $P= 0.404$ ). The mean knowledge score was found to be highest (70%) among respondents with a family income above Rs.10, 000 – 15,000. Further statistical F-test implies there is non-significant association between family income of respondents and

Knowledge of asthma management ( $F= 0.090$  NS,  $P= 0.910$ ). The mean knowledge score was found to be highest (84%) among respondents family suffering from asthma. Statistical t-test implies there



is a significant association between family history of asthma and knowledge of asthma management ( $f= 0.567$ ,  $P= 0.573$ ). The mean knowledge score was found to be highest (84%) among respondents family member. Statistical t-test implies there is a significant association between family members and knowledge of asthma management ( $f= 0.340$ ,  $P= 0.712$ ). The mean knowledge score was found to be highest (84%) among respondents No. living children. Statistical t-test implies there is a significant association between No. Living children and knowledge of asthma management ( $f= 1.010$ ,  $P= 0.391$ ). The mean knowledge score was found to be highest (84%) among respondents type of fuel. Statistical t-test implies there is a significant association type of fuel and knowledge of asthma management ( $t= 0.298$ ,  $P= 0.767$ ).

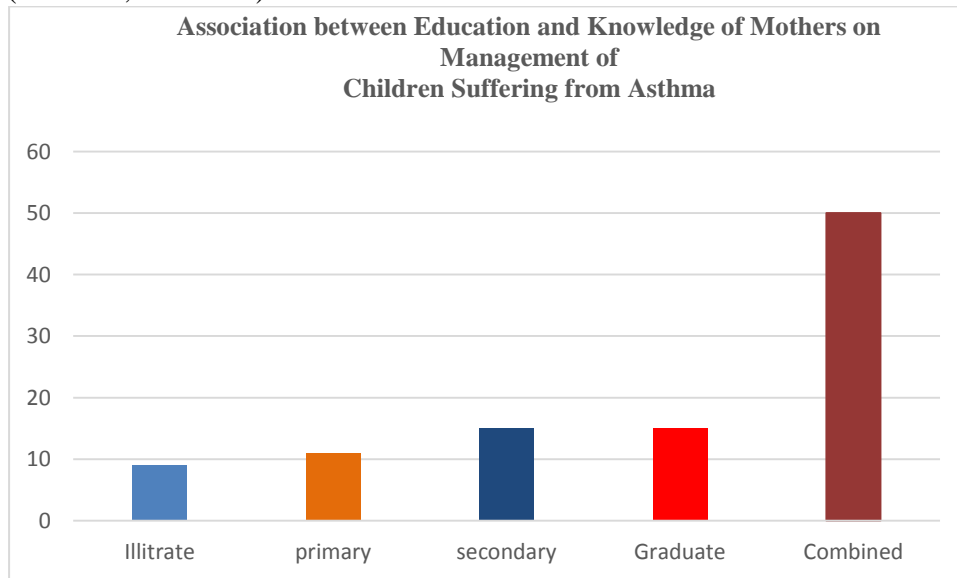


Figure 1 Association between education and knowledge of mothers management of children suffering from asthma

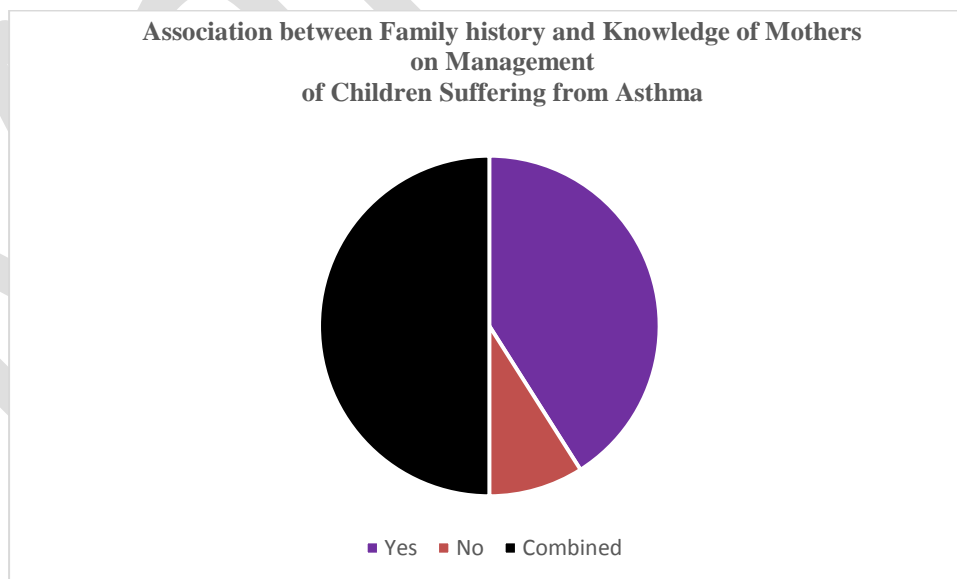


Figure 2 Association between Family history and Knowledge of Mothers on Management

## Discussion

The findings of the study revealed that overall mean knowledge score of mothers 14.68 was found to be inadequate, regarding management of children suffering from asthma. But in the areas of general information 60% knew the organ of respiration, 50% correctly responded to common respiratory problems, 50% knew the difference between asthmatic child and other children 60% correctly responded type of category asthma belonged and 56% knew period at which asthma started. In the area of causes of asthma 70% of respondents responded for triggering factors of asthma, 60% knew the effect of passive smoking and 30% correctly responded to common pets that cause asthma. This study was supported by Cases Vila C (2004). The results showed that identifying allergens causing the symptoms, confirming the role of these allergens, in clinical manifestations through specific challenge tests and indicating treatment befollowed. Findings of the study in the area of clinical manifestations, and complication revealed that in majority of areas knowledge was found to be inadequate, 38 percent. The knowledge in the area of common symptoms of asthma was 50%, where as complications of asthma were found 30%. This study was supported by Mistry R, et al (2004). The result shows there was a higher prevalence of wheeze in 13-14 year old children living in an old fashioned, congested city, than in a clean and modern city in South Asia. Findings of the study in the area of management of asthma revealed that there was inadequate knowledge in majority of areas, with the mean knowledge score of The highest knowledge score 80% was found in expectation from asthma treatment but the knowledge about after an asthma attack taking child to hospital was 60%, opinion if inhalation is given for long period 70%, Managing the child at home during asthma attack 50%, healthy practice to support the child with asthma 50%, expectations from asthma treatment 80% and asthmatic child can lead a normal life 50%.

F-test value of 0.520 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between the age of the respondents and impact of knowledge regarding management of children suffering from asthma. t-test value of 0.007 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between the religion of respondents and impact of knowledge regarding management of children suffering from

Asthma. T-test value of 1.110 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between the occupation of the respondents and impact of knowledge regarding management of children suffering from asthma. t-test value of 1.063 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between the type of family of the respondents and impact of knowledge regarding management of children suffering from asthma. F-test value of 0.990 which was significant at 5% level, ( $P < 0.05$ ) revealed that there was significant association between the education of the respondents and impact of knowledge regarding management of children suffering from asthma. F-test value of 0.090 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between the family income of the respondents and impact of knowledge regarding management of children suffering from asthma. t-test value of 0.567 which was significant at 5% level, ( $P < 0.05$ ) revealed that there was significant association between the family history of the respondents and impact of knowledge regarding management of children suffering from asthma. F-test value of 0.340 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between number of family members and impact of knowledge regarding management of children suffering from asthma. t-test value of 1.010 which was no significant at 0.05 level, ( $P > 0.05$ ) revealed that there was no significant association between number of living children and impact of knowledge regarding management of children suffering from asthma. T-test value of 0.298 which was significant at 5% level, ( $P < 0.05$ ) revealed that there was significant association between the types of fuel the respondents and impact of knowledge regarding management of children suffering from asthma.

Information booklet was developed on the basis of findings of the study. The steps adopted to develop an information booklet were as follows: Preparation of first draft of information booklet. Content validity editing of information booklet Preparation of final draft of information booklet. The

final draft of information booklet for the mothers on management of children suffering from asthma was prepared on the basis of review of literature.

## Conclusion

Study findings reveals that it is important to assess the Knowledge of Mothers Regarding Home Management of Children Suffering from Asthma and knowledge of mothers regarding management of children suffering from asthma was not adequate. Mothers had misconception, false belief, which influenced the need for formulating health education package regarding asthma management. researcher found significant association between demographic characteristics of mothers on management of children suffering from asthma was education, family history, and type of fuel of knowledge of mothers on management of children suffering from asthma.

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