

**Research Article****Illness Perception among Bronchial Asthma Patients Attending a Tertiary Care Hospital in Bengaluru, South India**Girianna Gowda<sup>1</sup>, Avinash Segu Damodar<sup>2</sup><sup>1</sup>Assistant Professor, Dept. of Community Medicine, Kempegowda Institute of Medical Sciences (KIMS), Bangalore.<sup>2</sup>Intern, Dept. of Community Medicine, Rajiv Gandhi University of Health Sciences (RGUHS), Karnataka.**\*Corresponding author**

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**Abstract:** Bronchial asthma is a major chronic illness and its prevalence is increasing all over the world. The control of the symptoms of asthma is related to the perception of its symptoms. A descriptive study was conducted with the objective of to assess the illness perception among bronchial asthma patients in a tertiary care hospital for a period of 2 months. 110 patients with bronchial asthma, selected by purposive sampling were interviewed using the standard Illness Perception Questionnaire – Revised (IPQ - R). There were 32 (29.10%) were males and 78 (70.90%) females. The mean age of study subjects was 35.75±15.89 years. 104 (94.55%) subjects experienced breathlessness and 102 (92.73%) experienced wheezing; however, only 52(47.27%) and 71 (64.55%) subjects respectively, related these symptoms to asthma. Possible causes of asthma according to the study subjects were pollution (105, 95.45%), diet (93, 84.55%), poor medical care in the past (50, 45.45%), hereditary (41, 37.27%) and stress/worry (41, 37.27%). In conclusion, Patients with bronchial asthma have poor illness perception.**Keywords:** Bronchial asthma, Illness perception, Asthma control, Asthma management.

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**INTRODUCTION**

Bronchial asthma is a chronic inflammatory disorder of the airways characterized by cough, breathlessness, wheezing and chest tightness [1]. It is a major public health problem worldwide. The prevalence of asthma is increasing both in developed and developing countries. The World Health Organization has estimated that 300 million people around the world suffer from asthma [2, 3]. In most of patients, symptoms can be controlled with medication. However, compliance with these medications is a major problem in asthma management. The control of asthma symptoms in a patient is related to the perception of symptoms.

The Illness Perception Questionnaire (IPQ) is a new tool to assess the cognitive representation of illness which in turn determines the ability of a patient to cope with his/her illness [4]. Poor perception and understanding of symptoms is related to poor compliance with treatment and thus frequent exacerbations of symptoms, leading to near death or even death in some cases [5, 6]. Only few studies have been conducted in India in relation to illness perception among patients with bronchial asthma. This study was therefore conducted with the objectives of assessing the perception of illness among patients with bronchial asthma patients.

**METHODOLOGY**

A descriptive study was conducted in a tertiary care hospital for a period of 2 months following approval from the Institutional ethics committee. The sample size of 110 was calculated based on the assumption that the prevalence of bronchial asthma is 7% (as determined in previous studies), with a precision of 5 %. The method of purposive sampling was employed to obtain the appropriate sample. Patients aged 18-65 years, attending the outpatient clinic of the Department of Pulmonary Medicine, with an established diagnosis of mild to moderate persistent bronchial asthma (GINA Guidelines), and consenting to participation in the study, were included. Seriously ill patients were excluded from the study. A standard Illness Perception Questionnaire – Revised (IPQ-R) developed by Weinman J *et al.* [7] was administered by the trained investigator to all the study subjects. Information regarding baseline characteristics and each patient's views about their illness and the possible causes of asthma were collected by the trained investigator in the local language. SPSS version 19.0 was used for data entry and analysis. Descriptive statistics were used.

**RESULTS**

There were 32 (29.10%) males and 78 (70.90%) females. The mean age of the study subjects was 35.75

$\pm 15.89$  yrs (Mean  $\pm$ SD). Majority of the subjects were aged between 21-30 years, with a majority of patients i.e. 32 (29.09%) being unskilled workers (Table 1).

**Table 1: Basic Demographic profile of study subjects.**

Parameters		Number	Percentage
Sex	Male	32	29.10
	Female	78	70.90
Mean Age (yrs) $\pm$ SD		35.75 $\pm$ 15.89	
Education	Primary/middle school	35	31.82
Occupation	Unskilled	32	29.09

There were 104 (94.55%) subjects experienced breathlessness but only 52 (47.27%) of these related this symptom with asthma. 102 subjects (92.73%) experienced wheezing but only 71 (64.55%) of these attributed this symptom to asthma. 98 (89 %) of subjects experienced cough but only 56 (51 %) related this to asthma.

The possible causes of asthma according to the study subjects were pollution (105 subjects, 95.45%), diet (93 subjects, 84.55%), poor medical care in the past (50 subjects, 45.45%), hereditary (41 subjects, 37.27%) and stress/worry (41 subjects, 37.27%) (Table 2).

**Table – 2: Distribution of study subjects according to possible causes of asthma (N=110)**

Possible causes	Number*	Percentages
Pollution	105	95.45
Diet	93	84.55
Poor medical care in the past	50	45.45
Hereditary	41	37.27
Stress/worry	41	37.27
Ageing	13	11.82
Alcohol	9	8.18
Smoking	12	10.91

It was observed that 71 subjects (64.55%) believed that their asthma could be controlled by treatment, 69 subjects (62.73%) presumed that nothing could be done to relieve their symptoms, 62 subjects (56.36%) expected to suffer from the disease for the rest of their lifetime, 47 (42.73%) believed that their current treatment would be effective in curing asthma and 46

subjects (41.82%) noticed that the symptoms of asthma varied a great deal on a daily basis. 104 patients (95%) wanted a permanent cure. 88 patients (80 %) were of the opinion that the disease had serious financial consequences. 87 patients (79%) reported a feeling of depression when they thought about their disease. (Table 3).

**Table – 3: Distribution of study subjects according to their views about Asthma (N=110)**

Patients views about their asthma	Agree*	Percentage
I expect to have this asthma for the rest of my life	62	56.36
My asthma is a serious condition	40	36.36
My asthma has serious financial consequences	41	37.27
My asthma seriously affects my quality of life	77	70.00
I can control my asthma	45	40.91
I get depressed when I think about		
My treatment can cause side effects	71	64.55
I can cure my asthma with available medications	98	89.09
I become addicted to medications	87	79.09
I am suffering from my asthma only when I have symptoms	94	85.45

## DISCUSSION

The success of the treatment of asthma is dependent upon the compliance of the patient to treatment, which in turn depends upon the patient's perception of asthma symptoms. In this study 47.27% of subjects attributed their symptom of breathlessness to asthma. Similarly, 64.55 % of subjects and 5% of subjects related wheezing and cough respectively to asthma. Alberto Cukier observed that patients with bronchial asthma patients can be classified as either "under perceivers" or "over perceivers", with more importance being given to "under perceivers" owing to the possibility of an increased risk of hospitalization and morbidity in this group due to postponement of treatment [8]. Studies by ID Bijil-Hofland *et al.* and Cathy Hermann *et al.* also concluded that poor perception of asthma symptoms, as was observed in their studies was directly related to asthma attacks and its complications [9, 10].

In our study, majority of subjects believed that pollution (95.45%), diet (84.55%), and poor medication in the past (45.45%) are possible causes of asthma. These findings are similar to those in a study conducted by R Prasad *et al.* in India, who observed that a majority of the patients had wrong concepts about the disease aetiology, disease management, inhalation therapy and the prognosis of asthma. It was observed that 85.45% of our subjects believed that they have asthma only when they are symptomatic. Asthma is a chronic inflammatory disease, the absence symptoms of which, does not imply the absence of disease, thereby necessitating follow up examination at frequent intervals and long term medication. Treatment only during symptomatic periods may lead to complications and frequent exacerbations in subsequent years [11]. A study by Johannes C *et al.* Conducted in Leiden, Netherlands also concluded that poor perception of the symptoms of asthma was observed in patients with severe asthma along with sputum eosinophilia[6].

In our study, it was observed that 89.09 % of patients wanted a permanent cure for their disease, 79.09% believed that they would become addicted to the medication if taken on a long term basis and 64.55% believed that the asthma medications had side effects. All these perceptual factors may lead to poor compliance with medication and therefore increased mortality and morbidity due to asthma in later life. In a study conducted by Rakhee Sodhi *et al.* in India, it was observed that 62.14% believed that asthma could be permanently cured and had tried an alternate system of medicine [12].

**CONCLUSION:** Patients with bronchial asthma have poor perception of their illness and its symptoms.

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