

## A Study on Self-Management of Asthma Patients

**Atul Bhargava\***

Jaipur National University, Business Associate Six Sigma Healthcare, Delhi, India

**\*Corresponding Author:** Atul Bhargava, Jaipur National University, Business Associate Six Sigma Healthcare, Delhi, India.

**Received:** September 30, 2019; **Published:** November 01, 2019

### Abstract

Asthma and COPD are increasing all over world at a significant pace. The south Asian countries are the most rapidly developing countries in the world. However, with appropriate medication, medical care and self-management most asthma symptoms are preventable. Inhaled corticosteroid therapy, breathing exercises, relaxation techniques and prevention of asthma triggers are essential components of the management of bronchial asthma. The main goal of my research was to study the association between awareness, prevention of recurrent attacks of asthma and self-management of Asthma. It was found that factors like age, qualification, profession and income of family has association with patient self-management. The analysis was done by using SPSS and other statistical tools.

**Keywords:** Asthma; COPD; SPSS; t Test; Chi Square Test; One way Anova; Self Management; IOT Devices

### Introduction

Asthma is a complex, chronic inflammatory disease of the lower airways affecting people of all ages. Approximately 300 million individuals are currently suffering from asthma worldwide and 10 per cent of it *i.e.* 30 million in India [1]. The prevalence of asthma is estimated to range from 3 to 38 per cent in children and from 2 to 12 per cent in adults [2]. The disease causes lost school and work days, limitations in daily activities, and sleep disturbances. Lung function impairment also occurs, resulting in decreased quality of life unless disease control is achieved and a high annual financial burden is incurred. Achievement and maintenance of control through assessment of clinical manifestations and future risk has become the aim of treatment over the years. About 15 million disability-adjusted life years are lost annually due to asthma; Asthma, therefore, represents 1 per cent of the total global disease burden. The annual death rate due to asthma is estimated to be 250,000 and the majority of deaths occur in low and middle income countries. Patients from low- and middle-income countries have more severe symptoms than those in high-income countries, possibly due to incorrect diagnoses, poor access to health care, not being able to afford therapy, exposure to environmental irritants, and genetic susceptibility to more severe disease. The apparent racial and ethnic differences in the prevalence of asthma reflect underline genetic variances with a significant overlay of socioeconomic and environmental factors. Asthma found in higher prevalence in developed than in developing nations, in poor compared to affluent population in developed nations and in affluent compared to poor population in developing nations-reflect lifestyle differences such as exposure to the allergens, access to health care, *etc.*

### Material and Methods

Asthma and COPD are increasing all over world at a significant pace. The south Asian countries are the most rapidly developing countries in the world. However, with appropriate medication, medical care and self-management most asthma symptoms are preventable. Inhaled corticosteroid therapy, breathing exercises, relaxation techniques and prevention of asthma triggers are essential components of the management of bronchial asthma [3-8].

The main goal of my research was to study the association between awareness, prevention of recurrent attacks of asthma and self management of Asthma. To determine the association between selected demographic variables with awareness and practice regarding prevention of recurrent attacks of asthma. Research design is descriptive survey. A detailed questionnaire related to patients self management was prepared to collect primary data, validated by experts.

**Independent variables:** Age, Gender, education, occupation, place of living, income of the family, dependents.

**Dependent variables:** Awareness and practices of bronchial asthma patients.

The primary data was collected by healthcare professional with desired qualification over a period of three months.

**Hypothesis**

- **H0:** There is no significant association between awareness, prevention of recurrent attacks of asthma and self management of Asthma.
- **H1:** There is a significant association between awareness, prevention of recurrent attacks of asthma and self management of Asthma.

**Analytical and statistical tools**

**Data analysis method**

The sample size was 500 asthmatic patient diagnosed by chest physician. The limitation of the study were patient between 18 - 60 years to maintain the homogeneity of sample. The sample universe was Rajasthan (India).

The analysis was done by using descriptive and inferential analysis.

**Descriptive statistics:** Frequency, mean, mean percentage, and standard deviation are used to describe demographic variables.

**Inferential statistics:** t independent test, Chi square and one way Anova test to find out the association between selected variables using spss.

**Results**

**Primary data showing qualification of respondents**

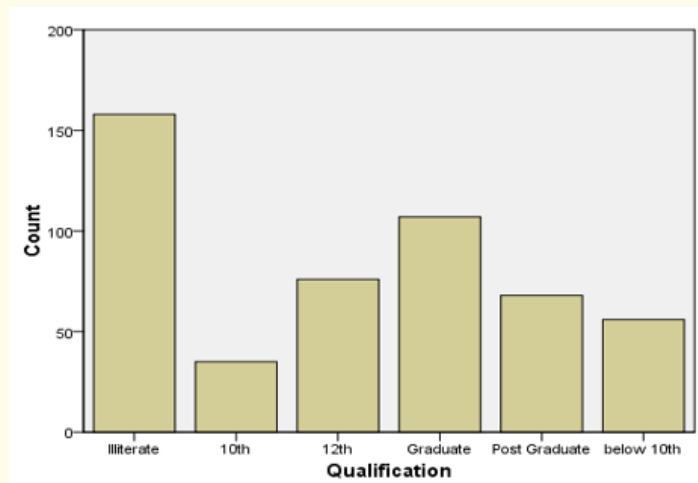


Figure 1

Primary data showing respondents profession

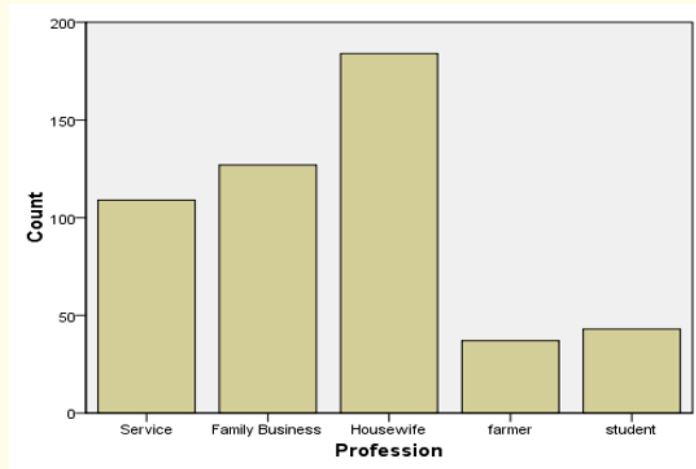


Figure 2

Primary data showing respondents dependents and gender

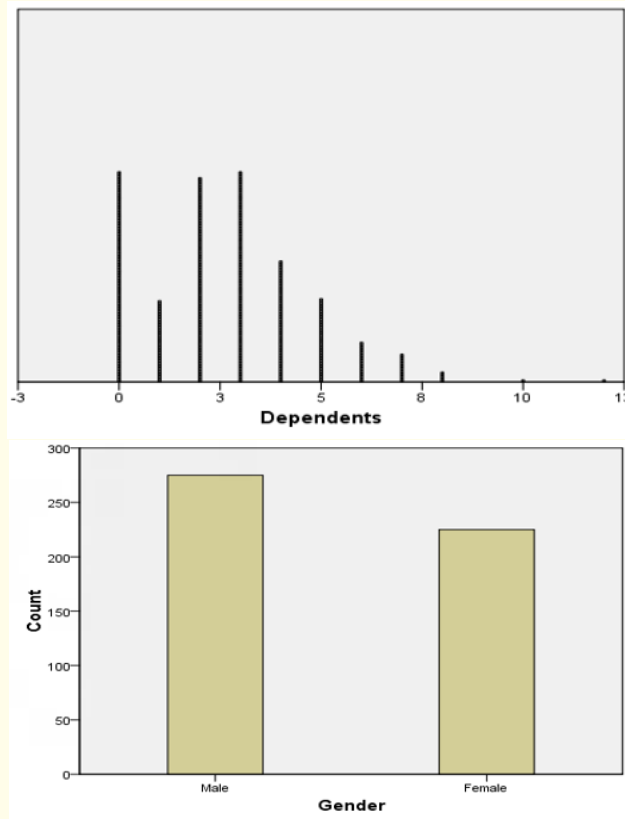


Figure 3

Primary data showing respondents age

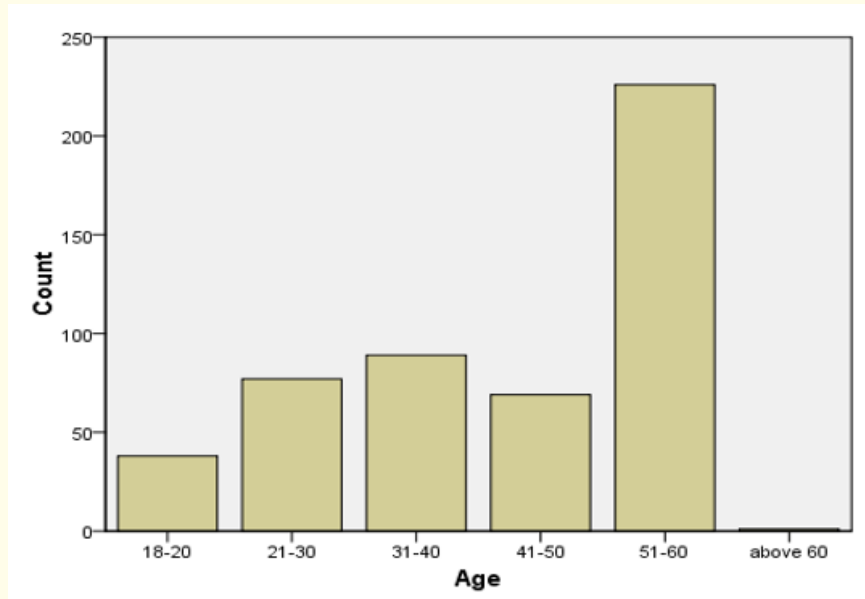


Figure 4

Data analysis

The t test was used to test hypothesis and the sign value was  $< .05$  so null hypothesis was rejected related to gender, age, qualification and profession. Then Chi square is also used to test hypothesis, the sign value was  $< .05$ . which these factors are dependent and has moderate effect. Finally one way Anova was used to determine the statistical significance between and within the groups and found  $p < .05$ . The data analysis was done by using spss.

Discussion

The Asthma patients self management remains a key issue in their treatment. Among 500 patients across all Age, Professions, Qualification Income groups 322 were managing very badly 167 were good and 11 were very good. Total number of patients were divided into three groups based on score number. This shows Asthma is not a disease which can only be treated with medicine. Apart from medicine patient lung exercise, yoga, naturopathy, regular monitoring of parameters which influence asthma, like avoiding trigger factors, awareness about asthma and correct use of preventive and rescue medication inhalation devices [9-18].

Conclusion

In case of Asthma patient a feedback form is very important, what and how patient managed during the past and present visit to chest physician. Based on that chest physician can design treatment and advice further and in subsequent visit can evaluate improvement. This will not only improve patient condition but also reduce financial burden on the individual and country. A self management booklet in vernacular language can be designed which can help patient to manage asthma when not in contact with chest physician. Along with correct diagnosis and desired medication patient monitoring when patient is managing himself/herself between two consultation. IoT devices can be a good option in this regard. But a patient feed back form and regular consultation is more practical method where cost of treatment is an issue.

## Bibliography

1. Kant S., et al. "Socio-economic dynamics of asthma". *Indian Journal of Medical Research* 138.4 (2013): 446-448.
2. Aggarwal AN., et al. "Prevalence and Risk Factors for Bronchial Asthma in Indian Adults: A Multicentre". *Indian Journal of Chest Diseases and Allied Sciences* 48.1 (2006): 13-22.
3. Comaru Talitha., et al. "Free asthma medications reduces hospital admissions in Brazil (Free asthma drugs reduces hospitalizations in Brazil)". *Respiratory Medicine* 121 (2016):21-25.
4. Gupta PR and Mangal DK. "Prevalence and risk factors for bronchial asthma in adults in Jaipur district of Rajasthan (India)". *Lung India* 23.2 (2006): 53-58.
5. Hedlund U., et al. "Socio-economic status is related to incidence of asthma and respiratory symptoms in adults". *European Respiratory Journal* 28.2 (2006): 303-310.
6. Hegewald MJ and Crapo RO. "Socioeconomic status and lung function". *Chest* 132.5 (2007): 1608-1614.
7. Hoskins G., et al. "Risk factors and costs associated with an asthma attack". *Thorax* 55.1 (2000): 19-24.
8. Hussein S and Partridge M. "Perceptions of asthma in South Asians and their views on educational materials and self-management plans: a qualitative study". *Patient Education and Counseling* 48.2 (2002): 189-194.
9. Cavkaytar O and Sekerel BE. "Baseline management of asthma control". *Allergologia et Immunopathologia* 42.2 (2012): 162-168.
10. Masoli M., et al. "For the Global Initiative for Asthma (GINA) Program, The global burden of asthma: executive summary of the GINA Dissemination Committee report". *Allergy* 59 (2004): 469-478.
11. Global Initiative for Asthma. "Global Strategy for Asthma Management and Prevention"(2011).
12. Lalloo UG., et al. "Asthma programmes in diverse regions of the world: challenges, successes and lessons learnt". *International Journal of Tuberculosis and Lung Disease* 15 (2011): 1574-1587.
13. Global Strategy for Asthma Management and Prevention (updated) (2012).
14. Agarwal AK. "Social classification: The need to update in the present scenario". *Indian Journal of Community Medicine* 33 (2008): 50-51.
15. Davoodi P., et al. "Association of socio-economic status with family history in adult patients with asthma". *Indian Journal of Medical Research* 138 (2013): 493-503.
16. Bacon SL., et al. "Individual-level socioeconomic status is associated with worse asthma morbidity in patients with asthma". *Respiratory Research* 10 (2009): 125.
17. Jindal SK. "Do we care asthma?" *Indian Journal of Medical Research* 135 (2012): 157-159.
18. Litonjua AA., et al. "Race, socioeconomic factors and area of residence are associated with asthma prevalence". *Pediatric Pulmonology* 28 (1999): 394-401.

**Volume 8 Issue 12 December 2019**

**©All rights reserved by Atul Bhargava.**