



CODEN [USA]: IAJPBB

ISSN: 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.3408169>Available online at: <http://www.iajps.com>

Research Article

### ANXIETY AND DEPRESSION IN ASTHMATICS: A CROSS SECTIONAL STUDY

Dr. Ahsan Farooq<sup>1</sup>, Dr. Babar Shahzad<sup>2</sup>, Dr. Sana Abbasi<sup>3</sup><sup>1</sup>Extern Department of Psychiatry, Nishtar Hospital Multan<sup>2</sup>Ex-Medical Officer, Jinnah Hospital, Lahore<sup>3</sup>Ex-House Officer, Bahawal Victoria Hospital, Bahawalpur**Abstract:**

**Objective:** To assess the anxiety and depression in cases of bronchial asthma presenting at Nishtar Hospital, Multan.

**Material and methods:** This cross-sectional study was conducted at Department of Psychiatry, Nishtar Hospital, Multan from December 2017 to June 2018 over the period of 6 months. Total 125 diagnosed cases of bronchial asthma were recruited in this study. Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression.

**Results:** Mean age of the asthmatic patients was  $45.68 \pm 7.46$  years. Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. Insignificant association of gender with anxiety and depression was noted with  $p$  value 0.432 and 0.524. Statistically significant association of area of residence with anxiety was noted with  $p$  value 0.000. Insignificant association between area of residence and depression was noted with  $p$  value 0.190.

**Conclusion:** Results of present study showed a higher rates of anxiety and depression among asthmatics. Statistically insignificant association of gender with anxiety and depression was noted. It is also noted in this study that rural asthmatics has higher rate of anxiety and depression as compared to urban asthmatics.

**Key Words:** Significant, asthma, anxiety, Psychiatric disorders, depression, chronic

**Corresponding author:**

Dr. Ahsan Farooq ,

Extern Department of Psychiatry, Nishtar Hospital Multan

QR code



Please cite this article in press Ahsan Farooq et al., *Anxiety And Depression In Asthmatics: A Cross Sectional Study.*, Indo Am. J. P. Sci, 2019; 06(09).

**INTRODUCTION:**

Bronchial asthma is one of the most frequently diagnosed medical conditions causing significant morbidity, mortality and rising health care expenditure.<sup>1</sup> It affects almost 300 million people globally which brings about high socio-economic costs and an increase in rate of morbidity and mortality.<sup>2</sup> BA is characterized by un-expected and sudden attacks of shortness of breath, thus asthmatic attacks are a real threat for life in these patients.<sup>3</sup> It makes sense that BA significantly affects psychological health of the patients because of its serious impact on activities, sleep and social life of patients.<sup>4</sup>

Many observational studies have reported that asthma was associated with psychological conditions such as anxiety and depression. Pulmonary functionality is impaired during asthmatic attacks, thereby causing significant respiratory distress among patients.<sup>5-6</sup> Intense fear, reduced productivity and quality of life due to frequent hospital walk-ins and dependency on the health care personnel pose significant psychological co-morbidities [e.g. anxiety and depression) among asthmatics.<sup>7-8</sup> Clinical trials further documented the relationship between asthma and psychogenic factors.<sup>7-8</sup> Anxiety is defined as an apprehensive anticipation of danger associated with an excessive feeling of dysphoria due to an illness or tension<sup>9</sup>; while depression is a condition which renders a person to feel discouraged, sad or uninterested in life.<sup>10</sup>

Prevalence of anxiety and depression in asthmatics is higher due to dyspnea causing reduced effort intolerance, noncompliance to medications and cholinergic bronchospasm.<sup>1</sup> Almost 24% of adults exhibited anxiety due to asthma in Iran.<sup>11</sup> Comparatively, depression was reported in 40-80% of asthmatic patients in the United Kingdom.<sup>12</sup> The increased risk of psychological comorbidities in asthmatics posed significant threat to patient adherence for asthma control.<sup>11</sup>

A study is planned to screen out the asthmatic patients for anxiety and depression. Results of this study may help us to decrease this co-morbidity of the asthmatics by early management of anxiety and depression.

**MATERIAL AND METHODS:**

This cross sectional study was conducted at Department of Psychiatry, Nishtar Hospital, Multan

from December 2017 to June 2018 over the period of 6 months. Total 125 patients of bronchial asthma either male or female having age range from 20-60 years were included in this study. Patients with history of diabetes mellitus and hypertension were excluded from the study.

Ethical approval was obtained from the institutional review committee and written informed consent was taken from every patient.

Hospital Anxiety and Depression Scale (HADS) was used to assess anxiety and depression. Scores 8-15 were considered as mild anxiety or depression, 16-20 as moderate anxiety or depression and scores higher than 17 as severe. Patients with primary education were considered as illiterate and above middle education were considered as literate. All the collected data was entered into SPSS version 17 and analyzed. Mean and SD was calculated for numerical variables and frequencies and percentages were calculated for categorical variables. Chi-square test was used as test of association. P value  $\leq 0.05$  was considered as statistically significant.

**RESULTS**

Mean age of the asthmatic patients was  $45.68 \pm 7.46$  years. Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. (Table 1) Out of 125 asthmatic patients, male patients were 94 (75.2%) and female patients were 31 (24.8%). Anxiety was seen in 74 (78.72%) male patients and in 27 (87.1%) female patients. Insignificant association of gender with anxiety was noted with p value 0.432. Depressive symptoms was noticed in 61 (64.89%) male patients and 18 (58.06%) female patients. But statistically insignificant association between depression and gender was detected with p value 0.524. (Table 2)

Total 75 (60%) patients belonged to rural area and 50 (40%) patients belonged to urban area. Anxiety was found in 69 (92%) patients of rural area and in 32 (64%) patients of urban area. Statistically significant association of area of residence with anxiety was noted with p value 0.000. Depressive symptoms were noted in 51 (68%) patients of rural area and in 28 (56%) patients of urban area. Insignificant association between area of residence and depression was noted with p value 0.190. (Table 3)

Table 1

## Frequencies for anxiety and depression in asthmatics

Status	Anxiety N (%)	Depression N (%)
Yes	101 (80.8)	79 (63.2)
No	24 (19.2)	46 (36.8)
<b>Total</b>	<b>125 (100)</b>	<b>125 (100)</b>

Table 2

## Association of gender with anxiety and depression

Gender	Yes (%)	No (%)	Total
<b>Association of gender with anxiety</b> <b>P. value = 0.432</b>			
Male	74 (78.72)	20 (21.28)	94 (75.2)
Female	27 (87.1)	4 (12.9)	31 (24.8)
<b>Total</b>	<b>101 (80.8)</b>	<b>24 (19.2)</b>	<b>125</b>
<b>Association of gender with depression</b> <b>P. value = 0.524</b>			
Male	61 (64.89)	33 (35.11)	94 (75.2)
Female	18 (58.06)	13 (41.94)	31 (24.8)
<b>Total</b>	<b>79 (63.2)</b>	<b>46 (36.8)</b>	<b>125</b>

Table 3

## Association of anxiety and depression with area of residence

Area of residence	Yes (%)	No (%)	Total
<b>Association of area of residence with anxiety</b> <b>P. value = 0.000</b>			
Rural	69 (92)	6 (8)	75 (60)
Urban	32 (64)	18 (36)	50 (40)
<b>Total</b>	<b>101 (80.8)</b>	<b>24 (19.2)</b>	<b>125</b>
<b>Association of area of residence with depression</b> <b>P. value = 0.190</b>			
Rural	51 (68)	24 (32)	75 (60)
Urban	28 (56)	22 (44)	50 (40)
<b>Total</b>	<b>79 (63.2)</b>	<b>46 (36.8)</b>	<b>125</b>

**DISCUSSION:**

The objective of present study was to assess the anxiety and depression among asthmatic patients. Mean age of the asthmatic patients was  $45.68 \pm 7.46$  years. In one study by Tafti et al mean age of the asthmatic patients was  $43.8 \pm 16.6$  years which is comparable with our study.<sup>13</sup>

Anxiety was noted in 101 (80.8%) patients and 24 (19.2%) patients were found without anxiety. Depression was found in 79 (63.2%) patient and 46 (36.8%) were found without depression. In one study, depression was noted in 65.4% patients which is in agreement with our study.<sup>13</sup> In another study depression was found in 66.7% patients which is also comparable with our findings.<sup>14</sup> Labo r et al reported frequency of anxiety and depression as 44.5%, 24.5% which is lower than that of our findings.<sup>15</sup>

There are some controversies regarding the prevalence of anxiety and depression in BA. Wang et al<sup>16</sup> reported that 70% of asthmatics have some degrees of anxiety and depression. Some other studies reported anxiety and depression six times more prevalent in asthmatic patients as compare to general population.<sup>17</sup> In a Canadian survey with psychiatric interview, anxiety was more prevalent in asthmatic patients than depression.<sup>18</sup>

Out of 125 asthmatic patients, male patients were 94 (75.2%) and female patients were 31 (24.8%). Anxiety was seen in 74 (78.72%) male patients and in 27 (87.1%) female patients. Insignificant association of gender with anxiety was noted with p value 0.432. Depressive symptoms was noticed in 61 (64.89%) male patients and 18 (58.06%) female patients. But statistically insignificant association between depression and gender was detected with p value 0.524. Similarly in study by Wilson et al, asthmatic males and asthmatic females had similar prevalence of anxiety and depression.<sup>19</sup> Conversely, in a study by Tafti et al,<sup>13</sup> significantly ( $P = 0.005$ ) more female asthmatics had depressive symptoms as compare to male asthmatic (70.2% versus 54.9%) and Nowobilski et al reported that asthmatic females experience higher degrees of somatic symptoms and anxiety than asthmatic males.<sup>20</sup>

**CONCLUSION:**

Results of present study showed a higher rates of anxiety and depression among asthmatics. Statistically insignificant association of gender with anxiety and depression was noted. It is also noted in this study that rural asthmatics has higher rate of anxiety and depression as compared to urban asthmatics.

**REFERENCES:**

1. Masoli M, Fabian D, Holt S, Beasley R, Global Initiative for Asthma (GINA) Program. The global burden of asthma: executive summary of the GINA Dissemination Committee Report. *Allergy*. 2004 May 1; 59(5):469–78.
2. Samaha HMS, Elsaid AR, Sabri Y. Depression, anxiety, distress and somatization in asthmatic patients. *Egyptian Journal of Chest Diseases and Tuberculosis*. 2015 Apr; 64(2):307–11.
3. Thoren CT, Petermann F. Reviewing asthma and anxiety. *Respiratory Medicine*. 2000 May 1; 94(5):409–15.
4. Scott KM, Von Korff M, Ormel J, Zhang M, Bruffaerts R, Alonso J, et al. Mental disorders among adults with asthma: results from the World Mental Health Survey. *General Hospital Psychiatry*. 2007 Mar 1; 29(2):123–33.
5. Moussas G, Tselebis, Karkanias A. A comparative study of anxiety and depression in patients with bronchial asthma, chronic obstructive pulmonary disease and tuberculosis in a general hospital of chest diseases. *Ann Gen Psychiatry*. 2008; 7:7.
6. Regier DA, Rae DS, Narrow WE. Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. *British Journal of Psychiatry*. 1998; Suppl 34: 24–28.
7. Rimington LD, Davies DH, Lowe D, Pearson MG. Relationship between anxiety, depression, and morbidity in adult asthma patients. *Thorax*. 2001;56: 266-271.
8. Marco FD, Verga M, Santus P, Giovannelli F, Busatto P, Neri M, et al. Close correlation between anxiety, depression, and asthma control. *Respiratory Medicine*. 2010; 104: 22-28.
9. Hill K, Geist R, Goldstein RS. Anxiety and depression in end-stage COPD. *Eur Respir J*. 2008; 31(3):667-77.
10. Ryu YJ, Eun-Mi C, Lee JH, Chang JH. Prevalence of depression and anxiety in outpatients with chronic airway lung disease. *Korean J Intern Med*. 2010; 25(1): 51–57.
11. Tafti SF, Safa M, Talischi F, Boroujerdi FG. Evaluation of anxiety and depression in patients with asthma at Massih Daneshvari Hospital, Tehran. *SL J Psychiatry*. 2013; 4(1):7-9.
12. Heaney LG, Conway E, Kelly C, Gamble J. Prevalence of psychiatric morbidity in a difficult asthma population: relationship to asthma outcome. *Respiratory Med*. 2005;99:1152-1159.
13. Tafti SF, Cheraghvandi A, Safa M, Eragh DF, Mokri B, Talischi F. Study of depressed mood and quality of life in asthma patients in Tehran using the 28-item general health questionnaire.

- East Mediterr Health J. 2011 Nov; 17(11):838–42.
14. Asnaashari AMH, Talaei A, Haghhigh B. Evaluation of psychological status in patients with asthma and COPD. *Iran J Allergy Asthma Immunol.* 2012 Mar; 11(1):65–71.
  15. Labor S, Labor M, Jurić I, Vuksić Z. The prevalence and pulmonary consequences of anxiety and depressive disorders in patients with asthma. *Coll Antropol.* 2012 Jun; 36(2):473–81.
  16. Wang G, Wang L, Szczepaniak WS, Xiong Z-Y, Wang L, Zhou T, et al. Psychological status in uncontrolled asthma is not related to airway hyper-responsiveness. *J Asthma.* 2010 Feb; 47(1):93–9.
  17. Goodwin RD, Jacobi F, Thefeld W. Mental disorders and asthma in the community. *Arch Gen Psychiatry* 2003; 60:1125-30.
  18. Lavoie KL, Bacon SL, Barone S, Cartier A, Ditto B, Labrecque M. What is worse for asthma control and quality of life: depressive disorders, anxiety disorders, or both? *Chest* 2006; 130(4):1039-47.
  19. Wilson DH, Appleton SL, Taylor AW, Tucker G, Ruffin RE, Wittert G, Hugo G, Goldney RD, Findlay C, Adams RJ. Depression and obesity in adults with asthma: multiple comorbidities and management issues. *Med J Aust.* 2010 Apr 5; 192(7):381-3.
  20. Nowobilski R, Furgał M, Polczyk R, de Barbaro B, Szczeklik A. Gender gap in psychogenic factors may affect perception of asthma symptoms. *J Investig Allergol Clin Immunol.* 2011; 21(3):193-8.