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Research Article

**A CROSS-SECTIONAL RESEARCH TO ESTIMATE
DEPRESSION AND ANXIETY AMONG BRONCHIAL ASTHMA
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Abstract:**Objective:** The objective of this research was to assess the depression and anxiety among bronchial asthma patients.**Research Methodology:** This cross-sectional research was carried out at Mayo Hospital, Lahore from July 2017 to February 2018 on a total of 125 patients of bronchial asthma. These patients were evaluated for depression and anxiety. We did not include any patient with hypertension and diabetes mellitus. Patients gave their informed consent before participation in research and ethical permission was also taken from the ethical review committee.**Results:** The total population included 125 cases who presented bronchial asthma. The patients were in the age bracket of (20 – 60) years with a mean age of (45.68 ± 7.46) years. In the total population 101 presented anxiety (80.8%) and 24 presented no signs of anxiety (19.2%); whereas, 79 presented depression (63.2%) and 46 did not present depression (36.8%). There was an insignificant association of gender with depression and anxiety (P-Value 0.524 Versus 0.432). There was a significant association between anxiety and residence (P-Value = 0.000); whereas, the insignificant correlation was reported between depression and residence (P-Value 0.190).**Conclusion:** The outcomes of this research present higher rates of depression and anxiety among the patients of asthma. There was a significant statistical relation to depression and gender. Higher levels of depression and anxiety were present in rural asthma patients than the urban population.**Keywords:** Asthma, Significant, Psychiatric Disorders, Anxiety, Chronic and Depression.**Corresponding author:****Dr. Rizwan Safdar,**

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INTRODUCTION:

Bronchial asthma is a repeated medical emergency which causes an increase in the healthcare expenditure, rate of mortality and morbidity [1]. Three hundred million individuals are affected due to bronchial asthma all over the world which increases mortality and morbidity along with socioeconomic burden [2]. Bronchial asthma features sudden and unexpected breath shortness attacks. These sudden asthmatic attacks present a threat to the life of the patients [3]. Moreover, psychological health is also severely affected causing a serious impact on the regular routine, social life and sleep pattern [4]. Various studies report about asthma that it has an association with the psychological states such as depression and anxiety. Asthmatic attacks also impair pulmonary functionality which also leads patients to respiratory distress [5 – 6].

Reduced life quality, productivity and intense fear are carried by the patients due to frequent hospital visits, dependency on others and associated psychological co-morbidities such as depression and anxiety in the patients of asthma [7 – 8]. Research works also document the association between psychogenic factors and asthma [7 – 8]. Anxiety refers to a danger apprehensive anticipation related to the increased dysphoria feeling because of the tension and illness; whereas, depression refers to a state in which patients feel discouraged, uninterested and sad [9, 10]. Prevalence of depression and anxiety among the patients of asthma is high because of dyspnea which causes non-compliance of the medications reduces effort intolerance and cholinergic bronchospasm [1]. The research reported 24% onset of asthma induced anxiety [11]. Comparative research reported the onset of depression from 40% to 80% in the UK [12]. The higher psychological comorbidities risks in asthma patients is a threat to the medication adherence and control of asthma [11]. The objective of this research was to assess the depression and anxiety among bronchial asthma patients. This effort will help to reduce the increased mortality and morbidity rates.

PATIENTS AND METHODS:

This cross-sectional research was carried out at Mayo Hospital, Lahore from July 2017 to February 2018 on a total of 125 patients of bronchial asthma. These patients were evaluated for depression and anxiety. We did not include any patient with hypertension and

diabetes mellitus. Patients gave their informed consent before participation in research and ethical permission was also taken from the ethical review committee. Depression and anxiety were evaluated through HADS (Hospital Anxiety and Depression Scale) with mild (Score 8 – 15), moderate (Score 16 – 20) and severe (Score more than 17) classifications. Educational status was taken such that primary and middle education were respectively illiterate and literate. Data was assessed on SPSS software. Numerical variables were presented in Mean and SD; whereas, categorical variables were presented in frequencies and percentages. Association was established through Chi-square test. Significant P-Value was ≤ 0.05 .

RESULTS:

The total population included 125 cases who presented bronchial asthma. The patients were in the age bracket of (20 – 60) years with a mean age of (45.68 ± 7.46) years. In the total population 101 presented anxiety (80.8%) and 24 presented no signs of anxiety (19.2%); whereas, 79 presented depression (63.2%) and 46 did not present depression (36.8%). In the total research population, there were 94 males (75.2%) and 31 females (24.8%). Anxiety was reported in 74 males (78.72%) and 27 females (87.1%). Depressive signs were reported in 61 male (64.89%) and 18 female (58.06%) patients. The rural representation was 60% (75 patients) and urban representation was 40% (50 patients). Depressive symptoms were reported among 51 rural patients (68%) and 28 urban patients (56%). There was an insignificant association of gender with depression and anxiety (P-Value 0.524 Versus 0.432). There was a significant association between anxiety and residence (P-Value = 0.000); whereas, the insignificant correlation was reported between depression and residence (P-Value 0.190). Detailed outcomes have been presented in the given tabular and graphical data.

Table – I: Comparison of Depression and Anxiety

Stat us	Anxiety		Depression	
	Numb er	Percenta ge	Numb er	Percenta ge
Yes	101	80.8	79	63.2
No	24	19.2	46	36.8

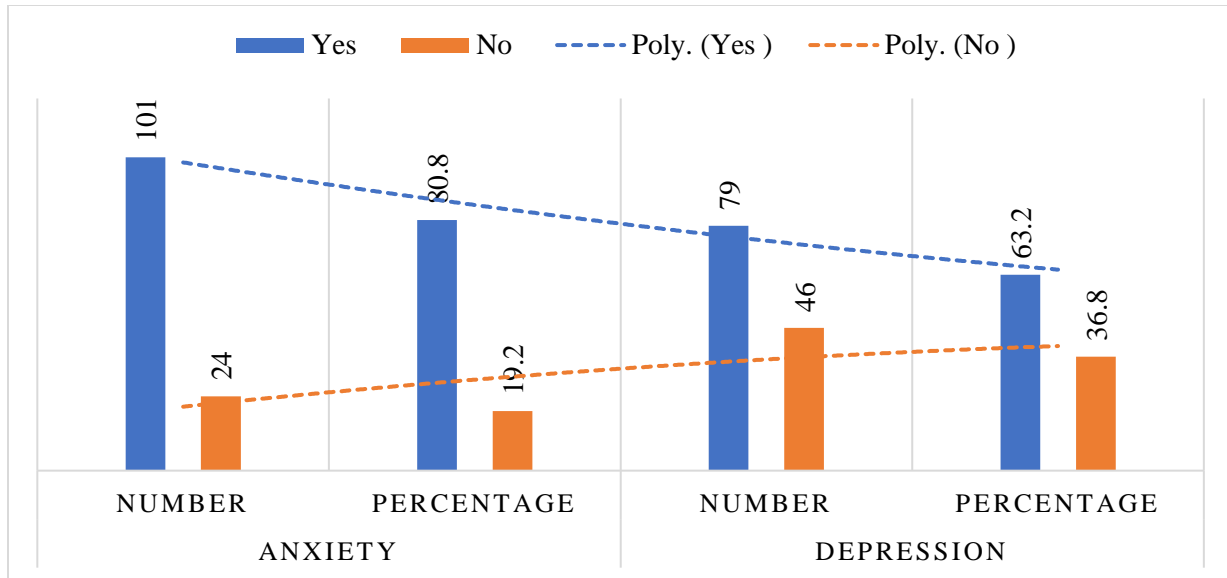


Table – II: Comparison of Depression and Anxiety among Males and Females

Gender		Yes		No		Total		P-Value
		No	%	No	%	No	%	
Anxiety	Male	74	78.72	20	21.28	94	75.2	0.432
	Female	27	87.1	4	12.9	31	24.8	
	Total	101	80.8	24	19.2	125	100	
Depression	Male	61	64.89	33	35.11	94	75.2	0.524
	Female	18	58.06	13	41.94	31	24.8	
	Total	79	63.2	46	36.8	125	100	

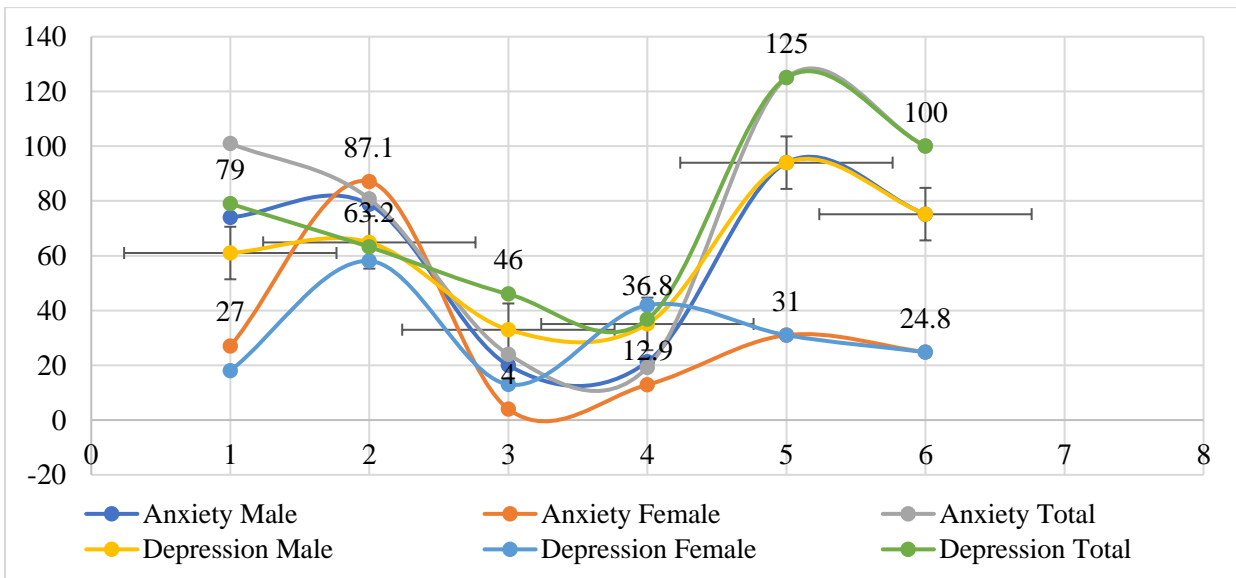
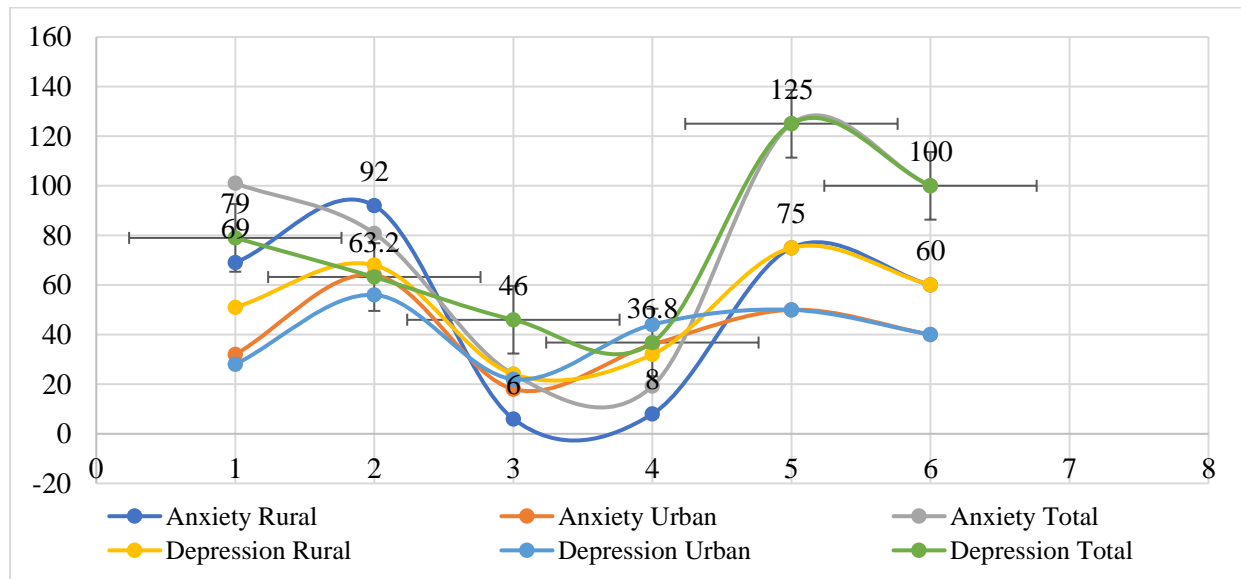


Table – III: Comparison of Depression and Anxiety with respect to Residence

Residence		Yes		No		Total		P-Value
		No	%	No	%	No	%	
Anxiety	Rural	69	92	6	8	75	60	0.000
	Urban	32	64	18	36	50	40	
	Total	101	80.8	24	19.2	125	100	
Depression	Rural	51	68	24	32	75	60	0.190
	Urban	28	56	22	44	50	40	
	Total	79	63.2	46	36.8	125	100	

**DISCUSSION:**

The objective of this research was to assess the depression and anxiety among bronchial asthma patients. The patients were in the age bracket of (20 – 60) years with a mean age of (45.68 ± 7.46) years. Tafti reported the mean age of (43.8 ± 16.6) years among asthmatic patients which is in agreement with our research [13]. In the total population 101 presented anxiety (80.8%) and 24 presented no signs of anxiety (19.2%); whereas, 79 presented depression (63.2%) and 46 did not present depression (36.8%). In two different research studies, similar outcomes were reported about depression that is 65.4% and 66.7% [13, 14]. According to Labor the occurrence of depression and anxiety was lower than our reported outcomes respectively 24.5% and 44.5% [15]. Controversies exist about depression and anxiety among bronchial asthma patients. Wang reported that seventy percent of the asthmatics pose depression and anxiety in different severity degrees [16]. Few of the authors also report six times higher incidence of depression and anxiety among asthmatic patients than

the general population [17]. A survey reported a higher prevalence of anxiety among asthmatic patients in comparison to depression [18].

In the total research population, there were 94 males (75.2%) and 31 females (24.8%). Anxiety was reported in 74 males (78.72%) and 27 females (87.1%). Depressive signs were reported in 61 male (64.89%) and 18 female (58.06%) patients. The rural representation was 60% (75 patients) and urban representation was 40% (50 patients). Out of 125 asthmatic patients, male patients were 94 (75.2%) and female patients were 31 (24.8%). Depressive symptoms were reported among 61 males (64.89%) and 18 female (58.06%) patients. The correlation between gender and depression was insignificant (P-Value 0.524). According to Wilson, both males and females were similarly affected by depression and anxiety [19]. Tafti reported more females (70.2%) in depressive state than males (54.9%) [13]. Nowobilski is of the view that higher somatic symptoms prevail among females than males suffering from asthma [20].

Depressive symptoms were reported among 51 rural patients (68%) and 28 urban patients (56%).

CONCLUSION:

The outcomes of this research present higher rates of depression and anxiety among the patients of asthma. There was a significant statistical relation to depression and gender. Higher levels of depression and anxiety were present in rural asthma patients than the urban population.

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