



ORIGINAL ARTICLE

Frequency of anxiety and depression among patients of pulmonary tuberculosis.

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ABSTRACT... Objective: To assess the frequency of Anxiety and Depression among patients of Pulmonary Tuberculosis. **Study Design:** Cross Sectional study. **Setting:** Tuberculosis Bacilli (TB) Hospital attached with Pir Syed Abdul Qadir Shah Jeelani Institute of Medical Sciences, GAMBAT, Kairpur Mirs, Sindh, Pakistan. **Period:** 1st August 2019 to 30th November 2019. **Material & Methods:** Patients of both gender between ages of 18 to 60 years, having diagnosis of Pulmonary Tuberculosis were enrolled. Anxiety and Depression were assessed through Hospital Anxiety and Depression Scale (HADS). The collected data was analyzed by Statistical Packages for Social Sciences (SPSS) version 22.0. **Results:** Majority 67(59.8%) were females, married 71 (63.4%), Sindhi speaking 108 (96.40%) educated till primary 81 (72.30%) and household by occupation 47 (42.00%). Frequency of Depression and Anxiety was 62 (55.4%) and 59 (52.7%) respectively. Statistically Anxiety and Depression were significantly associated with Pulmonary Tuberculosis regarding its diagnosis as first time, relapsed case or resistant case having p value of less than 0.05. **Conclusion:** It is concluded that Anxiety and Depression are highly prevalent among patients of Pulmonary Tuberculosis.

Key words: Anxiety, Depression, Pulmonary Tuberculosis.

INTRODUCTION

Tuberculosis (TB) is one of the 10 driving purposes behind death worldwide and the primary cause of mortality among infectious diseases. In 2016, there were 10.4 million new cases of TB worldwide.¹ Besides, enormous flare-ups of multidrug resistant tuberculosis (MDR-TB) have been seen in urban focuses among weak peoples (HIV-infected, people denied of freedom or in any case standardized, unlawful medication clients, exiles) and those with comorbid mental issues, diabetes mellitus, as well as smoking.² Depressive disorder and Anxiety disorders are typical mental issues influencing in excess of 300 million individuals of any age universally. It is the fundamental wellspring of insufficiency around the globe, and is a critical supporter of the overall load of infirmity. In the direst result comprehensible, misery can incite suicide and around 800,000 people die from suicide consistently; it is the ensuing driving explanation behind death in people developed 15 to 29 years.³ People

with tuberculosis (TB) are as often as possible experience the evil impacts of depression.^{4,5} The frequency of depression among TB patients was accounted for variable from various examinations which is in Nigeria (41.1%)⁶, Cameron (61.1%)⁷ and Pakistan (56%).⁸ There is developing enthusiasm among wellbeing experts in regards to the viability of tuberculosis treatment and mental co-morbidity especially anxiety and depression. A study coordinated in the district (Haripur) of Pakistan found 72% of TB patients had moderate to genuine level of depression and anxiety. Furthermore, there are certain psychological segments like poor money related condition, nonattendance of social assistance, reduced individual fulfillment due to TB finding related with the non-adherence of tuberculosis treatment. In any case, better administration of these elements can improve treatment adherence rate.⁹ Anxiety and depression are one of the components that can impact the consistence and prognosis of patient.¹⁰

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The objective of this study was to assess the frequency of Anxiety and Depression among patients of Pulmonary Tuberculosis so as such strategies' made to develop such liaison between chest physician and psychiatrists to reduce patients' sufferings and improve their quality of life.

MATERIAL & METHODS

A descriptive and cross sectional study carried out at Tuberculosis Bacilli (TB) Hospital attached with Pir Syed Abdul Qadir Shah Jeelani Institute of Medical sciences, GAMBAT, Kairpur mirs, Sindh, Pakistan, from 1st August 2019 to 30th November 2019. The sample size of the study was 112 calculated through standard sample size calculator. The sampling technique was convenient type. Permission was taken from Ethical Review Committee of the institute before start of study (PAQSJIMS/MC/172).

Informed consent was taken prior to enrollment. The clients were assured for their confidentiality and their right to withdraw anytime even without mentioning any reason. All the patients of both gender between ages of 18 to 60 years, having primary diagnosis of Pulmonary Tuberculosis whether first diagnosis, relapsed case or resistant cases were enrolled. The treatment duration of Pulmonary tuberculosis was taken as up to three months, more than three months but up to six months and more than six months. Those clients who were having multiple medical co-morbidities such as Diabetes, Hypertension, and Malignancy were excluded from study. Anxiety and Depression were assessed by Hospital Anxiety and Depression Scale (HADS). The HADS is a reliable instrument used in hospital settings for assessment of anxiety and depression. It has total 14 components, 7 for depression and 7 for anxiety, each scoring 21 for anxiety and depression. The score of more than 11 is considered yes for depression or anxiety and score of 11 or below is considered no for anxiety or depression. The collected data was analyzed by Statistical Packages for Social Sciences (SPSS) version 22.0. Frequencies of variables were noted and association of Anxiety and Depression was

carried out and chi square test was applied and p-value of less than 0.05 taken as significant.

RESULTS

Of the 112 participants 45(40.2%) were males and 67(59.8%) were females. Mostly participants were from Sindhi community 108 (96.40%) followed by 4 (03.60%) Urdu speaking. Amongst all 71 (63.4%) were married and 41 (36.4%) were single. Majority of patients were educated till primary 81 (72.30%) followed by middle 14 (12.50%) and matric 07 (6.30%), deeni taleem 06 (05.40%) and only 04 (3.60%) were educated till intermediate. Among 112 patients, 47 (42.00%) were household while 35 (31.30%) were doing some other profession for their livings, 14 (12.50%) were students followed by 09 (8.00%) doing professional work, 05 (4.50%) were jobless and 02 (1.80%) were shopkeepers as shown in Table-I.

Frequency of Depression and Anxiety was 62 (55.4%) and 59 (52.7%) respectively as shown in Table-II. Majority of cases were first time diagnoses as Pulmonary Tuberculosis as 86 (76.8%) followed by 21 (18.8%) relapsed cases and 5 (4.5%) were resistant cases. The majority of Pulmonary Tuberculosis patients were duration more than six months 72 (64.3%) followed by 30 (26.8%) were up to three months and only 10 (8.9%) were the cases up to six months duration as shown in Table-III. Statistically Anxiety and Depression were significantly associated with Pulmonary Tuberculosis regarding its diagnosis as first time, relapsed case or resistant case having p value of less than 0.05 as shown in Table-IV.

DISCUSSION

In this study the frequency of Depression and Anxiety as measured with Hospital Anxiety and Depression Scale was 62 (55.4%) and 59 (52.7%) respectively. It is higher as compared to previous study conducted in Pakistan during 2008¹¹ showing (46.3%) were depressed and 51 (47.2%) had anxiety, the relative difference could be timeline, methodology and previous study was multicenter and this study is carried out in rural population of Sindh, Pakistan. There has been a developing enthusiasm for mental co-morbidity

in physically sick patients and comprehension of its outcomes especially poor adherence. Nonetheless, to date there has been scarcity of clinical writing that has concentrated on co-morbid depression and ailment discernment in tuberculosis. The objective of current study was to look at the prevalence of depression and anxiety among patients of Pulmonary Tuberculosis. Frequency of depression (55.4%) and anxiety (52.7%) in these TB patients is further higher than effectively detailed mean predominance of anxiety and depression in Pakistan saw as around 34% (range 29–66% for female and 10–33% for men) in community based populace.¹² Though in our study the majority of population was females. In any case, the outcomes exhibit that raised depression and anxiety scores were related with an expansion in the quantity of TB duration and whether this was first diagnosis or relapsed case or resistant type of pulmonary tuberculosis. This is significant in light of the fact that these variables may add to poor consistence with TB medicine. A worldwide examination led at Ethiopia indicated the predominance of depression and anxiety among patients with TB were 43.4% and 41.5%¹³ separately which is low as thought about our own.

This investigation uncovered that the commonness of depression was 55.4%. The finding was higher than considers done in Nigeria 41.9%¹⁴, in Ibadan 45.5%¹⁵ and in Pakistan 46.3%.¹¹ This is likewise higher than study done in Nigeria 27%¹⁶ and Greece 9.93%¹⁷ and lower than the investigation was done in Kenya 61%¹⁸, in India 62%¹⁹ and 82%.²⁰ The variety may be because

of the distinction in study structure, information assortment device, test size and contrast in study members. The investigation indicated that the pervasiveness of uneasiness among TB patients was 52.7%.

Demographic Characteristics	n (%)
Gender	
Male	45(40.2)
Female	67(59.8)
Marital status	
Single	41 (36.60)
Married	71 (63.40)
Education status	
Deeni Taleem	06 (05.40)
Primary	81 (72.30)
Middle	14 (12.50)
Matric	07 (6.30)
Intermediate	04 (3.60)
Occupation status	
Student	14 (12.50)
Jobless	05 (4.50)
Household	47 (42.00)
Professional	09 (8.00)
Shopkeeper	02 (1.80)
Other Profession	35 (31.30)
Language	
Sindhi	108 (96.40)
Urdu	4 (03.60)

Table-I. Demographic characteristics

Depression / Anxiety	Yes	No	Total
Depression	62 (55.4%)	50 (44.6%)	112 (100%)
Anxiety	59 (52.7%)	53 (47.3%)	112 (100%)

Table-II. Frequency of anxiety and depression among patients of pulmonary tuberculosis

Pulmonary Tuberculosis	Frequency %	Treatment Duration	Frequency %
First Diagnosis	86 (76.8%)	Up to three months	30 (26.8%)
Relapse	21 (18.8%)	Up to six months	10 (8.9%)
Resistant	5 (4.5%)	More than six months	72 (64.3%)
Total	112 (100%)	Total	112 (100%)

Table-III. Pulmonary tuberculosis, diagnosis and treatment duration.

Pulmonary Tuberculosis	Anxiety Disorder		P-Value	Depressive Disorder		P-Value
	Yes	No		Yes	No	
First Diagnosis	38 (44.2%)	48 (55.8%)	0.003	42 (48.8%)	44 (51.2%)	0.021
Relapse	16 (76.2%)	5 (23.8%)		15 (71.4%)	6 (28.6%)	
Resistant	5 (100.0%)	0 (0.0%)		0 (0%)	5 (100%)	
Total	59 (52.7%)	53 (47.3%)		62 (55.4%)	50 (44.6%)	

Table-IV. Association of anxiety and depression with pulmonary tuberculosis

The discoveries are higher than the investigation directed in Pakistan 46.2%¹¹ and in Greece 40.67%¹⁷ however lower than the examination led in Romania 72.88%.²¹ The variety may be because of the distinction in information assortment apparatus which was STAI scale, may over gauge tension indications among TB patients in Romania and here we estimated uneasiness and sorrow on HADS score. Previous studies reported that the prevalence of depression in patients with pulmonary tuberculosis (ranging from 13.5 to 72%)²² was higher than that in the general population and same is reported by our study. There are some other studies who has determined that the prevalence of depression among patients with TB ranged from 16.8% in the Philippines to 80% among hospitalized patients in Pakistan.²³ Contrasted and the commonness of depression noted among patients tried out in past investigations, the pervasiveness of plausible depression noted among the PTB patients took a crack at the current examination was generally low as contrasted and a few and high in correlation with others.

CONCLUSION

The findings in this study conclude that Anxiety and Depression are highly prevalent among patients of Pulmonary Tuberculosis.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Muhammad Ilyas Jat	Research idea, Discussion writing, Writing and editing of manuscript.	
2	Anoop Kumar Juseja	Data collection, Data analysis, Results writing, Discussion writing.	