



**“TO ESTIMATE THE PREVALENCE OF DEPRESSION IN TUBERCULAR PATIENTS”:  
A DESCRIPTIVE STUDY**

**Qazi Faizanul Haque, Suman Khangarot, Roshni Mary Prince and Ramdhan Somani**

Dept. of Respiratory Medicine, Govt. Medical College, Kota

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**ABSTRACT**

**Background:** TB and mental illness often co-exist and though causality has not been established, mental illness has found to be significantly affect the outcome.

**Objective:** To study the prevalence of depression and their causes in tubercular patients who are on treatment.

**Materials and methods:** A cross sectional descriptive study was conducted in the tubercular ward of government medical college Kota using Beck's structured inventory(in Hindi) and patients were categorized into groups based on severity of disease. Probable causes of depression were asked for and diagnosis was made as per diagnostic and statistical manual of mental disorders V (DSM-V)

**Results:** The prevalence of depression in tubercular patients was found to be 72% with a male predominance. Among them, 32% patients had severe depression and 26.6% had moderate depression. Altered social relationship and TB stigma contributes maximally to the occurrence of depression followed by long duration of treatment.

**Conclusion:** TB treatment strategies should consider screening and managing the psychologically distressed individuals among TB patients and rehabilitating them for better compliance and outcomes.

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**INTRODUCTION**

Tuberculosis is a chronic and debilitating disease with significant physical and psychological morbidity. Globally, it is responsible for more than three million deaths each year and one of the leading causes of mortality worldwide.<sup>(1)</sup> The WHO Global Tuberculosis Report 2020 describes TB as “a disease of poverty, economic distress, vulnerability and marginalisation”.<sup>(2)</sup> The social and psychological impact on tubercular patients due to the social reproach and discrimination they face due to the disease contribute negatively to quality of life and disease outcome. It is the need of the hour to include psychological rehabilitation in treatment of TB and hence being watchful for the signs and symptoms of mental disorders is necessary.

The Becks depression inventory is developed by Aron Beck to measure the severity of depression. BDI is a self- rated scale in which individual rate their own symptoms of depression. it is a 0-21 item scale which evaluate key symptoms of depression including mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal ideas, crying, irritability, social withdrawal, indecisiveness, body image change, work difficulty, insomnia, fatigability, loss of appetite, weight loss, somatic pre occupation and loss of libido. In this study Hindi version by Lat et al (1974) is used. Total score is the sum of all the items.

BDI Score level of depression:

- 0-13 minimal depressive symptoms
- 14-19 mild depression
- 20-28 moderate depression
- 29 -63 severe depression

**MATERIALS AND METHODS**

Across sectional study was conducted in the tubercular ward of government medical college Kota to study the prevalence of depression in Tubercular patients. A total of 75 patients were included in the study and drug resistant tubercular patients were excluded. Beck's structured inventory (in Hindi) comprising of 21 questions was used to assess the symptoms and was filled during a face to face interview with the patient. Diagnosis was made as per Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V)

**Exclusion criteria**

1. Multi/extensively drug resistant TB
2. Patients already diagnosed with psychiatric diseases
3. Age less than 18 years
4. Patient who are on re- treatment
5. Patient who are intellectually disabled or has difficulty to communicate
6. Patients who didn't give consent

\*Corresponding author: **Ramdhan Somani**

Dept. of Respiratory Medicine, Govt. Medical College, Kota

**Inclusion criteria:** All tubercular patients above the age of 18 years and have given consent with no documentation of drug resistance or psychiatric illness were included in the study.

The scores were added up after interview and patients were categorised as per severity of depression. The common stressors were identified from literature and were probed for during the interview. Microsoft excel was used for data analysis. Frequency and percentage were used to depict categorical data. Ethical clearance was obtained from the institutional ethical committee and verbal consent was taken from patients.

**RESULTS**

Among the 75 study subjects, 46 were male and 29 were female out of which 54 patients developed depression which accounts for 72.1%. The gender wise distribution of severity of depression has been summarised in table 1 which shows a male predominance of the disease with 32.6% males and 31.03 % females having severe depression.

Age wise distribution of depressed patients in this study showed predominance of depression in young patients of the age group of 18-40. The age wise distribution of depressed patients in the study has been summarised in figure 2.

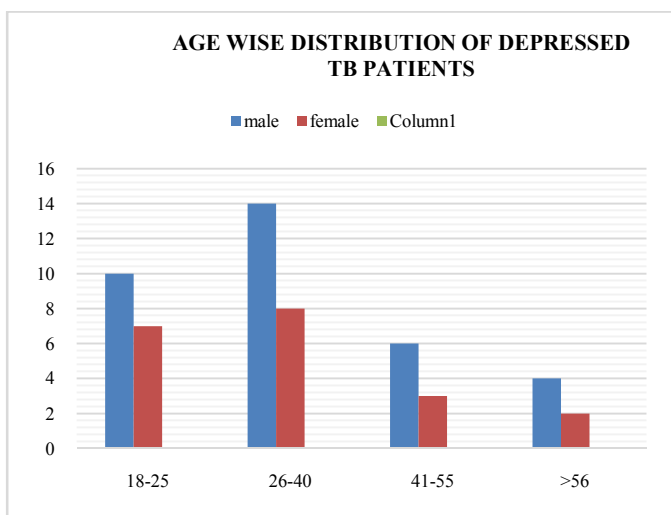


Figure 1

The causes for depression in both the genders were analysed and it was observed that altered social relationship and TB stigma contributes maximally to the occurrence of depression followed by long duration of the treatment. The other causes that were looked into includes economic condition and hospital environment and the results are summarised in table2.

Table 2 causes of depression in TB patients

	Hospital environment	Economic condition	Altered social relationship	TB stigma	Long duration of treatment	total
Male	2	6	13	5	8	34
Female	1	2	3	9	5	20
total	3	8	16	14	13	54

**DISCUSSION**

Sulehri et al<sup>(3)</sup> in their study in 2010 observed high prevalence of depression among tubercular patients due to multiple reasons with a male predominance to which our study was in agreement. The study prevalence estimates are consistent with multiple studies conducted in Cameroon, South Africa, Pakistan and India which ranges from 51.9 to 84%. Amy

Hyman et al in their meta-analysis reviewed 31 prevalence articles related to mental disorders in TB patients and came to the conclusion that 46-72% of TB patients experience depression and anxiety<sup>(4)</sup>.

Male preponderance might be due to the forced change in life style due to communicability, patriarchal mindset of our society forcing males to provide as breadwinners which is affected due to isolation post diagnosis. They have to bear more economic burden and stress of excessive responsibilities of their families.

It was observed in our study that maximum patients irrespective of gender had severe depression in accordance with the results obtained in multiple studies conducted. Some studies showed moderate depression in majority tuberculosis patients which can be explained by the use of different scoring and indices used in different studies.

It was observed that altered social relationships, stigma and long duration of treatment was the three most leading causes of depression in TB. Aghamwa et al<sup>(5)</sup>, Deribew et al<sup>(6)</sup>, Vega et al<sup>(7)</sup>, Westaway & Wolmarans highlighted that poverty and stigma play huge role in depression and anxiety in TB. Deribew found a low self-image and social isolation among these patients which would have led to common mental disorders.

Natani et al<sup>(9)</sup> in 1985 found in their study conducted in Jaipur that almost half met the criteria for depression (49%), citing similar social concerns as illiteracy, low socio-economic status, and attitudes towards TB as the major contributing factor. This significant difference in prevalence can be due to difference in baseline depressive characters in study subjects now compared to the time period when the study was carried out along with life style differences. Rouf et al<sup>(10)</sup> came to a conclusion in their study that depression during initiation of treatment is associated with more default and poor outcome in tuberculosis patients.

**CONCLUSION**

We came to the conclusion that incidence of depression is high in tubercular patients as in any other chronic disease. We found various factors like economic burden, stigmatisation and long duration of treatment as contributing factors. Though policies are in place to cover the financial and physical concerns of the patients, less efforts are put into addressing the psychological impact this disease has on patients. TB treatment strategies should consider screening and managing the psychologically distressed individuals among TB patients and rehabilitating them for better compliance and outcomes.

**Declaration of Conflict of Interest:** None

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