

Original article:

Study of estimation of prevalence of mental health disorders with special reference to anxiety and depression in tuberculosis patients using Global Mental Health Assessment Tool Primary care version

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Abstract :

Introduction: Psychiatric disorders occur very frequently in the medically ill patients. In hospitalized patients it occurs still more frequently. Mood disorders, anxiety disorders, delirium, dementia and substance abuse are the most common psychiatric disorders.

Methodology: Study was conducted in Wardha district. Wardha district has 8 Rural hospitals, 27 Primary Health centres and 2 medical colleges. It has 232 Dots centres, 17 Designated microscopy centre (DMC). There are three tuberculosis units in Wardha district Wardha, Arvi and Hinganghat. The population of Wardha district is 13,13, 093 (census 2011), the total number of patients registered and undergoing treatment under RNTCP Wardha in 2011 was 1338

Results: In the present study proportion of depression patients was highest i.e. 16(40%) among patients who belonged to class III socio-economic-status followed by class IV i.e. 79(35.42%) and class II i.e. 1(25%). The difference was not statistically significant. In the study group there are 48 illiterates, among them 14 (29.16 %) have depression. 103 have studied upto primary/middle school, among them 46 (44.66 %) have depression. 107 have studied upto High school /Secondary school among them 34 (31.77 %) have depression, 9 have studied upto Degree/Pg/honors among them 2 (22.22 %) have depression. The difference was not statistically significant.

Conclusion: It was observed that, the frequency of psychiatric morbidity in tuberculosis patients was 69.28% among them 51.89% patients were with depressive disorders, 37.29% with anxiety disorders, 8.10% had Alcohol abuse, had 1.08% Stress, 1.08% had Hypochondriasis and 0.5% had Obsessive compulsive disorder.

Introduction:

Psychiatric disorders occur very frequently in the medically ill patients. In hospitalized patients it occurs still more frequently. Mood disorders, anxiety disorders, delirium, dementia and substance abuse are the most common psychiatric disorders. These are seen more frequently in chronic medical illnesses like HIV, Cancer, Diabetes Mellitus and Pulmonary Tuberculosis. Consequently patients in general hospitals have the highest rate of psychiatric disorders compared with community residents. Hospitalized medically ill patients have major depression and anxiety 2-3 times more often and somatisation disorder 10 times more often than medically ill patients treated as out-patients.¹

The reasons for the frequent occurrence of these disorders could be many. Some represent reactions to stresses of illness and treatment, while others are a direct physiological consequence of the illness or complications of treatments (INH induced psychosis)¹. Psychiatric disorders may be coincident with, but etiologically unrelated to a medical disorder. Still, each complicates the diagnosis and management of the other. The course of the medical illness can alter because of comorbidity. It is often difficult to determine if the vegetative symptoms of depression or somatic symptoms of anxiety are evidence of the psychiatric disorder, a symptoms of medical illness, and or both. Physical illness can mimic psychiatric disorders, and some psychopathology present as a resemblance of medical illness. (e.g., somatoform disorders)² There are also frequent psychophysiological (Psychosomatic) inter relationship between disorders. For example, Depression and coronary disease commonly occur together and each appears to be a risk factor for the development of, or aggrevation of the other. Another reason for common medical, psychiatric comorbidity is that there are a number of commonly shared risk factors for the development of a variety of psychiatric and medical disorders (eg. smoking, low socio economic status) The higher concentration of patients with psychiatric disorders in medical settings provides a critical opportunity to intervene in patients, who might otherwise go undiagnosed and untreated.²

Methodology:

Study design : Cross sectional study

Study settings : Study was conducted in Wardha district. Wardha district has 8 Rural hospitals, 27 Primary Health centres and 2 medical colleges. It has 232 Dots centres, 17 Designated microscopy centre (DMC).There are three tuberculosis units in Wardha district Wardha, Arvi and Hinganghat. The population of Wardha district is 13,13, 093 (census 2011), the total number of patients registered and undergoing treatment under RNTCP Wardha in 2011 was 1338

Study period : Two years

Participants : Both new and retreatment tuberculosis patients and put on treatment under RNTCP from Wardha District. Including both patients in Intensive phase and continuation phase

Inclusion criteria : All tuberculosis patient (including TB+HIV, TB+DM and MDR TB) over 15 years of age registered under RNTCP for treatment will be included in the study

Exclusion criteria : Critically ill tuberculosis patients and children less than 15 years of age were excluded from the study. Tuberculosis patients with the history of mental health disorder / psychiatric disorder / currently on any psychiatric medications were excluded as well. Patients who do not give consent were not considered for the study

Data was collected from the selected patient by giving a home visit. Written informed consent was obtained for the data collection. The GMHAT/PC tool was administered.

Results:

There are 105 (39.33%) patients between 15 – 30 yrs. 97(36.33%) patients between 31 – 45 yr, 44(16.48%) patients, between 46 – 60 yrs, 21(7.87%) patients above 61 yrs.

Table 1: Distribution of study group according to socio economic status according to modified Kuppuswamy in Urban area and BG Prasad for Rural area

Socio economic status	Urban		Rural	
	Frequency	Percent	Frequency	Percent
II	3	1.62%	1	1.22%
III	21	11.35%	19	23.17%
IV	161	87.03%	62	75.61%
Total	185	100.00%	82	100.00%

Among urban patients 161(87.03%) belongs to IV class, 21(11.35%) patients belongs to class III and 3 (1.62%) patients belongs to class II. Among rural patients 62 (75.61%) belongs to IV class, 19 (23.17%) patients belongs to class III and 1 (1.22%) patient belongs to class II.

Table 2: Distribution of study group according to domicile

Domicile	Frequency	Percent
Urban	185	69.28%
Rural	82	30.71%
Total	267	100%

Among the study group 185(69.28%) patients are from urban areas and 82(30.71%) are from a rural background.

Table 3: Distribution of study group according to education

Education		Frequency	Percent
Illiterate		48	17.98%
Literate	Primary /Middle school	103	38.58%
	High school /Secondary	108	40.07%
	Degree/Pg/honors	9	3.37%
Total		267	100%

There are 48 (17.98%) illiterates, 103 (38.58%) with primary education/ middle school, 108 (40.07%) with High school /Secondary education, 9 (3.37%) completed Degree/Pg/honors. Majority of patients have studied up to High school /Secondary school.

Table 4: Distribution of study group according to age group v/s depressive disorder

Age	Present	Absent	Total
15 - 30	30 (28.57 %)	75(71.42%)	105(100%)
31 - 45	39 (40.20 %)	58(59.79%)	97(100%)
46 - 60	22 (50 %)	22(50%)	44(100%)
≥61	5 (23.80 %)	16(76.19%)	21(100%)
Total	96 (35.95 %)	171(64.04%)	267(100%)

(Figures in parenthesis indicate horizontal percentages), $\chi^2 = 8.3616$, df 3, p = 0.0391

Age group of 46 – 60 years had maximum patients with depression i.e.22 (50 %), followed by 31 – 45 years with 39 (40.20 %), 15 – 30 years with 30 (28.57 %) patients and ≥61 had 5 (23.80 %) patients with depression. The p value of 0.0391 in overall group statistics, is significant.

Table 5: Distribution of study group according to Socio economic status v/s depressive disorder

Socio economic status	Present	Absent	Total
II	1(25%)	3(75%)	4(100%)
III	16(40%)	24(60%)	40(100%)
IV	79(35.42%)	144(64.57%)	223(100%)
Total	96(35.95%)	171(64.04%)	267(100%)

(Figures in parenthesis indicate horizontal percentages), $\chi^2 0.51$, df 2, p = 0.7

Discussion:

In the present study proportion of depression patients was highest i.e. 16(40%) among patients who belonged to class III socio-economic-status followed by class IV i.e. 79(35.42%) and class II i.e. 1(25%). The difference was not statistically significant. In the study group there are 48 illiterates, among them 14 (29.16 %) have depression. 103 have studied upto primary/middle school, among them 46 (44.66 %) have depression. 107 have studied upto High school /Secondary school among them 34 (31.77 %) have depression, 9 have studied upto Degree/Pg/honors among them 2 (22.22 %) have depression. The difference was not statistically significant. It was observed that the proportion of depression patients was maximum i.e. 69 (51.11 %) among un skilled /semiskilled workers and was least i.e. 14 (15.38 %) among housewife/ unemployed. This difference was statistically significant. The present study shows psychiatric morbidity in tuberculosis patients from Wardha district. It also shows the relationship between socio demographic variable like age, sex, marital status, domicile, education, religion, occupation, socio economic status and clinical variables like duration of illness and type of treatment of tuberculosis.

In the present study 165 (61.79%) patients, with tuberculosis have psychiatric disorders as comorbidity. Among 51.89% patients were with depressive disorders, 37.29% with anxiety disorders, 8.10% had Alcohol abuse, had 1.08% Stress, 1.08% had Hypochondriasis and 0.5% had Obsessive compulsive disorder.

Bhatia³ found 78% psychiatric disorders; commonest being mixed anxiety and depressive disorders. **Manoharam**⁴ found 17.3% psychiatric disorders in pulmonary tuberculosis patients. Depression was the common diagnosis. There were more number of males, majority were at the age of 40 years, married, widows, illiterates and those having financial problems had more depressive disorders.

Bhatia³ found (18.4%) psychiatric morbidity among medical patients, neurosis (44.6%); affective psychosis 8.5%. **Silverstone**⁵⁵ found 27.2% had psychiatric disorders; among them depressive disorders were seen in 16 patients, 18 patients had anxiety disorder and 17 patients had alcohol dependence. **Sriram**⁵ found 31% had simultaneous medical illness and psychiatric illness. The possible reasons for high psychiatric morbidity in this study is patients taken from inpatient department and sampling bias (Purposing sampling).

In the present study it is noted that as age progresses proportion of mental illness increases, age 46 – 60 years has 33.5 times more chance of mental illness. Depressive disorders in different age groups are compared. Age group of 46 – 60 years had maximum patients with depression i.e.22 (50 %)and the statistical value is significant, which is comparable to **Issa**⁶, **Sriram**⁵ in which psychiatric disorders among medical outpatients showed high morbidity in 26 – 35 years of age group and in those above 55 years, where depression was more common in 46-55 years 82%, **Bhatia**⁴⁶ found those in the age group of 25-30 yrs (38%) had more illness. It differs from the study by **Manoharam**³.

In the present study higher proportion of psychiatric disorders was seen in higher socio economic status SES III & SES II. Depressive disorders in different socio economic groups were studied and it was not significant. But more depressive disorders in tuberculosis was seen in III socio economic status followed by class IV socio economic status. It may be because of financial burden acting as a psychological stress. As such tuberculosis can cause physical strain and patients cannot perform their occupation effectively leading to economic crisis.

In this study anxiety disorders in different socio economic groups were studied, proportion of anxiety patients was highest i.e. 2(50 %) among patients who belonged to class II socio-economic-status followed by class III i.e. 14 (35%), statistically it was not significant.

In this study depressive disorders in patients with different educational levels were studied and it was found that maximum patients with depression were seen in patients who studied upto primary/middle school 46 (44.66 %). The statistical value of difference between the groups was not significant. It is comparable with studies by **Swarn Lata Panchal⁷ who found that maximum** prevalence .

In this study anxiety disorders in different educational groups are studied and it is not statistically significant. Anxiety disorders are more in primary educated group and in the illiterates. The probable reason being the lesser educated people might still be having stigma about tuberculosis and perceiving tuberculosis as curse by God, feeling of being separated from the family members and fear of spreading the illness to others.

Conclusion:

It was observed that, the frequency of psychiatric morbidity in tuberculosis patients was 69.28% among them 51.89% patients were with depressive disorders, 37.29% with anxiety disorders, 8.10% had Alcohol abuse, had 1.08% Stress, 1.08% had Hypochondriasis and 0.5% had Obsessive compulsive disorder.

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