



# Assessing the Impact of TB-Related Stigma on Self-Esteem and Social Well-Being: A cross-sectional study among Tuberculosis Patients

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## ABSTRACT

**Background:** Tuberculosis (TB) is an international public health problem with serious social and psychological consequences. TB stigma leads to social isolation, emotional distress, and lower self-esteem among patients, affecting their treatment compliance and quality of life.

**Objective:** To explore the association between TB-related stigma and self-esteem, particularly its effects on patients' psychological adjustment and social interactions.

**Methodology:** A cross-sectional survey among 330 TB patients was done using standardized scales to measure stigma and self-esteem. Comparative analysis was done on the basis of demographic characteristics, and qualitative interviews gave deeper insights into patient experiences.

**Results:** The results of our study show moderate to high level of perceived stigma (mean = 3.8, SD = 0.9) and low self-esteem (mean = 17.2, SD = 4.5). Unemployment and female gender were associated with increased stigma and decreased self-esteem scores, supporting the association between socioeconomic circumstances and mental distress. Comparative analysis with international research verifies that stigma plays an important role in influencing TB patients' mental health and treatment compliance.

**Conclusion:** Stigma of Tuberculosis has been a huge hindrance to the treatment of such a population with vulnerability. Alongside with public health education and other intervention initiatives, it is extremely crucial to ensure psychosocial support for improving the self-esteem of the patients and compliance with such lengthy treatment.

**Keywords:** Tuberculosis; Stigma; Self-Esteem; Mental Health; Treatment Adherence

## Introduction

**T**uberculosis (TB) is among the most widespread infectious disorders globally, infecting millions of people annually.<sup>1</sup> Even with strong medical progress in its diagnosis and prevention, TB remains a primary public issue, especially in poor countries. In addition to its medical symptoms, TB carries deep social and psychological consequences, and stigma is a pivotal concern that impacts patients at both individual and societal levels. The stigma of TB is sustained by deep-rooted myths, fear of infection, and its link with poverty, malnourishment, and social exclusion. The resulting stigma has negative impacts on the self-esteem and mental well-being of TB patients, frequently resulting in social isolation, depression, and poor treatment compliance.<sup>2</sup>

Stigma is a multifaceted social phenomenon that exists in different forms, ranging from public stigma to self-stigma and structural stigma.<sup>3</sup> Public stigma refers to the negative stereotypes and attitudes of society that develop about the individuals with TB, often resulting in discriminatory behavior in workplaces, schools, and even families. Self-stigma is when TB patients internalize these negative attitudes and develop feelings of shame, embarrassment, and self-doubt. Structural stigma, conversely, is built into policies and institutional behaviors that perpetuate discrimination against TB patients, like restrictions on employment, poor healthcare policies, and social isolation.<sup>4</sup> These various types of stigma contribute to a hostile environment that makes it challenging for patients to access medical treatment, continue treatment regimens, and return to society after their recovery.

Self-esteem is a significant psychological determinant that affects the emotional resilience, confidence, and well-being of an individual.<sup>5</sup> In the case of TB patients, the disease comes with a stigma that can easily impact self-esteem, which in turn results in lowered self-worth and belonging. Most TB patients have reported social rejection, avoidance by family and friends, and social discrimination in communities, all contributing to helplessness and social isolation. The psychological weight of being considered "infectious" or "unclean" is tremendous and leads to many patients to avoid social contact and staying away from seeking treatment due to fear of judgment.

Low self-esteem among TB patients is usually also coupled with emotional distress, such as anxiety, depression, and hopelessness.<sup>6</sup> Patients internalizing stigma can develop a negative self-concept in that they feel they are burdens to their families and communities. This can have critical impacts on treatment compliance, as the person with low self-esteem might be less likely to comply with the long process of TB treatment, which can take a number of months.<sup>7</sup> In the worst situation, patients can even stop taking their drugs early, resulting in drug-

resistant TB strains and poor health outcomes.

The extent of stigma related to TB differs across societies and cultures. TB in certain areas has a strong correlation with poverty and social marginalization, thus exposing those from lower socioeconomic groups to discrimination. In other cultures, TB is seen as a reflection of individual failure or immorality and thus contributes to further stigma.<sup>8</sup> Gender is also implicated in TB stigma, with women experiencing higher social costs than men when they are diagnosed with TB.<sup>9</sup> Women with TB in certain communities can be considered inappropriate for marriage, discarded by their families, or excluded from job opportunities.

Strategies to counteract TB stigma and foster patients' self-esteem need to be multi-pronged, engaging healthcare providers, policymakers, community leaders, and the media. Public health campaigns that raise community awareness about the real facts of TB, its spread, and the success of treatment can challenge stigma and foster supportive behaviors toward patients. Supplying accurate information via schools, workplaces, and social media can challenge myths and foster empathy and understanding.

Healthcare professionals are key in mitigating stigma through providing sensitive and non-judgmental treatment to TB patients. Empathy-based communication and education of the patient regarding the disease may enhance their trust and adherence to treatment. Furthermore, incorporating mental health care into TB treatment programs may assist the patient in dealing with the psychological impacts of stigma and resilience building. Counseling, peer support groups, and psychosocial interventions can empower TB patients to get their confidence back and overcome their feelings of shame and isolation.

## Objective

To examine the correlation between self-esteem and TB-related stigma, emphasizing its effects on patients' psychological status and social behaviors.

## Methodology

A cross-sectional survey of a sample of 330 patients with tuberculosis drawn from healthcare centers and treatment clinics through stratified random sampling to represent various demographic and socioeconomic strata. The level of stigma and self-esteem was assessed using structured questionnaires that included standardized scales. The Berger Stigma Scale or Tuberculosis Stigma Scale was used to measure perceived stigma, whereas the Rosenberg Self-Esteem Scale was utilized for determining the level of self-esteem. There were also added survey questions that were used to obtain demographic information such as age, gender, education,

Table 1. Demographic and Clinical Characteristics of Participants

Characteristic	Frequency (n=330)	Percentage (%)
<b>Gender</b>		
Male	180	54.5
Female	150	45.5
<b>Age Group (years)</b>		
18-30	110	33.3
31-45	140	42.4
46 and above	80	24.3
<b>Employment Status</b>		
Employed	130	39.4
Unemployed	200	60.6
<b>Treatment Adherence</b>		
Adherent	250	75.8
Non-Adherent	80	24.2

employment, and treatment compliance.

To have a better understanding of the numbers, we incorporated qualitative part in our study. We conducted interviews from 30 to 40 patients of tuberculosis, deliberately bringing diversities in experience and background. From these interviews, the researcher investigated how patients were influenced by stigma and emotional tension, the coping mechanisms of dealing with the disease, and how it influenced their self-concept and related to others. Group discussions with community members and health workers were also done as part of acquiring the knowledge of how society views and treats a person with tuberculosis. All the interviews were recorded and transcribed and later analyzed to determine patterns and themes that were similar.

Ethical considerations were prioritized throughout the study. Participants provided informed consent, ensuring they understood the purpose of the research, their voluntary participation, and their right to withdraw at any time. Confidentiality was strictly maintained, with all personal identifiers removed from reports and publications. Ethical approval was obtained from the Institutional Review Board and relevant health authorities before initiating data collection.

## Results

A total of 330 patients were included in this study. Male were more in number (54.5%) and majority of study cases (42.4%) were from age group 31 to 45 years (Table 1).

Stigma was assessed using the Tuberculosis Stigma Scale, and self-esteem was measured using the Rosenberg Self-Esteem Scale. The mean stigma score was 3.8 (SD = 0.9) on a 5-point scale, indicating a moderate to high perception of stigma. The mean self-esteem score was 17.2 (SD = 4.5), suggesting relatively low self-esteem among TB patients (Table 2).

Further analysis using t-tests showed that stigma scores were significantly higher among unemployed participants ( $p < 0.05$ ) and those with lower education levels ( $p < 0.01$ ). Similarly, self-esteem was significantly lower among female participants ( $p < 0.05$ ) and those in the lower socioeconomic strata (Table 3).

## Discussion

The discussion of this study highlights the significant impact of stigma on the self-esteem and psychological

Table 2. Stigma and Self-Esteem Scores Among TB Patients

Variable	Mean	SD	Range
Stigma Score	3.8	0.9	1-5
Self-Esteem Score	17.2	4.5	0-30

well-being of tuberculosis (TB) patients. Stigma, whether public, self-imposed, or structural, creates substantial barriers to effective TB management by discouraging individuals from seeking timely medical care, adhering to treatment, and reintegrating into society. The results demonstrate a direct correlation between high stigma perception and low self-esteem, confirming that social discrimination exacerbates emotional distress and reduces patients' confidence in their recovery journey. The relationship between stigma and self-esteem in TB patients has been extensively studied, revealing consistent patterns across different regions. Stigma, whether public, self-imposed, or structural, significantly affects treatment adherence and mental health. The current study found that the mean stigma score was 3.8 (SD = 0.9) on a 5-point scale, indicating a moderate to high perception of stigma. The mean self-esteem score was 17.2 (SD = 4.5), suggesting relatively low self-esteem among TB patients. These findings align with a study conducted in Northeast China, where 56% of TB patients reported experiencing moderate to severe stigma.<sup>6</sup> This stigma was related to higher anxiety (42%) and depression levels (38%), as seen with the psychological distress in the present study. The research also identified that patients who reported high social support had 30% greater self-esteem scores, highlighting the significance of external motivation in lowering stigma.<sup>10</sup> Correspondingly, a study in Zambia found that 68% of TB

patients were socially excluded as a result of stigma and 45% had low self-esteem. The research highlighted the gender differences, as 70% of women with TB experienced stigma-related issues compared to 60% of men.<sup>11</sup> This is reflective of the present study, in which female respondents yielded a higher stigma score (4.1) than male patients (3.5) and lower self-esteem scores (16.0 vs. 18.4,  $p < 0.05$ ). The Zambian study also highlighted that 40% of non-adherent TB patients blamed poor treatment compliance on stigma. A Dalian, China, study revealed that 50% of TB patients experienced stigma, of which 40% isolated themselves from society and 30% hid their TB status out of fear of discrimination. The research further showed that patients with high social support were 25% more likely to be treatment adherent.<sup>6</sup> This is consistent with this current study's result, where 75.8% of the TB patients who were treatment adherent had lower levels of stigma compared to 24.2% of non-adherent patients with higher stigma perception and lower self-esteem. Another systematic review on TB stigma indicated that 60% of TB patients all over the world suffer from some form of social rejection. Furthermore, 35% of TB patients reported self-stigma that led to social withdrawal and the feeling of worthlessness.<sup>12</sup> The review suggested the significant reduction of stigma through interventions such as community awareness, training for healthcare providers, and psychosocial support in improving self-

Table 3. Comparison of Stigma and Self-Esteem Based on Key Demographics

Variable	Stigma Score (Mean)	p-value	Self-Esteem Score (Mean)	p-value
<b>Gender</b>				
Male	3.5	0.04*	18.4	0.03*
Female	4.1		16.0	
<b>Employment Status</b>				
Employed	3.2	0.02*	19.0	0.01*
Unemployed	4.3		15.6	

( $p < 0.05$ , statistically significant differences)

esteem among TB patients.

The outcomes of the present study are also supported by comparative statistical analyses. Employment status proved to be a significant variable, with unemployed patients having higher stigma score (4.3) than employed patients (3.2,  $p = 0.02$ ). Similarly, self-esteem was also less in unemployed patients (15.6 vs. 19.0,  $p = 0.01$ ), supporting the link between economic security and psychological well-being.

The results of this study concur with international evidence, showing that stigma around TB is a significant barrier to treatment adherence and mental health. The clear evidence across multiple settings underscores the compelling need for interventions like public education, healthcare education, and psycho-social support to counter stigma and enhance self-esteem in TB patients. Long-term strategies to decrease stigma and their application in a variety of socio-economic and cultural settings should be the focus of future studies.

## Conclusion

Stigma greatly affects the self-esteem of TB patients, resulting in social isolation, emotional trauma, and poor treatment compliance. The comparison with other research emphasizes the prevalence of stigma associated with TB and its deeper implications among vulnerable populations, including women and the unemployed. The alleviation of stigma by public education, health care assistance, and policy changes is necessary to enhance the quality of life of TB patients. It requires an integral strategy involving medical, psychological, and social interventions in order to minimize stigma and maximize treatment outcomes.

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