EMOTIONAL DISORDERS IN WOMEN WITH RESPIRATORY TUBERCULOSIS

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Abstract

To conduct a comprehensive assessment of emotional disorders in women with respiratory tuberculosis (RTB) and to analyze their association with clinical characteristics, disease duration, and quality-of-life indicators. The study included 65 women aged 18–60 years with confirmed RTB. Clinical, psychological, and quality-of-life assessments were performed using standardized instruments: the Beck Depression Inventory-II (BDI-II), the Spielberger–Khanin State-Trait Anxiety Inventory (STAI), and the SF-36 Health Survey. Statistical analysis included descriptive statistics, correlation analysis, and comparative group analysis. Clinically significant emotional disorders were identified in the majority of patients. Moderate to high anxiety levels were observed in 63% of women, while depressive symptoms were detected in 54%. More pronounced anxiety and depressive disorders were significantly associated with longer disease duration, greater clinical severity, and reduced quality-of-life scores ($p < 0.05$). Emotional disorders are highly prevalent among women with RTB and represent an important

component of the overall disease burden. Early identification and psychological intervention should be integrated into comprehensive tuberculosis care.
Keywords: emotional disorders; respiratory tuberculosis; women; depression; anxiety; psychosocial factors; quality of life

Introduction

Respiratory tuberculosis (RTB) remains one of the most socially significant and medically challenging public health problems worldwide. Despite the implementation of effective tuberculosis control programs, improvements in chemotherapy regimens, and advances in epidemiological surveillance, the disease continues to be characterized by high prevalence, prolonged clinical course, and a substantial negative impact on patients' quality of life. In recent years, increasing attention has been paid not only to the clinical and epidemiological aspects of tuberculosis but also to its psychosocial consequences. The chronic nature of tuberculosis, the need for long-term and often toxic treatment, and strict medical supervision contribute to persistent psychoemotional stress in affected individuals. Prolonged hospitalization, social isolation, reduced work capacity, and financial instability create conditions conducive to the development of anxiety and depressive disorders. Factors such as fear of death, concern about infecting close contacts, and uncertainty regarding social status after treatment completion further exacerbate emotional distress. Social stigma plays a crucial role in the formation of emotional disorders in patients with tuberculosis. Despite widespread access to medical information, tuberculosis continues to be associated in public perception with social marginalization, isolation, and danger to others. Stigmatization contributes to decreased self-esteem, feelings of guilt and shame, restriction of social interactions, and, consequently, worsening psychoemotional distress. Previous studies have demonstrated that the degree of perceived stigma is directly correlated with anxiety, depression, and reduced treatment adherence. Women with respiratory tuberculosis represent a particularly vulnerable clinical and social group. Gender differences in disease perception, emotional responses, and coping strategies are determined by both biological and psychosocial factors. Women are more likely to experience internalizing emotional disorders, including anxiety and depression, characterized by heightened emotional sensitivity, affective instability, and somatization of symptoms. Additional psychological burden in women is associated with socially defined roles related to motherhood, family responsibilities, and caregiving.

Materials and methods

A cross-sectional study was conducted involving 65 women with respiratory tuberculosis who received inpatient or outpatient treatment at a специализирован tuberculosis center during 2024–2025. The mean age of participants was 39.4 ± 10.8 years. All participants provided written informed consent prior to enrollment. Inclusion criteria: Microbiologically and radiologically confirmed respiratory tuberculosis; Female sex; Age between 18 and 60 years; Ability to complete psychological questionnaires independently. Clinical evaluation included: Collection of general, social, and disease-specific medical history; Physical examination; Chest radiography or computed tomography; Laboratory testing, including sputum smear microscopy and culture for *Mycobacterium tuberculosis*; Assessment of disease duration and clinical severity. Validated psychological instruments were used: Beck Depression Inventory-II (BDI-II) to assess depressive symptom severity; State-Trait Anxiety Inventory (STAI) to assess state and trait anxiety; SF-36 Health Survey to evaluate physical and mental components of quality of life. Statistical analysis was performed using standard biomedical statistical methods. Quantitative variables were expressed as means and standard deviations, while qualitative variables were presented as percentages. Correlation analysis was applied to evaluate relationships between clinical and psychological variables. Statistical significance was set at $p < 0.05$.

Results

Most participants were of working age. A substantial proportion of women reported significant social difficulties related to the disease, including concerns about job loss, changes in family roles, and social stigmatization (Table 1.).

Table 1.

Characteristic	Value
Mean age (years)	39.4 ± 10.8
Married	68%
Temporary work disability	42%
Presence of comorbidities	47%
Disease duration > 6 months	58%

According to BDI-II results, more than half of the patients exhibited clinically significant depressive symptoms, with moderate and severe depression predominating, indicating a high level of emotional distress. Anxiety assessment revealed elevated levels of both state and trait anxiety in the majority of women. Anxiety was most commonly associated with fear of disease progression, doubts regarding treatment effectiveness, and uncertainty about post-treatment social reintegration. Quality-of-life analysis demonstrated a significant reduction in both physical and mental health components. The most affected domains were Mental Health**,** Vitality**,** and Social Functioning**.** Women with pronounced anxiety and depression had significantly lower SF-36 scores ($p < 0,05$). Correlation analysis revealed moderate to strong associations: Depression severity positively correlated with disease duration ($r = 0,52$; $p < 0,01$); Anxiety levels were associated with clinical disease severity ($r = 0,48$; $p < 0,01$); Anxiety and depression showed significant negative correlations with quality-of-life indicators.

Discussion

The findings demonstrate a high prevalence of emotional disorders among women with respiratory tuberculosis. Emotional disturbances appear not merely as secondary reactions but as integral components of the disease experience. Chronic inflammation, prolonged treatment, social isolation, and stigmatization may jointly contribute to the development of anxiety and depressive disorders. The observed association between emotional disorders and disease duration underscores the importance of early psychological intervention. Persistent emotional distress may adversely affect treatment adherence, leading to poorer clinical outcomes and an increased risk of drug resistance. These findings are consistent with the contemporary biopsychosocial model of tuberculosis and highlight the necessity of integrating mental health services into tuberculosis care.

Conclusion

Women with respiratory tuberculosis exhibit a high prevalence of anxiety and depressive disorders closely associated with disease severity, duration, and reduced quality of life. Effective tuberculosis management should include not only pharmacological treatment but also psychological support.

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