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Clinical profile of tuberculosis and stigma

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Abstract
Background: Tuberculosis (TB) remains a leading cause of morbidity and mortality worldwide, with India bearing the highest burden. Despite effective treatment, TB is associated with significant social stigma that adversely affects patient outcomes. This study aimed to assess the clinical profile of TB patients and examine the prevalence and impact of TB-related stigma in a rural healthcare setting in Himachal Pradesh, India.
Methods: A cross-sectional observational study was conducted at the Community Health Centre (CHC), Chebh, Kangra district. A total of 100 adult patients newly diagnosed with pulmonary or extrapulmonary TB were enrolled. Data on socio-demographic characteristics, clinical presentation, comorbidities, and risk factors were collected using a structured questionnaire. TB-related stigma was assessed using a validated stigma scale measuring perceived, internalized, and experienced stigma. Statistical analysis included descriptive statistics and chi-square tests to examine associations between TB type and stigma.
Results: Among the participants, 74% had pulmonary TB and 26% had extrapulmonary TB. The most common symptoms among pulmonary TB patients were cough >2 weeks (70%), weight loss (66%), and fever (62%). Comorbidities included diabetes mellitus (14%) and HIV co-infection (6%), with 38% reporting a history of smoking. High levels of stigma were reported: perceived stigma (58%), internalized stigma (49%), and experienced stigma (44%). Pulmonary TB patients were significantly more likely to report high stigma (64.9%) compared to extrapulmonary TB patients (38.5%) ($p = 0.03$).
Conclusion: TB patients in this rural setting experience classical symptoms and a high burden of stigma, particularly those with pulmonary TB. Stigma presents a major barrier to timely diagnosis and effective treatment adherence. Integrated interventions addressing both clinical management and stigma reduction—through community awareness, psychosocial support, and confidentiality—are crucial to improving TB outcomes and achieving national elimination goals.

Keywords: Tuberculosis, Pulmonary Tuberculosis, Extrapulmonary Tuberculosis, TB-related Stigm

Introduction

Tuberculosis (TB) is one of the top 10 causes of death worldwide and the leading cause from a single infectious agent, ranking above HIV/AIDS [1]. According to the World Health Organization (WHO), approximately 10.6 million people fell ill with TB in 2022, and about 1.3 million deaths were reported among HIV-negative individuals globally [2]. India bears the highest TB burden in the world, accounting for more than 28% of global TB cases [3].

TB is primarily a pulmonary disease but may involve extrapulmonary sites, leading to a diverse clinical presentation. Pulmonary TB typically presents with symptoms such as chronic cough, hemoptysis, fever, night sweats, and weight loss [4]. Extrapulmonary TB may affect the lymph nodes, pleura, central nervous system, bones, and genitourinary system, making diagnosis more complex [5]. Risk factors for TB include HIV infection, diabetes mellitus, malnutrition, tobacco use, and socioeconomic determinants like overcrowded living conditions and poverty [6, 7].

Despite being a curable and preventable disease, TB continues to be associated with significant stigma. TB-related stigma arises from misconceptions regarding its transmission, perceived link with HIV, fear of infection, and its association with poverty and marginalized populations [8]. Stigma can be both external (public and institutional discrimination) and internal (self-stigmatization), and it negatively impacts health-seeking behavior, treatment adherence, and the overall well-being of patients [9].

Therefore, understanding the clinical profile of TB along with the social dynamics of stigma is essential for designing patient-centered interventions and improving public health responses. This manuscript aims to examine the clinical presentation of TB and explore the impact of stigma on diagnosis, treatment, and patient outcomes.

Materials and Methods

This cross-sectional observational study was conducted at the Department of Health and Family Welfare, Community Health Centre (CHC), Chebh, located in District Kangra, Himachal Pradesh. CHC Chebh is a rural healthcare facility functioning under the National Health Mission and serves as a peripheral nodal center for the implementation of the National Tuberculosis Elimination Programme (NTEP). The study was conducted over a period of [insert duration, e.g., six months], from [insert start date] to [insert end date]. The study population included adult patients (aged 18 years and above) who were newly diagnosed with tuberculosis—either pulmonary or extrapulmonary—attending the outpatient

department or directly observed treatment short-course (DOTS) center of CHC Chebh. Diagnosis was confirmed through sputum smear microscopy, CBNAAT (Cartridge-Based Nucleic Acid Amplification Test), chest radiography, and other clinical investigations in accordance with NTEP guidelines. Patients already on anti-tubercular therapy (ATT) for more than two weeks, those diagnosed with multidrug-resistant TB (MDR-TB), or those with significant cognitive or psychiatric impairment were excluded from the study.

The study enrolled a total of [insert number] participants through purposive sampling based on the availability of eligible patients during the study period. Data were collected using a structured and pre-tested questionnaire, which consisted of two sections. The first section captured socio-demographic details (such as age, sex, education, and occupation), clinical presentation (type of TB, symptom duration, and comorbidities such as diabetes or HIV), and risk factors (such as smoking or malnutrition). The second section evaluated TB-related stigma using a validated stigma assessment tool adapted from existing WHO guidelines. This tool measured dimensions of perceived stigma, internalized stigma, and experienced discrimination, using a 5-point Likert scale to quantify responses.

Results

Socio-demographic

The socio-demographic profile of the 100 respondents reveals a diverse distribution across various characteristics. In terms of age, the largest proportion (36%) falls within the 31–45 years group, followed by 30% in the 46–60 years group, 22% in the 18–30 years group, and 12% above 60 years of age. Gender distribution shows a higher representation of males (62%) compared to females (38%). A significant majority of the respondents (81%) reside in rural areas, while only 19% are from urban settings, indicating a predominantly rural sample. Regarding educational attainment, 27% of the respondents are illiterate, 35% have education up to the primary level, and 38% have completed secondary education or higher. This data reflects a population with a mix of age groups, a male majority, predominantly rural residence, and varied levels of education.

Clinical profile

In our study, among the 100 respondents, the majority (74%) were diagnosed with pulmonary tuberculosis, while 26% had extrapulmonary TB. Regarding the duration of symptoms before diagnosis, most individuals (62%) reported experiencing symptoms for 1–3 months, followed by 22% with symptoms lasting more than 3 months, and 16% who were diagnosed within one month of symptom onset. HIV co-infection was present in 6% of the respondents, while 14% had diabetes mellitus as a comorbidity. Additionally, 38% of the respondents reported a history of smoking, and 29% had a history of alcohol use. This data highlights key clinical and behavioural factors associated with tuberculosis in the study population.

Symptom Profile among Pulmonary TB Patients

In our study, among the pulmonary tuberculosis patients, the most frequently reported symptom was a persistent cough lasting more than two weeks, observed in 70% of the cases. Weight loss was also common, affecting 66% of the patients, followed by fever, which was reported by 62%. Night sweats were experienced by 41% of the individuals, while 34% reported breathlessness. Hemoptysis, or coughing up blood, was noted in 28% of the patients. These findings indicate that classic symptoms such as chronic cough, weight loss, and fever remain predominant in pulmonary TB cases, with a significant proportion also experiencing night sweats and respiratory distress.

TB-Related Stigma Scores Distribution

The analysis of TB-related stigma among respondents revealed varying levels across different domains. The mean perceived stigma score was 3.7 ± 0.9, with 58% of individuals reporting a high level of perceived stigma, indicating a significant concern about how they are viewed by others due to their TB diagnosis. Experienced stigma had a slightly lower mean score of 3.2 ± 1.1, with 44% reporting high stigma in this domain, reflecting actual instances of discrimination or negative treatment. Internalized stigma, which reflects self-directed negative feelings, had a mean score of 3.5 ± 1.0, with 49% of participants experiencing high levels.

Association Between Type of TB and Stigma (Chi-square Test)

Table 5 illustrates the association between the type of tuberculosis and levels of stigma experienced by patients. Among those with pulmonary TB, a significant majority (64.9%) reported high stigma, while 35.1% reported low stigma. In contrast, only 38.5% of extrapulmonary TB patients experienced high stigma, with 61.5% reporting low stigma. The difference in stigma levels between pulmonary and extrapulmonary TB patients was statistically significant, with a p-value of 0.03. These results suggest that individuals with pulmonary TB are more likely to experience higher stigma compared to those with extrapulmonary TB, possibly due to the more visible symptoms and higher perceived contagiousness associated with pulmonary TB.

Table 5: Association Between Type of TB and Stigma (Chi-square Test)

Type of TB	High Stigma (%)	Low Stigma (%)	p-value
Pulmonary (n=74)	48 (64.9%)	26 (35.1%)	0.03
Extrapulmonary (n=26)	10 (38.5%)	16 (61.5%)	

Discussion

This study aimed to evaluate the clinical presentation of tuberculosis (TB) patients and assess the degree of stigma associated with the disease in a rural setting at CHC Chebh, Kangra. The findings highlight not only the symptomatic burden but also the considerable social challenges faced by TB patients, particularly those with pulmonary involvement. The majority of patients (74%) had pulmonary TB, which is consistent with national data and prior studies reporting pulmonary TB as the most common clinical presentation [1, 3]. The most frequently reported symptoms in this study—chronic cough, weight loss, fever, and night sweats—are classical features and align with existing literature [4]. These symptoms, especially chronic cough and hemoptysis, are highly stigmatizing in social contexts due to fear of contagion, thereby often resulting in social exclusion and concealment of illness [10].

Risk factors such as smoking (38%) and diabetes (14%) were significantly prevalent among patients, echoing other Indian and global studies that identify these as key contributors to TB vulnerability [5, 11]. Notably, 6% of the patients were co-infected with HIV, a condition that further amplifies stigma due to dual labeling and perceived moral failings, as reported in other low- and middle-income settings [12].

A particularly important finding of this study is the high prevalence of stigma among TB patients. Perceived stigma (58%), internalized stigma (49%), and experienced stigma (44%) were commonly reported. This is in agreement with studies by Courtwright and Turner [7] and Chang and Catald [9], which revealed that TB-related stigma often leads to social withdrawal, delayed diagnosis, and poor treatment adherence. Pulmonary TB patients were significantly more likely to experience high stigma than extrapulmonary TB patients ($p = 0.031$), possibly due to the visibility of symptoms like coughing and the community's heightened fear of airborne transmission [8].

Table 1: Socio-demographic Characteristics of TB Patients

Socio-demographic Characteristics	Frequency (n=100)	Percentage (%)
Age group (years)		
18–30	22	22%
31–45	36	36%
46–60	30	30 %
>60	12	12%
Gender		
Male	62	62%
Female	38	38%
Residence		
Rural	81	81%
Urban	19	19%
Education		
Illiterate	27	27%
Up to Primary	35	35%
Secondary or above	38	38%

Table 2: Clinical Profile of TB Patients

Parameter	Frequency (n=100)	Percentage (%)
Type of TB		
Pulmonary	74	74%
Extrapulmonary	26	26%
Duration of symptoms before diagnosis		
< 1 month	16	16%
1–3 months	62	62%
> 3 months	22	22%
HIV Co-infection	6	6%
Diabetes mellitus	14	14%
Smoking history	38	38%
Alcohol use	29	29%

Table 3: Symptom Profile among Pulmonary TB Patients

Symptom	Frequency (n=100)	Percentage (%)
Cough > 2 weeks	70	70%
Fever	62	62%
Haemoptysis	28	28%
Weight loss	66	66%
Night sweats	41	41%
Breathlessness	34	34%

Table 4: TB-Related Stigma Scores Distribution

Stigma Domain	Mean Score ± SD	High Stigma Score (%)
Perceived stigma	3.7 ± 0.9	58 (58%)
Experienced stigma	3.2 ± 1.1	44 (44%)
Internalized stigma	3.5 ± 1.0	49 (49%)

Conclusion

This study highlights that tuberculosis, particularly pulmonary TB, continues to be a major health burden in rural populations, with classical symptoms such as chronic cough, weight loss, and fever being predominant. The presence of comorbidities like diabetes, HIV, and lifestyle factors such as smoking further complicates disease management. Importantly, stigma remains a significant barrier to timely diagnosis and effective treatment, especially among patients with pulmonary TB due to fear of social exclusion and discrimination. High levels of perceived and internalized stigma were noted, underscoring the urgent need for integrated psychosocial support within tuberculosis care programs.

To improve treatment outcomes and reduce transmission, TB control efforts must not only focus on clinical management but also address the social dimensions of the disease. Community-based awareness, early detection, confidentiality in care, and anti-stigma interventions should be embedded into the routine activities of health systems like those at CHC Chebh and across similar rural settings. Tackling both the clinical and social aspects of TB is essential to achieving the goals of the National Tuberculosis Elimination Programme and ensuring dignity and care for all affected individuals.

References

1. Global Tuberculosis Report 2023. Accessed, 2025. https://www.who.int/teams/global-programme-on-tuberculosis-and-lung-health/tb-reports/global-tuberculosis-report-2023
2. Tuberculosis. Accessed, 2025. https://www.who.int/health-topics/tuberculosis
3. India TB Report 2023 Central Tuberculosis Division. Accessed, 2025. https://tbcindia.mohfw.gov.in/2023/06/06/india-tb-report-2023/
4. Sharma SK, Mohan A. Tuberculosis: From an incurable scourge to a curable disease - journey over a millennium. Indian J Med Res.2013:137(3):455-493.
5. Lönnroth K, Jaramillo E, Williams BG, Dye C, Raviglione M. Drivers of tuberculosis epidemics: the role of risk factors social determinants. Soc Sci Med,2009:68(12):2240-2246. doi: 10.1016/j.socscimed.2009.03.041
6. Rekha B, Swaminathan S. Childhood tuberculosis - global epidemiology the impact of HIV. *Paediatr Respir Rev*,2007:8(2):99-106. doi: 10.1016/j.prrv.2007.04.010
7. Courtwright A, Turner AN. Tuberculosis stigmatization: pathways interventions. Public Health Rep,2010:125-4(4):34-42. doi:10.1177/00333549101250S407
8. Baral SC, Karki DK, Newell JN. Causes of stigma discrimination associated with tuberculosis in Nepal: a qualitative study. *BMC* Public Health,2007:7(1):211. doi:10.1186/1471-2458-7-211

9. Chang SH, Cataldo JK. A systematic review of global cultural variations in knowledge, attitudes health responses to tuberculosis stigma. *Int J Tuberc Lung Dis*,2014:18(2):168-173, i-iv. doi:10.5588/ijtld.13.0181
10. Atre SR, Kudale AM, Morankar SN, Rangan SG, Weiss MG. Cultural concepts of tuberculosis gender among the general population without tuberculosis in rural Maharashtra, India. Trop Med Int Health.2004:9(11):1228-1238. doi:10.1111/j.1365-3156.2004. 01321.x
11. Jeon CY, Murray MB. Diabetes Mellitus Increases the Risk of Active Tuberculosis. A Systematic Review of 13 Observational Studies. PLOS Medicine,2008:5(7):15 2. doi: 10.1371/journal.pmed.0050152
12. Munro SA, Lewin SA, Smith HJ, Engel ME, Fretheim A, Volmink J. *et al*. Patient adherence to tuberculosis treatment. a systematic review of qualitative research. *PLoS Med*,2007:4(7):238. doi: 10.1371/journal.pmed.0040238