TO EVALUATE THE TUBERCULOSIS-RELATED STIGMA AND ITS DETERMINANTS IN HIMACHAL PRADESH.

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Abstract

Introduction: Controlling tuberculosis (TB) is severely hampered by the stigma associated with the disease, which causes non-adherence and delayed diagnosis. But not much research has been done in India on the stigma associated with tuberculosis. The current study set out to investigate the prevalence of TB-related stigma and the predictive variables linked to it among TB patients. The State of Himachal Pradesh.

Methods: A cross-sectional survey was carried out at the Himachal Pradesh Hospital with the outpatient population. A questionnaire measuring stigma associated with tuberculosis, treatment status, anxiety, social support, doctor-patient communication, and other factors was used to gather data. To find the predictors of stigma connected to tuberculosis, a multiple linear regression model was utilized.

Results: We recruited 120 qualified volunteers in total. Regarding stigma connected to tuberculosis, the mean score was 10% and the median was 11. The mean ratings for anxiety, social support, and communication between the physician and patient were 4.03, 25.41, and 17.17, in that order. A multiple linear regression analysis showed that patients with anxiety, self-assessed moderate or severe disease, and gender were associated with higher levels of TB-related stigma.

Conclusion: This study examined the frequency of stigma associated with tuberculosis and the factors that are associated with it in tuberculosis patients. The stigma associated with tuberculosis

was widespread among the participants. Female patients with anxiety and a self-assessed moderate or severe disease were more likely than their peers to have a high level of TB-related stigma.

Keywords: Tuberculosis, Stigma, Associated factors

Introduction

Tuberculosis (TB) is a chronic infectious disease that severely affects the health of millions of people each year and is a major public health problem worldwide. Like those with human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) and leprosy, TB patients also face deep-rooted and persistent stigma.[1,2] This can be felt in different social environments, such as the home, workplace, and community, resulting in serious impacts on TB patients.[3,4] TB-related stigma has become a formidable challenge for TB prevention and control.[5,6] However, there is also a growing awareness of the need to address the stigma related to TB, a major social problem.[7,8]

Stigma was defined by Goffman as "an attribute that is deeply discrediting" that demeans people "from a whole and usual person to a tainted, discounted one". Studies in different contexts have reported that approximately 42–82% of TB patients suffer from stigma, while studies from China show a 45.32% prevalence of stigma.[9,10] TB-related stigma is generally the product of the exaggerated concept of contagiousness and fear of infection.[11,12] Due to a lack of understanding, people have false perceptions that TB is incurable and is highly contagious throughout treatment.[13] Sometimes inappropriate information in the media, such as fragmented or improperly presented information, results in the social reinforcement of TB-related stigma.[14] In addition, TB and HIV/AIDS share common physical signs and symptoms, such as weight loss, which also often leads to its association with HIV/AIDS.[15] Importantly, HIV/AIDS is a risk factor for the development of TB, this could be one of the leading drivers behind the misconception about everyone with TB is HIV/AIDS positive.[16] The negative characteristics of unethical or promiscuous sex that have been associated with HIV/AIDS, as well as its deadly nature, are also assumed in TB patients. The complex relationship between TB and HIV/AIDS stigmatizes TB patients.[17]

Despite some progress in TB control in recent years, the burden of TB in China remains high, second only to India, accounting for 9% of the global total. As far as we know, there have been no studies on TB stigma conducted in Northeast China. We also observed that studies in other parts of China explored factors associated with stigma in terms of only sociodemographic characteristics,[18] drug compliance and quality of life,[19] TB knowledge and family functioning, there is a lack of research on associated treatment status and anxiety. Moreover, the factors associated with TB-related stigma may vary depending on social and cultural backgrounds and region.[13] Hence, the present study was aimed to evaluate the tuberculosis-related stigma and its determinants in Himachal Pradesh.

Methods

The study was conducted in Himachal Pradesh. Liaoning Province is a coastal province with a strong economy in North India.

A cross-sectional survey was conducted at the Himachal Pradesh Hospital. With the help of hospital staff, outpatients who were on a waiting list and met the inclusion criteria were recruited. The inclusion criteria for patients included the following patients who had a diagnosis of TB with no mental illness, patients aged greater than or equal to 18 years, patients with clear consciousness, clear communication, and the ability to understand the contents of the questionnaire, and patients who agreed to participate in this study and could honestly express their views on the problem. Patients who participated in the study independently answered questionnaires administered by the investigators, and patients with limited literacy completed the questionnaires with the assistance of the investigators. A total of 125 patients were investigated in this study. Due to time constraints, 5 patients were excluded from the study because they did not complete the investigation. Therefore, 120 eligible patients were included in this study. To ensure the quality of the collected questionnaire data, an investigation team consisting of 7 graduate students completed a training class. The training content mainly included the research purpose and content, the implementation of the field

investigation, the screening of subjects, the general requirements of the investigation and matters needing attention. After the training, the surveyors were assessed on the proficiency level of the questionnaires, matters needing attention in the survey and other contents.

Statistical Analysis
Results
Baseline Characteristics
In our study, the mean age was 48.54±15.65 years. The most common age group was 41-50 years (37.50%) followed by 31-40 years (35.83%). 54.17% of patients were male and 45.83% of patients were female. 93.33% of patients were married. 80.83% of patients belonged to nuclear family (Table 1).

Treatment and substance use statuses and their relationships with TB-related stigma
The number of patients with newly diagnosed TB (62.50%) was approximately two times higher than the number of those with relapse TB. Similarly, the number of TB patients with a history of hospitalization (75%) was approximately three times higher than the number of those without a history of hospitalization. More than a quarter of the participants (35%) said they also had other medical conditions, and (58.33%) felt their condition was mild. A large percentage of participants (73.33%) said they were very confident in achieving TB cure, and more than half (55%) reported that their physical health was moderate or poor (Table 2)

Self-assessed severity
More than a quarter of the participants (41.67%) said they also had other medical conditions, and (58.33%) felt their condition was mild (Table 2).

Discussion
In addition to biological, cultural, and economic factors, stigma also plays an important role in effective TB control. To the best of our knowledge, this study was the first to investigate stigma and its associated factors among TB patients in Himachal Pradesh. Among the study participants, the mean score of TB-related stigma was 10%, which was lower than in a study conducted in North India.[20]

The mean age was 48.54±15.65 years. The most common age group was 41-50 years (37.50%) followed by 31-40 years (35.83%). 54.17% of patients were male and 45.83% of patients were female. 93.33% of patients were married. 80.83% of patients belonged to nuclear family. In a study by **Deribew et al** the age distribution of TB/HIV co-infected and non-co-infected patients was similar. Fifty percent of the co-infected and 60.2% of the non-co-infected HIV patients were females (P < 0.05). A higher proportion of co-infected patients (43.5%) had no source of income compared to the non-co-infected patients (26.7%). After adjusting for confounding variables, co-infected patients (57.5%) were more likely to have a lower CD4 lymphocyte count than non-co-infected patients (27.4%).[21] In a study by **Rajeswari et al** of the 610 patients, 54% of males and 57% of females were aged between 15 and 45. Literacy was significantly (p<0:0001) lower among females as compared to males (52% vs. 70%). About 40% of the patients were below the poverty line. Thirty-five percent of the males were smokers and 25% were alcoholics.[22]

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Our research found that good doctor-patient communication played an important role in reducing TB-related stigma. Similar results indicating that nurses' behaviors influenced patients' perceptions of

stigma, with sincerity, empathy and respect as the strongest and most important influencing factors, have been reported.[23] Health care workers are critical in successful TB treatment and management, and their support and care can promote patient motivation and adherence to treatment.[24] However, their negative attitudes and behaviors towards TB patients may lead to greater discrimination against TB patients.[25]

Conclusion

This study looked at the prevalence of TB-related stigma and the variables that are linked to it among TB patients. Among participants, stigma connected to tuberculosis was pervasive. Compared to their peers, female patients who self-assessed as having a moderate or severe illness and experienced anxiety were more likely to have a high level of TB-related stigma. Yet, patients who had strong social networks and open lines of communication with their doctors were more likely to avoid stigma associated with tuberculosis. As a result, patients with moderate to severe illness and female patients should receive greater resources while carrying out TB stigma-related activities.

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Table 1: Baseline Characteristics

Baseline Characteristics	Frequency (N=120)	Percentage (%)
Age (years)		
≤30	21	17.50%
31-40	43	35.83%
41-50	45	37.50%
>50	11	9.17%
Gender		
Male	65	54.17%
Female	55	45.83%
Marital Status		
Married	112	93.33%
Unmarried	8	6.67%
Family Type		
Joint	23	19.17%
Nuclear	97	80.83%

Table 2 Treatment and substance use statuses and their relationships with TB-related stigma.

TB-related stigma	Frequency (N=120)	Percentage (%)
TB status		
New	75	62.50%
Relapse	45	37.50%
Previous hospitalization		
Yes	90	75%
No	30	25%
Comorbid illness		
Yes	42	35%
No	78	65%

Table 3: Self-assessed severity

Self-assessed severity	Frequency (n=120)	Percentage (%)
Mild	70	58.33%
Moderate	32	26.67%
Severe	18	15%