

Original Research Article

A comparative study to assess the knowledge, attitude and practice regarding tuberculosis among the male and female TB patients in district Amritsar

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ABSTRACT

Background: Lack of knowledge about tuberculosis could have an effect on the patients who seek health care services and continue the disease transmission within the public. Hence, the study was conducted in Amritsar district to assess knowledge, attitude and practice towards transmission and prevention of Tuberculosis.

Methods: The study was conducted on 326 patients registered with district tuberculosis centre, Amritsar. Information was collected with reference to knowledge, attitude, and practice regarding TB.

Results: A total of 228 patients participated in the study. 72.4% had heard of tuberculosis before being diagnosed, with significant gender difference ($p=0.016$). 19.3% were afraid to disclose the disease to others. The relation between fear of disclosing the disease and gender was found to be statistically significant ($p=0.011$). 23.5% male vs 8.3% females were worried about finances, which was found to be statistically significant ($p=0.002$). Regarding the practices, 72.4% of the patients used separate utensils. In response to stigma 9.2% patients had isolated themselves from other members and 34.6% had discontinued their work and there was significant gender difference seen with both these practices ($p=0.0001$).

Conclusions: There were lot of unfavourable attitude and practices regarding TB. More male patients had heard of tuberculosis. Due to social stigma more males had isolated themselves and discontinued their work as compared to females. Females were worried that other family members may not get the disease.

Keywords: Knowledge, Attitude, Practice, Tuberculosis

INTRODUCTION

Tuberculosis (TB) remains a major health burden and it is one of the top 10 causes of death, and the leading cause from a single infectious agent ranking above HIV/AIDS. Millions of people continue to fall sick with the disease each year. In 2017, TB caused an estimated 1.3 million deaths among HIV-negative people, and there were an additional 3 lakh deaths from TB among HIV-positive people. Globally, there were an estimated 10.0 million

new cases of TB equivalent to 133 cases per 100 000 population in 2017 this includes 5.8 million men, 3.2 million women and 1.0 million children.¹ About 1.7 billion people, 23% of the world's population, are estimated to have a latent TB infection, and are thus at risk of developing active TB disease during their lifetime.²

Poverty and lack of awareness about TB are considered the most important factors that increase the risk of

exposure to TB. In addition, poor access to health facilities, lack of finances and lack of knowledge about the cause, mode of transmission, and symptoms, can act as barriers to TB diagnosis.³ Furthermore, it has been seen that the disease has a significant impact on social relations. This occurs when there is stigma, discrimination, and several misconceptions that could contribute to poor adherence and treatment compliance which pose a formidable challenge to control the disease.⁴ A high level of awareness on TB is essential for the prevention and control of TB in the community. Little is known about the knowledge, attitude and practices of communities towards TB in the current study area. Therefore, the study was conducted in Amritsar city to assess patient's knowledge, attitude and practice towards TB.

Objective of the study

- To assess the knowledge in patients regarding the tuberculosis.
- To compare the knowledge, attitude and practice of male and female patients regarding tuberculosis.

METHODS

The study was conducted in the field practice area of department of Community Medicine, Government Medical College, Amritsar. It falls under the Primary Health Centre (PHC) Verka.

All the patients belonging to the study area and registered with District Tuberculosis Centre, Amritsar from 1st April 2010 to 31st March 2011 were included in the study.

Inclusion criteria

Patients on directly observed treatment therapy were only included for the study. Patients of all three categories (i.e I, II & III) were included because at time of registration (2010) there were three categories.

List of patients suffering from tuberculosis with their complete address and treatment record was obtained from the tuberculosis register at District Tuberculosis center. Patients once started on treatment were included in the study. Houses of all the patients were located using address mentioned in the tuberculosis register, DOT provider or staff who knew the patients. If the patient was not available in the first visit, then every effort was made to contact the patient by subsequent visits as per convenience and suitability to the patient. In the event a patient no longer lived at a specific address, help of local neighbours and guides was taken to trace the patients. Patients who had migrated to another district were excluded from the study. The patients who were below 14 years of age, the adult family member who accompanied the patient to the DOT centre were interviewed and the consent of the parent/ guardian was taken. Informed

consent was taken from each study subject in their own vernacular language.

The information regarding name, age, sex, occupation, socio economic status, knowledge and practices regarding the disease was obtained personally by interviewing the patient. Modified Kuppaswami's socio-economic status scale, 2012, was used to determine the socioeconomic status of the participants. The information was recorded on a pretested and preformed questionnaire evolved for the study. Approval of college ethical committee was granted at the time of submission of the plan of the study.

Statistics

The data collected was compiled and analyzed statistically with help of Epi info version 3.5.3. Chi square test was applied to find the difference of knowledge about TB among male and female patients. The level of statistical significance was defined as $p < 0.05$ and valid conclusions were drawn.

RESULTS

Following observations were made:

Out of the total 326 patients, only 228 (69.94%) patients were interviewed. 59 (18.10%) patients could not be traced as most of them had migrated to new place and some of them could not be traced due to their incomplete or wrong addresses. 36 (11.04%) had died by the time of interview. 3 (0.92%) patients did not give consent for interview.

Table 1: Distribution of patients according to socio demographic variables (n=228).

Socio-demographic factor	Total	Percentage (%)
Age group (years)		
1-14	21	9.2
15-29	99	43.4
30-44	55	24.2
45-59	40	17.5
60-74	13	5.7
Sex		
Male	132	57.90
Female	96	42.10
Literacy status		
Illiterate	84	36.84
Below matric and matric	125	54.82
Above matric	19	8.34
Socio economic status*		
Upper	2	0.90
Upper middle	11	4.80
Upper lower	180	78.90
Lower middle	23	10.10
Lower	12	5.30

* Modified Kuppaswami's socio-economic status scale 2012.

The socio-demographic profile of the patients is summarized in Table 1. Among the 228 patients studied, majority 99 (43.40%) patients were in the age group

15-29 years. 67.6% of the patients belonged to economically productive age group i.e. 15-44 years.

Table 2: Distribution of patients according to knowledge, attitude and practice regarding TB.

	Male (n=132) (%)	Female (n=96)	Total (n=228)	Chi sq χ^2	P value
	N (%)	N (%)	N (%)		
Heard of TB					
Yes	104 (78.8)	61 (63.6)	165 (72.4)	5.727	0.01677
No	28 (21.2)	35 (36.4)	63 (27.6)		
Mode of transmission of TB					
Correct Knowledge	34 (25.8)	19 (19.8)	53 (23.3)	1.1195	0.5713
Incorrect knowledge	21 (15.9)	17 (17.7)	38 (16.7)		
Don't know	77 (58.3)	60 (62.5)	137 (60.0)		
Knowledge about supervision of Treatment					
Yes	56 (42.4)	37 (38.5)	93 (40.8)	0.2006	0.654
No	76 (57.6)	59 (61.5)	135 (59.2)		
Depressed/sad					
Yes	51 (38.6)	37 (38.5)	88 (38.6)	0.0002	0.988
No	81 (61.4)	59 (61.5)	140 (61.4)		
Afraid to disclose the disease					
Yes	18 (13.6)	26 (27.1)	44 (19.3)	6.4530	0.011
No	114 (86.4)	70 (72.9)	184 (80.7)		
Worried about finances					
Yes	31 (23.5)	8 (8.3)	39 (17.0)	8.99	0.002
No	101 (76.5)	88 (91.7)	189 (83.0)		
Afraid that other members may not get disease					
Yes	3 (2.3)	9 (9.4)	12 (5.3)	5.622	0.017
No	129 (97.7)	87 (90.6)	216 (94.7)		
Separated the utensils					
Yes	98 (74.2)	67 (69.8)	165 (72.4)	0.2120	0.645
No	34 (25.8)	29 (30.2)	63 (27.6)		
Isolated themselves					
Yes	17 (17.7)	4 (3.0)	21 (9.2)	14.3194	0.0001
No	79 (82.3)	128 (97.0)	207 (90.8)		
Discontinued work/studies					
Yes	61 (46.2)	18 (18.8)	79 (34.6)	18.51	0.0001
No	71 (53.8)	78 (81.3)	149 (65.4)		

Table 2 shows that majority i.e. 165 (72.4%) had, at least heard of Tuberculosis before being diagnosed, with significant gender difference ($p=0.016$). Out of 63 patients who had not heard of TB, 21.2% and 36.4% were males and females respectively. 53 (23.3%) had correct knowledge regarding mode of transmission of TB. Majority i.e. 137 (60.0%) of the study participants had absolutely no knowledge regarding the mode of spread of tuberculosis. Only 93 (40.8%) patients knew that DOTS is a supervised treatment. Knowledge about mode of transmission and about supervision of treatment showed no association with gender.

On being diagnosed, depression/sadness was equally found among both males (38.6%) and females (38.5%) participants. 44 (19.3%) were afraid to disclose the disease to others. The relation between fear of disclosing the disease and sex of patient was found to be statistically

significant ($p=0.011$). 23.5% male vs 8.3% females were worried about finances, which was found to be statistically significant ($p=0.002$). 12 (5.3%) respondents were worried that the disease may be transmitted to their family members. When asked about the practices for the prevention of TB, 165 (72.4%) of the patients replied that they used separate utensils, 21 (9.2%) had isolated themselves from other members and 79 (34.6%) had discontinued work/studies so that others may not get the disease and that society may stigmatize them.

DISCUSSION

Tuberculosis causes enormous burden of disease and death around the world. Lack of knowledge about the disease may lead to misconceptions & attitude about the disease which subsequently form a stigma.

In the present study, 154 (67.6%) of the patients belonged to economically productive age group i.e. 15-44 years. According to TB India 2012 report, tuberculosis primarily affects people in their most productive years of life. Almost 70% of TB patients are between 15-54 years of age.⁵ In our study 194 (85%) patients belonged to 15-59 years, similar findings are seen in a study conducted by Mohrana et al showed that 91.4% cases belonged to economically productive age group 15-59 years.⁶

In the present study male to female ratio was 1.37:1 approximately. This is in accordance with WHO global TB report 2014, the male: female ratio was 1.6 globally, ranging from 0.7 to 2.9 among high burden countries.⁷ More prevalence of Tuberculosis among males may be because of the fact that males have more exposure because of outgoing habits or health of males is given more preference. In some societies social stigma may preclude women from attending tuberculosis clinics.

When we considered the educational status about 36.84% respondents were illiterate, and 215 (76.7%) persons belonged to lower socioeconomic class. High rate of illiteracy and poverty are common findings amongst tuberculosis patients.⁸ The social conditions which arise from poverty have been known to provide a favorable environment for TB disease.

A perusal of Table 2 shows that 165 (72.4%) patients had heard of TB before being diagnosed with significant gender difference ($p=0.016$). A cross-sectional study by Kar and Logaraj in rural Tamil Nadu showed that 56% had heard of TB.⁹ Another study by Mukhtar et al in Libya showed 96.5% respondents had heard of disease.¹⁰

Majority, 137 (60.1%) of the study participants were ignorant about the mode of transmission of TB. Out of 38 (16.7%) incorrect respondents, 10.5% mentioned that TB occurs as a complication of typhoid or some other fever of long duration. Some mentioned poor diet, water, and alcohol, as cause of TB. Rest stated that tuberculosis is a curse. The respondents who answered 'air' as mode of transmission were considered to have correct knowledge. Male participants were more likely to know TB as an airborne disease compared to female participants (25.8% males vs. 19.8% females) but the difference is not significant. The implication of such misconceptions regarding the cause of TB is that it may have a negative impact on patients' attitude toward health-seeking behavior as people with such misconceptions may not visit health facilities or consider self-treatment, both of which delay case detection and treatment of patients with TB in the community. The results also showed that there was a significant difference in the knowledge about the mode of transmission of the TB between illiterate and literate tuberculosis patients. Poor knowledge about mode of transmission was significantly associated with less education ($p=0.0007$).

With regard to the attitudes towards TB, most of them 88 (38.6%) responded that they experienced sadness and/or hopelessness after being diagnosed with TB. Observations in our study are in line with the study by Thakker and Upadhyay which showed a feeling of worry and depression among 40.8% patients.¹¹

Out of 132 males, 18 (13.6%) were afraid to disclose their disease to others. In contrast, out of 96 females, 26 (27.1%) were reluctant to disclose their disease. The relation between fear of disclosing the disease and sex of patient was found to be statistically significant ($p=0.011$). Female participants were more likely to be afraid to disclose their disease status compared to male participants. In order to get rid from discriminations and ill behavior from other people patients hide their disease. Balasubramanian et al showed that overall, 21% of women and 14% of men felt inhibited discussing their illness with their families or friends.¹² A significantly higher proportion of women than men faced social stigmatisation or rejection because of their illness, felt inhibited discussing their illness with family and friends. This difference can be attributed due to the fact that they have to face more severe consequences. K Jaggarajamma et al showed that among those who disclosed the disease, 10% of the patients were kept isolated and 9% faced rejection due to their disease.¹³

In the present study, 39 (17.0%) patients were worried about finances, 23.5% male vs. 8.3% females were worried about finances, which was found to be statistically significant ($p=0.002$). 12 (5.3%) respondents were afraid that the disease may be transmitted to their family members.

A study to assess the psychological problems among TB patients by Thakker and Upadhyay also revealed that 66.6% of patients feared of spreading TB to other family members.¹¹ Separating the dishes or early separating was the most common preventive measure adopted by the patients and their families to prevent the transmission of disease to other family members. Our study also revealed that, 165 (72.4%) of the patients used separate utensils. Study by Khan et al and by Bhattacharyya et al showed that 57% and 78.3% patients use separate utensils for the prevention of TB in family respectively.^{14,15}

In present study 21 (9.2%) patients had isolated themselves from other family members. Relatively, a higher proportion of male TB patients were in favor of using separate room, as a preventive method of the disease, than female individuals (17.7% versus 3.0%, $p=0.0001$). Similar findings were observed in a study by Jangid et al where 47% patients kept themselves isolated (52.2% males vs 37.1% females).¹⁶ A study by Ritu et al, showed that spouses were found to sleep separately and avoided sexual contact.¹⁷

Our study showed that 79 (34.6%) patients had discontinued their work/studies so that others may not get

the disease and that society may stigmatize them. 46.2% males vs 18.8% females discontinued their work and there was significant gender difference ($p=0.0001$). Similar results were noted in a study done in turkey where 43.2% patients mentioned that they had to leave their job because of their illness.¹⁸

CONCLUSION

The study findings demonstrate that more males had heard of TB than females. There was also a significant difference in attitude and practice regarding TB among male and female patients. To improve the case detection rate, correct knowledge, attitude, and practices regarding tuberculosis are essential in the community. There is a need for a robust Information Education and Communication activities to remove the social stigma attached with the disease.

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