

## An Assessment of Patient's Perception on Tuberculosis, Prevention and Control in a Teaching Hospital

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### Abstract

Tuberculosis (TB) one of the oldest diseases known to humankind and remains as an important public health problem in India. It is still one of the leading causes of morbidity and mortality despite the fact that it can be cured with adequate treatment. The emergence of multidrug resistant tuberculosis (MDR-TB) or extensively drug resistant (XDR-TB) is one of the challenges in our efforts to control TB. The study aim was to assess the patient's perception on tuberculosis, prevention and control. The research shows significant gender difference between male and female awareness, patients have the information TB is not a contagious, patients were not keeping proper medication records thereby incomplete or inappropriate treatment could have severe consequences of disease and might lead to death. Knowledge about TB symptoms, diagnosis, pulmonary complication, duration of treatment, free treatment, has to be stressed during health education activities.

**Keywords:** Pulmonary complication; Patient perception: Prevention and control

### Introduction

Tuberculosis (TB) is a chronic infectious disease caused by a bacterium called *Mycobacterium tuberculosis* [1-3]. It usually affects the lungs in 80% of cases with warning signs of cough, haemoptysis, chest pain, shortness of breath, fever, weight loss, and night sweat. *Mycobacterium tuberculosis* (TB) infection is a significant cause of morbidity and mortality worldwide, with an estimated 2 billion people at risk for reactivation [4,5]. India is a high burden for tuberculosis (TB) [6-8]. Although the exact burden to Tuberculosis in India is not known, the WHO estimates an incidence rate for all forms of tuberculosis to be 1.9 million [9-11].

TB is spread mainly through the air in form of droplets, when infectious people cough, sneeze, talk, laugh or spit, droplets containing *Mycobacterium tuberculosis* are sprayed into the air. People nearby may inhale the bacteria and become infected. *Mycobacterium tuberculosis* can remain viable as air-borne droplet suspended in the air for a long time or as part of house dust for weeks [12-15]. However, transmission usually occurs only after substantial exposure to someone with active TB [16-19]. A person can be infected by *Mycobacterium tuberculosis* for many years without getting sick or spreading the organism to other people [20,21]. If the immune system is weakened by immunosuppressive disease like HIV infection, diabetes mellitus, malignancy, chronic kidney disease, extremes of ages, and immunosuppressive agent, latent TB infection can develop into active TB disease. If a person with active TB disease is left untreated, he or she will infect on the average between 10 to 15 people every year [22-25].

Possible causes of reemergence are due to rapid increase in poverty, poor living condition with overcrowding areas, malnutrition, lack of drugs, the chronic problem of underfunding on National Tuberculosis Programmes, and non-adherence to programme policies. These factors

may contribute to increased transmission of *Mycobacterium tuberculosis* in the community and increase risk of progression from latent to clinical TB [26-29].

Important challenges for TB control are human immunodeficiency virus (HIV) co infection and drug resistance. If TB is detected early and properly treated using a combination of medicines for 6 to 9 months, the patients quickly become noninfectious and are eventually cured [30-32]. However, complication and treatment outcome of tuberculosis patients has not been assessed yet in India [33-36]. Therefore this study aimed to assess the patient's perception on tuberculosis and its complications.

### Method

A cross-sectional study was conducted for a period of 30 months (Jun 1, 2013 to 30 Dec, 2015) to assessing TB related knowledge, prevention and control among the participants from the outpatient Pulmonology department of Owaisi Hospital and Research Center-HYD.

**Participants:** For data collection, a structured questionnaire was developed through revision of the literature which contains three different parts that is patient perception on TB disease, preventions and control. There were 1006 patients from the out-patient of pulmonology department who have been previously diagnosed for Tuberculosis was selected for the study. The response of the subjects in the survey study was analyzed in order to assess their perception on TB, prevention and control (Tables 1-7).

### Discussion

- 41% of total participants were unaware of disease Tuberculosis. 26% of patients have the information TB is not a contagious. Whereas 29% of participants were unsure about disease. 58% of participant belief that TB is curable and is a short lived disease. Contrary to this 28% of participant had negative thought; they felt

that TB is not curable completely. 30% of participants thought that 1 or 2 months continuous treatment is enough to eradicate TB diseases.

## Results

Have you ever heard about a disease called Tuberculosis?

Response	Male (N=744)		Female (N=262)		Total Participants (N=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	469	-63%	121	-34%	590	-59%
No	275	-37%	141	-54%	416	-41%

**Table 1:** It shows data about a disease called Tuberculosis.

Is Tuberculosis contagious?

Response	Male (n=744)		Female (n=262)		Total participants (n=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	382	-51%	69	-26%	451	-45%
No	178	-24%	84	-32%	262	-26%
Unsure	184	-25%	109	-42%	293	-29%

**Table 2:** The table represents tuberculosis is contagious.

If someone has TB can he/she try to hide the disease from other?

Response	Male (n=744)		Female (n=262)		Total participants (n=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	492	-66%	149	-57%	641	-64%
No	204	-27%	51	-19%	255	-25%
Do not know	48	-7%	62	-37%	110	-11%

**Table 3:** The data for hiding of the disease from others.

Do you think Tuberculosis is curable?

Response	Male (n=744)		Female (n=262)		Total participants (n=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	482	-65%	103	-39%	587	-58%
No	206	-27%	74	-28%	280	-28%
Do not know	56	-8%	85	-33%	141	-14%

**Table 4:** Is TB curable?

How long does the treatment take?

Response	Male (n=744)	Female (n=262)	Total participants (n=1006)
1 Month	116	32	148
2 Months	104	46	150
3 Months	289	69	358
6 Months	203	84	287
1 Year	32	31	63

	Fraq	%	Fraq	%	Fraq	%
1 Month	116	-16%	32	-12%	148	-15%
2 Months	104	-14%	46	-18%	150	-15%
3 Months	289	-39%	69	-26%	358	-36%
6 Months	203	-27%	84	-32%	287	-28%
1 Year	32	-4%	31	-11%	63	-6%

**Table 5:** Duration of treatment.

Do you keep a record of your medication?

Response	Male (n=744)		Female (n=262)		Total participants (n=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	252	-39%	133	-51%	385	-38%
No	492	-66%	129	-49%	621	-62%

**Table 6:** Record of medication.

After getting a positive MDR-TB test, have you completed given treatment?

Response	Male (n=744)		Female (n=262)		Total participants (n=1006)	
	Fraq	%	Fraq	%	Fraq	%
Yes	352	-47%	73	-28%	425	-42%
No	392	-53%	189	-72%	581	-58%

**Table 7:** Treatment results after MDR-TB Test.

- 62% of total participant indicate that they don't have idea to keep medication record for their treatment. It was clear that the patients were not keeping proper medication records due to this reason, where the disease TB was not under control. According to statistical Analysis above data shows that, maximum patients do not complete their treatment after the conformation of positive Multidrug Resistance tuberculosis (MDR-TB).
- According to statistical review, 50% of total participant had a general opinion that TB treatment might last for a short period of time. More than 64% of participants believed that the incomplete or inappropriate treatment could have severe consequences of disease and might lead to death.

## Conclusion

According to the research analysis, it was clear that patient have inadequate information regarding the disease TB, prevention and control. The appropriate and effective treatment to reduce the incidence and burden of active tuberculosis. It is therefore very important to have policy or guidelines for infection prevention and control for a better understanding in the context of health care settings on issues of TB transmission, Prevention and control measures to reduce the risk of TB infection and protection of inmates as well as

health care worker should be given highest priority in health care planning and development.

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