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## Original Article

### Awareness about Tuberculosis of T.B patients at Gulab Devi Hospital Lahore

#### ABSTRACT

Tuberculosis (TB) is still a major public health concern of the developing and poor nations including Pakistan. In developing countries factors like poverty, illiteracy and the poor health care services increases the magnitude of problem. Although it is treatable but unluckily, lack of awareness among people is wide-reaching problem. Thus, this study was undertaken with an

**Objective:** To assess the level of awareness (LoA) regarding TB among TB patients in Lahore, Pakistan

**Methods:** The descriptive cross-sectional research design was used. The study population comprised of young adults in Lahore with Pulmonary TB, taking DOTS therapy. A sample of 390 patients was selected from Gulab Devi Hospital; a TB public tertiary care hospital of Lahore. Level of awareness was evaluated through self-administered questionnaire.

**Results:** More than half (56.9%) of the study participants were male patients and the remaining proportion was female. Almost half of the patients (54.9%) belonged to the rural areas. Occupation of the patients was mostly agro pastoralist and most of them (63.6%) lived in pakka houses. Most of the patients (61.0%) knew that bacteria or germs are the causes of TB. There were 55.4% patients who expressed that poverty was the basic factor that provoked tuberculosis spread. More than 50% of patients (52.3%) were aware of tuberculosis.

**Conclusion:** The findings of the current study revealed that although more than 50% of patients are aware of TB but still 47.7% were unaware about tuberculosis. Hence, health care professionals should focus more on imparting knowledge about the TB symptoms, transmission, prevention, and treatment.

**Keywords:** Direct observation therapy, multiple drug resistance.

## INTRODUCTION AND LITERATURE REVIEW

Tuberculosis (TB) is still a major outstanding problem of the developing and poor nations including Pakistan. In developing countries factor like poverty, illiteracy and the poor health care services increases the magnitude of problem. TB has a high cross infection rate. Poor drug adherence is another cause of rising drug resistance. TB still is taken as social taboo in Pakistan. Keeping in mind the devastating effects of TB, now, in Pakistan “The Directly Observed Treatment Short-course” (DOTS) is being adopted as current approach to combat TB.

TB leftovers a major worldwide health issue, Estimated TB deaths in 2009 were 13 lacs globally. 9 million new cases and 15 lacs deaths in 2013 were reported. It has been supposed that a patient is infected by a single strain of Mycobacterium Tuberculosis (MTB) (1). According to the WHO (2) each second person gets infected by the Tuberculosis in the biosphere. Tuberculosis (TB), a respiratory disease communicated through airborne droplet of infected person like coughing, sneezing, spitting and talking. Tuberculosis is not transmitted by the fomites, dishes or any other articles used by the patient(3).

There is an increased risk of spread of Tuberculosis while working in overcrowded and ill-ventilated places. Some of the occupational diseases such as anthracosis and silicosis increase the susceptibility to tuberculosis(4).It is caused by the acid-fast bacilli Mycobacterium Tuberculosis.(5) It damages lungs mostly but other organs are infected as well. Although it is treatable but unluckily, lack of information and awareness among people is wide-reaching problem.(6)Pakistan is amongst 27 countries around the world with high burden of MDR TB patients. Tuberculosis is the single leading cause of deaths among women of reproductive age, i.e., between the ages of 15 and 44 (7).

(8)Pakistan ranks fifth amongst TB high-burden countries worldwide. It accounts for 61% of the TB burden in the WHO Eastern Mediterranean Region. Incidence of TB in Pakistan is about 420,000 and frequency of cases is around 231 cases per 100,000 inhabitants.(9) The incubation period is the time during the exposure to Mycobacterium Tuberculosis and development of active infection. It may vary from a few months to a few years.(10) Adverse drug reactions may lead to lengthening the treatment. It may also raise morbidity and mortality of disease.(11)

In Karachi, Pakistan a study conducted to assess knowledge, attitude and misconceptions regarding TB. It concluded that Eleven (7%) out of 170 patients assumed TB was not a communicable disease and 18 (10.6%) did not consider a curable disease. Polluted food was measured the cause of infection by 81 (47.6%) and 97 (57%) reflected that separating plates as an essential way of avoiding spread. Thirty-one (18%) patients would have withdrawn their pills

resulting in relief of symptoms. Thirty-nine (23%) of the patients thought that TB could lead to infertility and 66 (38.8%) assumed that there were decrease chances of getting married succeeding infection. TB may not be immediately diagnosed because there is deficient clinical experience of newly qualified physicians. TB may not be immediately diagnosed because there is deficient clinical experience of newly qualified physicians. (12)The stigmatization can play an imperative role in hesitancy of patients in pursuing treatment. No program for TB control can be operative unless specious dogmas amongst the multitudes are recognized and detached. Communal and traditional features have to be taken into account as they play a chief role in compliance of TB patients.(13)

In Malaysia, a study conducted on the Level of Societal Awareness and Stigma on TB. The results indicated that though the participants have heard of the TB ailment, a most of them were not sure about the sources affecting this disease. Mostly respondents have negative stigma towards TB patients. The findings designated that students prefer television, social networking websites and journals as source for gaining knowledge regarding TB.(14) The study on Effect of awareness programs by media on the epidemic outbreaks in India examined that awareness is widely recognized as a basic tool for persuading persons behavior towards the ailment to plan appropriate strategies for monitoring the epidemic.

Awareness program through media make individuals aware about the infection to take numerous safety measures (taking protective treatment, immunization, social isolation etc.), to lessen their probabilities of being infected. Awareness among the inhabitants alters the pattern of disease spread and decreases the rate of infection.(15) The Directly Observed Treatment Short-course (DOTS) policy for TB, proposed by World Health Organization (WHO), was applied in Pakistan from 1995 onward; DOTS is being adopted as current approach to combat TB. However, foremost improvement in TB control was only accomplished after the revival of the National TB Control Program ( NTP) in 2001.(16) (17)

## METHODOLOGY

### Objective

To assess the level of awareness (LoA) regarding TB among TB patients in Lahore, Pakistan

### Study design

Descriptive, cross-sectional study design was conducted for present study.

### Study Population

The study population comprised of young adults (age $\geq$ 18 year of age) with Pulmonary TB, taking DOTS therapy. A sample of 390 patients was selected from Gulab Devi Hospital, a tertiary care public hospital of Lahore.

### Sampling Technique

Convenient sampling technique is used for data collection.

### Selection and Development of the Tool

The tool used for the present study was a self-administered questionnaire. The questionnaire form was divided into three parts: part-I (demographic data), part-II (awareness of TB), Part-III (Assessment of Communities about Public Health Importance of Tuberculosis). Questionnaires were distributed among general public of infected patients of TB taking DOT therapy.

### Validity and reliability of the tool

The study tool was reviewed and validated by experts in public health and statistician. The questionnaire was then pilot tested amongst a group of patient ( $n = 20$ ). This process ensured that questionnaire were understandable and concise. Reliability of the tool was computed using Cronbach's. The results of the pilot study showed an internal consistency of 0.726 which showed that the tool was reliable for data collection.

## DATA ANALYSIS

Data were analyzed using descriptive statistics by computing frequencies, mean and standard deviation and has been presented in the form of tables.

The findings begin with a description of the respondent profile based on the total of 390 questionnaires returned.

**Table-1 Gender & Age Group**

Variable	Frequency	Percent (%)
<b>Gender</b>		
Male	222	56.9
Female	168	43.1
<b>Age</b>		
18-30	140	35.9
31-45	111	28.5
46-60	73	18.7
61-75	66	16.9
Total	390	100.0

Table-1 illustrates that 56.9% of the participants were male & most of them about 35.9% were in the age group of 15-30years.

**Table- 2: Level of Education**

Illiterate	44	11.3
Primary	86	22.1
Secondary	90	23.1
Matric	123	31.5
Other (Higher)	47	12.1

Table 2 illustrates that 31.5% were having matriculation education while very few 11.3%) were illiterate.

**Table -3: LoA Among all Study Participants**

LoA	Frequency	Percent%
More than 50 %	186	47.7
Less than 50%	204	52.3

Table-3 illustrates that those questions which were answered by more than 50 percent of the study participants were considered as having awareness and knowledge about the disease. 47.7% were aware about the disease and its infectious process. While 52.3 % were not having enough knowledge and awareness about the disease.

**Table- 4 Predisposing Factors in the spread of TB**

Time Period	Frequency	Percent
Poverty	216	55.3
Smoking, chewing tobacco, drinking	161	41.2
Drinking Raw milk	13	3.3
Total	390	100.0

Table 4 shows that majority 55.4% (n=216) patients expressed that poverty is most basic factor that provoke Tuberculosis spread.

**Table 5: Association of LoA and Literacy Level of the Patients**

LoA	Frequency	Percent%
Matric and above	113	60.75
Below Matric	73	39.25

Table 5 depicts that a direct relationship between LoA regarding tuberculosis and educational level. Those who have high qualification are more aware of disease while those who have less education have less aware.

## DISCUSSION

Tuberculosis is still a major health problem.(18)it is accountable for the significant morbidity and mortality in developing world and low socio-economic communities.(19) The present study showed that the majority of the study participants were males 56.9%.The finding is agreed with a study conducted on Pulmonary Tuberculosis Patients in a Peri-Urban Population of South Delhi, India in this study majority of the participants 250 (57.9%) were males out of 432 patients and 182 (42.1%) females.(20) 35.9% respondents were in the age group of 15-30years. This study is contraindicatory to the study conducted in Pakistan. The findings reported that there are more than 75% of active TB cases associated with the productive age group of 15-59 years.

(21) Concerning with the education, most of the participants were having secondary school qualification, it has been contraindicated to the study that all participants were aware of

tuberculosis.(22)It has been shown that intensive counseling has a significant impact on treatment adherence in patients on anti-Tuberculosis treatment. The active participation of family and community members would help to increase awareness about TB, and encourage patients to seek and continue treatment in our region. The existing study showed that 41.3% of the study population (n=161) stated that increase of smoking, chewing and drinking are the main contributors in the expansion of Tuberculosis. In a similar study from India (23) reported that only 2.3% of their respondents knew that TB was caused by a germ while in our study this level was 61% from all of the study participants. More than 33% of the patients in our study were of the opinion that TB may result from smoking and drinking of liquor, while 03% were of the view that it may be due to the scarcity of food and malnutrition. Clinical improvement, unavailability of drugs or cost of drugs were reported to be the main reasons for defaulting treatment in earlier studies.

(24) The current study shows mostly people (52.3%) were unaware about tuberculosis. The findings are in agreement that of patients have poor knowledge regarding tuberculosis. (13)The current study showed those who have good qualification are aware of the disease. The respondents in our study were receptive to the idea of DOTS, and felt that it would be an effective method of increasing treatment compliance.(25) Those who are illiterate are unaware of tuberculosis. These findings are matched with study conducted in health care workers of Andrew and Jamaica which reported that significant associations with good knowledge were only found with highest educational level obtained. (26) Other studies have also indicated that new TB patients have little awareness about the infectious nature of the disease, routes of infection and proper disposal of their secretions. Early diagnosis and immediate initiation of treatment are essential for an effective tuberculosis (TB) control program (27).

A full course of treatment of sputum-positive cases is the main method to control the further spread of disease in the community.(28) Mass media is main tool for encouraging individual's actions towards the disease to improve appropriate guidelines.(29) Patient adherence to prescribed TB drug regimens must be assured to prevent relapse, acquired resistance and transmission. A cross sectional study conducted in Norway concluded that the main reason of getting delay of TB treatment is contributed by the health system instead of the patient. The wakefulness about TB is little and stress should be given to enhancing the awareness of TB among the community(30)

(31) Such researches are more appropriate in inaccessible and backward regions occupied mostly by poor persons with inadequate access to healthcare.(32) Political leaders and rule makers need to comprehend that TB cannot be eradicated without capitalizing more resources.(33)We hope that this will inspire government leaders and donors to recognize the research talent and opportunity in the nation, as well as the research need (34) (35).



## **RECOMMENDATIONS**

The findings of this study recommend that comprehensive public health awareness programme should be initiated extensively by health care professional at primary & secondary health care facilities to combat with disease. The hospital administrators should also support the development of disease protocols. The health care providers should join hands with different NGOs creating awareness on disease prevention measures.

## **CONCLUSION**

The study reports poor LoA among TB patients. Stigmatization, cough, pain, financial difficulties, supported by parents, and loss of significant others were found as important determinants of LoA among TB patients. Moreover, interventions at governmental level are required to reduce social stigmatization of TB patients and to provide job security to them. LoA among TB patients is generally poor in Pakistan where the burden of population and the scarcity of resources are stabbing at health care system.

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