

Knowledge about Tuberculosis among Rural Population of Punjab, Pakistan

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ABSTRACT

Tuberculosis is a preventable bacterial disease that affects lungs but can attack other organs as well. It spreads through airborne particles called droplet nuclei. It is the second most common infectious cause of death worldwide and Pakistan is fifth amongst countries with highest burden of tuberculosis. This study was planned to raise awareness and assess knowledge of rural population of Punjab about disease. A cross sectional study was carried out in rural areas of Punjab, Pakistan from March 2017 to June 2017. A total of 500 participants between 20 to 70 years of age were enrolled through a non-probability, convenient sampling method. They were interviewed by Lady Health Workers during their routine visits in community after written informed consent through a pre-designed, pre-tested questionnaire. The obtained data was then analyzed using SPSS 22. Results showed that the knowledge of disease symptoms, transmission and prevention was very low. People do not know the significance of defaulting the treatment and availability of medication at government hospitals. There is urgent need to develop health education programs about disease awareness in community.

Keywords: Knowledge, rural area, tuberculosis

INTRODUCTION

Tuberculosis is an infectious disease caused by a bacteria *Mycobacterium tuberculosis*, that infects lungs primarily but can also affects other organs. It is transmitted through air droplets while coughing, sneezing, talking, singing or handling the secretions of patients. A single cough has about 4000 droplets that can cause infection in recipient, asymptomatic infections cause latent tuberculosis and around 10% of patients can develop active disease in their lifetime that may prove fatal in about half of them if left untreated¹.

In 2016, around 10.4 million people became infected with tuberculosis worldwide. It is the second most common cause of death due to infectious diseases and the most common cause of death in HIV/AIDS patients². Currently, Pakistan is fifth amongst countries with highest burden of tuberculosis and fourth with drug resistant tuberculosis globally, its incidence is 231/100,000 and 420,000 new cases are produced in our estimated population of 180 million people annually³. Poor adherence to the treatment is a major factor behind multi drug resistance and failure of DOTS (*directly observed treatment, short-course*) program. People have an idea of the disease but the lack of knowledge about transmission, prevention, risk factors and its association with HIV/AIDS is proving fatal. It not only delays the health seeking behavior compromising the health of patient but also gives ample time for infection to spread to the healthy community⁴. Our community holds a strong negative concept about tuberculosis and thus the negative influence on social relations and moral identity of the patient leads them to deny the disease.

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This study was planned to raise awareness in population about tuberculosis, its transmission, prevention, treatment and to determine the knowledge of our rural population. The study was aimed to assess the knowledge of rural population about tuberculosis

MATERIALS AND METHODS

A total of 500 participants were enrolled through a non-probability, convenient sampling method in a community based cross-sectional study in the rural areas of district Multan Punjab from March 2017 to June 2017. Community members of age 20 years to 70 years were included in the study. Exclusion criteria was age less than 20 and more than 70 years. Study participants were interviewed by Lady Health Workers during their routine visits in community after written informed consent through a pre-designed, pre-tested questionnaire. During interviews, all questions were asked in local language (Urdu/Punjabi) which were later converted to English language for data analysis. Data was entered in SPSS-22 for analysis. Quantitative variables like age were presented as mean and qualitative variables like gender and questions were presented as percentages and frequencies.

RESULTS

A total of 500 participants were included in the study. Mean age was 37.14 years. 38% were housewives/unemployed, 26% were private workers, 19% had a government job and 17% were doing their own business. A total of 46% were males while 54% of them were females. 56% of the them had a monthly income of less than pkr 10,000, 40% had between 10,000 to 50,000 and 4% earned 50,000 to 1 lac monthly. 37% of study participants were uneducated, 45% had done matric, 12% intermediate and 6% graduation.

Table 1:

Cause of tuberculosis	n	%age	Prevention method	n	%age
Bacteria	158	31.6	Cover mouth while coughing/sneezing	286	57.2
Cold wind	67	13.4	Washing hands	234	46.8
Smoking	154	30.8	Avoiding hand shakes	278	55.6
Spoiled soil	45	9	Isolating TB patients	256	51.2
Poor hygiene	120	24	Closing windows	187	37.4
Mode of transmission			Avoid sharing dishes	368	73.6
Through coughing droplets	286	57.2	Vaccination	198	39.6
Through shaking hands	297	59.4	Good nutrition	311	62.2
Through sharing dishes	308	61.6	Do not know	76	15.2
Do not know	101	20.2	Is TB curable		
Signs and symptoms			Yes	393	78.6
Cough for two weeks or above	358	71.6	No	107	21.4
Hemoptysis	124	24.8	Know free TB treatment availability		
Weight loss	68	13.6	Yes	387	77.4
Ongoing fatigue	117	23.4	No	213	42.6
Persistent Fever	189	37.8	Risk of defaulting from treatment		
Do not know	20	4	Death	79	15.8
Vulnerability for TB			No cure	46	9.2
Crowded places	203	40.6	Drug Resistance	58	11.6
General community	297	59.4	Do not know	317	63.4

DISCUSSION

Tuberculosis is a fatal but preventable condition that is second most common cause of death in infectious diseases, this study was planned to assess the knowledge of rural population of Punjab about causes, transmission, treatment and prevention of tuberculosis. Only 31.6% of our study subjects knew that TB is caused by bacteria. In a study carried out among Ethiopian prisoners in March 2017 45.9% population was aware of the cause of the disease⁵. 57.2% population said that TB was transmitted through cough droplets and around 60% reported that TB could be transmitted through shaking hands and sharing dishes, 64.6% population in another study knew that respiratory droplets transmit the disease⁶.

71.6% population responded that cough for more than two weeks is the main symptom of tuberculosis followed by persistent fever (37.8%) and hemoptysis (24.8%) while 94% of population in Tanzania knew the symptoms of tuberculosis⁴. In our study population 73.6% population thought that transmission of tuberculosis could be prevented by avoiding to share the dishes and 62.2% thought that good nutrition could prevent the disease transmission, 57% of people said that covering mouth while sneezing and coughing was important in prevention of disease, population. However, 55.6% and 37.4% mentioned inappropriate methods like avoiding handshakes and keeping windows closed while living with chronically coughing patients, this should be stressed while delivering health education that ventilation is important in prevention of tuberculosis. 78.6% of the population was aware that TB is curable and 77.4% knew that treatment for TB is available in government hospitals and is available for population free of cost.

Pakistan is fourth amongst countries with highest burden of drug resistant tuberculosis and knowledge of our population is very poor about defaulting from treatment. 63.4% of the population has no idea of consequences of defaulting and only 11.6% responded that defaulting from treatment could cause multi drug

resistance, 9.2% said that once a patient leaves treatment in between it becomes incurable that is again a misconception leading to the poor health seeking behavior and increased transmission of the disease to healthier population. More than half (59.6%) of the population thought that the risk of getting tuberculosis is same for general population as that is for people living in crowded places. A study conducted in Ethiopia showed that about half of population believed that TB is incurable among the poor because of bad nutrition and poor living conditions. This study shows a low level of knowledge about TB transmission and prevention in rural population of Punjab.

CONCLUSION

In this study it is evident that knowledge of adult population of Punjab about Tuberculosis is very low.

RECOMMENDATION

There is an urgent need to develop health education programs to improve the awareness of tuberculosis both at primary and secondary health care levels.

LIMITATION

The limitation of this study was that the study subjects were approached from a small sect of rural population hence the findings cannot be generalized to the whole rural population.

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