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TUBERCULOSIS; AWARENESS ABOUT SPREAD AND CONTROL.

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ABSTRACT... Objective: To assess the awareness about spread and control of Tuberculosis amongst people presenting at Ghurki Trust Hospital, Lahore. **Design:** A cross-sectional survey. **Place of study:** Lahore Medical and Dental College (LMDC), Lahore, **Period:** From November and December 2006. **Methodology:** A cross-sectional survey was conducted among people presenting at Ghurki Trust Hospital, Lahore, between November and December 2006. A structured questionnaire was used to collect the data. Descriptive statistics were determined in terms of percentages. **Results:** In the present study, 82% respondents did not know the correct mode of transmission of tuberculosis. Correct modes of transmission including coughing, sneezing, spitting and breathing air were mentioned only by 18%. A large proportion of respondents (76%) knew that tuberculosis presents as cough lasting more than three (3) weeks and having prolonged fever (68%). Fifty percent of respondents said that government health facilities are the best places for the treatment of TB. Twenty three percent (23%) of respondent mentioned use of medicine as a method of management and treatment. Improving sanitation and nutrition was mentioned to prevent and control TB by respondents in almost equal percentage (20% & 18%). **Conclusion:** Poor knowledge and misconceptions concerning tuberculosis are rampant in Pakistani patients. Poor knowledge of TB patients concerning their disease may contribute to the high burden of TB disease in the country.

Key words: Tuberculosis, modes of transmission, coughing, prolonged fever, government health facilities.

INTRODUCTION

Tuberculosis (TB) is one of the most serious health problems, as globally, around one third of the population has been infected with *Mycobacterium tuberculosis*¹. TB is a major public health problem and according to World Health Organization, Pakistan ranks 6th in the countries having high disease burden and contributes about 44% of tuberculosis burden in the Eastern Mediterranean Region². TB contributes 26% of avoidable deaths among adults and children in Pakistan³. According to WHO, the incidence of sputum positive TB cases in Pakistan is 80/100,000 per year and for all types it is 177/100,000 and about 361,000 new cases of TB are added every year in Pakistan⁴. TB is responsible for 5.1 percent of the total national disease burden in Pakistan. The impact of TB on socio economic status is substantial⁵.

TB has been prevalent in Pakistan Current focus of National TB Control Programme used Directly Observed Treatment Short Course (DOTS) to achieve and maintain cure rate of over 85% and augmentation of case finding activities to detect at least 70% of estimated cases.

Achieving these goals requires active community participation by way of creating awareness on the etiology, symptomatology, management, preventive measures, and information of availability of services, etc,

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for TB⁵.

The propensity to seek care depends on knowledge about and perceived risk of TB within reference groups (families, neighborhood) and communities at large. As demonstrated in studies in Ethiopia⁶, India⁷, Mexico⁸, Nigeria⁹, Pakistan¹⁰ and Thailand¹¹, patients with low knowledge about symptoms are more likely to postpone care-seeking and get tested.

Various studies have been done all over the world to assess the knowledge regarding various aspects of TB including its symptoms, modes of spread, its presentations and its management, treatment, control and prevention. Many studies^{12,13,14,15} found good awareness of the cure and symptoms of TB among the patients and had shown that majority of the participants of these studies perceived TB as a curable disease. Yet a few respondents^{12,16,17} in these studies considered tuberculosis as dangerous and incurable. Urban population had better knowledge about general and diagnostic aspects of tuberculosis than the rural ones, though both populations were poorly acquainted with its preventive aspects. Similarly, general knowledge about tuberculosis was poor in illiterate and low socio-economic population and high in literate and high socio-economic group¹⁸. A study done on Pakistani patients found various misconceptions concerning TB. Lack of knowledge on Tuberculosis was alarming among its participants¹⁹.

Stigma and misinformation about TB are still major barriers to TB screening and treatment in some countries. As many people do not consider themselves to be at risk, so the chances of identifying people before they reach the infectious stage of active, smear-positive TB are lessened. This in turn prevents a country from containing its TB epidemic²⁰.

People with TB often suffer from discrimination and stigma, rejection and social isolation. The disease has a worldwide stigma, which adds to the suffering. Scientifically unfounded beliefs about the transmission of the disease are the main significant predictor of the instrumental function of this attitude. Health education and, arguably, more successful control programmes

could help to reduce the social isolation suffered by people with tuberculosis²¹. The need for renewed efforts in health education for the public, clarifying areas of misunderstandings about important and common diseases like tuberculosis, in developing countries¹⁴. To reduce the stigma caused by traditional beliefs and negative attitudes towards TB, basic knowledge about the cause and mode of transmission is necessary^{22,23}. It is also essential to disseminate information and interact with the people for removing fear and stigma associated with TB so that people can come forward for seeking care¹⁰.

OBJECTIVES

1. To assess the awareness about spread and control of Tuberculosis amongst people presenting at Ghurki Trust Hospital, Lahore.
2. To formulate recommendation to improve awareness about Tuberculosis.

METHODOLOGY

A cross-sectional descriptive study was conducted amongst people presenting at Ghurki Trust Hospital, Lahore, between November and December 2006. Non-Probability Sampling Technique was used to recruit 50 respondents. A structured questionnaire was used to collect data on the perceptions of general public about cause, spread and prevention of Tuberculosis. Data was analyzed using SPSS version 10 and Descriptive statistics was determined in terms of percentages.

RESULTS

Socio-demographic profile

A large number of respondents (60%) belonged to age group 20-39 years. Sixty six percent of respondents were male and 34% were female. Regarding educational status, 52% of respondents were matriculate or above and only 16% of respondents were illiterate. Fifteen out of 17 females were housewives. Other respondents were either in regular employment (22%), had a business (22%) or they were day laborers (12%). The rest of the 5 respondents (10%) were land owners, students and unemployed. Two respondents did not give any response on the question of their occupation. Monthly Family Income of 10% of respondents was less than Rs. 3,000,

of 30% respondents was between Rs. 3,001 and 5,000, of 18% respondents was between rs. 5,001 and 10,000 and of 34% respondents more than Rs.10,000. Four respondents (8%) did not reveal their monthly Family Income.

Perceptions about Modes of Spread of Tuberculosis

Table I shows the perceptions of respondents regarding spread of tuberculosis.

Most common modes of transmission mentioned were, coughing and sneezing (42%), eating with a TB patient (42%), drinking dirty water (34%), spitting sputum (24%), Breathing air (22%) and touching each other (14%).

Table-I. Perceptions about Modes of Spread of Tuberculosis N=50 (Multiple Responses)

Perceived modes of spread	Frequency	%age of respondents
Coughing and sneezing	21	34%
Eating together	21	34%
Drinking dirty water	17	34%
Spitting sputum	12	24%
Breathing air	11	22%
Touching each other	8	14%
Mother to child transmission during pregnancy and delivery	4	8%
Breast feeding	1	2%
Others	15	30%

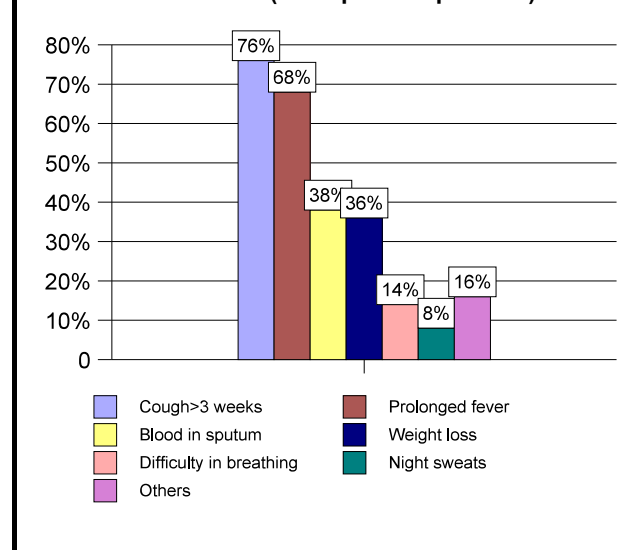
Other responses by 30% of respondents included social pressure, careless attitude, sexual contact, living in small houses, blood transfusion, smoking, open food, genetics and tension.

Presentation of Tuberculosis

Figure 1 show that a large proportion of respondents (76%) knew that tuberculosis presents as cough lasting more than three (3) weeks and having prolonged fever (68%). Blood in sputum, weight loss, difficulty in

breathing and night sweats were mentioned by 38%, 14% and 8% of respondents respectively. Other responses (16%) included dietary problems, weakness, back pain, skin color change and pain in shoulder.

Fig-1. Knowledge about modes of presentation of TB N=50 (Multiple Responses)



Perceptions about the curability of TB

When asked whether TB can be cured, 100% of respondents affirmed that TB is a curable disease.

Places where Tuberculosis treated best

Respondents were asked about the most suitable places for the treatment of tuberculosis. Multiple responses were obtained as 25 respondents (50%) said that government health facilities and private hospitals are the best places, 5 respondents (10%) mentioned Sanatoriums and GP clinics were named by 3 respondents (6%).

Management and Treatment of TB

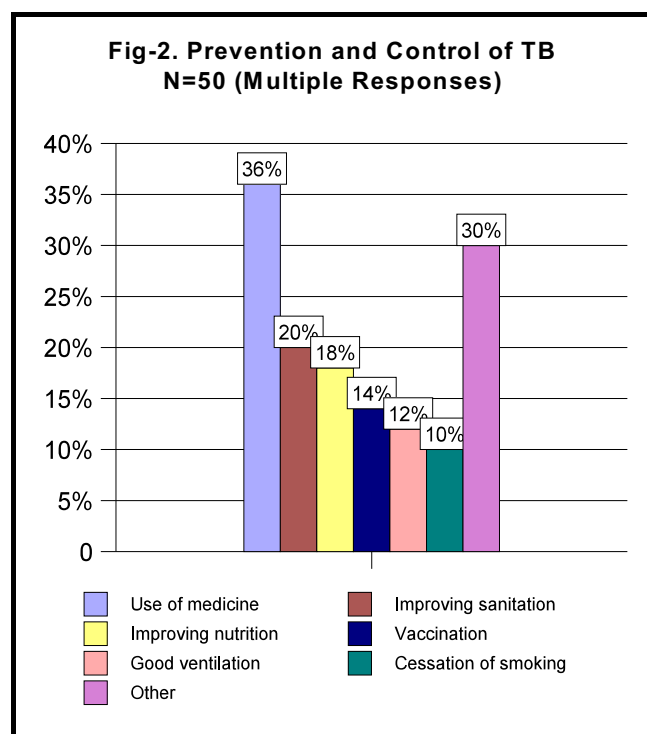
The respondents were asked about various methods of management and treatment of TB. As seen in Table II, 23% of respondent mentioned use of medicine as a method of management and treatment, followed by improving nutrition (14%), improved sanitation (14%), good ventilation (10%), vaccination (9%), and cessation of smoking (8%). Among other methods mentioned by respondents included avoiding the sour food and yogurt,

taking rest, improving food intake, timely checkups, improved patient hygiene and making patients happy.

**Table-II. Management & Treatment of TB
N=50 (Multiple Responses)**

Methods	Frequency	%age
Use of medicine	18	23%
Improving nutrition	11	14%
Improving sanitation	11	14%
Good ventilation	8	10%
Vaccination	7	9%
Cessation of smoking	6	8%
Others*	18	23%

**Fig-2. Prevention and Control of TB
N=50 (Multiple Responses)**



Prevention and Control of TB

Figure 2 depicts that when asked about prevention and control of TB, 18 respondents (36%) said that this can be achieved by use of medicines, 10 respondents (20%)

advised better sanitation, 9 respondents (18%) recommended improvement in nutrition, 7 respondents (14%) advocated for vaccination, 6 respondents (12%) mentioned good ventilation and 5 respondents (10%) suggested cessation of smoking. Thirty percent of respondents presented other methods of control and prevention which included, good environment, awareness about TB leading to its prevention, avoiding contact and eating with TB patients, use of sterilized syringes, preventing open spitting, isolating TB patients from children and avoiding blood transfusion.

DISCUSSION

In the present study, cough lasting more than 3 weeks (76%), fever (68%) and haemoptysis (38%), difficulty in breathing (14%) have been observed to be the symptoms of tuberculosis known to the people indicating a fairly good level of knowledge. Uplekar²⁴ and Subramanian²⁵ have reported that cough, haemoptysis and fever were known to 66%, 13%, 6% of individuals respectively. Croft reported 44% individuals to be aware of cough as a symptom in Bangladesh²⁶. The greater awareness of these symptoms in the present study is encouraging and may help to improve the passive case finding. However the correct route of transmission i.e., via air by coughing, sneezing, spitting was cited by only 18% of respondents in the present study. Wrong perception, that TB is spread by eating or drinking with or touching a TB patient, sexual contact, blood transfusion needs to be addressed to remove misconceptions and stigma attached with the disease. The fallacies regarding TB, prevalent among patients and in the community are multi-dimensional. Popular myths about cause of TB are contribution of wet weather and poor housing¹⁷ hard work, emotional trauma/stress^{15,19}, eating contaminated food^{15,28}, sharing food or utensils with those who have TB^{21,29} and smoking^{19,21,28}. People generally did not recognize the enormous role of crowded and poorly ventilated places in spreading TB²¹.

Similar results regarding perceived modes of prevention of TB as found in other studies done in Pakistan and world over were also observed in the present study. Most popular preventive measure worldwide is separation of utensils^{21,23}. Other measures prevalent in all societies are

keeping body and house clean, avoiding infected people, regular exercise, eating clean food, water, clean dishes, eating healthy food, dusty air and stop smoking^{28,29}

In the present study, majority of individuals favored treatment from government health facilities and private hospitals. This finding indicates that DOTS if implemented effectively can achieve its targets of detection of TB among symptomatic and their treatment. Vaccination as a preventive measure against tuberculosis was mentioned by only 9% of individuals. However, the lack of knowledge did not reflect the actual immunization status of the children, as 85% infants in the country have received BCG vaccination²⁷.

CONCLUSIONS

The study concludes that poor knowledge and misconceptions concerning tuberculosis are common in Pakistani communities. This may be an obstacle in effective cure, prevention and control of the disease.

RECOMMENDATIONS

1. Public awareness raising programmes should be arranged using electronic and print media. These programmes should particularly address the myths and various misconceptions regarding transmission of TB and its cure.
2. Health education booths should be set up in the waiting rooms, which provide counseling and advisory sessions on TB and distribute leaflets and pamphlets on various issues related with TB.
3. Billboards and posters containing health messages should be displayed at various places of hospitals.

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