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Knowledge, Attitude And Practices Regarding Tuberculosis Among Treatment Partners Attending Urban Health Care Centre, KMC, Mangalore-A Cross-Sectional Study

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Abstract

Background and Objective *:* This study aims to describe the knowledge, attitudes and practices towards tuberculosis (TB) among treatment partners seen at the out-patient department (OPD) of the Lady Hill Urban Health Care Centre, KMC, Mangalore from April to May 2009. ***Methodology***: A questionnaire-based survey was conducted to investigate the knowledge, attitudes and practices towards TB among treatment partners (age more than 12 years old; pediatric age group was excluded) seen at the OPD. A pre-validated questionnaire, which consisted of 20 questions, was distributed to treatment partners of these patients. ***Result***s: Out of the 184 respondents, 154 (83.70%) were aware of and had good knowledge about TB. Eighty-one percent of the respondents had acceptable attitudes and practices toward the disease. 96% were aware that TB is a highly infectious disease, while 79.3% believed that it is a curable disease. The main source of information about tuberculosis was the mass media (newspapers, television and radio) in 42.5% of the respondents. In the survey, only 16.3% patients were aware about DOTS and only 42.4% knew about free treatment services. ***Conclusion***: There is still a need to strengthen the educational activities on TB through mass media; they are excellent venues for information-dissemination, thus, leading to better case detection.

Keywords: Tuberculosis; DOTS; WHO; MDR; Treatment partners.

1. Introduction

Tuberculosis, or TB, is a debilitating and usually life-threatening illness caused by the respiratory introduction of *Mycobacterium tuberculosis* complex (which includes three sub -types) into the body. The majority of patients of TB, present as pulmonary TB, but *tubercle bacilli* can disseminate through the lymphatics and bloods vessels, and the disease can manifest in any organ of the body. These manifestations are referred to as extra-pulmonary TB. Pulmonary TB, if left untreated, can kill half of all patients within 5 years and the majority of these within first 18 months[1]. TB is the single largest infectious cause of death in the world, accounting for about 500,000 deaths per year in India alone[1-2]. TB remains the number one killer infectious disease affecting adults in developing countries like India.

WHO declared Tuberculosis a global emergency in 1993[3]. In 2007, it was estimated that globally 8.8 million people were infected with TB and 1.6 million people died of TB in 2005[4]. Majority of the infected people i.e. 7.4 million (84%) belonged to Asia and Sub-Saharan Africa[4]. The 1990 World Health Organization (WHO) report on the Global Burden of Disease ranked TB as the seventh most morbidity-causing disease in the world, and expected it to continue in the same position up to 2020 [5]. Globally, 9.2 million new cases and 1.7 million deaths from TB occurred in 2006, of which 0.7 million cases and 0.2 million deaths were in HIV-positive people[4].

India is the highest TB burden country in the world and accounts for nearly 20% of the global burden of the disease[6]. Controlling TB in India is a tremendous challenge. The TB burden in India is still staggering. Every year, 1.8 million persons develop the disease, of which about 800,000 are infectious; and, until recently, 370,000 died of it annually (~1,000 every day). The disease is a major barrier to social and economic development. An estimated 100 million workdays are lost due to illness. Society and the country also incur a huge cost due to TB, nearly US$ 3 billion in indirect costs and US$ 300 million in direct costs[7]. Early case detection and effective treatment, especially with Directly Observed Treatment Short Course (DOTS) used by the Revised National Tuberculosis Control Programme (RNTCP) of Government of India, not only cures patients but also interrupts the transmission of tuberculosis in the community as well[8].

TB spreads relatively slowly in comparison to other communicable diseases, many factors in the rural environment of north India compound the problem of infection and development of TB, including closed living quarters, malnutrition, smoking, improper disposal of sputum, and the emergence of multi-drug resistant (MDR) strains of TB. Also, as TB is one of the major opportunistic illnesses associated with HIV infection, the developing HIV/AIDS situation in north India may prove to be an exacerbating factor in the

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control of this disease.

This paper provides the baseline assessment of the knowledge, attitude and practices among treatment partners of patients diagnosed with TB attending morning OPD of the Lady Hill urban health care centre, KMC, Mangalore from April to May 2009. It is hoped that factors, which hinder a better understanding of TB, shall be identified with the ultimate goal of improving the quality of case detection and therapeutic outcomes for TB patients.

2. Methodology

2.1 Study Design: This is a cross sectional of the knowledge, attitudes and practices of the treatment partners of patients diagnosed with TB (pulmonary and extra-pulmonary) at the OPD of the Lady Hill Urban Health Care Centre, KMC, Mangalore from April to May 2009.

2.2 Study Population: The target population for this study was the treatment partners of patients (age more than 12 years old; pediatric age group was excluded) diagnosed, on follow-up, with TB at the OPD of the Lady Hill Urban Health Care Centre, KMC, Mangalore. The accompanying adults of said patients were interviewed. Those who acted as treatment partners, i.e. the caregivers, who were directly involved in the patient's treatment, such as bringing them to the clinic and administering the anti-TB medications at home, were included in this study. Patients who recently completed treatment for TB were also included in the study. Excluded were those who were seen for the first time at the said clinic; and those patients not accompanied by caregivers.

2.3 Data Collection: A semi-structured questionnaire-based survey was carried out among treatment partners of patients seen at the OPD of the clinic. Ten percent of the target population was asked to answer the questionnaires for validation. The final questionnaire was revised based on the pre-validated questionnaire and preliminary data. The two-part questionnaire, translated in Kannada and consisting of 20 items, included information on the socio-demographic characteristics of the respondent, such as the gender, age, level of educational attainment. The knowledge of the respondents about TB was assessed on the following topics: presentation of the disease, modes of transmission, severity of the disease and its curability, diagnostic modalities used, and their sources of information about the disease. The attitudes and practices of the treatment partners were also investigated through questions about: causes of delay in seeking health care; the health facility visited to get initial care; and their thoughts on the consequences of not seeking help and not taking or interrupting medications. The respondents were instructed to answer the questions on their own.

2.4 Statistical analysis: Data collected was entered into MS-Excel and Survey data was analyzed using SPSS (Statistical Package for Social Sciences) version 11.5 software. Statistical tests chi squared was also used. p value < 0.05 is statistically significant.

3. Results

A total of 184 treatment partners were recruited as respondents to this study, of which 76% were female. With respect to the knowledge about TB, 154 out of the 184 treatment partners (83.70%) of the patients were aware of and had good knowledge about TB.

Of the 184 respondents, 74 (40%) were from the urban areas and 110 (60%) were from the rural areas. Among 74 respondents from the urban areas, 7.4% were male and 21.3% were female while among 110 respondents from the rural areas, 16.6% were male and 54.7% were female. Most of the respondents (urban 13.4%, rural 21.0%) were 31-50 years of age and the rest were either less than 30 years (urban 20.1%, rural 20.5%) or above 50 years (urban 66.4%, rural 58.5%). The 56.3% urban and 51.9% rural respondents had the high school education, 18.1% urban and 17.7% rural respondents had the Degree/Diploma education, and 16.4% urban and 14.3% rural respondents had primary school education, 9.2% urban and 16.1% rural respondents were illiterate (**Figure I**).

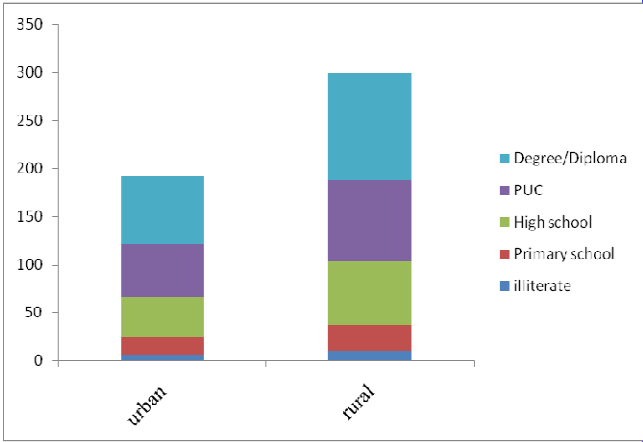

Figure I: Education of the respondents involved in the study

The mean age of the respondents was 36.5 ± 4.5 ranging from 13 to 60 years. Better knowledge about TB was seen in the older age group (>40 years old) and in those who have higher levels of education (high school and college levels). Most of the treatment partners who were included in this study were parents (67.7%), thus they were more likely to have good knowledge about TB than the other treatment partners, i.e. sibling, relatives and others.

3.1 Knowledge about Tuberculosis: As regards the treatment partner's knowledge about TB, the study shows that 96% were aware that TB is a highly infectious disease, while 79.3% believed that it is a curable disease. According to 42.5% of the respondents, knowledge and awareness about TB were obtained through mass media (television, radio and newspaper); 23.6% through the hospital staff; 27.5% from lay persons and/or personal experience; 3.3% from leaflets and booklets; and 3.1% through lectures. Meanwhile, 85% of the respondents believed that TB is transmitted by respiratory droplets through coughing, while 61.3% believed it's through the use of patient's personal things such as utensils. The following symptoms were frequently noted in patients with TB: cough (71.70%), fever of more than 2 weeks (32.60%), weight loss (28.30%), hemoptysis (27.20%), decreased appetite (18.50%), sweating (2.20%), chest pain (25%), sputum production (37%), breathlessness (22.80%) and weakness (30.40%) (**Figure II**). According to respondents, diagnostic modalities for the detection of TB included sputum

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examination (47.80%), chest x-ray (38%) and blood test (35.90%).

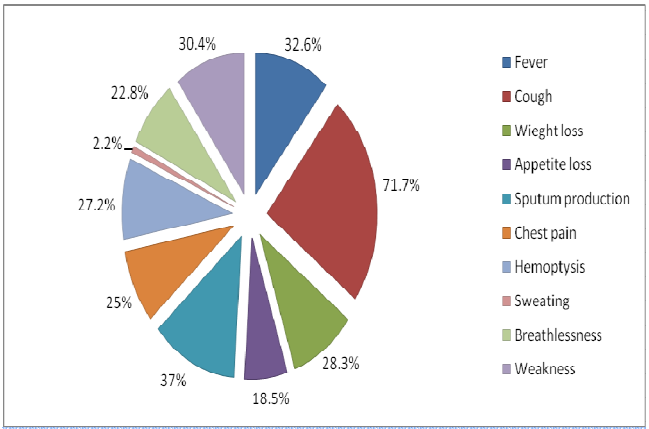

Figure II: Major symptoms of TB theory.

According to the respondents interviewed, 37% of them felt that family members of TB patients are more prone to acquiring TB and other factors includes low immunity (18.50%), malnourished (21.70%), HIV positive (10.90%), congested/ overcrowding locality (8.70%), smoking (10.90%) and children/ elderly (8.70%). Preference of medication system for TB patients includes allopathic (63%), ayurvedic (7.6%) and homeopathic (4.3%).

3. TB Attitude and Health-Seeking Behavior: Of the 184 respondents asked when seeking medical advice in case of TB symptoms, 2.20% replied they would wait for the symptoms to persist for 3-4 weeks i.e self treatment, 92.40% would approach to the health facility only after that self-treatment did not work, 4.30% would go to a medical shop. The perceptions of the member involved, with regard to the cost of TB diagnosis and treatment varied as shown in **Figure III**.

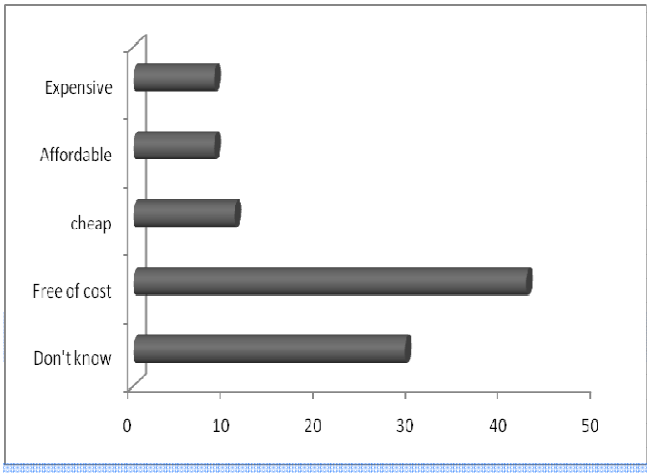

Figure III: Perceived cost of medicine services

Fourty-four percent of the community declared to know a person who has or had TB but generally try to avoid them. 34.80% of people indicated that the community mostly supports and helps persons with TB, 4.30% that community rejects persons with TB, and 16.30% did not know how their community would regard persons with TB. Attitude of respondent representing feeling of people towards TB patients shows 67.4% feels compassion and desire to help them; but 17.4% don't have such particular feelings; about 10.9% feel compassion but tend to stay away from these people and 4.3% were fear from getting infected. Medical consult was done at government clinic or hospital (50%); at the private clinic (47.80%); by a traditional or homeopathic healer (1.10%); and other sources (1.10%).

4. Discussion

A KAP (knowledge, attitude and practice) survey is a representative survey of a specific population to collect information on what is known, believed and done in relation to a particular topic, in this case TB. This survey data are essential to help plan, implement and evaluate advocacy, communication and social mobilization work[9]. A questionnaire-based survey was conducted among the treatment partners, i.e. caregivers, of patients diagnosed with TB at the OPD of the Lady Hill Urban Health Care Centre, KMC, Mangalore. There was no significant difference in the knowledge, attitudes and practices between sexes, age groups, levels of education. Most of the respondents were aware that TB is a highly infectious but curable disease. Despite this fact, a significant number still would not disclose if they were inflicted with the disease for fear of being excommunicated and left out. The relatively-poor outcome based on the knowledge, attitudes and practices among the respondents showed that there is a need to implement activities that would educate the public about the disease. These activities should put emphasis on the seriousness of the disease, the modes of transmission and the curability of TB.

The respondents were aware of the different symptoms associated with TB. Despite this, the health-seeking behaviors of the respondents were not commensurate to their knowledge about the disease. As seen in other studies, knowledge was not the only factor that affected patient's health-seeking behavior or adherence to treatment. This study found that in the population, the treatment partner's knowledge, attitudes and practices were important: they played significant roles in the adherence to anti-TB treatment, and thus in the prevention of complications and progression of the disease. In addition to knowledge, a number of factors also affected the attitudes and practices of these people. Correct knowledge and positive perception of the community towards TB and its management is a pre-requisite for them to seek early treatment. A study done in Mpwapwa district, Central Tanzania, on the knowledge, attitudes and practices with regards to TB and its treatment showed that TB was an important health problem. However, knowledge of the community on its cause was poor. This was likely the cause of delay in seeking treatment[10].

Lack of awareness is an important risk factor for exposure to TB and it not only affects health-seeking behaviors but also the control strategy, thereby sustaining transmission of disease within the population[11-18]. The low level of knowledge about TB among people, especially those living in the rural areas, was revealed in the current study.

5. Conclusion

The treatment partners of those patients with TB at the OPD of the Lady Hill Urban Health Care Centre showed good knowledge about the disease: its presenting symptoms; its infectiousness and curability; modes of transmission; and the diagnostic modalities needed for TB. The treatment partner's

knowledge, attitudes and practices played significant roles in the adherence to anti-TB medications, thus preventing the complications and progression of the disease. It was also found out that there is still a need to strengthen the educational campaign on TB through mass media; because they are excellent venues for information dissemination, there is a greater chance for better case detection.

In our survey, 83.7% of patients treatment partners attending the urban health centre were aware about tuberculosis. Only 52.2% of them were aware that TB could be transmitted through air borne droplets. Thus raising concern that adequate means of prevention may not be implemented if someone gets infected by TB. In the survey, only 16.3% patients were aware about DOTS and only 42.4% knew about free treatment services. It is highly recommended that this survey be extended to include the treatment partners from the rural areas to have a better picture of the knowledge, attitudes and practices of our population. Increasing the size of the sample population is also recommended. Finally, there is a need to educate the public on TB and eventually extend the DOTS program to the TB patients; this would ensure adherence to the anti-TB treatment and prevention of the emergence of acquired resistance.

Conflict of Interest

Authors don't have any conflict of interest.

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