



ASSESSMENT OF KNOWLEDGE ATTITUDE AND PRACTICE ON DOTs THERAPY BY TUBERCULAR PATIENTS

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ABSTRACT

PURPOSE OF THE STUDY: India is marked as world's highest Tuberculosis (TB) burden country in the year 2014 with an estimated incidence of 2.2 million cases. Patient adherence to the standard anti-TB therapy in developing countries has been estimated to be as low as 40%. Therefore we found our study is relevant to the situation.

DESIGN AND METHODOLOGY: A prospective- Educational Interventional study was conducted among 113 patients across DOTs centers in and around Bengaluru. Patient's level of knowledge, attitude and practice towards TB were assessed by conducting structured interviews using suitable validated KAP (Knowledge Attitude and Practice) questionnaire.

RESULT: Of the 113 patients, 46.9 % were found to have poor KAP, 52.2 % were found to have medium KAP and 0.88% of patients were found to have high KAP during the baseline interview.

IMPLICATION AND VALUE OF THE STUDY: A more comprehensive approach for patient education, incorporating easier access to drugs and emphasizing on motivating patients to come to the clinic to receive therapy are essential for completion of treatment course among TB patients.

CONCLUSION: Hence this study assessed level of Knowledge, Attitude and Practice (KAP) among patients with tuberculosis and revealed the need for providing more knowledge about tuberculosis and medications among patients.

Key words: Knowledge Attitude Practice, KAP, Tuberculosis, DOTs

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INTRODUCTION

Tuberculosis has severely affected communities and nations since times immemorial. The newer modalities for diagnosis and treatment of TB have made the disease curable for the people were suffering and dying from the disease. Globally, tuberculosis is the major cause of mortality and morbidity. It causes a great deal of ill health and enormous burden on population of most low and middle income countries. One-third population of the world continues to be infected with tuberculosis. World Health Organization (WHO) statistics for the year

2011 shows that India has estimated with 2.2 million cases of TB.¹

The most serious problem hindering tuberculosis treatment and control is non-adherence of patients which is due to decreased knowledge, attitude and practice towards TB. Many patients, in particular those who have a disease requiring therapy over prolonged period of time, have a tendency not to take medications as prescribed.

Studies shows females of younger age in rural residences with low income had low knowledge score and most of them were found to be illiterate. They also showed that less than half of the respondents were aware of the diagnosis and free treatment of TB, which could act as barriers to TB diagnosis and significantly affect the rate of cases.²⁻⁷ Furthermore, it has been proven that the disease had a great potential to have an impact on social relations. This happens when there is

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stigma, discrimination, and several misconceptions that could contribute to poor adherence and treatment compliance.^{8,9} The DOTS (Directly Observed Treatment short Course) effectiveness might be determined by the health-seeking behaviors of patients, which is related to their demographic characteristics, knowledge of TB, health education. These have crucial impact on treatment compliance and treatment success rate.¹⁰⁻¹¹

DOTS or Directly Observed Treatment Short course is the internationally recommended strategy for TB control that has been recognized as a highly efficient and cost-effective strategy.

For an effective treatment of tuberculosis, compliance to a minimum of 6 months treatment with multiple drugs is required¹². It is estimated that about 40% of the Indian population is infected with TB bacteria, the vast majority of whom have latent rather than active TB. Therefore, just providing anti-TB medication is not sufficient to ensure that patients are cured.¹ Collaborative approach between patient, pharmacist and health care providers may improve patient knowledge, attitude, medication adherence behavior and therapeutic outcomes. Thus a pharmacist has a role of tuberculosis educator who can help in reducing the risk factors and improving patient knowledge, attitude and practices (KAP) towards TB.¹²

Thus the present study provides the baseline assessment of Knowledge, Attitude and Practices towards TB among patients receiving DOTs therapy.

MATERIALS AND METHOD

The study was conducted in tuberculosis department in a 900 bedded tertiary care teaching and research hospital, and various DOTs centers in Bengaluru, South India. All tubercular patients of various age groups receiving any category of anti-TB drug therapy for at least a month were added in our study. Human ethical clearance was obtained from ethical committee of the Hospital. A separate data entry form format for incorporating patient's details was designed. The format contains the socio demographic details and KAP questionnaire containing 15 questions to assess the patient KAP towards the TB treatment.

All patients who met the inclusion criteria were included in the study after taking Informed Consent (IC) before commencing the study. The basic demographics, medication related details were collected by the researchers personally using the Case Report Form. An adopted semi-structured version of the KAP Questionnaire was designed and applied. It consists of closed ended questions dealing with the patient's health conditions and socio demographic situations. The questionnaire consisted of seven questions for knowledge assessment, two question for attitude assessment and four questions of practice assessment. It contained both multiple response questions and closed ended questions. The adapted questionnaire was pretested using tubercular patients.

The baseline KAP and adherence of the patients to anti-TB treatment and lifestyle management was assessed

for the patients who are enrolled in the study as per inclusion criteria.

STATISTICAL ANALYSIS

The result data was analyzed using descriptive statistical analysis and with statistical software JMP.

RESULTS

Out of 113 patients studied majority were adults 44% (N=50) followed by young adults and old patients. Eighty two percent (N=93) were rural dwellers and rest from urban society. Majority were in nuclear family (N=67) and few in joint family (N=46). More than three fourth were diagnosed with pulmonary Tb 85% (N=95) while only few had extra pulmonary TB (N=16) and a vast majority (82%, N=93) were under CAT I therapy. Of the 113 patients, 46.9 % (N=53) were found to have poor KAP, 52.2 % (N=59) were found to have medium KAP and 0.88% (N=1) were found to have high KAP during the baseline interview. From the study it was clear that there is still a need to strengthen the educational activities on TB and have venues for information-dissemination and pharmacist assisted care/counseling.

Table 1: Categorization of subjects according to age

Age Group (in years)	No. of Patients	Percentage (%)
Children (below 12yrs)	6	5
Adolescents (13-18yrs)	6	5
Young adults (19-29yrs)	25	22
Adults (30-54yrs)	50	44
Young old (55-64yrs)	13	12
Old old (65yrs and above).	13	12

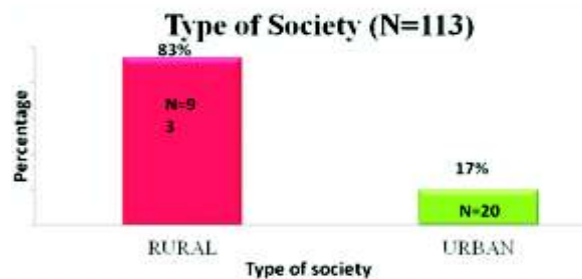


Fig. 1: Distribution of subjects according to their type of society

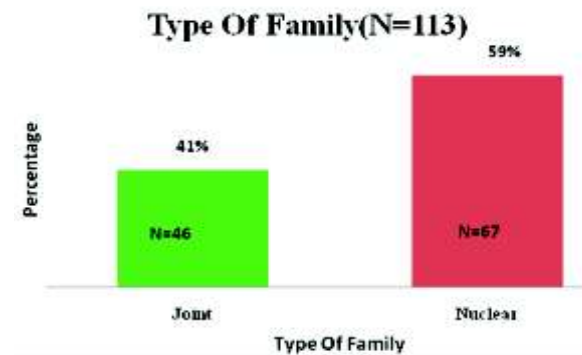


Fig. 2: Distribution of subjects based on type of family

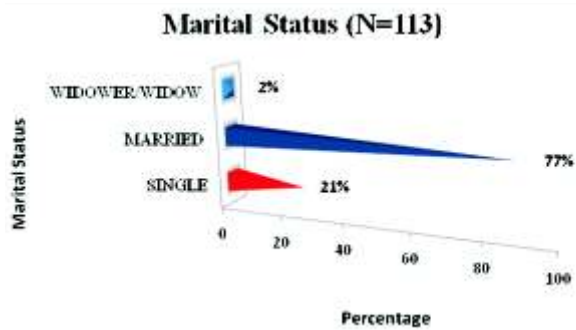


Fig. 3: Categorization of subjects based on their marital status

Socio-economic Status (N=113)

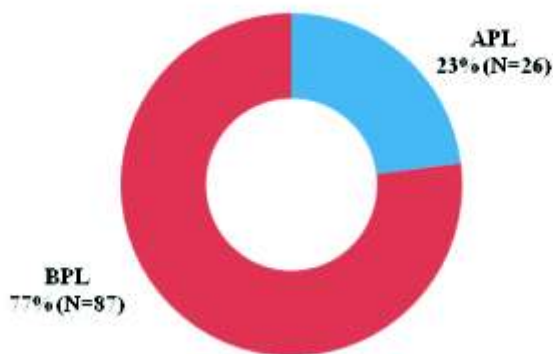


Fig. 4: Distribution of subjects according to socio economic status

Type Of TB(N=113)

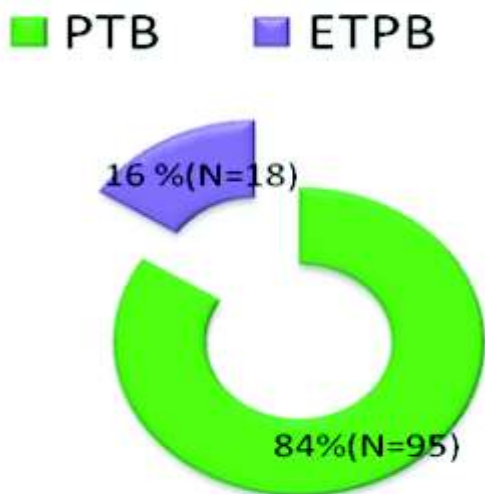


Fig. 5: Distribution of subjects enrolled under each type of TB

Tubercular Therapy(N=113)

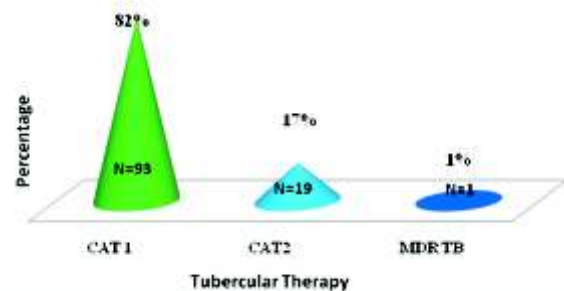


Fig. 6: Distribution of subjects with different tubercular therapy

KAP Score (N=113)

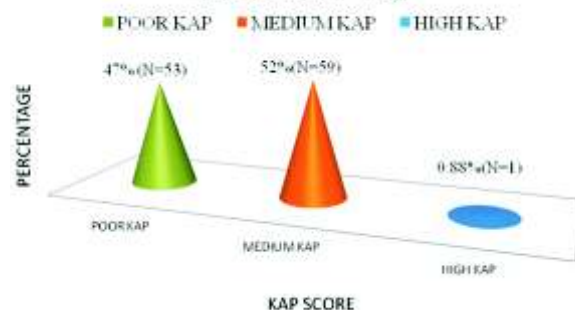


Fig. 7: Analysis of KAP score among enrolled patients

DISCUSSION

Globally, 5.4 million men, 3.2 million women and 1.0 million children are estimated to have TB detected. The general health/nutritional status of TB-infected persons affect their rate of progression to disease. Women's risk of disease may be increased in areas where human immunodeficiency status and nutritional status of women are poor than men; A number of studies shows vast differences in responses to illness by men and women, that makes barriers for early detection and the treatment of TB. In our study, of the 113 patients enrolled, 74.3 % (N=84) were male and 26% (N=29) were female. This less percentage of female enrollments were due to lack of their consent. Gender differences also exist in rates of compliance with treatment; women show more fear and stigma than men, often placing them in an economically or socially precarious position.^[13] Among the 113 patients, majority were adults 44 %, followed by young adults and young old and old old patients. Our studies indicated that majority of the patients were rural dwellers. Patients in rural India who are severely undernourished have twice a higher risk of death.¹⁴ Hence it is the need of the hour to check malnourishment in TB patients especially in the rural areas. Out of the enrolled 113 patients 87 patients were married, 24 patients were single and 2 patients were widows. Spouses are a high risk group who should be screened for active TB. Family members who are at close contact

with the TB patient have a higher risk of contracting the disease.¹⁵ In our study majority of the TB patients were from nuclear family and a minority from joint family. There is a higher risk of TB transmission in joint families, also maybe due to the less earning and more ignorance about health in joint family when compared to nuclear family¹⁶. Various studies have shown lack of education to be a factor leading to non adherence toward TB medication, which is consistent with our study. Individuals with higher education and urban area patients were comparatively better informed about TB infection. Patients with greater knowledge about TB were also less likely to experience delays in seeking treatment¹⁷. Three fourth of our study population were of lower socio-economic status. It remains still unclear how poverty may lead to tuberculosis. Poor socio-economic status with its attendant poor education has an association with poor knowledge of TB, infection risk and dissemination, and with inadequate and/or delayed availability of patient care. A study conducted in New York City showed Tuberculin positivity of 5.5% among residents of highest socio-economic status and 22.4% in the lowest.^{18,19}

According to the Collins English Dictionary, knowledge is defined as “the facts, feelings, Or experiences known by a person or a group of people” (Hanks et al., 1986). Knowledge about disease and treatment is necessary in order to optimize the patients’ treatment and to enhance their quality of life (Jaramillo, 2001). Updated drug therapy information of tuberculosis (TB) is equally important in seeking positive healthcare. (Hoa et al., 2003 Alvarez-Gordillo et al., 2000)²⁰

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, the sequelae of treatment interruption and the curability of TB.

The most prominent limitations of study were difficulty in obtaining the required sample size, language barrier was faced by few of the investigators, and obtaining approval from the state TB office for the conduct of the study was tedious. We also encountered problems associated with study drop outs. At the conclusion of the study we would like to take our research a step forward and help in making India a TB free nation. This we look forward to carry out by educating the health care professionals, and by providing counseling and public awareness in patients.

CONCLUSION

Currently, the RNTCP program of India has many components. Outreach workers, referral systems, regular patient follow-up and DOTs procedure are prominent features of the initiative. However, a more comprehensive approach for educating patient and incorporating easier access to drugs and emphasizing on motivating patients to come to the clinic to receive

therapy are essential for completion of treatment course among TB patients.

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