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KNOWLEDGE, ATTITUDE AND PRACTICES (KAP) TOWARDS TUBERCULOSIS PATIENTS IN TERTIARY CARE TEACHING HOSPITAL

Neethi Chandra[1],*Nagendra Prasad.B[2], Venkatesh P[2], Sreevidya C[2], Durga Prasad T.S[3], and Ranganayakulu D[4]

[1]Assistant Professor, Department of Pulmonology, Sri Venkateswara Ram Narain Ruia Government General Hospital (SVRRGGH) Tirupathi.

[2] Pharm D Interns, Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy Tiruchanoor, Tirupathi - 517503.

[3]Assistant Professor, Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy.

[4]Principal, Sri Padmavathi School of Pharmacy Tiruchanoor, Tirupathi, Andra Pradesh, India.

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***Correspondence for Author**
Nagendra Prasad.B
Pharm D Interns, Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy Tiruchanoor, Tirupathi - 517503.

ABSTRACT

BACKGROUND: To assess the knowledge, attitude and practice towards tuberculosis with or without co-morbidities among TB patients in both in-patient and out-patient pulmonology departments. **OBJECTIVES:1)** To describe the socio demographic profile of study population. 2) To assess knowledge about symptoms, transmission mode and causes of TB. 3) To assess attitude and practices towards Tuberculosis. 4) To identify the determining factors of tuberculosis. **METHODOLOGY: Study Site:** This study was carried out in outpatient (OP) & inpatient (IP) departments of pulmonology, Sri Venkateswara Ram Narain Ruia Government General Hospital (SVRRGGH), a 1200 bedded multi-disciplinary tertiary care teaching hospital, Tirupathi. **Study Design**: Descriptive study. **Study Duration:** 6 months (March 2014 to September 2014) **Study Population**: 57 patients. **Study materials:** Informed Consent Form (ICF), Patient Profile Form, Knowledge, Attitudes, And Practices (KAP) Questionnaire and Patient Information Leaflet (PIL). **RESULTS:** Out of 57 tuberculosis patients, 38 (67%) were male and 19 (37%) were female. Males are more affected than females in terms of personal habits and social habits. Out of 57 respondents, 38 (66%) scored “good” in their overall knowledge on TB. 44% of the respondents had

acceptable attitudes and practices towards TB. 87% of the respondents knew that TB is a highly-infectious disease, but was curable. The main source of information regarding tuberculosis is obtained from the medical workers 64% and mass media 29%. There was no significant difference in the proportion with good knowledge. **CONCLUSION:** Structural factors such as social status, literacy, ability or inability to support family and membership of community groups largely influenced the Tuberculosis patient's awareness, knowledge and practices of important issues.

KEYPOINTS: Knowledge, attitude and practice (KAP), Questionnaire, Tuberculosis (TB), Descriptive Study.

INTRODUCTION

Tuberculosis (TB) is one of the most globally serious public health problems. About one third of the global population has been infected with *Mycobacterium tuberculosis.*[1]

Tuberculosis is one of the oldest diseases known to man, as evidenced by findings of TB spinal disease within Egyptian mummies dating back to 4000 to 2000 BC. Tuberculosis is the second most common cause of death from an infectious disease in the world, second only to human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). Tuberculosis, or TB disease, 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 TB disease presents in the lungs as pulmonary TB, but it is possible through passage of tubercle bacilli through the lymphatic's and bloods vessels, for TB disease to become manifest in any organ of the body.[2]

In contemporary research, the term knowledge is popularly used in KAP surveys. KAP is a standard term in which the word knowledge is implicitly used as a proxy for awareness. In this report, the terms knowledge and awareness are, thus, used interchangeably. The term attitude is used to refer to the perception or way of thinking and practice to refer to the actions or behavior relating to patient's education. Attitude is used to refer to the perception or way of thinking and practice to refer to the actions or behavior relating to patient's education.[3]

Information, Education, and Communication (IEC) is an integral and important strategy of the programme to create awareness among public, health care providers and policy makers.

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, for TB. 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 care.

Many studies have stressed the importance of health education in treatment adherence, and demonstrate the positive effects of a structured health education programmed on the continuity of care and adherence behavior among TB patients. To improve the effectiveness and relevance of the TB health education programmed, therefore, it is necessary to understand more about patients' knowledge of TB. The purpose of the present study is to determine the knowledge of TB patients about medical aspects of tuberculosis and its treatment and to assess the effectiveness of the health education given in the health facilities.

RESEARCH METHODOLOGY

Study Site

This study was carried out in both outpatient (OP) & inpatient (IP) departments of pulmonology, Sri Venkateswara Ramanarain Ruia Government General Hospital (SVRRGGH), a 1200 bedded multi-disciplinary tertiary care teaching hospital, Tirupathi.

Study Design: Descriptive study

Study Duration: 6 months (March 2014 to September 2014)

Study Population: 57 patients

Study materials

Informed Consent Form (ICF), Patient Profile Form, Knowledge, Attitudes, And Practices (KAP) Questionnaire and Patient Information Leaflet (PIL)

PATIENT ENROLMENT

All patients were informed that their participation was voluntary and written informed consent was sought from all participants prior to their participation. Confidentiality of participants was maintained as no personal identifying information was collected on the questionnaire. Before the administration of the questionnaire the subjects were informed about the objectives of the study.

Patients were enrolled in the study based on inclusion and exclusion criteria.

Inclusion criteria

Patients of either sex of 18-60 years of age diagnosed with tuberculosis and who were admitted in pulmonology ward and on ATT.

Exclusion criteria

Patient with co morbid conditions and or psychological conditions.

METHOD OF STUDY

The study was conducted with the approval of the institutional ethical committee (IEC) of Sri Padmavathi School of pharmacy, Tiruchanoor. A pre-tested questionnaire that consisted of both closed and open ended questions on knowledge, attitude and practices were designed and applied. Though the questionnaire was prepared in English, it was translated into Telugu version (local language).

Patients who have been diagnosed with tuberculosis as per WHO/RNTCP guidelines and patients receiving anti tuberculosis drugs were included in this study.

During the study period, complete demographic details, past and present medical and medication history was obtained in a suitably designed patient profile form.

The knowledge of TB patients about TB was assessed by face to face interview for 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 health seeking practices of the treatment were also investigated through questions.

After completion of questionnaire, the patients were counselled for 15-20 minutes depending on their education level and understanding capability irrespective of their answers by patient information leaflet (PIL).

DATA ANALYSIS

The collected data was analysed for the following aspects:

1. Socio-demographic characteristics.
2. Clinical symptoms and contact history
3. Tuberculosis awareness and sources of information

4. Knowledge on Cause, Clinical manifestations, Transmission & Prevention of TB

Statistical analysis

The data collected were analysed by SPSS, Microsoft word and excel to generate graphs, tablets.

This study analyses the KAP issues covered by the questionnaire by the various background characteristics of patients. This was done to isolate the impact of background variables or determinants on each of the issues. In the background characteristics, selected KAP variables or indicators were also included.

RESULTS AND DISCUSSION

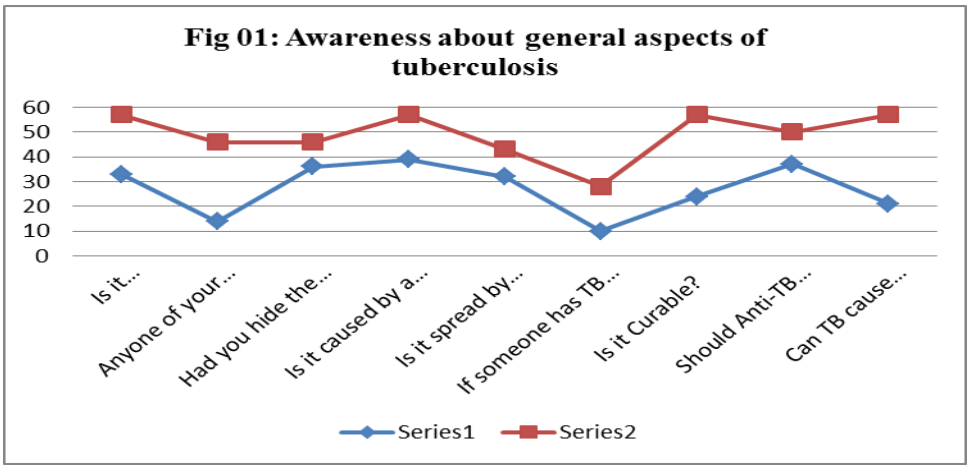
A questionnaire based study was conducted on 57 patients who were diagnosed with Tuberculosis for knowledge, Attitude, Practices for a period of 6 months.

Table 1: Demographic characteristics of respondents

sno	Characteristics	Numbers (n=57)	Percentage (%)
1	**Age (Years)**		
	<20	03	5.2
	21-40	32	56.1
	41-60	13	22.8
	>60	09	15.7
2	**Sex**		
	Male	38	67
	Female	19	33
3	**Education**		
	Illiterate	19	33.3
	Literate	38	66.6
4	**Personal Habits**		
	Smoking	13	23
	Alcohol	16	27
	Tobacco	06	11
	Alcohol and smoking	17	33
	Alcohol and smoking and tobacco	4	06
5	**Place of living**		
	Urban	18	31.5
	Rural	39	68.4
6	**Marital Status**		
	Married	42	73.6
	Unmarried	15	26.3

Table 02: **Awareness about general aspects of tuberculosis**

Sno	Statement about Tuberculosis	Yes	No
1	Is it communicable disease?	33 (58%)	24 (42%)
2	Anyone of your family had any of these symptoms?	14 (24.5%)	32 (56.1%)
3	Had you hide the disease (TB) from others?	36 (66%)	10 (16%)
4	Is it caused by a germ?	39 (68.4%)	18 (31.5%)
5	Is it spread by droplets through Cough and sneeze?	32 (56%)	11 (19.2%)
6	If someone has TB will others treat them differently?	10 (25%)	18 (35%)
7	Is it Curable?	24 (42%)	33 (58%)
8	Should Anti-TB drugs be given For 5<6 months?	37 (64%)	13 (22%)
9	Can TB cause death?	21 (40%)	36 (60%)



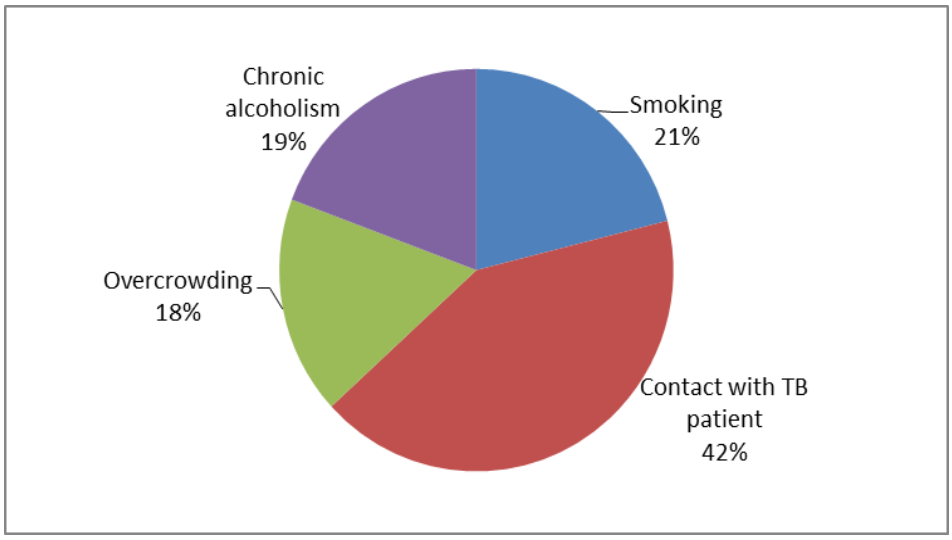


Figure 02: Factors affecting TB

Table 3: Knowledge about symptoms of tuberculosis

01	Avoiding contact with TB Patients	04 (7.1%)
02	Cover mouth and nose when coughing or sneezing	10 (17.54%)
03	BCG vaccination	05 (8.7%)

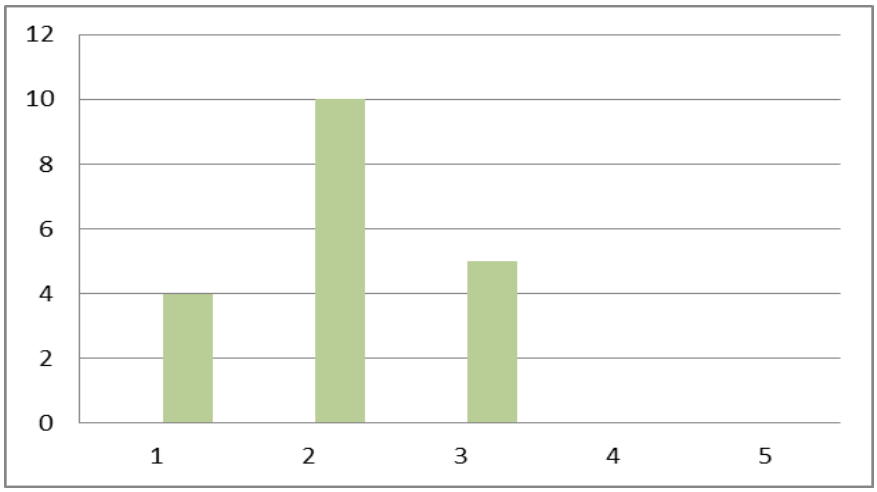
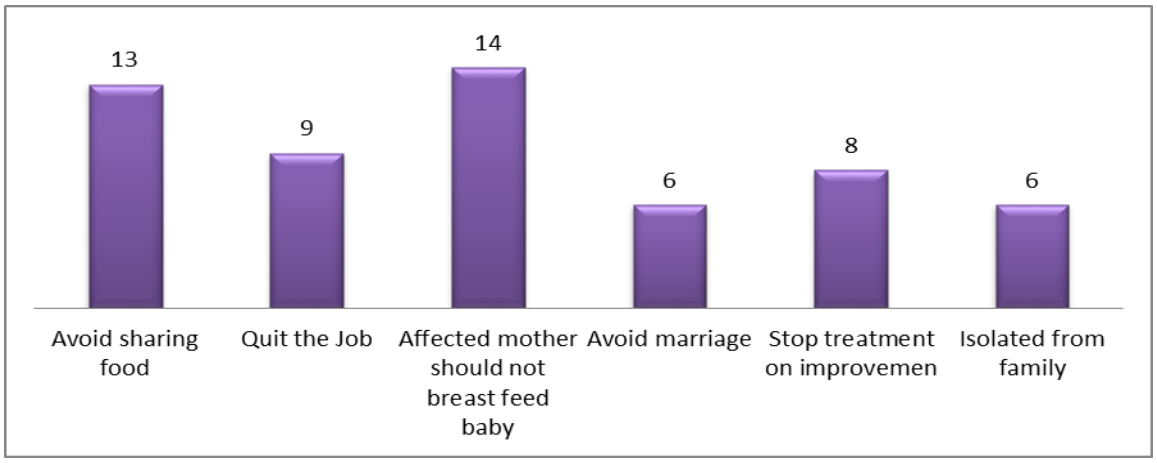


Figure 03: Preventing Measures

Table 4: **Attitude of respondents towards tuberculosis patients**

1	**Do you think which organs affected by Tuberculosis?**	**No of answered**	**Response no. (%)**
A	Lungs	18	31.5%
B	Heart	12	21%
C	Liver	07	12.2%
D	Bone	04	7.1%
2	**How is TB transmitted**		
A	Through the air with coughing	7	21%
B	Through blood	03	5.2%
C	Through hand shake with an infected person	06	10.5%
D	Sexually transmitted	04	7%
E	Sharing food with infected person	03	5.2%
F	You're born with it	05	8.7%
3	**In your opinion, who can be infected with TB?**		
A	Anybody	16	28%
B	Only poor people	12	21%
C	Only homeless people	04	7%
D	Alcoholics & smokers	26	47%
E	Drugs users	13	22%
4	**What symptoms can show that a person has TB?**		
A	Coughing with sputum	08	14.5%
B	Cough for over 3 weeks	03	5.2%
C	Weight loss	06	10.5%
D	Periodical increases of temperature for over 3 weeks	04	7.1%
E	Night sweating	02	4%
F	Chest pain	03	5.2%

G	Total weakness, inertia	06	10.5%
6	**Source of TB information**		
A	Medical workers	28	60%
B	Friends	03	06%
C	News paper	04	08%
D	Books	03	05%
E	TV	05	11%
F	Radio	04	09%
6	**How can someone with TB are cured?**		
A	TB cannot be cured only managed	24	42.1%
B	Herbal remedies	09	15.7%
C	Bed rest without medication	03	5.2%
D	General antibiotics	05	8.7%
E	Specific anti-TB regimen	11	19.2%
7	**What is the standard length of treatment for a newly diagnosed case of TB?**		
A	1 month	3	5.2%
B	1-2 months	6	10.5%
C	3-4 months	9	15.7%
D	5-6 months	16	28.0%
E	>6months	2	3.5%



A total of 57 tuberculosis Patients were enrolled into the study. Out of them 57 patients completed all the study follow-ups and in this study 38 (67%) were male and 19 (37%) were female patients. Male are more affected then female because of personal habits and social habits play an important role in the management of TB patients. The demographic details of the study patients are given in Table 01.

Majority of the tuberculosis diagnosis were between 21- 40 years age. This clearly indicates that young segment of the population is engaged in personal habits. In this personal habits include alcohol and smoking were risk factors for tuberculosis. In the study from rural area nearly 68.4% of the illiterates were unaware about different aspects of TB and they had

several Misconceptions towards the disease4. The present study also showed that literates were better informed and more aware about various aspects of TB as compared to the illiterates, especially with regard to some factors favoring TB development in a person, preventive measures like clean surroundings and few symptoms. Literacy was an important factor for acquiring information on TB5.

A study also found that Awareness about general aspects of tuberculosis most of the patients answered it is a communicable disease 33 (58%), some were hide the disease (TB) from others 36 (66%), most of the patients knows it is caused by a germ 39 (68.4%), and it is spread by droplets through Cough and sneeze 32 (56%), and Anti-TB drugs Should be given For 5<6 months 37 (64%), some Patients were answered If someone has TB will others treat them differently 10 (25%), and it is Curable 24 (42%), and TB Can cause death 21 (40%). A study found that Social factors play an important role in the management of TB patients because in this study patients have low knowledge about factors affecting TB and preventive measurements. Only 04 (7.1%) knew that avoiding contact with TB patients can prevent TB. Awareness on the role of BCG vaccine in the prevention of TB was 05 (8.7%). This figure is much lower as compared to that observed in Tamil Nadu (14%) [6] before initiating a health education campaign.

A study found that Structural factors such as social status, literacy, ability or inability to support family and membership of community groups largely influenced the tuberculosis. Patients' awareness, perceptions and practices of important issues.

Patient's knowledge, attitude and practices have an effect on medication adherence behaviour. An understanding about cause of the disease, its signs and symptoms, importance of regular intake of medicines and necessary life style modifications to be taken in controlling the symptoms will help to improve the therapeutic outcomes. In this study only few patients were aware of the causes, transmission of the disease signs and symptoms, triggers and proper management about Tuberculosis.

In the present study shows that respondents in present study had poor knowledge of which organs affected by Tuberculosis and transmission and symptoms of TB[7]. TB transmitted through the air with coughing mentioned by the respondents 7 (21%) followed by through blood 03 (5.2%) and through hand shake with an infected person 06 (10.5%), most of the patients answered Alcoholics & smokers 26 (47%), and TB can be infected to anybody 16

(28%), and Drugs users 13 (22%), and only poor people 12 (21%), They found that the sources of information were from friends 3 (6%), followed by television5 (11%), radio4 (9%), news paper 4 (8%), books 3 (5%), In the study sources of information in more than half of the respondents were doctors and health workers 28 (60%).

In the present study, Coughing with sputum 08 (14.5%) Weight loss 06 (10.5%), and Total weakness 06 (10.5%), among TB associated symptoms were seen more frequently than other symptoms. The other symptoms reported included Periodical increases of temperature for over 3 weeks 04 (7.1%), Chest pain 03 (5.2%), Cough for over 3 weeks 03 (5.2%), and Night sweating 02 (4%). And also the study finding the various diagnosis tests were used to conform the disease. Most of the patients were answered Sputum test 11 (19.2%), were used to conform the disease followed by x-ray 09 (15.7%), Blood test 08 (14%), and Urine test 05 (8.7%).some patients answered TB can cured by using Specific anti-TB regimen 11 (19.2%), some were TB cannot be cured only managed 24 (42.1%), and Herbal remedies 09 (15.7%) were also used to treat the TB.

In this study also finding that low knowledge about the standard length of treatment[6] for a newly diagnosed case of TB. In this study some were answered 5-6 months 16(28.0%), followed by 3-4 months 9 (15.7%), 1-2 months 6 (10.5%), 1 month 3 (5.2%), and >6months 2 (3.5%). Provision of DOTS to the affected patients is not the only solution in controlling TB since a large number of patients are expected to continue suffering from the disease due to lack of awareness, social stigma, misconceptions and discriminatory attitude towards them hampering their treatment seeking behavior. Concerted efforts in educating the illiterates for attitudinal change, active measures for early identification, sustaining treatment, minimizing defaulters through community participation are the need of the hour for controlling TB problem in high risk group population in the community.

In this present study shows table 4 respondents have poor Attitude of towards tuberculosis. In this study affected mother should not breast feed baby 14 (24%), and avoid sharing food 13 (22%), quit the Job 9 (16%), Stop treatment on improvement 8 (14%), Avoid marriage 6 (11%), and Isolated from family 6 (11%).

Many studies suggested that, pharmacists can play an important role by providing the counselling, which has shown a positive impact on health care and decrease the mortality and morbidity of the disease.

CONCLUSION

The findings suggest that a low level of knowledge about the causative organisms as well as the main symptoms of TB in the present study communities.

The study found the Patients knowledge, perceptions and practices positive when these structural factors were favourable, and *vice versa*. 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. Moreover, there are social stigmas associated with the diagnosis of TB. Therefore, health education targeting basic concepts on transmission and practices and on the need for early diagnosis could have paramount importance in TB control in this study. Using the preferred sources of information (health workers, TV and radio) for future health education & awareness creation activities could be a wise step to address the target groups. Educational level was found to have a significant association with TB knowledge. More effort by the clinical pharmacist, TB prevention and control programmers is expected to address illiterates who were more likely to have low knowledge.

This is necessary to health educate especially those living in rural areas it is necessary to propagate awareness in the communities especially those living in rural areas that they should report lasting longer than 3 weeks to the nearest health facility and the diagnosis and the treatment of TB are free of charge. Finally, there is a need to educate the public on TB due to lack of information regarding free availability of medication to treat tuberculosis.

A clinical pharmacist plays main role to improve the knowledge and health seeking care of the patients towards the disease, creating awareness and detection of latent TB infection and to prevent side effects TB medications.

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