



“ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICES OF TUBERCULOSIS IN NURSING STUDENTS OF WARDHA DISTRICT.”

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**ABSTRACT** Tuberculosis is the most common communicable disease in India. Proper knowledge regarding signs, transmission, and prevention of TB is necessary to inculcate in health care workers for proper treatment. Positive attitude towards TB patients is imperative in providing mandatory care by the nursing staff. In this study, we assess the knowledge, attitude and practices regarding TB in nursing students, Wardha. 100 respondents were interviewed using questionnaires to measure KAP in TB. The mean knowledge scores in women (11.42±1.92) were significantly higher (p=0.041, S) than men (9.61±2.12). Majority of them have a neglecting attitude towards the TB subjects. The Practice score of the students was 2.81±1.12. There is a lack of adequate knowledge and neglecting attitude towards TB. First preference for treatment is self-care and not DOTS. Therefore, efforts must be taken to impart knowledge and spread awareness among nursing students related to TB, to reduce the stigma.

**KEYWORDS :** Knowledge, Attitude, Practices, KAP, Tuberculosis, Nursing Students.

#### BACKGROUND:

Tuberculosis is a communicable disease and is considered a social stigma.<sup>1</sup> From 1995-2011, 51 million people were treated for TB in countries, that are following the WHO strategy and have saved 20 million lives.<sup>2</sup> Quoting the statistics, there were approximately 2.6 million TB cases<sup>3</sup> and thus RNTCP ( Revised National Tuberculosis Control Program) of India relies on passive cases. Effective collaboration with patients, healthcare workers, and the community is required to bring about favourable treatment and eradication of stigma from society.

For TB treatment and prevention to be a success in our country, healthcare staff should have the essential knowledge and adopt safe practices. Core knowledge and optimistic attitude towards patients suffering from TB, amongst doctors and nurses in making, are essential for achieving the Sustainable Development Goals (SDG) by the nation. These were proposed by the WHO in post- 2015 global TB strategy and to eradicate new challenges, countries might come across due to TB.<sup>4</sup> Hence in this paper, we have assessed the KAP ( knowledge, attitude and practice) in nursing students of Wardha district on TB , stressing on its symptoms, spread, and prevention in the society, whether there is a need for improvement in nursing curriculum regarding tuberculosis.

#### OBJECTIVES:

1. To study the knowledge regarding tuberculosis in nursing students of Wardha district.
2. To study the attitude and practices of tuberculosis in the same participants.

#### METHODS:

**Study Setting:** Study was conducted in Nursing college, Wardha

**Study Duration:** Two months; 17<sup>th</sup> Jan-17<sup>th</sup> March 2019.

**Study Design:** Questionnaire-based cross-sectional study regarding knowledge, attitude and practices (KAP) survey about TB.

**Sample Size:** The target sample size for this study was estimated as 100 nursing students.

**Study Participants:** 100 nursing students from SRMMCON who were willing to participate in the study were asked to fill the questionnaire. Inclusion criteria: SRMMCON nursing students. Exclusion criteria: Subjects beyond the age limit of 24yrs and those who are not willing to fill the questionnaire.

**Study Questionnaire:** A well designed and validated questionnaire containing a set of 34 questions was used for research and was thoroughly validated and checked by the Department of community medicine, JNMC.

**Data collection:** All respondents were informed about the study and after obtaining consent, administration of validated tool was done by the trained investigators.

**Study variables:** Includes age, gender, knowledge about TB, its symptoms, route of transmission, diagnosis, treatment, duration of treatment, risk factors and statements to capture stigmatizing and discriminating attitudes and practices.

**Data entry:** Statistical analysis was done using only descriptive statistics.

#### RESULTS

One hundred nursing students responded to the distributed

questionnaires. The age of the study population varied from 15 to 24 yrs. Out of which 60 were females and 40 were males. All of them have completed high school and currently are not under paid employment. **Table 1** shows that the distribution is totally based on the scoring system as per the questionnaire they answered. The criteria decided are given below;

- aMaximum Possible score=15(Low<5, Medium 5-10, High>10)
- bMaximum Possible score=5(Low<1, Medium2-3, High>3)
- cMaximum Possible score=4(Low<1, Medium 1-2, High>3)

**Table 1: Distribution of score based on knowledge, attitude and practice**

	Low	Moderate	High	Total
Knowledge <sup>a</sup>	1(1%)	38(38%)	61(61%)	100
Attitude <sup>b</sup>	3(3%)	55(55%)	42(42%)	100
Practice <sup>c</sup>	14(14%)	45(45%)	41(41%)	100

**Table 2: Mean (standard deviation) knowledge, attitude and practice score for tuberculosis among nursing students according to gender**

Sex	No. (%)	Mean ± SD	Total	p-value
<b>Knowledge</b>				
Male	40(40%)	9.61±2.12	11.31±2.12	0.041,S
Female	60(60%)	11.42±1.92		
<b>Attitude</b>				
Male	40(40%)	2.71±1.29	3.21±1.21	0.56,NS
Female	60(60%)	3.25±1.01		
<b>Practice</b>				
Male	40(40%)	1.96±1.26	2.81±1.12	0.21,NS
Female	60(60%)	2.29±1.21		

The mean knowledge score in women (11.42±1.92) were significantly higher (p=0.041, S) than men (9.61±2.12). Attitude score of the students 3.21±1.21 and the attitude level of the subjects were moderate (55%) in the majority. Practice score in females (2.29±1.21) also higher than males (1.96±1.26) and the practice level of the students were low, 14%.

**Table 3: Distribution of nursing students according to their Knowledge Score**

Knowledge	Percentage(%)
Information about TB	80
Source of information : Teachers	60
How big a problem is TB in community: very serious	15
Signs and symptoms of TB you know: cough longer than 2 weeks and coughing blood	41
How can a person get TB-through the air or when a person with TB coughs or sneezes	27
How can a person prevent getting TB-cover mouth and nose on coughing	19
Who can be infected with TB-anybody	22
People living with HIV should be concerned about TB-yes	90
Do you think- A person living with HIV is more likely to develop TB?- Yes	80
Can TB be cured?-Yes	83
How can TB be cured-Drugs given by a health center and DOTS	63
Well informed about TB-Yes	75
Want more information on TB-Yes	100

**Table 3** shows the correct answers to knowledge questions about TB among nursing students. 20% of subjects have No knowledge regarding TB. The most effective source of information is from teachers mentioned by the majority. 30% of the students said that the disease is not very serious and only 15% mentioned that the disease is very serious. 41% stated that cough longer than 2 weeks and coughing blood as the sign and symptom of TB. Only 27% candidates stated that the person can get TB through the air when a person with TB coughs or sneezes. 19% of students said that they can prevent TB by covering their mouth and nose while coughing and 14% through good nutrition. 22% candidates mentioned that anybody, poor people, drug users and alcoholics are infected by TB. People living with HIV should be concerned about TB answered correctly by the majority. 63% of subjects said that the TB can be cured through drugs given by health center (44%) and through DOTS (19%) regime.

Knowledge of them was good, but still, they lack some information regarding the signs and symptoms of TB, how a person can get and prevent TB. About three-fourths subjects have no idea about DOTS Regimen and two-thirds of them did not know the distance that should be kept from the contagious patients. Majority of them wanted more information regarding TB.

**Table 4: Distribution of nursing students according to their attitude score**

Attitude	Percentage
Feeling of compassion towards people with TB	55%
Feel people with TB are rejected by society	55%
Fear on finding out that having TB	34%
Talk about illness with parents	38%

**Table 4** shows that the majority of them have a neglecting attitude towards the TB patients. 55% feel compassionate towards the TB affected patients. 34% of them fear, on finding out to be suffering from TB. Only 38% open up to parents about this disease. 55% feel society rejects TB patients.

**Table 5: Distribution of nursing students according to their practice score**

Practice	No of students	Percentage
<b>What would you do if you thought you have TB</b>		
Go to the health facility	49	49%
<b>If you had symptoms of TB when would you seek help</b>		
When self-treatment does not work	60	60%
<b>Why would you not go to a health facility</b>		
Transport challenges/ distance from health facility	50	50%
<b>How expensive do you think TB diagnosis and treatment is in India</b>		
Reasonably priced	54	54%

**Table 5** shows that the two-fourth of the students would seek help from a health-facility when self-treatment does not work. Half of them mentioned that TB diagnosis and treatment in India is reasonably priced but still the practice score of the students were 2.81±1.12.

**DISCUSSION:**

Study uses KAP to identify the key areas to be emphasized regarding TB and the training of nursing students who play an indispensable role as implementers of the treatment plan for TB.

The KAP score in 40% males and 60% females associated with knowledge with a standard deviation of 2.12 and 1.92 respectively with a p-value of 0.041 which was statistically significant.20% of students did not have proper knowledge regarding TB. 41% categorized fever, chest pain and fatigue as signs and symptoms of TB. About 15% of the population categorized TB as a serious disease.

In accordance with the respondents' views there is a huge gap in knowledge regarding the acquirement of infection, route of transmission and the steps in prevention of TB. Also, only, 19% of the subjects thought that TB can be treated by DOTS.This denotes the difficulty in equipping the nursing students with the latest knowledge with regard to TB. Other researches conducted in this field also showed this significant knowledge gap.<sup>5-6</sup>This is central to the fact that nursing students will be an important pivot in TB treatment and awareness campaigns in the community (RNTCP and DOTS regimen) and thus their inability to comprehend the basic facts regarding clinical decisions can lead to faulty patient care<sup>7</sup>. Furthermore, other researches have emphasized the fact that TB prevention can be looked at through a whole new dimension through a boost in knowledge in health care workers.<sup>8</sup>

Mass communication and effective learning sources should be provided to train nursing students to equip them with a better understanding of TB.

Our data also pointed out that the subjects had a neglecting attitude and a notable stigma concomitant with TB. Though 55% respondents responded they felt compassion when asked if people close to them had TB, still 34% felt fearful if diagnosed with TB and 55% had the mindset that TB patients are rejected in the society. This is congruent to a study which found a significantly related positive stigma in the nursing department.<sup>9</sup> A study in Ghana highlighted the fact that fear regarding TB is paramount in stigmata associated with the disease thus

resulting in the evasion and separation of the TB patients from the society.<sup>10</sup> A novel approach of removing this stigma is through campaigns which target the root of the problem by coaxing participation and addressing individual interests.<sup>11</sup>

Less people prefer talking about their illness to the health staff. The root may be the lack of proper communication between doctors and nurses. Thus, it is imperative to formulate proper communication strategies to bridge this gap<sup>12</sup> which will, in turn, be beneficial by facilitating proper exchange of knowledge and thus changing the attitude towards TB.

There is a huge gap to be addressed regarding treatment practices in nursing students. About two-thirds of the study population were willing to seek help from a healthcare facility when self-treatment does not work. Majority of them mentioned that TB diagnosis and treatment in India is reasonably priced but still the Practice score of the students was  $2.81 \pm 1.12$ . 19% of the subjects thought that TB can be treated by DOTS. This is due to the lack of awareness that for TB treatment DOTS regimen is absolutely free since RNTCP is a centrally sponsored program.<sup>13</sup>

Thus this KAP study is of uttermost importance to increase awareness regarding TB in nursing students to reduce the morbidity and mortality associated with it. It indicates the need for a structured training program in the nursing students which should be carried out in the form of skits, extempore and debates to encourage participation which should not only impart knowledge regarding the medical background of TB but also inform about RNTCP and DOTS and the fact that TB treatment in India is absolutely free. This should also be backed by proper interaction with other healthcare workers to propagate better knowledge related to TB and thus to step towards a TB free India.

The limitation of the study is being the small sample size. Thus, this study should be conducted on a large population to gain a wider perspective of KAP Score.

#### CONCLUSION:

After assessment of knowledge, attitude, and practices regarding TB among nursing students we concluded that students lack adequate knowledge about signs, symptoms, transmission, and prevention of TB.

A large number of students have a neglecting attitude towards TB. Fear of rejection from society after being diagnosed with the disease and are fearful of catching the disease while dealing with patients.

Therefore, it is imperative to increase awareness regarding TB to reduce the morbidity and mortality rate. Efforts must be taken to teach the students about safe practices, precautionary measures and the distance that should be kept to prevent themselves from catching the disease. Also, more efforts should be taken to spread awareness among the nursing students and society to reduce the stigma, attached to the TB.

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