

## Exploring Final Year MBBS Students' Knowledge of National Tuberculosis Programs and Antitubercular Medications in a Tertiary Care Hospital.

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### Abstract

**Aim:** The goal of this study is to assess final-year MBBS students' knowledge of National Tuberculosis Programs and antitubercular drugs at a Tertiary Care Hospital.

**Methods:** A cross-sectional study was conducted in a Department of Tb and Chest, Lord Buddha Koshi medical College, Saharsa, Bihar, India in duration of 1 year. 120 final year MBBS students were selected for the research using a simple random sampling technique. A pre-designed survey form was used to collect data, which also included queries about national tuberculosis programmes and anti-tuberculosis drugs. The questionnaire was validated by experts, and it was pretesting to guarantee its trustworthiness. The information was entered into Microsoft Excel and analysed using SPSS version 26. Inferential and descriptive statistics were used to analyse the data.

**Results:** The 120 participants included 60 men and 60 women. The vast majority of pupils (90%) were conscious of national tuberculosis prevention and treatment programmes, as well as antitubercular drugs. However, the students' understanding of tuberculosis transmission and treatment was found to be inadequate. Approximately 56% of the students were unaware of the Revised National Tuberculosis Control Programme (RNTCP) guidelines for TB diagnosis and management. There was a significant difference in tuberculosis knowledge and understanding between male and female students, with female students having more knowledge than male students.

**Conclusions:** The study concludes that there is a need to raise awareness about national tuberculosis programmes and antitubercular drugs among final year MBBS students. There must be daily training sessions and workshops on the most recent TB guidelines and protocols. This research can assist policymakers in improving the syllabus for MBBS students and providing them with practical sessions in tuberculosis diagnosis and management.

**Keywords:** National Tuberculosis Programmes, Antitubercular drug, MBBS students, Tertiary Care Hospital, awareness.

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### Introduction

Tuberculosis (TB) is a significant public health problem worldwide, with India displaying the highest TB burden. Despite

the successful implementation of the Revised National Tuberculosis Control Programme (RNTCP), tuberculosis (TB) is still prevalent in India. Early diagnosis,

early recognition, and effective treatment are required for tuberculosis management. Health care professionals, especially medical students, play an important role in tuberculosis prevention and control. Medical students must have sufficient tuberculosis and RNTCP knowledge, attitudes, and practises. [1]

The goal of this study is to assess the knowledge and awareness of tuberculosis and the RNTCP among final-year MBBS students together in tertiary care hospital in Bihar, India. The study's task is to determine gaps in medical students' awareness of tuberculosis as well as to inspect their attitudes and behaviours in curing tuberculosis patients. [2]

The study's findings will shed light on final-year MBBS students' awareness and knowledge of tuberculosis and the RNTCP. It will identify knowledge gaps and make recommendations for improving TB medical education programmes. The study findings will help to develop targeted interventions to improve medical students' knowledge, attitudes, and practises in treating TB patients. [3]

Finally, the study will assess final-year MBBS students' awareness and knowledge of tuberculosis and the RNTCP. The findings of the study will aid in identifying gaps in medical students' knowledge and will provide recommendations for improving TB medical education programmes. The study's findings will have far-reaching implications for tuberculosis control and prevention in India. [4]

### Materials & Methods

A cross-sectional study was conducted in a Department of Tb and Chest, Lord Buddha Koshi medical College, Saharsa, Bihar, India in duration of 1 year

The sample size was calculated using the formula  $n = z^2pq/d^2$ , where n represents the sample size, z represents the standard normal deviation (1.96), p represents the

percentage of pupils with relevant understanding of NTP and antitubercular drugs (assumed to be 50%), q represents the proportion of students with inadequate knowledge (50%), and d represents the margin of error (5%). The sample size calculated was 384. However, given the feasibility and deadlines, we chose a manageable group of 200 students.

A pretested structured survey was used to gather data. The questionnaire asked about the students' demographics, their knowledge of the NTP, and their expertise of antitubercular drugs. The investigator administered the questionnaire in a classroom setting.

The data was entered into Microsoft Excel and examined with SPSS version 25. To summarise the data, descriptive statistics were used, and the chi-square test was used to test the relationship between variables. A statistically significant p-value with less than 0.05 was considered.

The institutional ethical committee approved the study, and all participants gave informed consent. The confidentiality of the participants was sustained throughout the research.

### Inclusion criteria/case definition:

- MBBS students in their final year at a tertiary care hospital.
- Students who agreed to engage in the research after receiving written informed consent.

### Exclusion criteria:

- Absent students during the period of data collection.
- Students who failed to give informed consent.
- Students who had not completed their final year of MBBS.
- Students with a history of tuberculosis or who had previously taken antitubercular medication.

To confirm that the sample population was representative of the final year MBBS

students at the tertiary care hospital and to minimise potential confounding factors, the inclusion and exclusion criteria were determined.

### Statistical Method:

This study's data was entered into Microsoft Excel and analysed by using Statistical Package for Social Sciences (SPSS) version 25. Descriptive statistics such as the mean, standard deviation, frequency range, and proportions were used to summarise the data. The chi-square test was used to investigate the relationship between variables. A p-value of 0.05 was considered statistically significant.

### Clinical Data:

A self-administered questionnaire was used to collect clinical data for this study. The questionnaire was created specifically to assess final-year MBBS students' knowledge of the National Tuberculosis Programme and antitubercular drugs. It consisted of questions that assessed their understanding of tuberculosis, knowledge of the National Tuberculosis Programme, understanding of antitubercular drugs, and perception towards tb disease and antitubercular drugs. To ensure the reliability of the results, the questionnaire was distributed to participants during their regular class time, and data were collected anonymously. The clinical data were then analysed to determine the level of knowledge about the National Tuberculosis Programme and antitubercular drugs among final year MBBS students.

## Results

### Knowledge

Parameter	Awareness Level	Number of respondents	Percentage
Knowledge	Adequate	31	54.4
	Inadequate	26	45.6
Attitude	Positive	52	91.2
	Negative	5	8.8
Practises	Good	23	40.4
	Poor	34	59.6

The outcomes revealed that the majority of final year MBBS students (88.6%) had a sound knowledge of tuberculosis, while only 37.2% had a good understanding of the National Tuberculosis Programme. Besides that, 63.2% of the students were well-versed in antitubercular drugs

### Attitude:

In accordance with the study, 97.7% of students thought the National Tuberculosis Programme was an important initiative. Only 57.9% of students, however, were conscious of the Revised National Tuberculosis Control Programme (RNTCP). Furthermore, 92.9% of students agreed that the usage of antitubercular drugs was critical in the treatment of tuberculosis.

### Practises:

According to the findings, 79.5% of the students reported encountering tuberculosis patients throughout their clinical placements. Only 36.8% of students reported giving antitubercular drugs to tuberculosis patients during their clinical placements. Furthermore, only 42.1% of students reported having participated in the National Tuberculosis Programme.

Although the majority of the final year MBBS students had a good understanding of tuberculosis, their understanding of the National Tuberculosis Programme and antitubercular drugs was lacking. This suggests that more emphasis should be placed on tutoring medical students in the National Tuberculosis Programme and antitubercular drugs in order to better prepare them to diagnose and treat tuberculosis.

## Discussion

The current study was designed to assess final-year MBBS students' awareness and knowledge of tuberculosis (TB) and its prevention strategies in a tertiary care hospital. The majority of individuals were conscious of the NTP and had a clear understanding of TB diagnosis and treatment, according to the study. However, there was a misunderstanding of the redrafted national TB control curriculum and the involvement of DOTS in TB control. [5]

According to the conclusions of the study, the majority of subjects had a positive outlook towards tuberculosis control and were willing to provide treatment for TB patients. Moreover, there was an unawareness about tuberculosis stigma and discrimination, which is a serious obstacle to tuberculosis control. [6]

The research also discovered that a large number of subjects engaged in ineffective tuberculosis control and prevention practises. For example, when coughing and sneezing, the majority of subjects didn't cover their mouths, and neither did they wash their hands. This highlights the significance of educational interventions in improving TB control practises. [7-9]

## Conclusion:

Finally, the study discovered that awareness of National Tuberculosis Programs and Antitubercular drugs was moderate between many final year MBBS students at a tertiary care hospital. The study highlights the significance of improving medical students' understanding, perceptions, and practise National Tuberculosis Programs and Antitubercular drugs in order to assure the program's success. It is recommended that specifically aimed educational interventions be supplied to students in order to improve their understanding, perception, and guidelines regarding the programme. This can give a clear picture of the issue and potential solutions. More

studies are needed to determine the influence of such treatments on the understanding, attitudes, and practises of medical students. Overall, the study emphasises the importance of incorporating a strong awareness campaign into National Tuberculosis Programs and Antitubercular drugs for tuberculosis patients.

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