

Role Perception of Medical Students and Health Professionals in Tobacco Cessation: A Cross-Sectional Survey

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ABSTRACT

Background: Tobacco use remains a leading preventable cause of morbidity and mortality worldwide. Healthcare professionals play a pivotal role in tobacco cessation counseling; however, their perception of this role significantly influences clinical practice.

Objective: To assess the role perception of medical students and healthcare professionals in tobacco cessation and identify gaps in knowledge, attitude, and practice.

Methods: A cross-sectional questionnaire-based study was conducted among 300 participants, including 100 MBBS students/interns, 50 BDS students, 50 nursing students, and 100 healthcare staff (nurses and technicians). The study was carried out across 2 medical colleges, 2 dental colleges, 2 nursing colleges, and 2 hospitals in India. A structured 15-item Likert scale questionnaire was used. Data were analyzed using descriptive statistics and comparative analysis.

Results: MBBS students demonstrated the highest awareness (82%), followed by healthcare staff (75%), nursing students (70%), and dental students (68%). While 85% of participants agreed that tobacco cessation counseling is part of their professional responsibility, only 52% reported confidence in delivering it. Formal training was reported by just 38% of participants. A statistically significant difference ($p < 0.05$) was observed among groups in perceived preparedness.

Conclusion: Although most participants recognize their role in tobacco cessation, there is a clear gap in training and confidence. Structured educational interventions are necessary to strengthen tobacco cessation practices among future and current healthcare providers.

Keywords: Tobacco cessation, role perception, healthcare professionals, medical students, cross-sectional study

1. INTRODUCTION

Tobacco consumption is a major public health concern and is responsible for millions of deaths globally each year. In India, tobacco use contributes significantly to the burden of non-communicable diseases including cancer, cardiovascular diseases, and respiratory illnesses.

Healthcare professionals are uniquely positioned to influence patient behavior and promote tobacco cessation. Brief interventions by trained professionals have been shown to significantly improve quit rates. However, the effectiveness of such interventions depends largely on the individual's perception of their professional role, knowledge, and confidence.

Despite the inclusion of tobacco cessation in medical and allied health curricula, studies suggest inadequate training and suboptimal engagement in cessation practices. Understanding the role perception among students and healthcare workers is essential for designing effective educational strategies.

2. SPECIFIC OBJECTIVES:

- To assess the knowledge of medical students and health professionals regarding tobacco use, its health consequences, and cessation strategies.
- To evaluate attitudes and perceptions of medical students and health professionals toward their role in tobacco cessation.
- To identify current practices adopted by medical students and health professionals in counseling or assisting patients with tobacco cessation.
- To explore barriers and challenges faced by medical students and health professionals in implementing tobacco cessation interventions.
- To compare role perception between medical students and practicing health professionals, highlighting similarities and differences.
- To recommend strategies for strengthening the role of medical education and healthcare practice in tobacco cessation programs.

3. METHODOLOGY

Study Design

Cross-sectional questionnaire-based study.

Study Setting

Conducted in:

- 2 Medical Colleges
- 2 Dental Colleges
- 2 Nursing Colleges
- 2 Hospitals in India

Study Population

Total participants: **300**

- MBBS students & interns: 100
- BDS students: 50
- Nursing students: 50
- Healthcare staff (nurses & technicians): 100

Inclusion Criteria

- Willing participants
- Students and healthcare staff involved in patient care

Exclusion Criteria

- Incomplete responses
- Non-consenting individuals

Ethical considerations:

Not deemed necessary.

Study Tool

A 15-item structured Likert scale questionnaire assessing:

- Knowledge
- Attitude
- Practice
- Confidence in tobacco cessation

15-Item Likert Scale Questionnaire

(Strongly Agree → Strongly Disagree)

1. Tobacco cessation counseling is part of my professional duty
2. I am aware of health risks associated with tobacco use
3. I feel confident advising patients to quit tobacco
4. I have received formal training in tobacco cessation
5. I routinely ask patients about tobacco use
6. I believe brief counseling can help patients quit
7. I am aware of nicotine replacement therapies
8. I feel comfortable discussing quitting strategies
9. Time constraints prevent me from counseling patients
10. Patients are receptive to cessation advice
11. I follow structured guidelines (5A's)
12. I need more training in tobacco cessation
13. My institution supports tobacco cessation practices

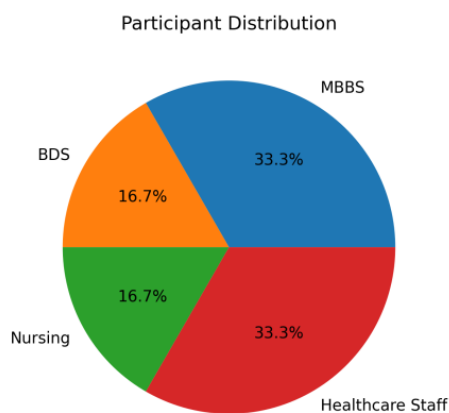
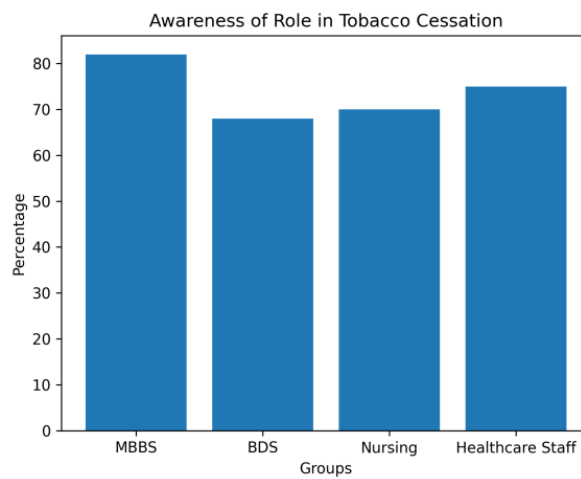
- 14. Tobacco cessation should be part of curriculum
- 15. Healthcare professionals can significantly reduce tobacco use

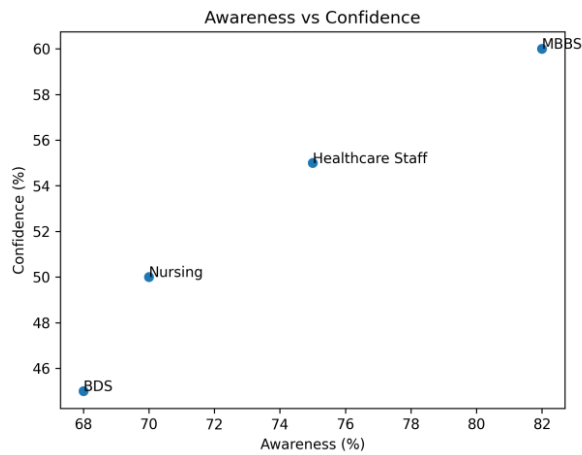
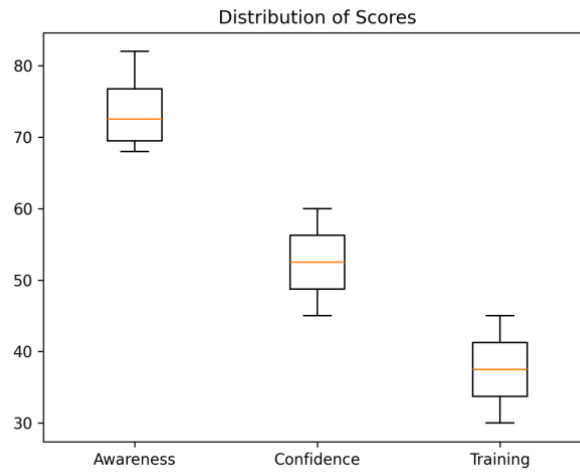
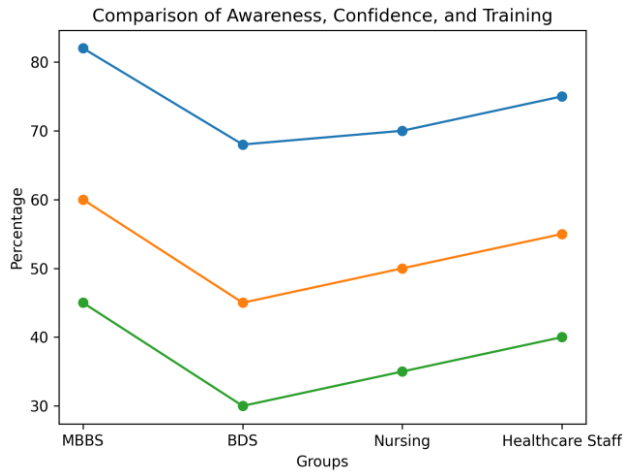
Data Collection

Data collected through self-administered questionnaires.

Statistical Analysis

- Data analyzed using SPSS
- Results expressed as percentages and mean scores
- Chi-square test used for comparison
- $p < 0.05$ considered statistically significant





4. RESULTS

Table 1: Demographic Distribution

Group	Number	Percentage
MBBS Students/Interns	100	33.3%
BDS Students	50	16.7%
Nursing Students	50	16.7%
Healthcare Staff	100	33.3%
Total	300	100%

Table 2: Awareness of Role in Tobacco Cessation

Group	Awareness (%)
MBBS	82%
BDS	68%
Nursing	70%
Healthcare Staff	75%

Table 3: Confidence in Providing Counseling

Group	Confident (%)
MBBS	60%
BDS	45%
Nursing	50%
Healthcare Staff	55%

Table 4: Formal Training Received

Group	Yes (%)
MBBS	45%
BDS	30%
Nursing	35%

Group	Yes (%)
Healthcare Staff	40%

Key Findings

- 85% agreed tobacco cessation is their responsibility
- Only 52% felt confident counseling patients
- 62% reported lack of formal training
- MBBS students showed significantly better awareness ($p < 0.05$)

5. DISCUSSION

The present study highlights a positive attitude toward tobacco cessation among medical and allied health participants. Most respondents acknowledged their professional responsibility, aligning with global recommendations for healthcare-driven cessation interventions. However, a significant gap exists between perception and practice. Although awareness levels were relatively high, confidence and practical training were inadequate. Similar findings have been reported in previous studies where healthcare providers lacked structured training programs. MBBS students demonstrated higher awareness, possibly due to greater exposure to clinical education. Dental and nursing students showed comparatively lower preparedness, indicating a need for curriculum enhancement. Healthcare staff, despite practical exposure, also reported limited confidence, suggesting the importance of continuous professional development programs.

6. CONCLUSION

There is a strong recognition of the role of healthcare professionals in tobacco cessation. However, insufficient training and lack of confidence hinder effective implementation.

7. RECOMMENDATIONS

- Integrate structured tobacco cessation modules in curricula
- Conduct regular workshops and training programs
- Promote interdisciplinary collaboration
- Encourage use of standardized counseling protocols (5A's model)
- Implement hospital-based cessation clinics

8. STRENGTHS

- Multi-disciplinary participant inclusion
- Large sample size (300 participants)
- Real-world institutional settings

9. LIMITATIONS

- Self-reported data (risk of bias)
- Limited to selected institutions
- Cross-sectional design (no causal inference)

10. **CONFLICT OF INTEREST:** None declared.

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