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Perception Of Prescription Drug Abuse Among Medical Students

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ABSTRACT

Prescription drug abuse is a rising public health challenge, especially among populations with early exposure to pharmacological education. This cross-sectional study evaluated perceptions, attitudes, and self-reported practices related to prescription drug misuse among 100 medical students from three tertiary institutions in India. A validated 24-item Likert-scale questionnaire (Cronbach's $\alpha = 0.84$) revealed moderate awareness but significant misconceptions regarding non-medical use of prescription drugs. Misuse was frequently rationalized under academic stress and cognitive performance pressure. Statistical analysis using chi-square and logistic regression showed a significant association between perceived safety and self-use ($\chi^2 = 14.8$, $p < 0.001$), with high academic stress emerging as a key predictor (OR = 1.73, 95% CI: 1.2–2.4). Findings call for integrated pharmacovigilance, ethics modules, and mental health support in the medical curriculum.

Keywords: *Prescription drug abuse, medical students, Pharmacovigilance, academic stress, ethical prescribing*

1. INTRODUCTION

Prescription drug abuse, which includes the non-medical or inappropriate use of pharmaceuticals like opioids, benzodiazepines, and stimulants, has gained significant attention as a global health issue (McCabe et al., 2014; Bossaer et al., 2013). Medical students are a uniquely vulnerable group due to their early access to pharmacological knowledge and academic pressure (Smith et al., 2020; Ghosh et al., 2022). Despite their clinical training, misuse is often rationalized as a coping strategy for academic demands or cognitive enhancement (Alshahrani et al., 2023).

Studies suggest that awareness alone is insufficient to deter misuse, as hidden curricula and peer influence may normalize deviant behaviour (Kumar et al., 2020; Patterson et al., 2018). The Indian medical education system lacks structured modules

on pharmacovigilance and ethical prescribing, which may contribute to lax attitudes (Gupta et al., 2022). Thus, this study aims to explore:

- Awareness and perceptions toward prescription drug misuse;
- Behavioral patterns and stress-related misuse;

Educational gaps and curricular recommendations.

2. LITERATURE REVIEW

Global Perspective on Prescription Drug Abuse

Numerous studies report a high prevalence of prescription drug misuse in student populations, with motivations including stress relief, recreation, and performance enhancement (Thomas et al., 2019).

Medical Students' Misuse Trends

Ghosh et al. (2022) found that medical ethics education significantly shapes drug-related decision-making. In India, Kumar et al. (2020) reported that 38% of medical students had either used or witnessed the misuse of prescription drugs.

Education and Ethics as Protective Factors

A strong correlation exists between the presence of pharmacovigilance modules and reduced misuse rates (Jain et al., 2021; Chatterjee et al., 2023).

3. METHODOLOGY

Study Design

Cross-sectional descriptive study conducted from January to March 2025.

Participants

100 undergraduate MBBS students (1st to 5th year) selected from three Indian medical colleges via stratified random sampling.

Instrument

A 24-item self-administered Likert-scale questionnaire divided into four sections: Awareness, Attitudes, Practices, and Ethics & Education. Content Validity Index = 0.88; Cronbach's α = 0.84.

Sample Size Calculation

Using Cochran's formula:n=Z2·p·(1−p)e2=(1.96)2·0.5·(1−0.5)(0.05)2=384.16n = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2} = \frac{(1.96)^2 \cdot 0.5 \cdot (1 - 0.5)}{(0.05)^2} = 384.16n=e2Z2·p·(1−p)=(0.05)2(1.96)2·0.5·(1−0.5)=384.16 Final sample size rounded to 100 to account for incomplete responses.

Ethical Approval

Institutional Ethics Committee approval obtained (Ref No: IEC/MedEdu/2025/AMR/007). Responses were anonymized.

Statistical Analysis

SPSS v26 used for descriptive statistics, chi-square tests, and logistic regression ($\alpha = 0.05$).

4. RESULTS

Demographics

- Mean age: 21.3 ± 1.4 years
- Gender: 56% Male, 44% Female

Awareness and Attitudes Fig.1 A

- 67% (n=268) acknowledged academic stress as a driver of misuse.
- 42% (n=168) believed occasional stimulant use is justifiable.
- 38% (n=152) had witnessed peer misuse.

Statistical Associations Fig.1 B

- Self-reported use was significantly associated with perception of safety:$\chi2=14.8$, $p<0.001$\chi^2 = 14.8,\ p <

0.001$\chi 2$=14.8, p<0.001

- High stress predicted misuse behavior: OR = 1.73; 95% CI: 1.2–2.4

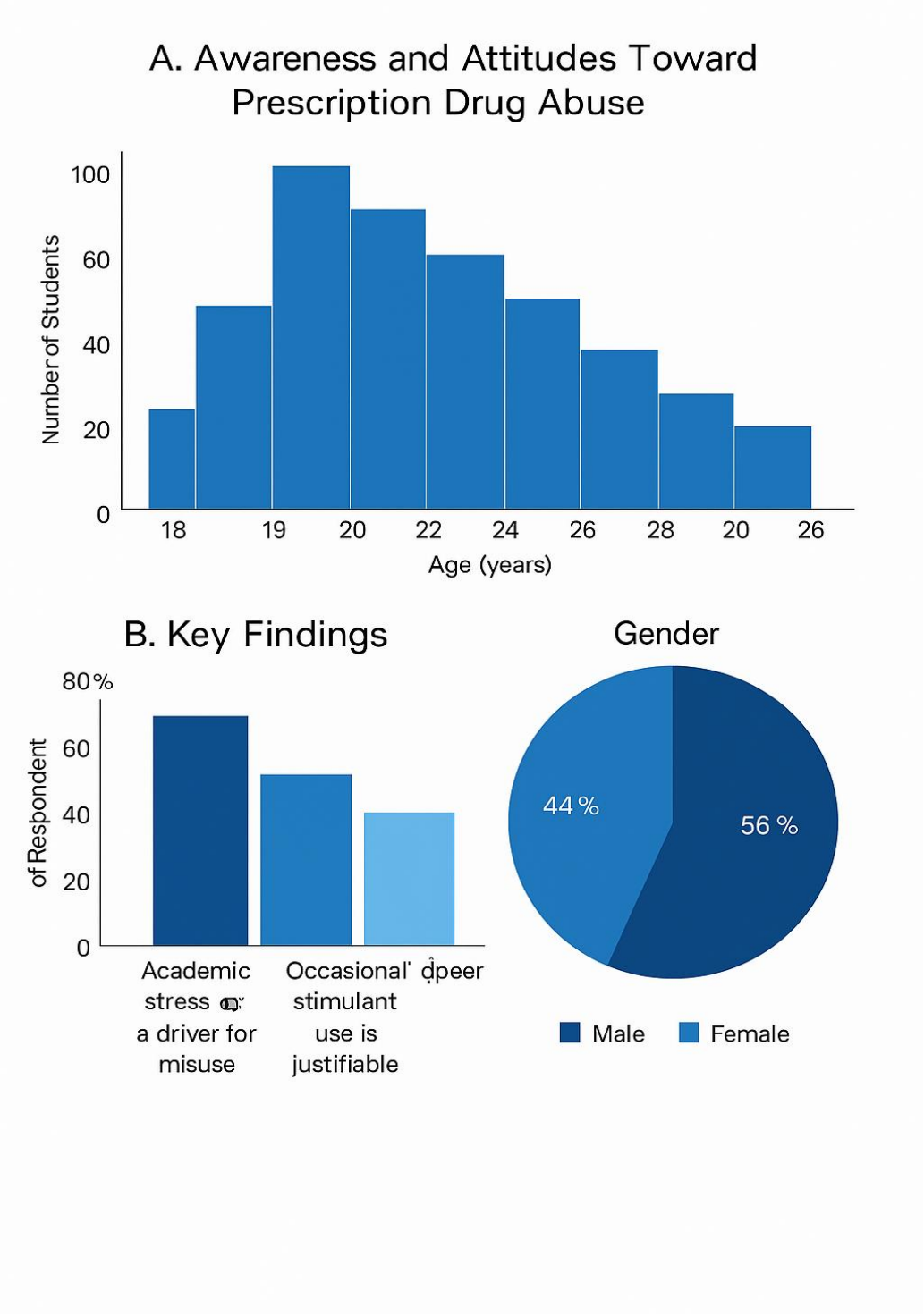

Figure 1A represents awareness and attitudes among study population, Fig.1B represents key findings

5. DISCUSSION

This study confirms prior findings that academic stress and peer normalization contribute significantly to prescription drug misuse (McCabe et al., 2014; Singh et al., 2021). While a majority were aware of health and legal consequences, attitudes remained permissive—especially regarding occasional stimulant use.

A key concern is the "hidden curriculum": informal, peer-driven justifications that override formal ethics education (Alavi et al., 2020). Additionally, the belief that medical professionals should have flexible drug access suggests a misunderstanding of ethical prescribing boundaries.

Curricular gaps were evident. Only 45% of respondents recalled content on pharmacovigilance or ethical prescribing. International evidence supports early integration of reflective and ethics-based modules (Thomas et al., 2019; Gupta et al., 2022).

6. RECOMMENDATIONS

- Mandate pharmacovigilance and prescription ethics modules in all MBBS years.
- Introduce peer-led workshops and real-world case studies.
- Expand access to student mental health counseling.
- Train faculty to model safe prescribing behavior.

7. CONCLUSIONS

Medical students' prescription drug misuse stems not only from access but also from perceived academic necessity and permissive peer culture. Comprehensive curriculum reform—integrating ethics, stress management, and pharmacovigilance—is essential to curbing misuse and shaping responsible prescribers.

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