

## Original Research Article

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# Study of tobacco and alcohol consumption among students of a medical college in a city of Maharashtra

Arvind V. Gaikwad, Rashmi Priya, Vishal S. Dhande\*, Mohan K. Doibale

Department of Community Medicine, Government Medical College, Aurangabad, Maharashtra, India

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**\*Correspondence:**

Dr. Vishal S. Dhande,  
E-mail: [drvishaldhande15@gmail.com](mailto:drvishaldhande15@gmail.com)

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## ABSTRACT

**Background:** Over the years, substance use has increased drastically in every section of the society. Tobacco and alcohol consumption in medical fraternity is quite common. The objectives of the study were to find out the prevalence of tobacco and alcohol consumption in medical students and to find out various reasons to start these habits.

**Methods:** It was a cross-sectional study conducted in Government Medical College, Aurangabad during September to November 2018. Study was conducted amongst undergraduate MBBS students. Taking prevalence as 47%, allowable error 10% and 10% non-respondents the sample size comes as 85. By lottery method, third year medical students were selected randomly for the study. Completed data from 120 students were included in the study. Pre-designed semi-structured self-administered questionnaire was used for data collection. Trial version of SPSS software was used for statistical analysis.

**Results:** In the present study, overall prevalence of substance use among undergraduate MBBS students was found to be 52.5% out of which 61.6% were males and 29.4% were females. Peer pressure was the main reason of continuing the habit (93.2%). 66% of these substance users showed willingness to quit the habit.

**Conclusions:** High prevalence of tobacco and alcohol consumption was observed among undergraduate medical students.

**Keywords:** Tobacco, Alcohol, Medical college

## INTRODUCTION

Alcohol and other substance use is a global problem and has become a public health concern mainly amongst children and adolescents.<sup>1</sup> Tobacco is the single most common cause of preventable mortality.<sup>2</sup> Deaths due to tobacco is said to rise from 1.4% in 1990 to 13.3% by 2020.<sup>3</sup> Substance abuse had been proven to cause various Non-communicable disease (WHO, 2018). 5.4% of the global burden of disease is contributed by Alcohol and illicit drug use.<sup>4,5</sup> Globally 4.2% of population aged 15 and more are illicit drug user and contributes to 0.8% of disability burden.<sup>6</sup> Early age of starting is usually associated with poor prognosis.<sup>7</sup> Alcohol and tobacco are

the most commonly abused substance among adolescents and medical fraternity. The role of addiction in family and peer pressure are also some of the major causes of initiation of substance. Medicos hold a respectable place in society and are considered to show high quality professional conduct and behavior. Substance use can adversely affect their fitness and effectiveness as practitioner.<sup>8</sup>

Keeping this in mind, the present study was conducted in Government Medical College, Aurangabad to find out prevalence of alcohol and tobacco consumption among medical students and various reasons to start these habits.

## METHODS

It was a cross-sectional study conducted in Government Medical College, Aurangabad during September to November 2018.

Study was conducted in undergraduate MBBS medical students. Taking prevalence as 25%, 10% allowable error and 10% non-respondents the sample size comes as 85.<sup>9</sup> By lottery method, third year medical students were selected randomly for the study. 140 out of 150 were present on the day of study. Out of them 130 participated in the study. Incompletely filled questionnaire were not included in the data. As such, data from 120 students were included in the study.

The students were administered an anonymous, pre-designed questionnaire. The questionnaire was prepared by taking in consideration the CAGE questionnaire and WHO Global Youth Tobacco survey (GYTS) and Global Information System on Alcohol and Health (GISAH).<sup>10-12</sup> The questionnaire consisted of information regarding sociodemographic profile of study subjects, pattern of alcohol and tobacco consumption, history of addiction in family, reason behind starting alcohol and/or tobacco and their desire to quit the habit.

**Table 2: Socio-demographic profile of study participants and their relation with substance use.**

| Sex                    | Substance abuse | No substance abuse | Total    | P value                   |
|------------------------|-----------------|--------------------|----------|---------------------------|
|                        | N (%)           | N (%)              | N (%)    |                           |
| Male                   | 53(61.63)       | 33(38.37)          | 86(100)  | $\chi^2=10.14$ , p=0.0014 |
| Female                 | 10(29.41)       | 24(70.59)          | 34(100)  |                           |
| <b>Type of family</b>  |                 |                    |          |                           |
| Nuclear                | 48(57.14)       | 36(42.86)          | 84(100)  | $\chi^2=2.42$             |
| Joint                  | 15(41.67)       | 21(58.33)          | 36(100)  | p-value=0.1198            |
| <b>Present address</b> |                 |                    |          |                           |
| Hostel                 | 73(67.59)       | 35(32.4)           | 108(100) | $\chi^2=8.437$            |
| Local                  | 3(25)           | 9(75)              | 12(100)  | p-value=0.0036            |

Tobacco and alcohol combined was the most common type of substance abuse (Table 4).

In this study substance use was found to have significant association (p=0.0006) with positive family history of addiction (Table 5). Out of 63 study participants, 42 students (67%) i.e. 35 males and 7 females were willing to quit.

**Table 3: Various reasons behind initiation / continuing substance use.**

| Reason*          | Number | %     |
|------------------|--------|-------|
| Peer pressure    | 55     | 93.2  |
| Special occasion | 50     | 84.74 |
| Stress           | 23     | 38.98 |
| Curiosity        | 10     | 16.94 |

\*Multiple responses.

Data was analyzed using SPSS trial version 16 software. Test of significance applied was Chi-square test and p<0.05 was taken as statistically significant.

## RESULTS

Among 120 students who participated in the survey, 86 (%) were males and 34 (%) were females. The mean age of participants was  $21.15\pm0.14$  years (Table 1).

**Table 1: Age-wise distribution of study participants.**

| Age group (years) | Number     | %          |
|-------------------|------------|------------|
| 18-20             | 40         | 33.33      |
| 21-23             | 72         | 60         |
| 24-26             | 08         | 6.67       |
| <b>Total</b>      | <b>120</b> | <b>100</b> |

53 (61.62%) males and 10 (29.41%) females consumed alcohol/tobacco or both (Table 2 shows the sociodemographic profile of study participants and their relation with substance abuse). The most common reason for substance abuse was peer pressure (93.2%) followed by special occasion (84.74%) like birthdays, social gathering, passing parties etc. then stress (38.98%) and curiosity (16.94%) (Table 3).

**Table 4: Different types of substance use among study participants.**

| Type of substance use | Number    | %          |
|-----------------------|-----------|------------|
| Tobacco only          | 06        | 9.5        |
| Alcohol only          | 19        | 30.2       |
| Tobacco + Alcohol     | 38        | 60.3       |
| <b>Total</b>          | <b>63</b> | <b>100</b> |

**Table 5: Distribution of study participants according to history of substance abuse in family.**

| Substance use among study subjects | Family history of substance abuse |          |          |
|------------------------------------|-----------------------------------|----------|----------|
|                                    | Yes                               | No       | Total    |
|                                    | N (%)                             | N (%)    | N (%)    |
| Yes                                | 44 (70)                           | 19 (30)  | 63 (100) |
| No                                 | 1 (11.1)                          | 8 (88.9) | 09 (100) |

$\chi^2=11.5$ , df=1, p=0.0006.

## DISCUSSION

The study was aimed to find out the prevalence of alcohol and tobacco among medical undergraduates. In this study, the overall prevalence of substance abuse was found 52.5% which was much higher than the study of Mehra et al in which the prevalence was 20%.<sup>13</sup> This was probably because this study was conducted among medical undergraduates of a city whereas Mehra et al conducted their study in a rural setup.

In present study the prevalence of substance use was found significantly high among males (61.62%) which was similar to the study done by Singh et al (61.29%) but much higher than that of Padhy et al where prevalence was 37.22%.<sup>3,14</sup>

The prevalence among females (29.41%) was similar to the study of Kumari, Nath (28.8%) but significantly higher than Singh et al, (8.24%) and also Padhy et al at 7.22%.<sup>15</sup>

This study found that major reason for substance abuse was peer pressure (93.2%) followed by special occasion (84.74%), stress (38.98%) and curiosity (16.94%) this was considerably different than the study by Singh, which found stress (43%), followed by the curiosity of alcohol and tobacco (41.5%) as the major reasons behind taking up substance abuse. This was almost similar to the study of Mehra et al which found friends (80%) as the main cause. The most common substance abuse was tobacco and alcohol combined which was similar to the findings of Jaiswal et al.<sup>9</sup> Substance abuse among students is significantly associated with history of substance abuse in family specially parents or siblings this was similar to the study of Kumar et al and Khosla et al.<sup>16,17</sup>

In our study, 66% were willing to quit which was much higher than Singh et al (44.6%) somewhat nearer to the findings of Arora et al, where the attempt to quit substance use was 59.6%.

## CONCLUSION

Substance abuse among young adults is growing considerably. Appropriate intervention, health education, support and counselling should be done to uproot this type of habits at early stage of life. Efforts should be made to improve home environment

Substance abuse has adverse effect on personal level, family as well as society like anxiety, crime, accidents, violent behavior, impaired decision making and withdrawal from family etc.

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**Ethical approval:** The study was approved by the Institutional Ethics Committee

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