PSYCHOACTIVE SUBSTANCE USE AMONG MEDICAL STUDENTS

R.V. ZULFIKAR ALI, G.K. VANKAR

Using a standard epidemiological survey instrument for psychoactive drug use, 215 medical students in three classes were studied. One third of all students reported non-medical drug use. The substances ever used were: betel nut 13%, smokeless tobacco 3%, cigarettes 12%, alcohol 12.5%, cannabis 0.9% and benzodiazepines 3.7%. Last month use was reported for four substances and daily use was reported for cigarettes only (3.2%). Cigarette and benzodiazepine use mostly began after entry to medical college. Men and final year students had a higher prevalence of drug use.

Key words: Psychoactive substance, use, medical students, depression.

INTRODUCTION

Psychoactive substance related impairments may have a detrimental and life threatening impact not only on individual physicians but also on patients dependent on them. Nonmedical drug use among medical students has been surveyed in India (Agarwal et al, 1975; Sethi & Manchanda, 1987; Singh, 1979; Ponnudurai et al, 1984; Vankar (personal communication, 1984) and abroad (Maddux et al, 1986; McAuliffe et al, 1986; Baldwin et al, 1991). As these studies were conducted with different questionnaires and with different procedures, at different places and times and with varying response rates, the results cannot be generalized.

This study differs in two aspects from earlier studies. Firstly, in addition to information about extent and nature of substances used, it also sought information regarding impairment because of psychoactive substance use. Secondly, it measured depression which has been reported to coexist with the use of alcohol and other substances. This study aimed at finding out the prevalence and pattern of psychoactive substance use among medical students, sociodemographic correlates of such use and association of depression with such use, if any.

MATERIAL AND METHODS

A self-administered questionnaire adapted from the questionnaire used by Johnston et al (1982) was used for the survey. The questionnaire elicited information on sociodemographic characteristics, psychoactive substance use and impairment due to such use. Depression was measured by the twenty item Zung self-rating Depression Scale (Zung, 1972). The questionnaire was distributed to first, second and final MBBS students by one of the investigators (Z.A.R.V.) in their respective classes after thorough explanation of purpose of study. All students responded to the questionnaire.

Psychoactive substance users and nonusers were compared on several sociodemographic characteristics as well as for presence of depression. Chi-square and 't' test were used to find out statistical significance.

RESULTS

Out of 234 medical students in the three classes, 19 provided inadequate information, leaving 215 responses for analysis.

Table 1 shows the prevalence of psychoactive substance use. Seventy (32.5%) students had used at least one psychoactive substance during their lifetime. Betel nut, alcohol and cigarettes were the three most frequently used substances. Less commonly used were benzodiazepines, smokeless tobacco and cannabis. Last month substance use was limited to four substances: cigarettes, alcohol, betel nut and benzodiazepines, in that order. Daily use (for twenty or more days during the last one month) was reported by 3.2% and was limited to cigarettes only.
More than 90% of alcohol users also had used another substance. Cannabis use was uncommon, reported by only two students. Impairment in physical, social or academic spheres were reported by only 2.3% of all and 7.1% of drug user students. For different substances, mean age of starting substance use ranged from 15 to 17.5 years. The lowest mean age for the onset of use of any substance was for betel nut (15 years), and the highest mean age was for benzodiazepines (17.5 years).

Table 2
Chronology of psychoactive substance use

| Substance          | Before medical college | During medical college | Never |
|--------------------|------------------------|------------------------|-------|
| Alcohol            | 22 (10.0)              | 14 (7.0)               | 179 (83) |
| Betel nut          | 21 (9.8)               | 7 (3.0)                | 187 (87) |
| Cigarettes         | 11 (5.0)               | 14 (7.0)               | 190 (88) |
| Benzodiazepines    | 2 (1.0)                | 8 (3.7)                | 205 (95) |
| Smokeless Tobacco  | 2 (1.0)                | 1 (0.5)                | 212 (99) |
| Cannabis           | 1 (0.5)                | 1 (0.5)                | 213 (99) |

Table 3
Reasons cited for substance use

| Substance          | Most cited (Per cent users per substance) | Second most cited | Third most cited |
|--------------------|------------------------------------------|-------------------|------------------|
| Alcohol            | Experiment (36.1)                        | Good time (30.5)  | Feel good (11.1) |
| Betel Nut          | Experiment (57.1)                        | Good taste (17.8) | Good time (14.3) |
| Cigarettes         | Experiment (60.1)                        | Relax (12.0)      | Good time (4.0)  |
|                    |                                          |                   | Avoid problems (4.0) |
| Benzodiazepines    | Sleep (100)                             |                   |                  |
| Smokeless Tobacco  | Experiment (65)                         | Relax (33)        |                  |
| Cannabis           | Feel good (50)                          |                   |                  |
|                    | Anger (50)                               |                   |                  |

Table 4
Sociodemographic characteristics

|                | Users n = 70 | Nonusers n = 145 |
|----------------|--------------|------------------|
| Gender         | Men 89       | Women 43         |
| Age (yrs)      | Range 17 to 25 | 17 to 23        |
|                | Mean(SD) 19.7(2.0) | 19.5 (1.4)     |
| Class          | I MBBS 30 | II MBBS 47 |
|                | II MBBS 24 | III MBBS 16 |
| Domicile       | Urban 63    | Rural 37        |
| Residence      | Hostel 61   | Day scholar 39  |
| Religion       | Hindu 93    | Other 7        |
| Marital Status | Single 94   | Married 6       |
| Status         | Married 6   | Single 94       |
| Annual Income   | <60,000 57  | >60,000 43     |
| Income (Rs)    | <60,000 57  | >60,000 43     |
| Health Status  | Good 81     | Fair/poor 19   |
| Academic Status| Upper 37     | Lower 10        |

As shown in Table 2, use of alcohol, betel nut and smokeless tobacco started more often prior to entering medical college. After admission to medical college, the use of two substances: cigarettes and benzodiazepines became more frequent. Cannabis use did not show any difference before or after medical college entry. The reasons cited for experimenting with drugs are mentioned in Table 3.

Table 4 compares sociodemographic characteristics of psychoactive substance users and non-users. Life time use was more often by men as compared to women (89% vs 11%); use was most frequent among final MBBS students. The users and non-users did not differ as regards age, domicile, residential arrangement, religion, marital status, parental income, perceived health and academic status.

On Zung self-rating Depression Scale (Zung, 1972) more non-users compared to users had depression (25.5% vs 20%). However, the difference was not statistically significant.
DISCUSSION

Almost one third of medical students reported a lifetime use of psychoactive substances. The lower prevalence may be related to inclusion of younger students belonging to the first and second years. Use of opioids, stimulants, hallucinogens or cocaine was nonexistent. Impairment due to drug use were also uncommon. Use of two substances: cigarettes and benzodiazepines started more often after medical college entry. Easy access to benzodiazepines for medical students may be a factor leading to its use. Drug use was not associated with more depression. Clark and Zeldo (1987) observed that medical students with depression did not report alcohol or other substance use more frequently; in fact severely dysphoric students reported less consumption of alcohol. Drug use might have improved the mood state of users. Psychoactive drug use started in most instances at younger age. Emphasis in medical curriculum on psychoactive substance use cannot be overemphasized.

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