

DRUG ABUSE AMONG MEDICAL STUDENTS AT A NIGERIAN UNIVERSITY: PART 1. PREVALENCE AND PATTERN OF USE

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Using a structured pro forma, 728 out of 775 medical undergraduates at a Nigerian university were surveyed for the prevalence and pattern of drug use. An operational definition of substance abuse was made, and 28 percent of students fell within that criterion. Male abusers (81 percent) exceeded female abusers (19 percent). Substances most commonly abused were alcohol (60 percent), minor tranquilizers (48 percent), tobacco (35 percent), and narcotics (29 percent), particularly codeine. Only 11 percent abused cannabis. While most students were polydrug users, there was a low frequency of daily drug use. A general lifetime (occasional use) prevalence of substance use of 56 percent was found. Drugs consumed on a daily basis were alcohol (2 percent) and tobacco (6 percent). The prevalence of drug use was highest among the fourth and final year students. The majority of students were occasional abusers; there was no evidence of physical dependence.

Man has long used substances that alter consciousness for the production of pleasure and euphoria, or

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for the reduction of pain, anxiety, and distress. Ancient Greco-Romans employed singing, dancing, and drinking to a point of oblivion and ecstasy in ceremonies in honor of their gods of wine, Bacchus and Dionysus.¹ Successive civilizations and diverse cultures since have added other items to the range of substances that man can use to achieve his desired state of euphoria or to relieve his anxiety, pain, or distress.² The probable adverse effects of these psychoactive substances have caused international concern over many years and international legislations have been enacted at various times to control their circulation and use.³

Various studies have reported an increasing trend in the prevalence of substance abuse, particularly among the youth,⁴⁻⁶ and its seriousness as a public health hazard.⁷ A greater cause for concern is the finding of a similarity between urban and rural trends in drug use.⁸ In a recent study,⁹ 22 percent of clinical medical students in a Nigerian university either did not disapprove or only disapproved slightly of the nonmedical use of listed psychoactive drugs. A review of the available literature on epidemiological studies of drug abuse in Nigeria reported a noticeable shift in the previous patterns of use, for example, from abuse of methaqualone to barbiturates.¹⁰ Abuse of drugs among physicians has been estimated to be about 30 to 100 times the rate in the general population.¹¹ In spite of this, no study has been done in Nigeria to assess the true position with regard to physicians, or to estimate the time in their career when they are likely to have acquired the habit. However,

TABLE 1. PREVALENCE OF SUBSTANCE USE (ALL DRUGS) IN SAMPLE OF 728 STUDENTS

Frequency	No.	Percent
Once in a lifetime	91	13
Once or twice in a year	108	15
Once or more in a month	205	28
Never abused	324	45

studies carried out elsewhere on medical undergraduates yield very useful findings.¹²⁻¹⁶

A pilot study was therefore undertaken to determine the prevalence and pattern of drug use among the various matriculating classes of undergraduate medical students at the College of Medicine of the University of Nigeria. It is hoped that by repeating the study on the same persons later in their lives, any change in the pattern of drug use may be detected as well as the point at which such a change could have taken place.

MATERIALS AND METHODS

All matriculated undergraduate medical students of the University of Nigeria during the third term of the 1982-83 academic session formed the population of this study. There were 775 students in five classes. Each class of students filled out the questionnaires during a class hour, after explanations and assurances of confidentiality. Anonymity was maintained. The items on the questionnaire were a modified version of those used to study drug abuse among American high school students.¹⁷

The first part of the questionnaire sought basic demographic information, while the second part included questions regarding drug use during lifetime, frequency of use of each drug listed, reasons for use, and the subject's expectation of future use. Substances included were alcohol, cannabis, stimulants, sedatives (including barbiturate and nonbarbiturate hypnotics), minor tranquilizers, opium, synthetic narcotics, cocaine, hallucinogens, inhalants (volatile agents), and tobacco (including cigarettes and snuff). Data so obtained were pooled and analyzed. For the purpose of this study, *drug abuse* was defined as the taking of a drug at a frequency of at least once a month without medical prescription.

RESULTS

Of the 775 matriculated students, completed responses were obtained from 728 (93.9 percent), con-

TABLE 2. DISTRIBUTION OF SUBJECTS* ACCORDING TO SEX

	Men	Women
	No. (%)	No. (%)
Abuser (n = 205)	166 (81)	39 (19)
Nonabuser (n = 324)	242 (75)	82 (25)

$\chi^2 = 2.46$; $df = 1$; NS

* Age range, 18 to 29 years; average age, 22.6 years; SD = 2.36

TABLE 3. TYPES OF DRUG ABUSED

Type of Drug	Men	Women	All Students
	No. (%)	No. (%)	No. (%)
Alcohol	95 (46)	28 (14)	123 (60)
Tranquilizers	62 (30)	36 (18)	98 (48)
Tobacco	62 (30)	10 (5)	72 (35)
Narcotics	40 (20)	20 (10)	60 (29)
Sedatives	20 (10)	6 (3)	26 (13)
Cannabis	22 (11)	1 (0.5)	23 (11)
Stimulants	6 (3)	2 (1)	8 (4)
Opium	—	—	—
Cocaine	—	—	—
Hallucinogens	—	—	—
Volatile agents	—	—	—

sisting of 607 responses from 635 men and 121 from 140 women.

Prevalence of Substance Use

Four hundred four students had taken drugs at some time in their lives without a medical prescription (Table 1). This gives a prevalence rate for the "occasional user" of 56 percent for all substances used. Two hundred five (28 percent) students were recognized as real abusers if they used drugs once or more each month.

Sex Distribution

As shown in Table 2, more men (81 percent) than women (19 percent) were involved in drug abuse; however, sex difference between abusers and non-abusers did not attain statistical significance.

Type and Prevalence of Drug Abused

The substance most commonly abused by this sample was alcohol, which was consumed by 60 per-

TABLE 4. FREQUENCY OF USE OF DRUGS MOST COMMONLY ABUSED

Drugs Abused	No. of Students Abusing Drugs	Once per Month	Two to Three Times per Month	Once to Twice per Week	Almost Daily
		No. (%)	No. (%)	No. (%)	No. (%)
Alcohol	123	84 (68)	28 (23)	8 (7)	3 (2)
Tranquilizers	98	78 (80)	15 (15)	5 (5)	—
Tobacco	72	41 (57)	18 (25)	9 (13)	4 (6)
Narcotics	60	48 (80)	9 (15)	3 (5)	—
Sedatives	26	20 (77)	4 (15)	2 (8)	—
Cannabis	23	17 (74)	6 (26)	—	—
Stimulants	8	6 (75)	2 (3)	—	—

cent of students. This was followed by minor tranquilizers (48 percent), with tobacco in its various forms, but mostly as cigarettes, ranking third (35 percent). Sedatives and cannabis were abused by nearly an equal number of students. There was no report of abuse of opium, cocaine, hallucinogens, and volatile agents (inhalants) in this study. Only six men and two women reported using stimulants (Table 3). Codeine was the most common narcotic abused, and there was no report of morphine and pethidine use.

Frequency of Use of Drugs Most Commonly Abused

There was a paucity of daily use of most of the drugs abused. Sixty-eight percent of abusers of alcohol did so once a month. Twenty-three percent used it two to three times each month, while 7 percent drank alcohol once or twice a week. Of the 98 students who abused minor tranquilizers, the majority (80 percent) took them two to three times a month, while about 5 percent took them once or twice a week. Only one girl reported having ever used cannabis. Frequency of use of the other drugs listed is shown in Table 4.

Prevalence of Single and Polydrug Use by Year of Study

Approximately 22 percent of all the students were single-drug users while the remaining 78 percent were polydrug users. Single-drug abuse was highest among second and third year students and least among fourth and final year students. On the other hand, polydrug abuse was highest among the fourth and final year students. The observed prevalence of drug abuse in the second and third years was nearly trebled by the fourth and final years of study (Table 5).

TABLE 5. PREVALENCE OF SINGLE AND POLYDRUG USE BY EACH YEAR OF STUDY

Year of Study	Single-Drug Users	Polydrug Users	Total Users
	No. (%)	No. (%)	No. (%)
2nd year	10 (36)	18 (64)	28 (16)*
3rd year	11 (31)	24 (69)	35 (18)*
4th year	8 (16)	43 (84)	51 (48)*
5th year	9 (23)	30 (77)	39 (35)*
Final year	6 (12)	46 (89)	52 (38)*
All students	44 (22)	161 (79)	205 (28)

* Percentage of total class population

DISCUSSION

Widespread ignorance of the probable ill effects of certain drugs and legal prohibitions against the illegal use of such drugs constitute an obstacle to any epidemiological study of drug abuse in Nigeria. The consequent reluctance on the part of abusers to cooperate in such studies for fear of prosecution or stigmatization appears understandable, though misguided. Nevertheless, it is necessary to have an idea about the nature and size of the problem if meaningful and effective preventive measures are contemplated.

The lifetime prevalence of drug use without a medical prescription in this study was 56 percent, with a much higher frequency among men than women. This figure was higher than the 13 and 16 percent for undergraduate medical students at Glasgow University,¹² comparable to 49 percent obtained by Sethi and Manchanda in India,¹⁴ considerably lower than 72 percent for another medical school in India,¹⁵ and 69 percent for high school undergraduates in America.¹⁸ These differences, while highlighting the com-

plex nature of drug abuse, also reflect the different criteria used for the diagnosis of substance abuse. Differences in methodology, sociocultural characteristics of the various samples studied, and the different numbers of drugs included also contribute to the observed differences. An interesting finding is the absence of reported cases of abuse of opium, cocaine, and hallucinogenic and volatile substances. This tendency to avoid the "harder" drugs is probably because of stringent enforcement of legal sanctions, thus making it more difficult for the would-be abuser, particularly within the confines of a university campus, to get at such drugs.

The most commonly abused substances were alcohol, minor tranquilizers, tobacco, narcotics (particularly codeine), and sedatives in that order. The rate of abuse of all forms of alcohol is 60 percent and reflects the easy availability of that commodity in this country, where there are no serious restrictive laws against its use (except for underage persons). With the present increase in the number of breweries producing alcoholic beverages, this figure could be higher in the future—a situation that calls for urgent public education and effective preventive as well as remedial measures. The prevalence of true drug abuse (according to the operational definition of this study) was 28 percent.

As many as 78 percent of the students were polydrug users. This gives cause for concern, as adverse consequences may arise from one drug potentiating the effect of another. About 50 percent of those abusing alcohol also smoked cigarettes. The higher prevalence rate of polydrug use in the three most senior classes reflects the amount of stress impinging on the student as a result of increasing academic work and the pressure of clinical postings, which often exclude the student from the usual social interactions with the outside world. The two- to three-fold increase in prevalence of drug abuse between the junior and the senior classes shows increasing knowledge and reliance on the effect of drugs and alcohol as well as enhanced availability of these substances. It becomes important, therefore, that the student should be made aware of the dangers ahead and be helped to curb the habit before he or she becomes a qualified medical doctor and drugs become more readily available.

The majority of students in this study were occasional abusers. The study involved only students who were present at lectures on the days when questionnaires were distributed. Because anonymity was maintained, absentees could not be contacted there-

after. The eight students who abused stimulants included five men who had abused kolanuts—the dried cotyledons of *Cola acuminata* that are traditionally served to visitors by Nigerians, as a mark of hospitality. This fruit, which has a high caffeine content,¹⁹ is used by students to postpone sleep. More intensive work needs to be done to assess the real extent to which this substance is abused in society generally.

Cognizant of the importance of drugs in the health care system of any community and the fact that the types of drugs used tend to change with time, the present study was intended to give an insight into the prevalence and pattern of drug abuse among medical undergraduates at one institution. Although the majority are occasional users, the overall picture is disturbing enough, particularly as it shows an upward trend in prevalence among the senior classes. However, a cause for cheer is the fact that only eight (4 percent) students gave a hint of their desire to continue taking drugs, and these were in relation to alcohol, tranquilizers, and narcotics, so the picture is not entirely one of unmitigated gloom. The latter years of medical education are perhaps an auspicious moment to introduce any remedial measures necessary to control or modify the students' drugtaking behavior before they graduate as doctors with more money for alcohol and greater access to drugs.

While the results of this study appear informative, there is a greater and urgent need to intensify research on the epidemiology of drug abuse in various communities in Nigeria, particularly at this time of fluctuating socioeconomic fortunes. The inclusion of alcohol and tobacco has no doubt increased the prevalence of the occasional user category. The sociomedical consequences of abuse of these substances and the fact that alcohol and tobacco are very important agents of social interaction make their inclusion in such a study necessary.

ACKNOWLEDGMENT

Professor J. C. Ebie and Dr. Eva Tongue provided resource material for this study; and Mr. Charles Onoh typed the manuscript.

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