ALCOHOL AND DRUG TAKING AMONG MEDICAL STUDENTS AT A NIGERIAN UNIVERSITY CAMPUS: PART 2. SOCIODEMOGRAPHIC FACTORS OF ETIOLOGIC SIGNIFICANCE

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In a survey of Nigerian undergraduate medical students, alcohol and drug users were classified as frequent users, casual users, and nonusers. Place of residence during session and family structure recorded no significant contribution to the development of substance abuse. Male sex, poor performance on examinations, drug taking among close friends and peers, and a family background of lower socioeconomic status emerged as sociodemographic factors correlating positively with the presence of substance abuse. Health education, controlled distribution of drugs and alcohol, stringent regulatory provisions against their use, and a permanent Commission on Substance Abuse with full judicial powers are suggested as measures that may help control the abuse of psychoactive substances and the hazard they pose to public health.

Investigation of the sociodemographic characteristics of substance abusers is necessary for an understanding of the dynamics and likely causes of that habit. Although varying results have usually emerged from such studies,[1] drug taking generally has been regarded as determined by a combination of the peculiar properties of the drug, characteristics of the user, and the nature of the person's environment.

An increased use of dependence-producing drugs has been reported among adolescents from middle and upper socioeconomic classes[2,3]; and from Illinois came the observation that certain family characteristics and peer group influences, rather than age, grade, or sex, significantly affected the prevalence of drug abuse among adolescents.[4] Miller[5] concluded that although the etiologic factors involved in male drug abuse were determined mainly by environmental variables, such as curiosity, experimentation, and group conformity, in women such determinants were mostly of an emotional and psychodynamic nature. These findings appear to be consistent with those of more recent workers.[6] While affluence and easy accessibility to drugs have been suggested,[7] Winnick[8] postulated that access to dependence-producing substances, disengagement from proscription against their use, and role strain or role deprivation contributed to the development of a state of drug abuse. The observation is made that although drug abuse can be found in all social categories, its manifestation seems to be influenced by the sociologic and socioeconomic context within which it develops.[9]

In Nigeria, Lambo[10] drew attention to the increasing incidence of drug abuse among sophisticated urban women. Boroffka[11] and Adesina[12] implicated social isolation as an important etiologic factor among students and migrants and Oviasu[13] and Anumonye[14] found a preponderance of young men and women under the age of 35 years among their substance abusers. A more recent review of the relevant literature in Nigeria, however, found no age limit among drug abusers and also found results on the influence of social class to be contradictory.[15] In periurban Kenya, an association has been found between lower socioeconomic status, high social mobility, overcrowding, and a high prevalence of substance abuse, particularly if there were local brewing of alcoholic beverages, drug trafficking, and poor parental control over children.[16]

The present study was undertaken to ascertain the relationship between certain sociodemographic variables and substance abuse among medical undergraduates. The variables studied included age, sex, rural/urban background, on-campus vs off-campus accommodation, family structure, academic performance, drug use among current friends, family income, loss of a parent or parental separation before the age of 18 years, and age of introduction to drugs.

MATERIALS AND METHODS

The characteristics of this study population were described in the first part.[17] From the operational definition of drug abuse, the identified abusers were divided into two groups—frequent users (those taking drugs on at least 60 or more occasions with a frequency of at least once a month during the period of use) and casual users (those who had used drugs on less than 60 occasions in their lifetime, with a frequency of less than once a month during the period of use). The first group, therefore, consisted of heavy and moderate users, whereas the latter group included occasional (mild) and experimental users. A random sample of 60 responders was taken from each of these two groups of users as well as from the nonusers. The selected sociodemographic variables were then analyzed in relation to each of these user groups.

RESULTS

Of 775 students in the medical school, there were 635 men (81.9 percent) and 140 women (18.1 percent) ranging in age from 18 to 29 years.

TABLE 1. DISTRIBUTION OF RESPONDERS ACCORDING TO SEX

Groups of Responders	Men	Women
Frequent users	60	—
Casual users	47	13
Nonusers	36	24
Total	143	37

$x^2 = 17.12$; $df = 2$; $P < .01$.

TABLE 2. DISTRIBUTION ACCORDING TO RURAL/URBAN BACKGROUND

Responders	Rural	Urban
Frequent users	38	22
Casual users	31	29
Nonusers	28	32
Total	97	83

$x^2 = 3.50$; $df = 2$; not significant.

Sex Distribution

Comparison of the various users with nonusers shows a significant male to female ratio at $P < .01$. There were no women among frequent users. The majority of the male users were frequent or casual users, and the majority of the women were nonusers and only 13 were casual users (Table 1).

Rural/Urban Background

Although there were slightly more users (57.5 percent) with a rural background than those from an urban setting (42.5 percent), there was no significant difference between them in the prevalence of substance abuse (Table 2).

Place of Residence During Academic Session

The majority of users and nonusers live in university hostels and there was no significant difference between them and those in off-campus accommodations in terms of drug use.

Family Structure

Although more responders came from homes with extended kinship than from nuclear family units,

TABLE 3. DISTRIBUTION ACCORDING TO ANY FAILURES ON EXAMINATIONS

Responders	Yes	No
Frequent users	19	41
Casual users	14	46
Nonusers	8	52
Total	41	139

$x^2 = 10.60$; $df = 2$; P < .02.

there was no significant difference between both groups in terms of their drug-using propensities.

Academic Performance

The number of users who have ever failed an examination by far exceeded the number of nonusers who failed one or more examinations in the past (Table 3). This difference attained statistical significance at the 2 percent level ($x^2 = 10.60$; $df = 2$; P < .02).

Drug Use Among Current Friends of Responders

Table 4 shows how common drug use is among current friends of responders in the three groups. One half of their friends were taking drugs among 20 percent of frequent users; 13.3 percent for casual users, and for nonusers it was 8.3 percent. There was no evidence of drug taking among friends in 16.7 percent of frequent users, 48 percent of casual users, and as much as 60 percent of nonusers. Conversely, 43.3 percent of frequent users reported almost all their friends as taking drugs, whereas the figures for casual users and nonusers were 20 and 11.7 percent, respectively. With regard to drug use among their current friends, therefore, there was a statistical difference between frequent users, casual users, and nonusers at the 1 percent level of significance ($x^2 = 38.41$; $df = 2$; P < .01).

Parental Income

In Table 5 is a summary of the estimated annual income of parents of the subjects. Among frequent, casual, and nonusers, there is an excess of subjects from families that belong to the lower income groups (annual salary below ₦3,000; at this time $1.00 US is equivalent to ₦4.20 Nigerian naira). A much

smaller number of users came from families in the higher income groups. This difference, which became more pronounced in the case of both frequent and casual users than with nonusers, occurred at the 1 percent level of significance ($x^2 = 13.75$; $df = 2$; P < .01).

Other Associated Findings

Eleven students (6.1 percent) reported the loss of a parent (or parents) or separation from parents before the age of 18 years. Of these, six were frequent users, two were casual users, and three were nonusers. Sixty-three users (52.5 percent) acquired knowledge about drugs when they were between 15 and 19 years of age, whereas 24 (20 percent) began the habit between 20 and 25 years of age.

DISCUSSION

The recorded excess of men vs women is similar to findings in several studies on drug abuse[4,5,13,18-20] and female drug users appear to have done so on a casual or experimental basis. Family structure, rural/urban background, and residence in a university hostel or off-campus accommodation did not contribute significantly to the prevalence of drug abuse; examination performance could be influenced by various factors, personal and environmental. However, drug users in this study tended to fail their examinations more often than nonusers ($x^2 = 10.60$; $df = 2$; P < .02). This is similar to the findings of Singh,[19] who reported a lower level of intelligence among medical undergraduate drug users in Patiala, India.

A significant finding is that a higher proportion (66.7 percent) of close friends of drug users also were taking drugs, whereas the majority (60 percent) of friends of nonusers were not taking drugs or alcohol. Peer group influence and conformity to group norms of behavior have been held to account for this observation.[4] The majority of frequent users come from lower socioeconomic homes. This may be a reflection of the amount of socioeconomic stress impinging on such persons or a consequence of lack of adequate parental control, as these groups contain much of the illiterate and less sophisticated families within the population—a group comparable to the lower socioeconomic groups of periurban Kenya.[16]

The early age at which the students became introduced to alcohol and drugs gives cause for concern.

TABLE 4. DISTRIBUTION ACCORDING TO PREVALENCE OF ALCOHOL AND DRUG TAKING AMONG CURRENT FRIENDS OF RESPONDERS

Responders	Most or All	About One Half	Less Than One Half	A Few	None
Frequent users	28	12	6	4	10
Casual users	12	8	5	6	29
Nonusers	7	5	8	4	36
Total	47	25	19	14	75

$x^2 = 38.41$; $df = 2$; $P < .01$.

TABLE 5. DISTRIBUTION ACCORDING TO PARENTAL INCOME PER ANNUM

Responders	Less than ₦1,500	₦1,500 to ₦3,000	₦3,000 to ₦6,000	₦6,000 to ₦9,000	Over ₦9,000
Frequent users	19	22	9	6	4
Casual users	16	24	8	10	2
Nonusers	22	16	12	3	7
Total	57	62	29	19	13

$x^2 = 13.75$; $df = 2$; $P < .01$.

It is similar to the finding that 15 to 20 percent of Americans, particularly men aged 18 to 34 years, were recent marijuana smokers.[20] This is an indication that preventive measures should be initiated early in the educational life of the youth, preferably at the post-primary stage, especially as the habit is observed to have developed in high school and college and persisted, albeit at a diminished rate, during medical school years.[6] Emotional problems engendered by parental loss and separation at an early age have contributed to the development of substance abuse among a handful of subjects in this study. Although the number involved is rather small, it appears that in some cases the social support and warmth of affection generated within the extended kinship system of the Nigerian culture do not sufficiently overcome those emotional problems that may lead to substance abuse by persons from broken homes and one parent families. In addition, the fabric of this hitherto supportive system appears to be weakening under the impact of urbanization and rapid social change. This observation is comparable with those of Soueif et al,[21] who found that among their patients, more smokers than nonsmokers lived away from their families, had at least one parent dead, and participated in peer group activities.

Among factors emerging as positively correlated with a probable risk of substance abuse are male sex, poor performance on examinations, drug taking among close friends and peers, and a family background of lower socioeconomic status. This type of family background contrasts with the finding in Chile.[7] Although the rural societies are still well integrated, with local ethnic norms and customs observed, it appears that the youth who migrate to the urban centers and metropolis gradually become detribalized, acquiring the prevailing habits and ambient mores of their new environment. If that new environment has a substance abuse subculture, a less resilient youth would fall prey to the practice. The easy availability of over-the-counter drugs is another factor enhancing the development of drug abuse. The situation has been reinforced by a large number of breweries producing alcoholic beverages. More stringent measures are, therefore, necessary to control the distribution of these substances. Health education and public campaigns directed toward enlightening the population on the dangers of substance abuse as well as the evils of self-medication would be steps in the right direction. The population of Nigeria is mainly young. To protect this generation and future ones from the effects of substance abuse, it may be necessary to institute a permanent Commission on Substance Abuse, with full statutory powers to monitor the problem and to apply relevant preventive and remedial measures.

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