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Predictors of hazardous and harmful alcohol use among Nigerian Freshmen

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Summary

Problem drinking among young persons is a concern among contemporary researchers. The present study examines the prevalence and the predictors of hazardous and harmful alcohol use among a sample of freshmen at the University of Ibadan Nigeria. Five hundred and forty freshmen were surveyed, of which 289 used alcohol. The effect of eighteen psychosocial variables on Alcohol Use Disorder Identification Test (AUDIT) scores was investigated using regression analysis. The results showed that, being a male freshman ($r=0.78, p < 0.0005$); coming from a polygamous home background ($r=0.59, p < 0.01$); high levels of parents socio-economic status ($r = -0.47, p < 0.0005$); living with both parents ($r = -0.24, p < 0.0005$); mother working full time outside home ($r = 0.39, p < 0.005$); increasing number of siblings ($r = 0.35, p < 0.0005$); living in urban cities ($r = 0.38, p < 0.005$); belonging to a social club ($r = -0.46, p < 0.01$); increasing religious activities ($r = -0.51, p < 0.005$); increasing parent child interaction ($r = 0.72, p < 0.01$); and low need for affiliation ($r = -0.49, p < 0.0005$) were found to be associated with hazardous and harmful alcohol use among the freshmen. When these eleven variables were entered into a stepwise multiple regression analysis to determine their relative predictive power to hazardous and harmful alcohol use among the freshmen, three variables; being a male ($p < 0.0005$); polygyny polygamy ($p < 0.0053$) and low need for affiliation ($p < 0.0053$) remained significant. There is a need to consider psychosocial factors in designing health educational programs for students on alcohol consumption.

Résumé

La consommation de l'alcool parmi les jeunes est un problème de recherche contemporaine. Cette étude examinait la prévalence des prédicteurs nuisibles et l'abus d'alcool parmi les nouveaux étudiants à l'université d'Ibadan. Cinq cent quarante nouveaux étudiants incluant 289 alcooliques étaient surveillés. Les effets de 18 variables

psychosociales aux alcooliques utilisant les tests d'identification des désordres (TID) et l'analyse de régression. Ces résultats montraient que étant jeune étudiant ($r=0.47, P<0.0005$), venant d'un foyer polygame ($r=0.09, P<0.01$), de la classe socio-économique élevée ($r=0.78, P<0.0005$) et les parents vivant ensemble ($r=0.46, P<0.0005$), mère travaillant hors de la maison ($r=0.39, P<0.0005$), le nombre des frères et sœurs ($r=-0.35, P<0.0005$), vivant dans un centre urbain ($r=0.38, P<0.005$) appartenant à un club social ($r=0.46, P<0.001$), l'augmentation des activités religieuses ($r=0.51, P<0.005$) l'augmentation d'interaction avec les parents ($r=0.72, P<0.01$) et un faible besoin d'affiliation ($r=-0.49, P<0.0005$) étaient associés aux abus d'alcool parmi les nouveaux étudiants. À l'aide de la régression, 3 sur 11 variables: garçons ($P<0.0005$), polygamie ($P<0.0005$) faible besoin d'affiliation ($P<0.0005$) étaient significatives prédicteur relatif à l'abus d'alcool. Il est nécessaire de considérer les facteurs psychosociaux en désignant les programmes de santé éducationnelle aux étudiants sur la consommation d'alcool.

Keywords: *Alcohol, young people*

Introduction

In Nigeria, alcohol use dates back to over a hundred years ago [1]. It plays an important role in social as well as cultural life of many Nigerian communities. Recently remarkable progress has been made in documenting patterns of drinking and the extent of usage. From the modest work of Asuni [2] who reported that men drink more than women, and suggested that those who drink in excess have increased mental health problems to a very recent study [3], which reported a risky and high alcohol consumption among Area boys, commercial sex workers, market women and students of both secondary and tertiary institutions in Ibadan, studies on alcohol abuse have been consistent and repetitive [4,15].

Research in Nigeria has indicated that excessive alcohol consumption has progressively been on the increase and constitutes a big problem [3]. For example, there is an increased rate of alcohol induced automobile accidents [16], and an increase in psychiatric admission

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of individuals with drinking problems [17]. So there is a need to document trend and pattern of alcohol consumption in Nigeria. There has been a noticeable trend and increasing involvement of the female sex in alcohol abuse [18, 20] and more prevalence studies on women especially young women are needed to help increase understanding about female involvement in harmful alcohol use.

Although some studies on alcohol use and misuse exist, empirical studies in Nigeria are still few in comparison with a more extensive and general literature on drug use (cannabis, cocaine, heroin etc) [21, 22]. Knowledge about the precursors of problematic alcohol usage has been limited and remains unclear, although biological, psychosocial, cultural and familial factors have been found to be determinants of drug use (cannabis) [23, 25]. Most of the few studies available on drinking problems have focused on institutionalized subjects [14], although there are a few exceptions [7, 11-13]. Studies are often conducted in the broader framework of a drug and alcohol use survey rather than having a specific focus on alcohol [26, 34].

There is great concern about the increasing prevalence of alcohol use among young people [3, 34] which has led to increased efforts to address the problem through empirical studies [19]. Apart from updating the literature on the present pattern of alcohol use among young people, there is the need to document the psychosocial correlates of this behavior for the purpose of intervention. The research described here attempted to estimate the prevalence as well as psychosocial associations of hazardous and harmful alcohol use among new students of the University of Ibadan, Ibadan, Nigeria. It was part of an extensive documentation of a routine health examination and profiling of freshmen. This effort is needed, in view of the absence of a school based drug reduction and health education program especially for the freshmen in the University of Ibadan, Nigeria.

Method

Design

This study was a cross-sectional survey, focusing on a correlation design method, to investigate the links between personal and family factors and excessive alcohol harmful use among a sample of freshmen at the University of Ibadan. The University of Ibadan was founded in 1948 as the premier tertiary institution in Nigeria. With a campus covering over 1032 hectares of land and a student population of approximately 19,000, the University of Ibadan is one of the largest universities in the country. There are 12 faculties and 57 departments in the University. With the exception of Law, Pharmacy and Veterinary Medicine, each Faculty runs a variety of undergraduate

and postgraduate courses leading to the award of diplomas and degrees.

Participants

Five hundred and forty (540) freshmen from the University of Ibadan Nigeria were systematically recruited to participate in this study. The reason freshmen were the target group is their vulnerability as a risk group for drug dependence. The period of being a freshman is "transitional" in the sense that it is a move from a hitherto restricted life, monitored by parents, to a more independent self directed life influenced by a complex University system [35].

To be eligible, freshmen that had been offered admission for the first time to read any course in the University of Ibadan in the 2000/2001 academic sessions evidenced by their letters of admission and who fell within the age range of 16 – 25 years were recruited for the study. There were 351 (65%) males and 186 (35%) females. Five hundred and twenty seven (97.5%) of them were single and thirteen (2.5%) of them were married. Their mean age was 21.7 years (SD 1.33) while the mean year of education was 13.3 (SD 2.48).

Instruments/measures

The study included measures of social-demographic characteristics. It utilized a 76-item questionnaire comprising four mutually exclusive scales namely: need for affiliation, need for autonomy, social anxiety scales, and the Alcohol Use Disorder Identification Test (AUDIT).

Socio-demographic—variables

The following variables were recorded: family type, religiosity (i.e. level of religious activities), sex, age, years of education, family type, birth order, parental status (i.e. absence, mother's job outside, number of siblings, residential area, social stability status, parent-child interaction and confidence. Most of these variables have been implicated as determining factors for drug use in the literature on drugs in general [36].

Need for affiliation

This is an eight-item scale adapted from the validated version of the 15-item forced-choice questionnaire of Edward's Personal Preference schedule (EPPS) [36]. It assesses the level of affiliation of an individual to his social environment. It has a split half reliability of 0.80 ($p > 0.0001$), a coefficient alpha of 0.69, a coefficient of equivalence of 0.73 ($p < 0.0001$); and a stability coefficient of 0.47 ($p < .001$). It has a construct validity of 0.51 ($p <$

0.001) with a known criterion – number of close friends, and a convergent validity of 0.67 ($p < 0.001$) with subject actual self-rating on perceived need for affiliation. Response categories range from one, meaning 'strongly disagree' to five, meaning 'strongly agree'. For the purpose of this study, a Cronbach Alpha of 0.64 was recorded among a sample of 100 different freshmen that were on the part-time diploma and certificate programs of the University of Ibadan.

Need for autonomy

This is a 9-item Likert type scale adapted and validated from a 15-item forced-choice questionnaire of the Edward's Personal Preference Schedule (EPPS) [36]. It assesses degree of inhibition in social and interpersonal interaction. It has a split-half reliability of 0.77 ($p < 0.001$), a coefficient alpha of 0.78, a coefficient of equivalent of 0.59 ($p < 0.001$) and a stability coefficient of 0.22 ($p < 0.05$). It has a convergent validity of 0.27 ($p < .01$) with subjects actual self-rating as criterion on perceived need for autonomy. For the purpose of this study, Cronbach Alpha of 0.75 was observed among the sample of 100 different freshmen earlier mentioned.

Social anxiety

This in its original form was a 28-item true-false, self-report questionnaire, and was modified into a 10-item Likert-type questionnaire by [36]. It assesses the degree of fear and avoidance of social situations because of possibility of embarrassment or humiliation. It has a convergent validity of 0.72 ($p < 0.001$) with the original version and a discriminant validity of -0.31 , ($p < 0.001$), score ranges from 10 – 40. For the purpose of this study, Cronbach Alpha of 0.83 was observed among the sample of 100 different freshmen earlier mentioned.

Alcohol Use Disorder Identification Tests (AUDIT)

This is a scale developed by the World Health Organisation through a six-nation cross-cultural study to tap the frequency of drinking, dependence symptoms and signs of harmful consumption [37]. The AUDIT scale consists of 10 items measured on a 4 point Likert format, with a total maximum score of 40, (for example: 'How often do you have a drink containing alcohol?'; 'How often do you have five or more drinks on one occasion?'; 'How often during the last year have you found that you were not able to stop drinking once you had started/had a feeling of guilt or remorse after drinking?') were unable to remember what happened the night before because you had been drinking?'). The classification of normal,

hazardous and harmful alcohol was based on the total score of a respondent on the scale. If a respondent's score was within 0-8 it was classified as being within the 'normal' range of alcohol use, if their score was within 9-18 it was classified as being within the 'hazardous' range of alcohol use and a score within 19-40 was classified as 'harmful' use.

The audit has been used in Nigeria [38] though with a poor sensitivity record of 32% and a specificity of 93%. An internal consistency of the item was established however with an alpha of 0.70 with a sample of 100 respondent's freshmen. For the purpose of this study 289 (54%) of the sample who reported alcohol use and whose scores ranges between 1 and 40 constituted the case-ness used for analysis in this study. The other 251, which constitute 46% of the entire sample, do not use alcohol at all.

Procedure

Freshmen admitted for the first time into the University are allocated into one of six halls of residence. Through the cooperation of the student affairs officer and with an informed consent and assurance of confidentiality, all the students who reported within two weeks after resumption of school at the clearance point for allocation into halls were given the questionnaires to complete. No student refused filling completion of the questionnaire.

A total of 575 questionnaires were filled in and collected on the spot by a research assistant, who was at the time of the study was a master's student of psychology. Five hundred and forty (540) questionnaires were found to be suitable for data analysis. Thirty four (34) questionnaires were rejected due to incomplete and missing data. Breakdown of the 540 students showed that they represented students from seven faculties: Arts (62 students, 11.5%); Social Science (106 students, 19.6%); Law (34 students, 6.3%); Science (104 students, 19.3%); Technology (72 students, 13.3%); Agriculture (70 students, 13%) and Education (92 students, 17%).

From the 540 properly completed questionnaires, 289 (54%) were using alcohol at the time of the study and had their data analyzed and presented in the results for this study.

Data analysis

Various statistical analyses such as frequency, mean, standard deviation, Pearson correlation and regression analysis were employed for the data of this study. The Statistical Statistical Package for the social Sciences (SPSS) was used.

Results

Demographic characteristics of freshmen that use alcohol (N = 289)

As presented in table 1, the freshmen represented a predominantly male population with relatively young age group (mean age 20.6 {SD = 1.4}. Mean years of education was 12.4 {SD = 2.7}. A substantial number (71%) were from a monogamous home structure. Approximately half of the freshmen occupied the later position of birth order of their parents; with a majority of them 62% indicated living with

Table 1: Socio-demographic and familial characteristics of freshmen that use alcohol (N = 289)

<i>Gender</i>	
Male	192 (66.4%)
Female	97 (33.6%)
Mean Age (Yrs)	20.6 (S.D. = 1.4)
Mean Years of Education (Yrs)	12.4 (S.D. = 2.7)
<i>Family Type</i>	
Monogamy	204 (71%)
Polygamy	85 (29%)
<i>Birth Order</i>	
First birth	57 (19.7%)
Second birth	88 (30.4%)
Later birth	144 (49.8%)
<i>Religion</i>	
Christian	154 (53.3%)
Muslims	87 (30.1%)
No religion affiliation	48 (16.6%)
<i>Social Affiliation</i>	
Belong to social club	82 (28.3%)
No social club	207 (71.7%)
<i>Living Status</i>	
Lived with both parents	178 (62%)
Lived with fathers only	24 (8.3%)
Lived with mothers only	51 (18%)
Lived with neither parents	36 (12.5%)
<i>Employment status of Mothers</i>	
Worked full time outside home	197 (68%)
Worked part-time outside home	60 (21%)
Did not work at-all	32 (11%)
<i>Close confidants</i>	
In fathers	51 (18%)
In mother	167 (58%)
In brothers	28 (9.7%)
In sister	16 (5.5%)
In friends	27 (9.3%)

both of their parents. Majority of the freshmen indicated that their parents were of above average (38%) or average (51%) in socio-economic status. Most of the mothers (68%) of these freshman worked full time outside their homes, while, a great majority (71.7%) did not belong to any social club. Many (53.3%) belonged to the Christian faith; while majority, (58%) had a close confident in their mother.

Pattern of hazardous and harmful alcohol use

As we have indicated, 289 respondents, representing 54% of the entire freshmen surveyed used alcohol at the time of study with a mean score of 9.56 (SD = 4.20). Of these, 192 (66.4%) were males while 97 (33.6%) were females. Further analysis showed that a substantial number (60%) of the freshmen that used alcohol did so normally (i.e. had a score on the AUDIT within 0-8). Seventy-eight (27%) males and ten (3.5%) of females used alcohol hazarously (i.e. had a score on the AUDIT within 9-18). Twenty-six (9%) males and 3 (1.5%) of the female's freshmen used alcohol harmfully (i.e. had a score on the AUDIT within 19-40).

Correlates/predictors of harmful or hazardous alcohol use among the study population (N = 117)

Eleven variables were found to be associated with hazardous or harmful alcohol use among the freshmen. They were: being a male freshman ($r = 0.78, p < 0.0005$); coming from a polygamous home background ($r = 0.59, p < 0.01$); high levels of parents socio-economic status ($r = -0.47, p < 0.0005$); living with both parents ($r = -0.24, p < 0.0005$); mother working full time outside home ($r = 0.39, p < 0.005$); increasing number of siblings ($r = 0.35, p < 0.0005$); living in urban cities ($r = 0.38, p < 0.005$); belonging to a social club ($r = -0.46, p < 0.01$); increasing religious activities ($r = -0.51, p < 0.005$); increasing parent child interaction ($r = 0.72, p < 0.01$); and a low need for affiliation ($r = -0.49, p < 0.0005$). When these eleven variables were entered into a step wise multiple regression analysis to determine their relative predictive power to alcohol use among the freshmen, three variables; being a male ($r < 0.005$); polygamy ($p < 0.005$) and a low need for affiliation ($r < 0.005$) remained significant.

Discussion

This study examined the prevalence and associated factors to hazardous and harmful alcohol use among freshmen of the University of Ibadan Nigeria. Results showed that three significant variables: male, polygamy and a low level need for affiliation contributed most to hazardous and/or harmful alcohol use.

Much of the literatures on alcohol usage have consistently reported that men drink more than women [10, 12, 14, 32, 37, 38]. This present study further supports these findings. It was found that being a male contributed 34% to the total explanatory power of harmful and hazardous alcohol use among the freshmen. What consistently explains this pattern remains unclear. However, the constitutional factors in men, as well as the cultural privileges of males in most African setting could suggest a reason for this pattern. Also men in Africa have been known to be more socially inclined and therefore may increase their likelihood to engage in a high degree of alcohol consumption [1].

Another significant finding is the power of family type in predicting hazardous and harmful alcohol usage. Coming from a polygamous home background was found in this study to have contributed (7%) of the total variance of alcohol use among the sample studied. This support some studies, which have implicated family factors [23, 25] especially large family size and family disruption as a very important predictors of drug use [36].

Though a polygamous family structure is common in Africa, evidence abounds in literature about its relationship to crises in the home, and children reared in this type of family are conflict prone [36]. Crises can take the form of broken homes, lack of family cohesiveness, poor parent-child relationships, the development of mistrust, and a life of isolation for children from these homes. A possible escape from this stressed induced environment could result in the misuse of drugs, including alcohol.

A monogamous family is usually smaller and has closer ties, with the two parents giving greater attention and affection to their children. A polygamous family is usually larger and with decentralized authority, the authority of the father being shared with two or more wives: often the result is greater permissiveness, which may encourage problem drinking. [25] Oyefeso [36] observed that drug users are more likely to come from polygamous families than monogamous families. [24] Blum [24] indicated that the perceived father-son relationships, including the degree of paternal affection, i.e., care love and attention, is related to the adolescent male's use of alcohol. Boys who received insufficient paternal affection are more likely to use alcohol than boys whose fathers are affectionate. Blum [24] further noted the importance of parental values and socialization in involvement in alcohol use.

This study found high degrees of parent-child interaction between freshmen and their parents, though it did not assess parents' drinking behaviour, perhaps a

relationship may exist between this and harmful/hazardous drinking behavior of the freshmen that reported a relatively high prevalence of alcohol consumption. Future studies may consider examining the relationship between parental alcohol consumption, parent-child interaction and the child alcohol consumption pattern.

One surprising result in this study is the inverse relationship between need for affiliation and patterns of alcohol use. Low need for affiliation contributed 3% of the total variance of alcohol use among the freshmen; with greater alcohol consumption found among freshmen with low need for affiliation. This contradicts previous work in this area, which shows an association between factors such as the need to belong and the need to have a sense of identity and alcohol consumption. One explanation to this however could be the "naivety" of the population studied and the possibility that they had not had time to form relationships in their first year at the university. It may also be an indication that alcohol consumption by these freshmen is contextual. The finding supports this that there was an inverse relationship between belonging to a social club and alcohol consumption. It would be interesting to survey these students again in their final year of studies when more relationships may have been formed.

Summary and policy implications

In this study it was found that several associations exist between certain psychosocial factors and hazardous and harmful alcohol use and that a male gender, coming from a polygamous family, and a low need for affiliation anticipated alcohol use among freshmen in a Nigerian University. These associations are interesting, and confirm the importance of social factors as important variables in the explanation of substance usage among young persons. It is therefore important that social factors are taken into account in any health education programme for this group.

The findings of this study suggest that alcohol education and general drug reduction programme should be integrated into the General Educational System (GES) programme which is currently a compulsory subject to be passed by all category of undergraduate student in the University of Ibadan before graduation. This alcohol education should focus on the physical, social and psychological consequences of alcohol use. This program when fully developed might be supported by a manual driven and be part of the orientation program often given to students within the first week of the admission. The student affairs division as well as executives of various registered social clubs and societies in the campus

could participate in this program. The current Drug Free Club (DFC) in the University could serve as a pivot on which such educational programs can be run. Such program could have as its operational base a Psychological Clinic for Drug Reduction (PCDR), which could be situated within the facilities available at the Department of Psychology.

The findings from this study should be interpreted with caution. This study is limited by its small sample size, due to limited number of students who filled the questionnaire, which makes generalization difficult. Larger studies are needed with more rigorous sampling procedure to make an appreciable impact in the alcohol pathology literature. A cross-section survey involving freshmen from other universities would be helpful. It would also be useful to carry out a study in which factors could be related to the presence/absence of alcohol use among respondents. The instruments used for assessing alcohol use pattern among the subject in this study were a self-reported ten item-screening test: it is therefore not a diagnostic tool. Due to its self-reported nature, most information supplied could have been distorted by social and conformity factors, especially as the questionnaires were distributed and completed in groups.

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