

Pattern and Predictors of Alcohol Use Disorders in a Family Practice in Nigeria

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ABSTRACT

Background: Primary care has been identified as a key setting for the reduction of alcohol-related harm, while general practitioners are expected to play a significant role. The study aimed at identifying pattern of, and factors that are associated with alcohol use disorders (AUDs) among patients attending Family Medicine unit of State University Teaching Hospital. **Materials and Methods:** Sample was selected through a random sampling from a population of patients, aged 18-65 years, attending the general medical out-patients unit of the hospital from January to April 2013. A pretested, semi-structured questionnaire was administered, incorporating sociodemographics and the diagnoses made by the attending Physician. The participants also completed the alcohol use disorders identification test (AUDIT) questionnaire and the patient health questionnaire-9. **Results:** The prevalence of AUDs among the population of general out-patients was 9.7%. The AUDIT scores of the participants range from 0 to 29 with a mean of 1.3 (standard deviation = 4.08). AUDs were significantly associated with gender, level of education, occupational class, and the presence of significant depressive symptoms ($P < 0.05$). There was no statistically significant association found for age, employment status, marital status, and religion. **Conclusion:** The prevalence of AUDs among population studied was lower compared with a similar study in similar setting, but however, significant. AUDs were predicted by gender, lower education level, occupational group, and the presence of significant depressive symptoms mostly in the mild to moderate form. Identifying the group at risk in clinical setting may go a long way in reducing the adverse effect of AUDs in our society.

Key words: Alcohol use disorders, alcohol use disorders identification test questionnaire, family practice, predictors

INTRODUCTION

Alcohol-related harm is a global problem. Globally, alcohol consumption has increased in recent decades, more significantly in developing countries. Prevalence estimates range from 4% to 29% for hazardous drinking and from <1% to 10% for harmful drinking

globally.^[1] Similar rates of hazardous or harmful alcohol use in health care settings have been reported from different African countries.^[2-7] Recent estimates suggest that about 2.5 million deaths each year are directly attributable to alcohol, with the highest percentage of alcohol-related deaths occurring among people between 15 and 29 years old; with nearly 1 out of 10 deaths in this age group worldwide attributable to alcohol.^[8] This makes alcohol the world's third largest risk factor for disease. Alcohol use contributes to traumatic outcomes; killing or disabling many at a relatively young age, and resulting in the loss of many years of life to death or disability.^[9] Researchers have established a strong association between alcohol use and road traffic accidents in Nigeria.^[10-12] In fact, Welcome and Pereverzev^[12] reported that

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approximately 50% of accidents on Nigerian roads are related to alcohol use.

There has been an increasing emphasis on the role of primary health care and family physician in the prevention and management of alcohol-related harm.^[13,14] The health professionals at these primary care settings are readily accessible to the general population and have a significant role in the delivery of advice about alcohol consumption. In addition, there is good evidence that brief interventions delivered by general practitioners have a positive impact on patients' alcohol consumption.

This study is aimed at determining the pattern and the predictors of alcohol use disorders (AUDs) among patients attending the family practice unit of our teaching hospital which provides essentially primary care services.

MATERIALS AND METHODS

Study population

The study population consists of patients attending Family practice units of the Ekiti State University Teaching Hospital, Ado-Ekiti, in South-western Nigeria. It is a State University Teaching Hospital providing primary, secondary and tertiary care. The family Physician clinic provides essentially primary care services and makes referrals to other specialist clinics.

Sampling technique

Sample was selected through a random sampling from a population of patients, aged 18-65 years, attending the general medical unit of the hospital from January to April, 2013. Patients with debilitating physical illnesses and those that came for routine medical check-up were not included in the study.

Procedures

The Ethics and Research Committee of the University Teaching Hospital approved the study protocol and informed consents were obtained from the participants after the aims and objectives of the study had been explained to them. Previously trained research assistants who are of Psychology students and clinical Psychologists explained the size of a standard drink to those agreeing to participate. A standard drink was defined as equivalent volumes containing an average of 13.5 g ethanol.

Data were collected using a pretested, semi-structured questionnaire incorporating sociodemographics, and the diagnoses made by the attending physicians. The participants also completed the alcohol use disorders identification test (AUDIT) questionnaire and the patient health questionnaire (PHQ-9). The AUDIT is

a self-administered questionnaire including three items on the amount and frequency of drinking, three on alcohol dependence, and four on common problems caused by alcohol. Each item is scored 0-4, giving a total score of 40. Several studies have shown its validity and reliability in the detection of hazardous drinking, alcohol misuse, and alcohol dependence.^[15] While this study, a score of 8 and above for men; and score 7 and above for female indicated AUDs. Subjects' occupation was classified according to the system of Boroffka and Olatawura^[16] which is well-operationalized and is comparable to other systems like the International Labor Organization classificatory system.^[17] It has also been widely used in previous studies in this environment.^[18,19] The categories are as follows: Group I consists of professionals with university degrees, e.g., doctors, lawyers, scientists, etc.; group II consists of professionals without university degrees and include teachers, administrators, large scale farmers, and armed forces officers; group III consists of clerks, motor vehicle drivers, mechanics, etc.; group IV consists of cooks, small-scale farmers, barbers, etc.; group V includes laborers and petty traders; group VI includes full-time housewives, students, and unemployed educated youths.

The PHQ-9 consists of nine items, each of which is scored 0-3, providing a 0-27 severity score. PHQ-9 severity is calculated by assigning scores of 0, 1, 2, and 3, to the response categories of - not at all, — several days, — more than half the days, and nearly every day, respectively. PHQ-9 total score for the nine items ranges from 0 to 27.^[20] It consists of the nine criteria for depression from the Diagnostic and Statistical Manual of Mental Disorders, fourth edition.

Data analysis

The Statistical Package for the Social Sciences version 16 (SPSS.16) program was used for statistical analysis. Results were calculated as frequencies (%), means, and standard deviations (SD). *T*-test for continuous data and Chi-square for categorical data were used to examine differences between groups. The level of significance was set at $P < 0.05$.

RESULTS

General measures

A total of 245 participants completed both the PHQ-9 and the AUDIT questionnaires. The age of the participants ranges from 18 to 65 years with a mean of 42.07 (SD = 13.93) 23 (9.4%) had AUDIT score indicating AUDs. The AUDIT scores of the participants ranges from 0 to 29 with a mean of 1.3 (SD = 4.08). The group includes 150 (61.2%) females. The mean AUDIT score for male is 2.68 SD = 5.875

and for female is 0.48 (SD = 1.889, $P = 0.000$). The PHQ score ranges from 0 to 23 with a mean of 5.99 (SD = 5.17). Most (69.8%) were married to only 13 (5.3%) constituting either separated or divorced or widowed. Other sociodemographic characteristics are as shown in Table 1.

Sociodemographic characteristics and alcohol use disorders [Table 2]

Of the 23 who had AUDIT score indicating AUDs, 18 (18.9%) of males and the remaining 5 (4.0%) of women had AUDs. The association between gender and AUDs was statistically significant ($\chi^2 = 10.136$, $P = 0.003$). Higher proportion (11.2%) of those aged 45 and above had AUDs compared to 7.8% of those aged below 45 years, however, this was not statistically significant ($\chi^2 = 0.857$, $P = 0.239$). A greater proportion of those with primary education (22.0%); compared to secondary (5.9%) or tertiary education (6.3%) had AUDs. The association between level of education and AUDs was statistically significant ($\chi^2 = 8.198$, $P = 0.042$). No statistically significant association was found between marital status ($P = 0.170$), average income per month ($P = 0.463$), religion ($P = 0.714$), and employment status ($P = 0.629$).

As shown in Table 3, analysis of occupational group in relation to AUDs shows that higher proportion of participants in occupational group IV had AUDs.

Table 1: Sociodemographic characteristics of the respondents

Subjects characteristics	Frequency (%)
Gender	
Male	95 (38.8)
Female	150 (61.2)
Age	
<29	67 (27.3)
30-39	42 (17.1)
40-49	45 (18.4)
50-59	57 (23.3)
60 and above	34 (13.9)
Employment status	
Employed	174 (71.0)
Unemployed	71 (29.0)
Education level	
None	27 (11.0)
Primary	41 (16.8)
Secondary	51 (20.8)
Tertiary	126 (51.4)
Marital status	
Single	61 (24.9)
Married	171 (69.8)
Divorced/separated/widowed	13 (5.3)
Religion	
Christianity	220 (89.8)
Islam	25 (10.2)

Categorizing occupational groups into upper, lower, and others shown that majority of those in the lower occupational group compared to other groups had AUD, and this was statistically significant ($P = 0.008$).

Depression and alcohol use disorders

Table 4 shows that 18 (16.5%) of those who had significant depressive symptoms compared with 5 (3.7%) of those without significant depressive symptoms had AUDs. Significant depressive symptoms was significantly associated with AUDs ($\chi^2 = 11.722$, $df = 1$, $P = 0.001$). Most of the participants with AUDs presented with mild to moderate depression.

DISCUSSIONS

Most alcohol-related harm is attributable to hazardous/harmful drinking.^[21,22] This study looked at the pattern and the predictors of harmful alcohol drinking among patients visiting the Family physician at the general outpatient clinic. Twenty-three (9.3%) of the population studied have AUDs. This prevalence is relatively similar to what was reported by Gureje *et al.*,^[5] however, it is lower compared with that reported by Abiodun *et al.*^[18] both in Nigeria and likewise lower when compared with other studies in Africa; by Kullgren *et al.*^[23] in Uganda and Peltzer^[3] in South Africa. The difference observed in the prevalence rates may not be too surprising as difference sociocultural practices and cultural view of AUDs are influenced by prevalent norm in the society. It has been suggested, even though some similarities exist with respect to the definition of problematic alcohol use in ethnically diverse societies, very substantial differences also exist.^[24] The variations in the study methods used, including how alcohol use and various disorders are defined and the sensitivity of the instruments used, is another major factor. The variability in the response of the respondents to alcohol use may also be a factor.

Like in most studies,^[3,6,18,23,25,26] our study found a significant association between AUDs with some sociodemographic variables. There was male dominance among patients with AUDs. Similar findings had been reported in this environment. Indeed, in a study by Abiodun *et al.*^[18] all the participants with AUDs were males. The cultural practices and perception which is permissive to men drinking alcohol and the occupational engagement of men are possible reasons for this observation. Besides, men also take alcohol to enhance sexual performance, for social acceptance and to overcome societal stresses.^[27] A higher prevalence of AUDs is seen among those age 45 years and above compared to those below 45 years. Though our study did not find a significant association between age group and AUDs, the study by Abiodun *et al.* reported

Table 2: Sociodemographic characteristics and AUDs

Patients characteristics	Non-AUDs	AUDs	Statistics
Gender			
Male	79 (83.2)	16 (16.8)	$\chi^2=10.136$, $P=0.003$
Female	143 (96.0)	7 (4.0)	
Age			
<45	119 (92.2)	10 (7.8)	$\chi^2=0.857$, $P=0.239$
>45	103 (88.8)	13 (11.2)	
Employment status			
Employed	159 (91.4)	15 (8.6)	$\chi^2=0.415$, $P=0.629$
Unemployed	63 (90.3)	8 (6.7)	
Education level			
None	24 (88.9)	3 (11.1)	$\chi^2=8.193$, $P=0.042$
Primary	32 (78.0)	9 (22.0)	
Secondary	48 (94.1)	3 (5.9)	
Tertiary	118 (93.7)	8 (6.3)	
Marital status			
Single	53 (86.9)	8 (13.1)	$\chi^2=3.538$, $P=0.248$
Married	156 (91.2)	15 (8.8)	
Divorced/separated/widowed	13 (100)	0 (0)	
Religion			
Christianity	199 (90.5)	21 (9.5)	$\chi^2=0.209$, $P=0.714$
Islam	22 (88.0)	9 (22.0)	
Occupational groups			
Upper occupational group	65 (97.0)	2 (3.0)	$\chi^2=9.648$, $P=0.008$
Lower occupational group	141 (87.0)	21 (13.0)	
Others	16 (100)	0 (0)	

AUDs – Alcohol use disorders

Table 3: Occupational group and AUDs

Occupational groups	Non-AUDs	AUDs
Group 1	6 (85.7)	1 (14.3)
Group 2	58 (98.3)	1 (1.7)
Group 3	36 (87.8)	5 (12.2)
Group 4	6 (66.7)	3 (33.3)
Group 5	52 (86.7)	8 (13.3)
Group 6	48 (90.6)	5 (9.4)
Clergy	5 (100.0)	0 (0)
Retirees	11 (100.0)	0 (0)

AUDs – Alcohol use disorders

Table 4: Relationship between depression and AUDs

Depression	Non-AUDs (%)	AUDs (%)	Statistics
Diagnosis of depression			
Depressed	91 (83.5)	18 (16.5)	$\chi^2=11.722$, $P=0.001$
Not depressed	131 (96.3)	5 (3.7)	
Severity of depression			
Minimal symptoms	126 (97.7)	3 (2.3)	$\chi^2=17.005$, $P=0.002$
Mild	44 (80.0)	11 (20.0)	
Moderate	36 (83.7)	7 (16.3)	
Moderately severe/severe	16 (87.5)	2 (12.5)	

AUDs – Alcohol use disorders

a significant association between older age group and AUDs. Nonetheless, there is a considerable variation in the pattern and prevalence of AUDs in different age groups. Some authors have reported higher prevalence among younger age group^[26,28] while some have reported higher prevalence among older age group.^[18,29,30] The possible explanation for the pattern observed in this study may due to the fact that the study is based in the hospital; and many young people with alcohol problems may not patronize the hospital but rather engage self-medication.^[31] Studies have shown that young people tend to find it difficult to ask for help especially when it comes to health issues.^[29-35] Thus, whenever young people face health concerns, they often seek health care informally; in other words, they do not refer to health professionals or to formal health services first.

There is a significant association between educational level and AUDs. Even though, majority of patients in our study had tertiary education, however, a larger proportion of those with primary education compared with other groups had AUDs. This observation may also explain the higher prevalence of AUDs among those in lower occupational group. Similarly, other authors^[18,26] have reported an association between low educational level and AUDs. The fact that those with lower education engaged more in manual works such as driving, bricklaying, laborers and other occupation that expose them to the risk, and encourage use of drugs as an “enhancer” may possibly explain this observation. Besides, this group is more likely to take more of local gin that contains a higher concentration of alcohol.

In this study, AUDs is significantly associated with the presence of significant depressive symptoms. About a quarter of those with significant depressive symptoms compared to barely 4% of those without significant symptoms had AUDs, and most of these are likely to present with mild to moderate form of depression. Previous studies^[36,37] have found that anxiety and depression were associated with AUDs and identifying alcohol use in these groups of people may be particularly important. People with AUDs often have co-occurring psychiatric disorders, most importantly depression; furthermore, they experienced an adverse health outcome, and repeated hospital admissions.^[38] The association between AUDs and depression also increases the possibility of suicide because alcohol abuse can exaggerate depression and increases impulsiveness and impairs judgment.

CONCLUSIONS

Alcohol use disorders are relative lower in this population compared with other studies, but however significant. AUDs are associated with gender, low

educational, low occupational group, and the presence of significant depressive symptoms mostly in the mild or moderate severity. Identifying the group at risk in clinical setting may go a long way in reducing the adverse effect of AUDs in our society.

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