



### Hazardous Alcohol Use among Doctors in a Nigerian Tertiary Hospital

*Usage Abusif d'Alcool Chez Des Medecins dans un Hopital Tertiaire du Nigeria*

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#### ABSTRACT

**BACKGROUND:** There has been conflicting reports of the level of hazardous alcohol use among doctors despite the significant occurrences in the general population. Hence, the need to study the drinking habits of doctors, being supposedly role models in terms of behavior and lifestyle.

**METHODS:** All the consenting doctors in the employ of University of Ilorin Teaching Hospital, Nigeria completed questionnaires detailing the socio-demographic (e.g., age, gender, marital status, professional qualifications), work-related (e.g., leisure, workload, job satisfaction), and clinical (e.g., prior treatment) variables. The participants also completed the 10-items Alcohol Use Disorders Identification Test (AUDIT) and the General Health Questionnaire-12 (GHQ-12).

**RESULTS:** Of the 241 participants, 'lifetime abstainers' constituted 173 (71.8%) while 'lifetime (ever) alcohol use' was 68 (28.2%), 'past (time specified abstainers) alcohol use' was 29 (12.0%), and 'current users' were 39 (16.2%). Ten (4.1%) participants were 'hazardous users' while 29 (12.0%) were 'moderate users'. Of the 'hazardous users', 3 (30.0%) were interns, 5 (50.0%) were residents while 2 (20.0%) were consultants. They were found in five departments: Obstetrics & Gynaecology, 4 (40.0%); Laboratory Medicine, 3 (30.0%); and 1 (10.0%) each in Pediatrics, Surgery, and Internal Medicine. Heavy workload was significantly related to being a 'hazardous drinker' ( $\chi^2 = 5.92, p = 0.015$ ) while 'abstinence' within the previous 6 months was related to GHQ-12 caseness (i.e., morbidity) ( $\chi^2 = 11.78, p = 0.0006$ ).

**CONCLUSION:** There was a detectable level of hazardous drinking especially amongst the junior doctors. Efforts should be focused on younger doctors and their workload. *WAJM* 2012; 31(2): 97–101.

**Keywords:** Hazardous, Alcohol, Doctors, AUDIT.

#### RÉSUMÉ

**CONTEXTE:** Il y'a eu des rapports contradictoires sur l'ampleur de l'usage abusif d'alcool chez les médecins malgré sa survenue significativement fréquente dans la population générale. D'où la nécessité d'étudier les habitudes alcooliques des médecins compte tenu de leur supposé devoir de servir de bon exemple sur le plan du comportement et du mode de vie.

**MÉTHODES:** Tous les médecins consentant et travaillant à l'Hôpital Universitaire d'Ilorin, Nigeria ont rempli un questionnaire détaillant les variables sur les données socio démographiques (âge, genre, statut matrimonial, qualifications professionnelles), les informations sur le travail (loisir, charge de travail, satisfaction professionnelle) et les données cliniques (traitement antérieur). Les participants avaient subi le test à 10 items sur l'identification des désordres liés à l'abus de l'alcool et rempli le questionnaire-12 (GHQ-12) sur la santé globalement.

**RÉSULTATS:** Parmi les 241 participants, 173 (71.8%) étaient des 'abstentionnistes absolus' tandis que 68 (28.2%) avaient 'constamment utilisé l'alcool', 29 (12.0%) avaient antérieurement utilisé l'alcool (abstentionniste à un temps spécifique) et 39 (16.2%) utilisaient couramment l'alcool. Dix participants (4,1%) utilisaient abusivement l'alcool tandis que 29 (12.0%) l'utilisaient modérément. Parmi ceux qui utilisaient abusivement l'alcool, 3 (30,0%) étaient des stagiaires internes, 5 (50,0%) étaient des résidents tandis que 2 (20.0%) étaient des praticiens hospitaliers. Ils se trouvaient dans 5 départements : Gynécologie Obstétrique : 4 (40.0%); Laboratoire Médicale : 3 (30.0%) et 1 (10.0%) en Pédiatrie, Chirurgie et Médecine Interne. Une charge élevée de travail était significativement associée avec l'abus d'alcool ( $\chi^2 = 5.92, p = 0.015$ ) tandis que l'abstinence durant les 6 mois précédant était associée à 1 statut de cas selon le GHQ-12 (morbidité) ( $\chi^2 = 11.78, p = 0.0006$ ).

**CONCLUSION:** Il y'avait un niveau considérable d'abus de l'alcool particulièrement chez les jeunes médecins. Des efforts devraient être orientés vers les jeunes médecins et leur charge de travail. *WAJM* 2012; 31(2): 97–101.

**Mots clés:** Abusif, Alcool, Médecins, AUDIT.

## INTRODUCTION

Alcohol, tobacco, and illegal drug use are responsible for considerable mortality and morbidity and hazardous drinking with the attendant risk of alcohol-related physical and psychosocial problems that exist in the general population.<sup>1</sup> Hazardous drinking is a pattern of alcohol consumption that increases the risk of harmful consequences for the user or others. Hazardous drinking are of public health significance despite the absence of any current disorder in the individual user.<sup>1</sup> The European Alcohol report of 2004 put the rates of hazardous alcohol consumption at 3-23% for men (over 60 g/day) and 1-11% for women (over 40 g/day).<sup>2</sup> Studies on alcohol use in Nigeria showed that there has been an increase in alcohol availability and use among Nigerian youths.<sup>3,4</sup> For instance, Anderson (2007) and Adelekan et al (1992) found alcohol as being the most commonly used substance, with 56% "ever users" and 14% "recent (past year) users". Several studies of alcohol use and abuse by doctors have reported varied outcomes. While some concluded that physicians are prone to alcoholism<sup>5,6,7</sup> others disputed this.<sup>8,9</sup> Birch *et al* (1998)<sup>10</sup> found that about two-thirds of recently qualified doctors in United Kingdom exceeded recommended safe drinking limits, whilst 10% were drinking at hazardous levels.

Various reasons have been attributed to a doctor being at risk of alcohol misuse, and includes: the long duration of training characterized by intense competition, excessive workload, fear of failure, and continued stressful situations even after graduation and during daily practice.<sup>11</sup> Other reasons may be similar to non-doctors' reasons for dinking such as peer influence, genetic predisposition and societal issues that permit use of alcohol in social events. However, the relationship between perceived stress at work and substance misuse appears to be mediated by individual's vulnerability.<sup>12</sup>

It is important to study drinking habits of doctors because they might be as prone to its health hazards as the general public and also because they are supposedly the role models in terms of

behavior and lifestyle. This study tried to survey doctors in the employ of a Nigerian University Teaching Hospital for their alcohol use, and how doctors' drinking varies by specialty, and sociodemographic factors. Identifying the doctors at increased risk might facilitate processes of remediation and intervention.

## SUBJECTS, MATERIALS, AND METHODS

The data for this study were collected as part of a larger study to determine the doctors' management skill of the mentally ill, psychological impact of work on the doctors as well as their alcohol use. The study was carried out at the University of Ilorin Teaching Hospital (U.I.T.H.), a tertiary health centre that provides health services for Kwara State (one of the 36 States in Nigeria) and the neighbouring states. Enveloped questionnaires together with information sheet and consent form were distributed to all doctors in the service of the hospital irrespective of their cadre in all the departments except the department of Behavioural sciences, the department of the researchers. The questionnaires comprised of a socio-demographic questionnaire that sought information on: age, gender, marital status, professional qualification; clinical parameters such as history and nature of prior treatment for any form of emotional disturbance by the participants or their relatives; work related conditions such as leisure activities, relationship with colleagues and patients, perception of workload, remuneration and job satisfaction. The participants also completed a twelve items General Health Questionnaire (GHQ-12) and a thirteen items questionnaire comprising of 10 items Alcohol Use Disorders Identification Test (AUDIT) and 3 questions that asked whether the participants have ever used alcohol, types of alcoholic beverages and the time the participants stopped taking alcohol, if they ever drank and had stopped.

The AUDIT is a self-rated 10-item questionnaire that has been shown to be a valid and reliable instrument in the detection of hazardous drinking.<sup>13</sup> It was developed by Sanders *et al*<sup>14</sup> as part of the WHO collaborative project on the

detection and management of alcohol-related problems in Primary Health Care, to identify hazardous and harmful alcohol use. The AUDIT at cut-off of 5 and above could clearly identify participants with alcohol-related problems in Nigeria.<sup>13</sup> In this study a score of 0-4 on AUDIT was rated moderate alcohol use while score of 5 and above was rated hazardous use. The twelve items General Health Questionnaire (GHQ-12) was used to assess their emotional dysfunction. A score of 3 or more on the GHQ-12 was regarded as positive, indicating the possibility of psychiatric morbidity.<sup>15</sup>

The Ethics and Research Committee of the hospital approved the study protocol and participant who returned their questionnaires with signed consent forms were further processed.

Simple frequencies and percentages were calculated using Statistical Package for Social Science (SPSS) version 11. The sociodemographic variables were dependent variables while alcohol related variables such as the AUDIT scores and GHQ-12 scores were independent variables. Chi square tests with Yates correction were used to describe relationships and student t-test to compare means where applicable at 5% level of significance and 95% confidence interval.

## RESULTS

Of the 350 respondents who were served with questionnaires, 241 returned completely filled questionnaires, thus giving a response rate of 68.9%. Fifteen (6.2%) of them had sought treatment for emotional disturbances in the past, majority (153 or 63.5%) preferred relaxation with family members as leisure, few (11 or 4.6%) preferring religious activities, and 11 (1.7%) did not indicate their preferences. Most (195 or 80.9%) of them perceived their workload as heavy compared to 186 (77.2%) who perceived their job as satisfying.

The 'lifetime (ever) alcohol use' was 68 (28.2%) while 'past (time specified abstainers) alcohol use' was 29 (12.0%) and included: <6months, 8 (27.6%); and >6months, 21(72.4%). Only 39 (16.2%) were 'current users' in this cohort.

With a cut-off point of 5 for 'hazardous use' and <5 for 'moderate

use', 10 (4.1%) respondents were 'hazardous users' while 29 (12.0%) were 'moderate users'. Regarding the types of beverages consumed, majority (19 or 32.8%) consumed beer, wine and spirit. Fifteen (51.7%) of the 'moderate drinkers' preferred relaxation with their families as leisure compared with 6 (30%) of the 'hazardous drinkers' who preferred same. This comparison was however not statistically significant.

**Table 1: Socio-demographic Characteristics of Participants**

Variables	Frequency (%)
<b>Gender</b>	
Male	182 (75.5)
Female	59 (24.5)
<b>Marital Status</b>	
Single	39 (16.2)
Married	202 (83.8)
<b>*Professional Qualification</b>	
MB;BS	93 (38.6)
Primary	41 (17.0)
Part I	51 (21.2)
Part II	56 (23.2)
<b>Practice Groups</b>	
Surgeons	116 (48.1)
Physicians	115 (47.7)
Others (General Practitioners/Med. Officers)	10 (4.2)

\*Primary, Part I and Part II refer to the stages (beginner, intermediate and final) of examinations passed at the Postgraduate Medical Colleges in Nigeria

Most (28 or 95.6%) of the 'moderate drinkers' and majority (6 or 60.0%) of 'hazardous drinkers' perceived their workload as heavy ( $\chi^2=5.92, p=0.015$ ). Regarding job satisfaction, while most (21 or 72.4%) of 'moderate alcohol users' were satisfied with their jobs, majority (6 or 60%) of the 'hazardous drinkers' found their work not satisfying (Table 2). The difference was however, not statistically significant. Overall, 34 (34.1%) of the total respondents compared with 6 (15.4%) of 39 respondents who took alcohol, scored  $\geq 3$  on GHQ-12 thus suggesting possible emotional problems (Table 3).

**Table 2. Work Related Factors in Relation to the Level of Drinking**

	Hazardous drinkers (n=20)	Moderate drinkers (n=20)	
<b>Assessment of Work Load</b>			
Heavy	6	28	Yates corrected $\chi^2=5.92, p=0.015$
Not heavy	4	1	
<b>Work Satisfaction</b>			
Satisfying	4	21	Yates corrected $\chi^2=2.13, p=0.144$
Not satisfying	6	8	
<b>Leisure</b>			
Relaxing	6	15	$\chi^2=1.998, p=0.573$
Travelling	4	9	
Playing	0	4	
Religion activities	0	1	

**Table 3: Comparison of GHQ-12 Scores of the Participants and Drinkers**

GHQ-12 Score	All Participants n (%)	Drinkers n (%)	
<3	207 (85.9)	33 (84.6)	$\chi^2=0.04, p=0.832$
3 or more	34 (14.1)	6 (15.4)	
<b>Total</b>	<b>241 (100)</b>	<b>39 (100)</b>	

Only about 15% (6/39) of respondents who took alcohol were GHQ-12 positive while 6 (20.7%) 'moderate drinkers' were GHQ positive. The level of drinking and GHQ-12 score were not statistically related; all the ten 'hazardous drinkers' were GHQ-12 negative whereas all the 5 'abstainers' who scored  $\geq 3$  on GHQ had only abstained in the previous 6 months (Table 5).

**Table 4: Level of Drinking and Socio-Demographic Variables**

Variables	Hazardous	Moderate	Audit Report
<b>Age</b>			
<34	1	3	$\chi^2 = 0.078, p = 0.962$
35-44	7	19	
45-54	2	7	
<b>Gender</b>			
Male	10	28	$\chi^2 = 0.552, p = 0.744$
Female	0	1	
<b>Marital Status</b>			
Single	1	3	Yates corrected $\chi^2 = 0.33, p = 0.566$
Married	9	26	
<b>Qualification</b>			
MBBS	4	11	Yates corrected $\chi^2 = 1.044, p = 0.791$
Primary	3	6	
Part I	1	7	
Part II	2	5	
<b>Ever Sought Treatment for Emotional Treatment</b>			
Yes	0	7	Yates corrected $\chi^2 = 1.536, p = 0.216$
No	10	22	
<b>Practice Groups</b>			
Surgeons	5	16	Yates corrected $\chi^2 = 0.28, p = 0.869$
Physicians	5	10	
Others (Gen Med Practitioners/Med Officers)	0	3	

**Table 5: Abstinence, Drinking Levels and GHQ-12**

	GHQ Negative	GHQ Positive	
<b>Abstainers</b>			
<6 months	3	5	Yates corrected
≥6 months	21	0	$\chi^2=11.78, p=0.0006$
“moderate” drinkers	23	6	Yates corrected
hazardous drinkers	10	0	$\chi^2=1.11, p=0.2912$

Among ‘hazardous users’, 3 (30%) were house officers (interns), 5 (50%) were residents while 2 (20%) were consultants. They were found in five departments of the hospital with majority (4 or 40%) being in Obstetrics & Gynaecology, 3 (30%) in Laboratory Medicine, and 1 (10%) each in Internal Medicine, Pediatrics, and Surgery.

## DISCUSSION

### Factors affecting Hazardous Alcohol use by Doctors

While acknowledging the dearth of study of alcohol use by doctors in Nigeria, the level of ‘hazardous drinking’ found in this study is appreciable with as much as half of the ‘hazardous users’ found among young doctors, though lower than the 19.8% found in Germany.<sup>16</sup> Unlike their German counterparts, age, gender and specialties were not significantly related to ‘hazardous drinking’ unlike heavy workload. It does appear perhaps that our cohort used alcohol as a coping strategy for heavy or excessive workload. Thus, confirming the observations by Gossop *et al*<sup>11</sup> that excessive workload and fear of failure are some of the reasons why doctors abuse alcohol and other drugs. A study from Nepal reported the use of alcohol among physicians of a medical school in eastern Nepal to be 63%, a value which was said to be lower than the general population of Nepal.<sup>17</sup> Among the Nepalese, being a male physician was associated with higher chance of being a user of alcohol.<sup>17</sup> This study did not, however, state the level of use of alcohol among the physicians. The reported 12.7% level of risk drinking by physicians in Aarhus, Denmark was higher than the 2.5% found in Mainz, Germany<sup>18</sup> which was also higher than the present finding. Thus it might be assumed that even though a few of Nigerian doctors were ‘risk drinkers’,

attention could still be focussed on this group on account of its possible social and health implications. The finding of appreciable alcohol use among young doctors could have evolved from their period in the medical school and residency period where they, perhaps, have perceived their work/training as stressful or overloaded and had developed fear of failure.<sup>11,12,19</sup>

### Alcohol Use by Doctors Compared to the General Population

The level of alcohol use among doctors in this study was lower than that of the general population of Nigeria with proportion for ‘ever use of alcohol’ of 28.2% compared to 56.0% found in the general population.<sup>9</sup> The doctors knowledge of the potential negative effects of alcohol on the body systems could have been responsible for the lower figure. This lower figure among doctors compared to the general population is comparable to previous studies.<sup>17</sup>

### Alcohol Use and Gender

In this study female drinking was low, with 1.7% of the female population being ‘moderate drinker’ compared to all ‘hazardous drinkers’ being males. The cultural and religious factors that do not support female drinking in this locality might be responsible for this finding. This finding tends to support a cross-cultural study of 10 European countries<sup>20</sup> that men always exceeded women in drinking frequency and quantity and in rates of heavy drinking episodes and adverse drinking consequences. Consistently, women were more likely than men to be ‘lifetime abstainers’. Though that study suggested that gender differences in drinking might be biologically influenced, the substantial variations between countries in the magnitude of the differences could be suggestive of strong

influence of socio-cultural factors. Similar finding was obtained in another study that found that drinking per se and high-volume drinking were consistently more prevalent among men than among women, but lifetime abstention from alcohol was consistently more prevalent among women.<sup>21</sup> In addition to the cultural factors, biological differences between men and women leading to women’s greater vulnerability to alcohol have been adduced as a possible explanation.<sup>22</sup>

### Hazardous Drinking and Psychiatric Morbidity

Earlier studies have found an association between ‘problem drinking’ and GHQ scores, indicating relationship with emotional dysfunction.<sup>23</sup> This study, however, found no significant association between alcohol drinking and GHQ-12 scores. Modest sample size of the study population and the relatively small number of respondents involved with ‘hazardous alcohol use’ in the study population may have accounted for this finding.

The research team intends to carry out a multicentre research design involving much larger sample sizes in order to clarify these issues in the future. There is need to carry out this type of studies on a periodic basis to determine the trend over time. Findings from such studies may be useful in instituting adequate preventive measures overtime and also for a more appropriate cross-cultural comparison of the research findings between developed and developing countries.

### Conclusion

There is an evident level of ‘hazardous drinking’ among hospital doctors, especially amongst the junior ones. Therefore, efforts to reduce hazardous drinking among hospital doctors should include focusing on the medical school and young doctors’ population as well as reduction of their workload. Periodic education on safe drug use should be incorporated into hospital interdepartmental seminars, which must be regular and participatory. It is difficult to generalize the findings of this study to the general population of doctors in Nigeria on account of the small

sample size and the fact that the sample was drawn from one hospital. We humbly recognise these as limitations of this study. The strength of our findings lies in the fact that the reports by the doctors were as it affected each doctor and thus eliminated the bias of reporting.

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