

## BINGE DRINKING AND SEXUAL ASSAULT AMONG WOMEN IN JOS METROPOLIS, NIGERIA

Suwa G. Goar (MBBS, FMCPsych.), Gladys K. Ayuba (B.Sc. Social Work), Charles N. Nwoga (MBBS, FMCPsych.), Christopher G. Piwuna (MBBS, FWACP), Friday P. Tungchama (MBBS, FWACP), Maigari Y. Taru (MBBS, FWACP), Moses D. Audu (MBBS, FWACP).

Department of Psychiatry, Jos University Teaching Hospital, Plateau State  
Clinical Division, Quintessential Healthcare Center, Ray-Field, Jos

### *Corresponding Author*

Dr Suwa G. Goar, Department of Psychiatry, Jos University Teaching Hospital, Plateau State.

Email: [goarsuwa@yahoo.com](mailto:goarsuwa@yahoo.com), +2348130291664

### **ABSTRACT**

**Background** Alcohol related sexual assault is a growing epidemic world wide that affects mainly women. There is urgent need to empower women to identify behaviors and situations that may predispose them to sexual victimization.

**Objectives** The study was carried out to determine the relationship between binge drinking and socio-demographic factors. It also assessed the relationship between binge drinking and sexual assault.

**Methods** The cross-sectional descriptive study was carried out in Jos North Local Government Area from March to July, 2017. Multistage sampling technique was employed to select 272 participants aged 18 years and above who consented after obtaining ethical approval.

**RESULTS** The total numbers of participants were 272 females with an age range of 18–60 years. The mean age was  $28.8 \pm 8.6$  years. The socio-demographic variables significantly associated with binge drinking were marital status ( $\chi^2 = 9.847$ , DF = 2,  $p = 0.007$ ), educational status ( $\chi^2 = 10.684$ , DF = 3,  $p = 0.014$ ) and employment status ( $\chi^2 = 5.122$ , DF = 1,  $p = 0.024$ ). Binge drinking was significantly associated with sexual assault ( $\chi^2 = 10.732$ , DF = 1,  $p = 0.001$ ). Previously married were significantly more likely to binge drink compared with never married and married. Those with no formal education were more likely to binge drink compared to those with tertiary education while the unemployed were less likely to binge drink compared with the employed. The sexually assaulted ( $P = 0.01$ , OR = 2.429, CI = 1.419–4.157) were 2 times more likely to binge drink.

**Conclusion** There was a significant relationship between binge drinking with marital status, employment, lower level of education and sexual assault. Women should be provided with information about the safe level of alcohol consumption and the many consequences of heavy drinking including sexual assault.

**Keywords:** Binge drinking, women, sexual assault, socio-demographic, Jos

## Introduction

Harmful alcohol consumption and sexual violence are public health problems of growing concern globally and women are mainly affected<sup>1</sup>. These factors often co-occur and are associated with complex set of psychosocial elements. Research has shown that 7.2% of women aged 15 years and above have suffered sexual assault<sup>3</sup>.

Sexual assault is a severely traumatic experience that disproportionately affects women and girls<sup>4</sup>. Sexual assault include forced or coerced vaginal or anal penetration by any other parts or object; breast or genitalia fondling; or being forced or coerced to touch another persons genitalia<sup>5</sup>. It involves lack of consent; the use of physical force, coercion, deception or threat, and or involvement of a victim that is mentally incapacitated or physically impaired due to voluntary or involuntary alcohol or drug consumption, asleep or unconscious<sup>6</sup>. It has been found that only 2 of 40 cases of rapes are reported in Nigeria. These studies were largely conducted in the hospital with prevalence rates ranging from 0.06% to 5.2%<sup>7,8</sup>. Community based studies showed rather high prevalence of sexual assault from 14% to 69.9% among out of school adolescents and juvenile hawkers<sup>9,10</sup>. This high prevalence of sexual assault in community based studies may be attributed to the tedious legal procedures needed to prove the cases and the fear of rejection and stigmatization by the society<sup>11</sup>. Nevertheless, research on proximal factors that predispose victims is necessarily important in designing preventive measures. Although there are myriad of these factors alcohol has been implicated world wide as the most commonly use substance to perpetrate or be a victim of sexual assault<sup>2,3</sup>.

Alcohol consumption among women has increased significantly because of societal change in gender roles<sup>12</sup>. In addition, women are also been targeted with large numbers of female friendly sweetened

alcoholic beverages which may even have higher percentage of alcohol with beer<sup>13, 26</sup>. Research has shown that only few females are aware of the percentage of alcohol by volume in these females friendly designed alcoholic beverages<sup>26</sup>. Therefore binge drinking is becoming a common phenomenon. The National Institute of Alcohol Abuse and Alcoholism defines binge drinking for a typical adult as an alcohol drinking pattern that brings the blood alcohol concentration to 0.08g percent equivalent to 5 drinks for males and 4 drinks for females in two hours<sup>17</sup>. The amount of alcohol consumed as well as the drinking pattern has serious implication on alcohol related harm. For instance, it has been reported that women with heavy episodic drinking are at greater risks of being forced to have sexual contact or sexual relations<sup>14</sup>. Furthermore, it has been found that 38–55% of the sexually assaulted women reported being under the influenced of alcohol during assault<sup>15, 16</sup>. Binge alcohol drinking is a risk factor for sexual assault because of its effects on physical and cognitive process by reducing self control, judgment and the inability to recognize signs of danger<sup>1</sup>. Because of this some men encourage women to drink large quantities of alcohol believing that when women are intoxicated, they are more unlikely to resist sexual advances<sup>2, 18</sup>. Sexual assaults involving alcohol consumption are more likely than other sexual assaults to occur between men and women who do not know each other well<sup>22</sup>.

On the other hand, women who are sexually assaulted are 2.3 times more likely to abuse alcohol and 2.6 times more likely to develop depression or anxiety. Therefore, it has been suggested that harmful consumption of alcohol by victims may be a coping strategy adopted to address the stress caused by violent situation<sup>1, 19</sup>. Some researchers have argued that the co-occurrence of alcohol and sexual

assault is not a proved that alcohol causes sexual assault<sup>20</sup>. For example, a woman who drinks alone to intoxication in the comfort of her home is not at a greater risk than a sober woman<sup>20</sup>. Rather, the victims personality characteristics, attitudes and experiences as well as situational factors are predictors of victimization<sup>21</sup>. As plausible as these findings are they do not substitute the role of women consumption of alcohol as a risk factor for sexual victimization. Perpetrators often perceived women who drink alcohol as being more sexually available and promiscuous compared to women who do not drink<sup>22</sup>.

Despite, the growing public health implication of alcohol-related sexual assault there is paucity of literature on this in North Central, Nigeria which findings can inform prevention and treatment plan. Therefore the study was undertaken to determine the relationship between binge drinking and socio-demographic factors, and also to assess the association between binge drinking and sexual assault.

## METHODS

The study was a community based cross-sectional descriptive study that was conducted from March to July in Jos North Local Government Area of Plateau State, located in north central Nigeria. The sample size of 272 for the study was determined by Kish formula for cross sectional studies. Formula,  $n = Z^2pq/d^2$

Where: Z = standard score variance 1.96 which correspond to 95% confidence level. P = prevalence rate of 23%, q = proportion of failure = 1-p, d = degree of accuracy desired estimated at 0.05 (5%). Therefore,  $n = 1.96^2 \times 0.23 \times 0.77 / 0.05^2 = 272$ .

Multistage sampling technique was employed to select the respondents after obtaining ethical approval. In the first stage Jos North LGA was

purposely selected. Simple random sampling was used to select two wards from the twelve wards and one community from each ward that was selected. One consented eligible adult was interviewed at the time of data collection from each household. If there were more than one adult in a household balloting was used for selection.

The socio-demographic variables of interest were appropriately collected. Alcohol consumption was determined by "Do you ever drink alcohol nowadays, including drinks you brew or make at home" Those who answered yes to this question were administered the Alcohol Use Disorder Identification Test (AUDIT). The number three question "How often do you have four or more drinks in one occasion?" in the AUDIT was used to assess for binge drinking; Never = 0, Less than monthly = 1, Monthly = 2, weekly = 3, Daily or almost daily = 4. These responses were divided into No for those who scored zero and yes for those who scored 1 to 4. The AUDIT is a cross-culturally validated instrument for assessment of alcohol use in the general population. Sexual assault was assessed by positive answer to the question "Have you ever been forced to have sexual contact or sexual relations?"

The data generated was coded and entered using Statistical Package for Social Science (SPSS 20). Frequencies and proportions were computed. Chi square was used to test for association between categorical variables and logistics for variables that were significant. The statistical significant level was set at p = 0.05 at 95% confidence interval.

## RESULTS

The total numbers of participants were 272 females with an age range of 18-60 years. The mean age was  $28.8 \pm 8.6$  years. Majority 112(41.2%) were in the age group 25-34 years. Most of them were never

married 168(61.8%), protestants 151(55.55) and had secondary education 97(35.7%). About half 148(54.4%) were employed with 167(61.4%) of them on an average monthly income of 20,000 naira or less. Ninety six (35.3%) were sexually assaulted with 80(29.4%) had binge drank as indicated in Table: 1.

The socio-demographic variables significantly associated with binge drinking were marital status ( $\chi^2 = 9.847$ , DF = 2, p = 0.007), educational status ( $\chi^2 = 10.684$ , DF = 3, p = 0.014) and employment status ( $\chi^2 = 5.122$ , DF = 1, p = 0.024). Binge drinking was significantly associated with sexual assault ( $\chi^2 = 10.732$ , DF = 1, p = 0.001) as tabulated in Table: 3.

Logistic regression revealed that previously married were significantly more likely to binge drink compared with never married (P = 0.04, OR = 0.427, CI = 0.760-0.960) and married (P = 0.03, OR = 0.368, CI = 0.147-0.960). Those with no formal education (P = 0.164, OR = 2.002, CI = 0.753-5.300) were 2 times more likely to binge drink compared to those with tertiary education but it was not significant while the unemployed (P = 0.117, OR = 0.616) were less likely to binge drink compared with the employed. The sexually assaulted were 2 times more likely to binge drink Table: 2.

**Table: 1 Socio-demographic factors, Binge drinking and Sexual Assault**

<b>Socio-demographic variables</b>	<b>Number</b>	<b>percentage</b>
<b><i>Age group</i></b>		
18-24	96	35.3
25-34	112	41.2
35-44	44	16.2
45-60	20	7.4
<b><i>Marital Status</i></b>		
Never-Married	168	61.8
Married	74	27.2
Previously Married	30	11.0
<b><i>Employment Status</i></b>		
Unemployed	124	45.6
Employed	148	54.4
<b><i>Educational Status</i></b>		
No formal education	23	8.5
Primary	61	22.4
Secondary	97	35.7
Tertiary	91	33.5

<b>Religion</b>		
Protestant	151	55.5
Catholic	80	29.4
Islam	23	8.5
Others	18	6.6
<b>Monthly Income</b>		
= 20,000	167	61.4
=21,000	105	38.6
<b>Binge drinking</b>		
NO	192	70.6
Yes	80	29.4
<b>Sexual assault</b>		
Yes	96	35.3
NO	176	64.7
Total	272	100

**Table: 2 Relationship between Binge drinking and Socio-demographic factors, Sexual assault**

Socio-demographics	Binge drinking		Chi-square ( $\chi^2$ )	DF	P-value
	No	Yes			
<b>Age Group</b>					(= 0.05)
18-24	74(38.5)	22(27.5)	4.807	3	0.186
25-34	72(37.5)	40(50.0)			
35-44	33(17.2)	11(13.8)			
45-60	13(6.8)	7(8.8)			
Total	192(100)	80(100)			
<b>Marital Status</b>			9.847	2	?0.007
Never-Married	126(65.6)	42(52.5)			
Married	52(27.1)	22(27.5)			
Previously Married	14(7.3)	16(20.0)			
<b>Employment Status</b>			5.122	1	?0.024
Unemployed	96(50.0)	28(35.0)			
Employed	96(50.0)	52(65.0)			

<b><i>Educational Status</i></b>			10.684	3	?.014
No formal education	11(5.7)	12(15.0)			
Primary	39(20.3)	22(27.5)			
Secondary	77(40.1)	20(25.0)			
Tertiary	65(33.9)	26(32.5)			
<b><i>Religion</i></b>			2.112	3	0.549
Protestant	112(58.3)	39(48.8)			
Catholic	53(27.6)	27(33.8)			
Islam	15(7.8)	8(10.0)			
Others	12(6.8)	6(7.5)			
<b><i>Average monthly income</i></b>			0.093	1	0.076
= 20,000	119(62.0)	48(60.0)			
= 21,000	73(38.0)	32(40.0)			
<b><i>Sexual assault</i></b>			10.732	1	?.001
Yes	56(29.2)	40(50.0)			
No	136(70.8)	40(50.0)			
Total	192(100)	80(100)			

? Significant *P*-Values

**Table: 3 Logistic regression Binge drinking and Socio-demographic factors, Sexual assault**

<i>socio-</i>	Binge drinking		D	P =	B	OR	95% C.I.
<i>demographics</i>			F	0.05			
Educational Status	No	Yes	3				
No formal education	11(5.7)	12(15.)		0.164		2.002	0.753–5.322
Primary	39(20.3)	22(27.)		0.560		1.237	0.606–2.525
Secondary	77(40.1)	20(25.)		0.213		0.644	0.322–1.288
Tertiary	65(33.9)	26(32.)				1.0	
<i>Employment Status</i>							
unemployed	96(50.0)	28(35.)				1.0	
employed	96(50.0)	52(65.)	1	0.117	-0.484	0.616	0.336–1.129
<i>Marital status</i>							
Never-Married	126(65.)	42(52.)		0.040	-0.887	0.412	0.176–0.960
Married		22(27.)		0.033	-0.999	0.368	0.147–0.921
Previously Married	52(27.1)	14 (7.3)	2			1.0	
<i>Sexual Assault</i>							
Yes		40(40.)	1	0.001	0.887	2.429	1.419–4.157
No	56(29.2)	136(70.)				1.0	

## Discussion

The prevalence of binge drinking in this study is 29.4%. This concurred with studies that found Nigerian women who consume alcohol were often frequent or heavy episodic drinkers<sup>23, 24</sup>. It has been suggested that the threshold for hazardous drinking is too low. However, this threshold has been set based on robust research findings of the biological and behavioral effects of alcohol<sup>25</sup>. This pattern of alcohol consumption clearly put these women at an increased risk of both the short and long term consequences of harmful use of alcohol.

Binge drinking among women has been found to decrease as they grow older. Similarly, this study found that younger age group engaged more in heavy episodic drinking than the older age group. It is assumed that women reduced their consumption of alcohol as they get married and have to fulfill the role of wife and motherhood<sup>26,27</sup>. Other demographic factors found in women with heavy episodic drinking have been unmarried, less educated and lower socioeconomic status<sup>28, 29</sup>. Whereas, in this study the association between episodic heavy drinking and being previously married, employed and less educated was found. These findings may be a result of and or a way of coping with the harsh economic and social conditions.

Some literature have documented that religion confers protection against alcohol consumption among females<sup>30,31</sup>. However, this study did not find significant relationship between religion and binge drinking. The differential in finding could be as a result of assessing religion as a single item, such as having religion or not rather than using religiosity which is a multi-dimensional concept<sup>31</sup>.

The prevalence of 35.3% of sexual assault found in this study is higher than 14.0% found in Lagos<sup>10</sup> and lower compared with 69.9% found among females hawkers in Anambra state in Nigeria<sup>9</sup>. These

differences may be attributed to the operational definition, study sample and methods used. It was found in this study that those who binge drink were two times more likely to be victims of sexual assault. This concurred with previous studies that found females with heavy episodic drinking were more likely to be victims of sexual assault<sup>14,33</sup>. However, a positive relationship between alcohol consumption and sexual assault in it self is inadequate to establish that women's drinking contributes to victimization, rather than alcohol consumption increasing vulnerability to sexual assault, alcohol could have been used to self medicate following a traumatic experienced of sexual assault<sup>34</sup>. In addition to amount of alcohol consumed, the drinker characteristics, the influence of drinker expectations<sup>35</sup>, and the drinking context and situation<sup>36</sup> have been found to be important in drinking sexual assault relationship and should be considered for subsequent study.

## Conclusion

There was a high prevalence of binge drinking especially among the unmarried, lower educated, employed and less educated, and they were more likely to be victims of sexual assault. Therefore, women should be provided with information on safe drinking and to identify behaviors and situations that may put them at risk without feeling responsible.

**Limitation:** The study may not be a true reflection of the prevalence of binge drinking and sexual assault in the community because of the associated stigma. The sample size was small therefore the study may not be generalizable in the region. Further study involving more local government areas with a larger sample size is needed.

**Conflict of interest:** Nil



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