

## **HARMFUL USE OF ALCOHOL AMONG NIGERIAN UNDERGRADUATES: THE INFLUENCE OF ALCOHOL-RISK PERCEPTION, RELIGIOSITY AND GENDER**

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### **ABSTRACT**

This study investigated the role of alcohol risk perception, religiosity and gender in harmful use of alcohol using a sample of Nigeria undergraduates. The study participants comprised of 501 undergraduate students (340 males and 161 females) between the age of 18 and 27 years, with the mean age of 23.14 years. Participants completed a measure of the augmented CAGE questionnaire, alcohol-risk perception scale, and the religiosity scale. Linear regression showed that males are more likely to abuse alcohol than females ( $\beta = -.17$ ;  $t = -3.47$ ;  $P < .01$ ). Also, alcohol-risk perception significantly predicted alcohol abuse ( $\beta = .14$ ;  $t = 2.74$ ;  $P < .01$ ). However, religiosity did not significantly predict alcohol abuse. Results, implications of findings, and suggestions for further research were discussed.

**Keywords:** Harmful use of alcohol, Alcohol-Risk perception, Religiosity, Gender, Nigeria

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### **INTRODUCTION**

Substance use and abuse is a serious problem in Nigeria as in most other parts of the world. The early study of Obot and Olaniyi (1991) clearly depicted that a very high proportion (91%) of the patients admitted in four Nigerian hospitals for drug related problems between 1984 and 1988 were aged below 39 years. Alcohol is one of the substances with a very high level of social acceptance and consumption

among Nigerian youths and adults (Akin-dutire & Adebayega, 2012; Yahasai, 2010; Yusuf, 2010). One reason for such high level of consumption is that in Nigeria, unlike illicit drugs, the purchase, possession, and consumption of alcohol are legal for adults and for most, a part of their everyday social fabric. Regardless of the level of acceptance of alcohol use in the society, excessive use and abuse of alcohol causes serious problems affecting the psychological and physical health of

millions. According to the World Health Organization (2011), 320,000 young people between the ages of 15-29 die from alcohol-related causes each year. Overall, harmful alcohol use results in 2.5 million deaths each year that arises from unintentional and intentional injuries (WHO, 2011). As a definition, harmful alcohol use, also known as alcohol abuse, refers to a pattern of alcohol use that causes physical or mental damage to health. Not only does alcohol abuse impair the physical and psychological health of the drinker, it also harms the well-being and health of the people exposed to the drinker by putting them at risk of accidents or violent behaviours.

Several studies have demonstrated a high prevalence of alcohol use and abuse among Nigeria students (Awoyinfa, 2012; Odejide, 1989; Pela, 1989) and such high rate of continuous and excessive use of alcohol is significantly associated with some adverse outcomes. For example, Ukwai, Ambekeh, Uwanede, & Undelikwo (2013) found that among Nigerian students, excessive use of alcohol is significantly associated poor academic performance, truancy and school drop-out. Also, in respect to developmental trajectory, research has found that prenatal exposure to alcohol use is associated with Attention Deficit Hyperactivity Disorder (ADHD) (Mick, Biederman, Faraone, Sayer, & Kleinman, 2002).

Previous studies have been conducted to determine the factors that predict alcohol abuse. The role of Alcohol risk perception on alcohol use was investigated by Lundborg and Lindgren (2002) Using Swedish participants, three major conclusions were drawn. Firstly that people overestimate the risk of alcohol, secondly, these alcohol risk perceptions fall

substantially with age thirdly, individuals with higher perceived risks were less likely to consume alcohol. Furthermore, Patterson, Hunnicutt, and Stutts (1992) conducted a study on perceptions of warnings and risks associated with alcohol consumption, using American young adults aged between 16 to 24 years. They concluded that consuming larger quantities perceived alcohol consumption to be significantly less risky than respondents who reported consuming smaller quantities of alcohol. Similar pattern was found in a Colombian study by Lopez-Quintero and Neumark (2010). Subsequently, a growing number of studies focus on the relationship between religiosity/spirituality and substance use including drinking. These studies consistently found a negative relationship between religiosity and alcohol use and abuse (Benda & Corwyn, 1997; Feyza, Zaje & Lee, 2008; Kovacs, Piko & Fitzpatrick, 2011; Picko, Kovacs, Kriston & Fitzpatrick, 2012; VonDras, Schmitt & Marx, 2007).

Although, there have been several studies on the influence of alcohol risk-perception and religiosity on alcohol abuse, little or no literature have considered the predicting role of alcohol risk perception, religiosity and gender on alcohol abuse in a Nigerian sample. Hence, this study stands to fill that gap in the literature.

## METHOD

### Participants

A total of five hundred and one (501) undergraduates, drawn from the University of Nigeria, Nsukka, were used in the study. The participants included students from the Faculties of Engineering, Biological Sciences, Social Sciences and Arts.

They were 340 males and 161 females, between the ages of 18 and 27 years, with a mean age of 23.14 years. A convenient sampling technique was used to select participants.

### Instruments

The three instruments used to collect data were Augmented CAGE Questionnaire, Alcohol Risk Perception Scale and Religiosity Scale.

#### *Augmented CAGE Questionnaire.*

The augmented CAGE questionnaire is a 10- item scale developed by Ewing (1968) and validated by Shayesta Dhalla and Jacek Kopec (2007) as a global measure of alcohol abuse. The augmented CAGE questionnaire consists of 4 items from the CAGE questionnaire, which is a brief and popular screening instrument used in clinical practice and 6 items from the Alcohol Use Disorder Identification Test (AUDIT). Each item has a unique response format, corresponding to how the item is constructed. The first four items that are from the CAGE Questionnaire are anchored on a 'YES' or 'NO' response categories. In item five, participants were required to indicate how often they have had a drink containing alcohol in the past year, on a response format of *never* (0), *monthly or less* (1), *2-4 times per month* (2), *2-3 times per week* (3), *greater or equal to 4 times per week* (4). Item six required the participants to indicate the number of drinks containing alcohol they would take on a typical day when they wanted to drink on a response format ranging from *1 or 2* (1) to *10 or more* (5). The seventh to tenth items eliciting the peoples' extent of alcohol abuse are stated in a format that requires a 'YES' or 'NO' response. Composite scores are formed

by summing all item scores. Higher scores indicate higher levels of alcohol abuse. In this study, the Cronbach's alpha obtained for this scale was 0.79.

#### *Alcohol-Risk Perception Scale.*

The Alcohol-Risk Perception Scale is a modified version of Cannabis-Risk Perception Scale developed by Apostolidis, Fieulaine, Simonin and Rolland (2006). The scale is a 20-item scale modified to elicit peoples' subjective evaluation of how risky they perceive alcohol use. Respondents indicated the extent of their agreement with each item on a 7 point response format, ranging from *strongly disagree* (1) to *strongly agree* (7). The scale has been shown to perform creditably well across cultures. For the current study, Cronbach's alpha of 0.77 was obtained.

#### *Religiosity Scale.*

The third instrument used for the study was the religiosity scale developed by Agbo (2011), a 5- item questionnaire that measures religiosity. The items are (1) *my religion is my life*; (2) *I strongly believe everything I am taught in my religion*; (3) *I find it difficult to separate my religion from my life activities*; (4) *I always evaluate myself on the bases of my religious belief*; (5) *My religion is my identity*. Responses were scored on a 7 point scale ranging from *strongly disagree* (1) to *strongly agree* (7). The Cronbach's alpha obtained was 0.85.

### Procedure

All participants used were given a description of the study that was adequate enough to enable them properly respond to the items on the questionnaire. Then a total number of 520 questionnaires were distributed based on convenient sampling

to undergraduate students of the University of Nigeria, Nsukka, in their various classes within their respective faculties. Each participant completed the questionnaire and it was collected immediately with the assistance of the class representative. The distribution and collection of the questionnaires were made within one week and the entire questionnaires distributed were collected. Nineteen (19) questionnaires were discarded due to incomplete response and inappropriate filling. Therefore a total of 501 questionnaires were used for the analysis.

### Design/statistics

The study employed a cross-sectional survey design and regression technique was used to analyze the data. Analyses were done with the Statistical Packages for the Social Sciences (SPSS Version 22).

## RESULTS

Before the analysis, data was screened for anomalies such as outliers, but none was found. The descriptive statistics, correlation and regression for the variables were computed. Correlations were

conducted to determine the level of relationship among the study variables and to identify the significant variables to be included in the regression analysis. The results of the bivariate correlation indicated that alcohol risk perception is significantly positively related to alcohol abuse ( $r=.65, p<.001$ ). Since alcohol risk perception scale was scored in such a way that high scores indicated low levels of perceived risk for alcohol use and low scores indicated high level of perceived risk for alcohol use, the present result therefore means that people who perceive alcohol as having less or no risk were more likely to use higher levels of alcohol than those who perceive alcohol as having high risk. The direction of the correlation indicated that high level of alcohol risk perception is related to low level of alcohol use and abuse among undergraduate students.

The results of the correlation also demonstrated that religiosity is negatively related to alcohol abuse ( $r=-.59, p<.01$ ). High scores on the religiosity scale were significantly related to low level of alcohol abuse. Also, religiosity was negatively related to alcohol risk perception. Since high scores on the alcohol risk perception scale indicated low risk associated with

**Table 1.** Correlation among variables of study

Variables	1	2	3
1. ARP	—		
2. Religiosity	-.73**	—	
3. Alcohol Abuse	.65***	-.59**	—
Mean	65.93	23.84	5.11
SD	15.97	7.44	4.13
Range	165.00	51.00	49.00
Skewness	-.05	-.10	.03
Kurtosis	-.08	-.22	-.06

ARP Alcohol Risk Perception; SD Standard Deviation; \*\*correlation is significant at  $p<.01$ ;

\*\*\* correlation is significant at  $p<.001$  (2-Tailed)

alcohol use, the negative relationship between religiosity and alcohol abuse portrays that high scores on religiosity scale were significantly related to low scores on alcohol risk perception scale.

To address the objective of this study, a linear regression analysis was conducted to determine if alcohol risk perception, religiosity and gender significantly predicted alcohol abuse. The results of the regression analysis revealed that two independent variables were significantly associated with alcohol abuse among Nigerian undergraduate students. Specifically, gender and alcohol-risk perception were found to be significant predictors of alcohol abuse.

In this study, males were coded 1, and females coded 2. Hence, the negative sign associated with B and Beta values means that males were more likely to use alcohol than females ( $\beta = -1.56$ ,  $t = -3.47$ ,  $p < .01$ ). Similarly, the regression analysis result showed that alcohol risk perception is a significant predictor of alcohol abuse ( $\beta = .14$ ,  $t = 2.74$ ,  $p < .01$ ). The Beta statistics is .14 and this means that for every one-point increase in the alcohol-risk perception scale, there was an increase on the alcohol abuse scale by .14. In brief, the result indicated that a higher score on the alcohol risk perception scale (which signifies low level of perceived risk in alcohol use) is related to high score on the alcohol abuse scale.

However, as shown in Table 2, religiosity did not significantly predict alcohol use

( $\beta = -.04$ ,  $t = .396$ ,  $p > .05$ ). This implies that the religious involvement and religious commitment of an individual does not influence their level of alcohol use.

## DISCUSSION

The results of this study showed that alcohol risk perception is a significant predictor of alcohol use. This finding is consistent with the findings of Lundborg and Lindgren (2002) and Lopez and Neumark (2010) who found that individuals with higher perceived risks were less likely to consume alcohol and other related substance. Therefore, perceiving regular alcohol use as a risky behaviour functions as a protective factor against the intention to use, use, and abuse alcohol.

This result can be explained by the fact that individuals avoid behaviours that they consider risky. In avoidance learning, an event or condition that signals an aversive state is avoided. For instance, drinking and driving may be associated with automobile accidents and death, then because of such associations, people may engage in behaviours to avoid the anticipated, aversive consequences. Making it a practice to avoid drinking is sensible avoidance behaviour. Therefore in such manner, people avoid drinking or rather engage in low level of alcohol consumption when they associate high levels adverse consequences to alcohol use. In the

**Table 2.** Regression analysis of Gender, alcohol risk perception and alcohol abuse

DV	Variables	B	SE	Beta	T
Alcohol Abuse	Gender	-1.56	.45	-.17	-3.47**
	Religiosity	-.02	.28	-.04	.396
	ARP	.04	.01	.14	2.74**

DV- Dependent Variable; ARP-Alcohol Risk Perception; SE= Standard error; \*\*=  $p < .01$

same vein, individuals that neglect these adverse consequences and accentuate on the reinforcing effects of alcohol use, are motivated to drink because of differential sensitivities to the rewarding outcomes of alcohol consumption such as temporal anxiety-reduction, increased elation, and anxiolytic effects. Therefore the positive reinforcing effects of alcohol generally are accepted as the motivating factors in alcohol-drinking behaviours in the early stages of alcohol use and abuse (Lopez & Neumark, 2010).

The findings of this study also demonstrated that religiosity did not significantly predict alcohol use. This finding is not consistent with the finding of Feyza et al. (2008) and Piko et al. (2012) which showed religious commitment, dispositional religious coping, religious attendance and private praying predicted less frequent alcohol use. The non-predicting role of religiosity on alcohol abuse found in this study could be as a result of some factor that mediates between religiosity and alcohol use. Most of the participants in this study were Christians and in most Nigerian Christian churches, alcohol consumption is not totally prohibited. Most Christian churches do not frown at moderate alcohol intake but, in the Muslim culture, alcohol consumption is prohibited. Furthermore, in the present society, people's sense of morality sometimes does not reflect in their behaviour. Even in religions where alcohol use is strongly frowned at, some individuals still engage in alcohol use and abuse. This is usually common in the case of adolescents and young adults that engage in experimental substance use. Therefore, even if the religious groups prohibit alcohol use, many adolescents would like to taste alcohol to know what it feels like to have heightened

elation and other reinforcing effects of alcohol. And this is what is known as experimental substance use. Subsequently, modern adolescents may learn more from peer groups than religious groups.

Also, since alcohol is a relatively mild substance, the non-predictive role of religiosity in relation to the alcohol use may be attributed to the cultural view of alcohol as a permissible substance, used often in social settings. Though religiosity is thought to be a significant predictor of alcohol use, the finding from this study does not support such view. Furthermore, the present study found males to consume more alcohol and abuse alcohol than females. The most common hypothesis to explain why men and women differ in their drinking behaviour is that alcohol consumption both symbolizes and enhances men's greater power relative to women (McClelland, Davis, Kalin, & Warner 1972). Alcohol consumption, particularly in large quantities has been an emblem of male superiority, a privilege that men have often reserved for themselves and denied to women (Martin, 2001). Alcohol consumption in all male-groups may affirm the privileged status of being a man rather than a woman (Nghe, Mahalik, & Lowe, 2003) and the ability to consume large amounts of alcohol without apparent impairment may help to demonstrate that the drinker is manly (Roberts, 2004). Also, men drink more alcohol than women do because men are generally more willing or motivated to take risks than women (Weber, Blais & Betz, 2002). Gender differences in risk-taking may result from many possible causes: that men find risk-taking more inherently rewarding (exciting) than women do, that risk-taking is an important way of demonstrating masculinity. Alcohol consumption

especially in large quantities may not only be a form of risk-taking, but may chemically make it easier to take other risks that women would be less likely to take, such as in aggressive behaviour. Furthermore, men's and women's drinking are differently affected by social responsibilities. On the one hand, men may be more likely to drink heavily because drinking either helps them ignore responsibilities (particularly domestic roles) or demonstrates their immunity to role obligations (Magazine, 2004). On the other hand, greater role responsibilities, particularly at home, may cause women (more than men) to limit their drinking (Bloomfield, Gmel, Neve, & Mustonen, 2001) because perhaps drinking might impair their role performance or because women with more role responsibilities are subject to greater social surveillance. These reasons for gender differences in alcohol use may occur together, so it is possible that combinations of these reasons will be sufficient to maintain gender differences in alcohol use in any given culture and historical era. It is important to also note at this point that gender differences in alcohol use and drinking behaviour are likely to be greatest where individuals, groups, or societies give the greatest value and importance to male dominance, risk-taking and avoidance of responsibilities.

### **Implication of the findings**

In this study, 90 percent of undergraduate students admitted to having used or even abused alcohol at various instances in their life. Also, since it was found that alcohol risk perception is a significant predictor of alcohol abuse, regulatory agencies should focus on sensitizing and educating the public on the perilous consequence alcohol abuse, in order to deter

them from excessive use of alcohol. Results from this study, therefore, could arguably be used to further refine alcohol education programme efforts by directing more efforts on the risk associated with alcohol abuse.

So many laws have been promulgated to regulate, control, and prevent the sale or use of some substances such cocaine, heroin and LSD, but no law has been enacted to regulate the use of alcohol in the country. This might be because of the economic benefits accruing from the alcohol-producing companies. Another reason is that alcohol is instrumental in many cultural activities in Nigeria. But the findings of Makanjuola (1992) brought to limelight the need to enact laws regulating the use of alcohol as in other drugs of abuse. Makanjuola found drunkenness to be a significant cause of death among Nigerians through depression, suicide, road traffic accidents, liver disease, hypothermia and heart diseases. Therefore, the government should endeavor to enact a law and put in measures that will deter people from the abuse of alcohol such as issuance of alcohol license to only reputable vendors, regulating the number of alcoholic products an individual can have access to at a time, banning the sale of more alcohol to an already intoxicated person, organizing seminars and mobilizing the press to educate the masses on the health risks associated with alcohol abuse.

Further studies should vividly explore not only alcohol use but also various substances that are being used by the citizens within that particular context, and also state explicitly the negative effects of such usage in order to deter people from engaging in substance use and abuse. Second, subsequent studies that are aimed

at finding the relationship between religiosity and alcohol use should explore different dimensions of religiosity to assess what aspects of it are significantly related alcohol use. Third, any future research in this area should investigate the variables that mediate the relationship between religiosity and alcohol use.

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