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EXAMINING FACTORS INFLUENCING ALCOHOL USE AMONG UNIVERSITY STUDENTS IN LAGOS, NIGERIA.

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Abstract

Alcohol use among university students keeps increasing, suggesting that it is a public health issue. As students in developing nations will become part of the labour force in the future, it is therefore important to study alcohol use among university students in Nigeria. This study aimed to examine the relationship between sleep quality, psychological well-being, and alcohol use, and gender differences in alcohol use among students of the University of Lagos in Nigeria. The study was a descriptive, cross-sectional study using questionnaires organised into 4 sections to define the variables under consideration. Section A was designed to measure bio-data of the respondents; Section B used the Pittsburgh Sleep Quality Index (PSQI) to measure sleep quality; Section C utilised the 18-item Psychological Well-being Scale to measure psychological well-being; and Section D used a scale measuring alcohol use with the Alcohol Use Disorders Identification Test (AUDIT). 329 participants (X: 2.74, SD: 3.708) were selected through a non-probabilistic convenience sampling technique. Pearson's Product-Moment Correlation and the independent-samples t-test were used to test the hypotheses. Results revealed that there was a positive relationship between sleep quality and alcohol use($r = .168$, $p<.01$) and psychological well-being ($r =- .168$, $p<.01$), and there was a negative relationship with alcohol use; there was a gender difference in alcohol use. The study shows that with better sleep quality, the students use more alcohol and with poor psychological well-being, the students use more alcohol. Additionally, male students consumed more alcohol than female students.

Keywords: alcohol use, sleep quality, psychological well-being

Introduction

Alcohol is a beverage used universally, particularly by university students. A 70% prevalence estimate of alcohol use was reported in the study by Zadarko-Domaradka et al. (2018) among university students in the Carpathian Euro region, while a study from the southern part of Nigeria found a prevalence rate of 56.5% (Eze & Uzoegbe, 2015). This suggests that alcohol use among university students is of public health interest, especially in a developing country like Nigeria, as this cohort of students is expected to contribute to the labour force (Ou & Zhao, 2016; Marks, 2018).

The high prevalence rates of alcohol use arise from many factors, such as alcohol consumption serving as a facilitative agent in social gatherings (Gureje & Lasebikan, 2006; Ferreira-Borges et al, 2017) and also some specific risk factors, as highlighted in the review of Ajayi et al (2019). Moreover, the use of alcohol is a contributory factor to physical illness, such as liver problems (Lim et al. 2012), and it ranks fifth as a risk factor for premature death among young people worldwide (World Health Organisation, 2014).

One of the factors of alcohol use that has served many reasons for humans is sleep. Sleep is a behaviour that varies in duration between people, with the main function of restoring imbalanced physiological rhythms. It can be studied in terms of the quantity or quality of sleep a sleeper has. Sleep quality depends on how well you sleep. A higher number of college students in the United States reported poor sleep quality, as evidenced by complaints of short or irregular sleep time (Fucito et al., 2014). A Nigerian study confirmed a 32.5% prevalence of poor sleep quality among medical students on clerkship at a psychiatric hospital (James et al, 2011). Alcohol consumption or usage decreases the amount of time it takes to fall asleep and, by extension, relaxes those who may be experiencing sleep problems (Roehrs & Roth, 2001). Singleton & Wolfson (2009) showed an association between an increase in alcohol intake of over two weeks and less nighttime sleep, including weekend sleep rather than sleep at any other time. This was consistent with the study of Chakravorty et al (2016).

Furthermore, the cross-sectional study of Van Reen et al. (2010), which examined the difference between self-reported sleeping patterns and self-reported alcohol use among first-semester university students, found that there was an association between alcohol consumption and later bedtimes and rising times. This pattern of results is similar to that of Brower (2003). In the study of Roehrs & Roth (2001), it was shown that students who had poor sleep quality used alcohol to fall asleep. Exploring further the negative effects of alcohol use and how it relates to sleep quality, Taylor & Bramowerth (2010) and Kenny et al (2012) suggested that poor sleep quality was a reason why a university student would want to consume more alcohol. Additionally, a study utilising a mixed-method design found that there was an association between sleep problems and drinking more alcohol (Fucito et al. 2014). Despite a lot of studies considering psychosocial correlates of alcohol use among Nigerian university students, only one study reported that alcohol consumption can result in sleep disturbances among secondary school students (Eze et al. 2017).

Psychological well-being is a term that has benefited greatly from the contributions of positive psychology (Vazquez et al, 2009). The term has different meanings for different researchers, leading to the use of different instruments to conceptualise it. For example, Ryan & Deci (2008) described it as a feeling of happiness and the use of one's life potential to the fullest; Diener (2009) believed that psychological well-being resulted from having achieved one's goal. It is concisely viewed as positive mental health. Psychological well-being differs from subjective well-being; it is simply an outcome of a well-lived life (Ryff & Keyes, 1995; Ryff & Singer, 1998).

According to Cranford et al (2009), the association between alcohol use and psychological well-being is nebulous. However, researchers have made significant efforts to explain this association. For example, Zulkefly & Baharudin (2010) and Fuad et al. (2015) found that university students exhibit a worrying level of low psychological well-being. Likewise, the psychological distress of students was reported to be 30% in a Nigerian study that used a 12-item General Health

Questionnaire to operationalise psychological well-being (Ogunsemi et al. 2013). The study of Davoren et al (2013) was a national cross-sectional survey of undergraduate students using the Warwick-Edinburgh mental health well-being scale to measure positive mental health and the Alcohol Use Disorder Identification Test for Consumption (AUDIT-C) as a scale for alcohol use showed that there was no association between alcohol use and positive mental health. Alternatively, longitudinal studies by Molnar et al (2009) and Tembo et al (2017) found that alcohol use was significantly associated with a positive sense of well-being among university students. There is a dearth of evidence looking at the association between psychological well-being and alcohol use among university students in Nigeria.

Alcohol consumption among university students is not limited only to the male gender. Oye-Adeniran et al (2014) conducted a study that selected female students using a multi-stage stratified random sampling method. The study reported that alcoholic beverages were the most common substance used among the participants. However, the study of Obierufu (2017) and Ajayi et al. (2019) confirmed that males consume more alcohol than females.

The objectives of this study were:

1. To investigate the relationship among sleep quality, psychological well-being and alcohol use, and
2. To investigate sex differences in alcohol use among undergraduate students of the University of Lagos.

The results of this study would be useful to university administrators in sensitising students to the relationship between sleep, psychological well-being, and alcohol use, and in guiding the development of a policy on alcohol use on the university campus.

Materials and Methods

This study was a descriptive cross-sectional survey that used quantitative methods to collect data via questionnaires to describe university students' alcohol use, sleep quality, psychological well-being, and sex differences. The study was conducted at the University of Lagos, Akoka, Nigeria, one of the publicly funded federal universities in the country. It is a conventional university with a campus for both undergraduate and postgraduate students, spanning 12 faculties and 150 departments. The university is situated in the most populous city in West Africa (World Population Review, 2020). The demographic properties, including the mean and SD of the participants, were: 329 (X=2.74, SD=3.708; males 139 (42.2%, X=3.57, SD=4.307), females 190 (57.8%, X=2.13, SD=3.072)) participated in the study. Their age characteristics were: 122 (37.1%) were 16-20years, 168 (51.1%) were between 21-25years, 34(10.3%) between 26-30 years and 5(1.5%) aged between 31years and above.

The study employed a non-probabilistic convenience sampling technique. This was because most students met in places where they completed the questionnaires, such as the cafeteria, common rooms, classes when lectures were not in session, and other rendezvous across campus. The measuring instrument was divided into four sections. Section A contained the respondents' biodata, including age, sex, faculty, and department. Section B collected answers to questions about sleep quality using the Pittsburgh Sleep Quality Index (PSQI; Buysse et al, 1989)**.** The PSQI is a 24-item questionnaire measuring sleep quality among respondents. It has a reliability coefficient of .83. Aloba et al. (2007) established the psychometric properties of the PSQI among Nigerian university students. Section C of the questionnaire measured participants' psychological well-being using the 18-item Psychological Well-being Scale (Ryff & Keyes, 1994). Internal

consistency value for the scale was established by Van Dierendonck (2005) for the 18 items scale to be .92. While Section D was measured with the Alcohol Use Disorder Identification Test (AUDIT) that was developed by Saunders & Aasland (1987) as a World Health Organization (WHO) project targeted at early recognition of alcohol-related problems and identification of hazardous and harmful use of alcohol. AUDIT is a self-rated 10-item questionnaire scored on a 0-4 scale, yielding a total of 40 scores.

Ethical approval was obtained from the university ethics research committee, and the research was thoroughly explained to the participants. The researchers introduced themselves to the participants, gave them the questionnaires, explained what the study was about, and asked them to participate by completing the questionnaires after giving their consent by signing. After completing the questionnaire, the data were collected from the participants for further statistical analysis. The anonymity of the participants was ensured by not asking them to provide their names or matriculation numbers on the questionnaires. The hypotheses in the study were tested using Pearson Product-Moment Correlation and an independent-samples t-test in SPSS 20 to examine relationships among sleep quality, psychological well-being, and alcohol use, and to examine sex differences in alcohol use among University of Lagos students.

Results

The hypothesis, which stated that there will be a significant relationship among sleep quality, psychological well-being and alcohol use, was tested with Pearson Product-Moment Correlation, and it is shown in the table below:

Table 1: Summary table using Pearson Product-Moment Correlation Analysis among sleep quality, psychological well-being and alcohol use

Variables	1	2	3	Mean	SD
1. Sleep Quality	1			6.0	2.9
2. Psychological Well-being	-.151**	1		92.6	13.6
3. Alcohol Use	**.168****	**-.168****	1	2.7	3.7

**. Correlation is significant at the 0.01 level (2-tailed). N=329

Table 1 reveals that sleep quality (r = .168, p<.01) has a significant positive relationship with alcohol use. While psychological well-being (r =- 168, p<.01) significantly has a negative relationship with alcohol use. This result reveals that the better quality of sleep experienced by the students, the higher the use of alcohol. However, as psychological well-being decreases, the use of alcohol increases among students.

The hypothesis, which stated that gender differences will have a significant influence on alcohol use, was tested using an independent t-test, and the result is shown in the table below:

Table 2. Summary of an independent sample for t-test analysis showing the influence of gender differences on alcohol use.

Variables of study	Groups	N	Ẍ	SD	t	Df	P
	Male	139	**3.54**	**4.30**			
Gender	Female	190	2.13	3.07	3.53	328	**<.01**

The result from Table 3 shows that male students ($\bar{X}$=3.54; SD=4.30) significantly reported higher alcohol use than female students ($\bar{X}$=2.13; SD=3.07). The male students reported having more use of alcohol than females (t (328) =3.53, p<.01). This implies that male students are

significantly different from female students on alcohol use; as such, gender significantly influences alcohol use among students.

Discussion of Findings

In 2018, there were 1.9 million young people in different Nigerian universities (National Universities Commission, 2017). Given the importance of university education in developing nations like Nigeria (Otonko, 2012), this study on alcohol use among this cohort is highly relevant. We examined the relationship among sleep quality, psychological well-being and alcohol use; and checked the difference between males and females on alcohol use among University of Lagos students, Nigeria.

This study found that while there was a positive relationship between sleep quality and alcohol use, there was a negative relationship between psychological well-being and alcohol use. This suggests that as our participants are having better sleep quality, they tend to use more alcohol. This did not align with the findings of Singleton & Wolfson (2009). The study of Chakavorty et al. (2016) was explicit in explaining the negative relationship between sleep and alcohol use. Further studies may want to investigate differences between hazardous and non-hazardous use and between various sleep patterns.

Also, it was revealed that if there were poor psychological well-being, the students would consume more alcohol. This suggests that students' experience of distress could be a pointer to the use of alcohol (Tembo et al. 2017). The findings from our study differ from those reported by Molnar et al. (2009) and Davoren et al. (2013). This difference, especially for Davoren (2013), may not be unconnected to the operationalisation of psychological well-being in these studies; while we defined psychological well-being with the use of the 18-item Psychological Well-being Scale (Ryff& Keyes, 1994), Davoren et al. (2013) understood it with the use of a 14-item Warwick-Edinburgh Mental Well-being Scale (WEMBS) (Stewart-Brown &Janmohamed,2008).

Expectedly, we found out that the male gender consumes more alcohol than the female gender. This aligns with the studies of Obierufu (2017) and Ajayi et al. (2019).

Implications and limitations

The results of the study have implications for university policy on alcohol use that would include improvement of the psychological distress of university students. The design of this cross-sectional study called for caution in interpreting our findings. Also, the students' population could likely under-report their level of alcohol use and other psychological constructs considered in the study because we used self-reports to measure all the variables of interest in the study. However, we asked them to answer the questionnaires as they truly described them and informed them that the information they provided would be used for research purposes only. Furthermore, we used students from a publicly run conventional federal university in Nigeria; therefore, generalising the results to students in other universities should be done with caution.

Conclusion

This study shows that the better the quality of sleep, the more the students consume alcohol; and the lower the psychological well-being, the more the students consume alcohol. Additionally, male students consumed more alcohol than female students.

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