Key Social and Environmental Correlates of Substance Use Among University Students: Insights from a Cross-Sectional Study in Ogun State, Nigeria

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Abstract: The use of illicit substances has emerged as an increasing cause for concern globally. Research suggests that students are particularly vulnerable to the use of illicit substances, which can significantly impact their health and overall well-being. Identifying current determinants of this hazardous behavior among and around students is essential. This study assesses the key social and environmental determinants of substance use behavior among university students in Ogun State, Nigeria. We administered a quantitative survey using a cross-sectional methodology to 424 respondents from a target population of undergraduate students. The study revealed multiple characteristics as the key correlates of substance use among students, with a mean score exceeding 2.5. The principal determinants were family disputes, friends' offers/peer pressure, access to substances, low self-confidence, school location, and academic stress. This study points out the necessity of developing evidence-based strategies and implementing integrated social intervention programs to address these problems and mitigate substance use in academia and society as a whole.

Keywords: Environmental correlates, Ogun State, psychoactive substances, substance use, social correlates, and undergraduate students.

INTRODUCTION

Youth substance use is a worldwide health issue that adversely impacts young people, their families, the healthcare sector, and society at large. Substance use refers to the harmful consumption of alcohol, tobacco, or illegal and/or prescription substances. Substance use has consistently been a leading factor in morbidity and mortality across 17 developed nations, with Americans exhibiting the highest risk of death due to substance use. Regrettably, developing nations are equally susceptible to this peril as developed nations. Studies have identified teenagers and young adults (ages 18 to 25) as high-risk populations for regular and problematic substance use (McCray *et al*., 2020; Weigard *et al*., 2021). The majority of individuals in this category are seeking higher education for the sake of knowledge acquisition and personal growth.

Recently, a university observer noted students congregating to commemorate a friend's birthday and partake in cake sharing. Regrettably, the majority exhibited misconduct following the gathering and were transported to the University Medical Centre, where a comprehensive examination disclosed the unwitting consumption of psychoactive chemicals, notably cocaine. The reasons behind this remain ambiguous, however they may stem from specific environmental variables that significantly influence individuals' decisions to engage in substance use, including participation in celebratory activities associated with it. Ayala *et al*., (2017) observed in their research that there is a restricted comprehension of the determinants affecting substance use among students. A study indicates that certain perceived predictors precede substance use among youngsters, beginning in secondary school, and need attention (Kamorudeen & Olayemi, 2020). Jodczyk *et al*., (2022) found stress as a detrimental factor influencing students' engagement in substance use.

In the same vein, Singh *et al*., (2018) identified peer pressure as a prevalent antecedent of substance use and concluded that easy accessibility significantly contributes to increased substance use among teenagers. Gebremariam *et al*., (2018) indicated that substance use among adolescents commences in preparatory schools, influenced by multifaceted factors including individual, familial, educational, social, and environmental elements. Shuaibu *et al*., (2020) identified peer pressure, parental influences, and awareness of the associated risks

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as the determinants of substance use among students. Okafor (2019) indicated that the necessity to manage academic hurdles prompted numerous university freshman to engage in substance addiction, subsequently resulting in diminished self-esteem or psychological difficulties. Ikonta (2020) showed that enhancing self-efficacy and behavioral skills most effectively predicts prevention of substance use. An epidemiological assessment in Sudan indicated that students face norms and circumstances distinct from their home environment, prompting them to adopt harmful behaviors (Osman *et al.*, 2016).

Despite scholars' observations and recommendations that ought to have led to substantial change and rationality in academia and society, it is still essential to assess the key determinants of such behavior among university students in Ogun State. The risk variables discovered in other contexts may not be applicable to substance use among university students from diverse cultural backgrounds, such as those in Ogun State. Consequently, evaluating the existing key social and environmental determinants of such behavior among university students in Ogun state is imperative.

MATERIALS AND METHODS

This research used a descriptive cross-sectional survey to assess the key social and environmental factors influencing substance use among university students. The study population consisted of 55,544 undergraduates from selected universities in Ogun State. The 16 NUC-accredited universities in the state were categorized as federal, state, and privately owned institutions. The Federal University of Agriculture, Abeokuta (FUNAAB), Olabisi Onabanjo University, Ago-Iwoye (OOU), and Babcock University, Ilishan-Remo, Ogun State were selected for the study using a criteria-based sampling technique.

Research Design

A cross-sectional study was conducted at the universities to assess the current determinants of substance use among the undergraduate students. Data were collected within three months using an adapted Google Form questionnaire, with the help of research assistants.

Sample Size and Sampling Technique

The sample size was determined using Cochran's formula and increased by 10% to account for a potential non-response rate. A multi-stage sampling method was used to select the sample. A total of 424 responses were collected, but due to incomplete responses, only 413 survey responses were included in the analysis.

Statistical Analysis

Data obtained were analyzed using version 26 of the IBM Statistical Product and Service Solution; both descriptive and inferential statistics were utilized. The respondents' demographic information was presented using descriptive statistics such as frequency counts and percentages, while the research objectives were analyzed using tables.

RESULTS AND DISCUSSION

This covers the presentation and interpretation of data analysis outcomes. The analysis was performed, and the principal findings were thoroughly examined.

Table 1.1: Socio-demographic characteristics of respondents (n = 413)

Respondents' Biodata Options		Frequency	Percentage (%)
Age of students (Mean age = 22.05 years SD = 3.99)	18-20 years	176	42.6
	21-23 years	130	31.5
	24-26 years	62	15.0
	Above 26 years	45	10.9
Gender	Male	196	47.5
	Female	217	52.5
Religion	Christianity	264	63.9
	Islam	148	35.8
	Others	1	0.2
School type	Private	82	19.9
	Public	331	80.1
Number of sessions	2-3	258	62.5
	4-5	111	26.9
	>5	44	10.7

This table shows that majority 176 (42.6%) of the respondents were within the age group of 18-20 years, few of them 45 (10.9%) were above 26 years. A notable percentage (52.5%) were females while the rest were males. Majority 264 (63.9%) were Christians. As regards their Institutions, majority 331(80.1%) attends public universities while the remaining 82 (19.9%) attends private university. Most of them 258(62.5%) had completed 2-3 sessions, but only 10.7 % had spent above 5 sessions.

Research Question: What are the key social and environmental determinants of substance-use behaviour among students?

Table 1.2: The key social and environmental determinants of substance use behaviour among students

Key determinants	LI	SI	I	VI	MI	Mean/SD
Teenage curiosity	97(23.5)	82(19.9)	62(15.0)	72(17.4)	100(24.2)	2.99/1.51
Joy seeking	75(18.2)	114(27.6))	80(19.4)	67(16.2)	77(18.6)	2.90/1.38
Somatic diseases	97(23.5)	122(29.5)	95(23.0)	58(14.0)	41(9.9)	2.57/1.26
Psychiatric problems	108(26.2)	95(23.0)	77(18.6)	64(15.5)	69(16.7)	2.74/1.43
Lack of knowledge about complications of substances	79(19.1)	106(25.7)	76(18.4)	68(16.5)	84(20.3)	2.93/1.41
Impulsive personality/traits	54(13.1)	107(25.9)	99(24.0)	90(21.8)	63(15.3)	3.00/1.27
Low self confidence	72(17.4)	77(18.6)	84(20.3)	77(18.6)	103(24.9)	3.15/1.43
To eliminate shyness	87(21.1)	77(18.6)	81(19.6)	81(19.6)	87(21.1)	3.01/1.44
Lack of amusement facilities around	85(20.6)	81(19.6)	110(26.6)	75(18.2)	62(15.0)	2.87/1.34
Disability in resolving routine problems	83(20.1)	74(17.9)	123(29.8)	69(16.7)	64(15.5)	2.90/1.32
Having strict Parents	93(22.5)	78(18.9)	106(25.7)	66(16.0)	70(16.9)	2.86/1.38
Presence of an addicted person in the family	86(20.8)	77(18.6)	91(22.0)	77(18.6)	82(19.9)	2.98/1.42
Parents' divorce	71(17.2)	97(23.5)	88(21.3)	84(20.3)	73(17.7)	2.98/1.36
Family disputes	75(18.2)	87(21.1)	96(23.2)	81(19.6)	74(17.9)	3.32/1.42
Friends offer/pressure	62(15.0)	66(16.0)	85(20.6)	79(19.1)	121(29.3)	3.19/1.47
Access to substances	82(19.9)	63(15.3)	73(17.7)	86(20.8)	109(26.4)	3.15/1.42
Lack of access to adequate counsel	70(16.9)	78(18.9)	83(20.1)	83(20.1)	99(24.0)	2.87/1.36
Low cost &/or availability of substances	79(19.1)	103(24.9)	93(22.5)	68(16.5)	70(16.9)	2.66/1.32
Having free time	95(23.0)	111(26.9)	102(24.7)	50(12.1)	55(13.3)	2.95/1.34
Presence of an addicted person in residential place	71(17.2)	95(23.0)	100(24.2)	76(18.4)	71(17.2)	2.85/1.31
Academic stress	74(17.9)	106(25.7)	100(24.2)	72(17.4)	61(14.8)	3.04/1.31
Emotional/relationship stress	60(14.5)	91(22.0)	107(25.9)	81(19.6)	74(17.9)	2.90/1.36
Location of the school	77(18.6)	98(23.7)	101(24.5)	64(15.5)	73(17.7)	3.06/1.47

LI = Least Important, SI = Slightly Important, I = Important, V = Very important, MM = Most important

This table demonstrates that, after examining all the means of the identified factors in this study, all the factors are accurate predictors of substance use among students. The most significant predictors, however, are family disputes (mean = 3.32), friends' offer or peer pressure (mean = 3.19), access to substances (mean = 3.15), low self-confidence (mean = 3.15), school location (mean = 3.06), and academic stress (mean = 3.04).

DISCUSSION
The age distribution of respondents indicates that 306 individuals (74.1%) were aged between 18 and 23, resulting in a mean age of 22. This indicates that most respondents were young individuals. Gender statistics indicate that 217 individuals (52.5%) were female, while 47.5% were male. This aligns with the findings of Alabi *et al*., (2020), which indicated that most respondents were female. The issue of gender discrimination against women in academia is gradually diminishing, as an increasing number of women are being afforded the opportunity to study alongside their male counterparts. Approximately 264 respondents, representing 63.9%, identified as Christians, supporting the findings of Nolte *et al*., (2018) that Christians form the majority in contemporary southern Nigeria. Christians, by implication, constitute a majority among religious groups. Approximately 80.2% of students enrol in public universities. Herrmann and Nagel (2023) found that only 9% of German students are enrolled in private educational institutions. Alabi and Mutula (2020) indicate that the enrolment in public schools exceeds that of private schools.

This study determined that all indicated characteristics are key determinants of student substance use. This result is unsurprising, as a similar study indicated that teenagers initiated substance use for various reasons. Researchers identified that various factors, ranging from individual to structural, influence psychoactive substance use among university students, with the socialisation process being paramount. Gebremariam *et al*., (2018). The principal determinants ranked by significance, are family disputes, friends' offers/peer pressure, access to substances, low self-confidence, school location, and academic stress. This aligns with the findings of Ifeoma *et al*., (2020), who identified peer pressure as a risk factor for drug use among college students. In a study by Singh *et al*., (2018), easy accessibility and peer pressure were found to significantly increase substance use among students. Another study by Chang *et al*., (2017) identified academic stress, including exam preparation, as a major predictor of substance use among students.

CONCLUSION

Overall, this study found all the parameters to be the key social and environmental determinants of substance use among students but family dispute, peer pressure, access to substances, low self-confidence, location of the schools, and academic stress were the most prominent determinants of substance use among them. These factors may be responsible for the continuous rise in the number of students who are becoming substance users on campuses. There is an urgent need for evidence-based enlightenment programmes and campaigns on our campuses, including both private and public universities. Access to various substances and peer influence have been confirmed as parts of the prominent predictors of substance use among undergraduates. Governmental agencies within developing countries, including university stakeholders, need to probe further and block access to substances within and around the university communities.

RECOMMENDATIONS

- Enlightenment campaign: Stakeholders saddled with the responsibility of caring for the university students especially Nurses within the directorate of university health services should engage in evidence-based, student-friendly enlightenment campaign activities. This should be done continuously (as new students enrol) by moving from college to college and utilizing social media channels within and around the campuses.
- Rehabilitation &Snowballing approach: The university administration should collaborate with the directorate of health services to ensure complete rehabilitation of identified substance users who could positively influence their colleagues. This category of rehabilitated students can be used to reach out to other users and form a formidable campaign team that could purify the academic community.
- Regularly accessible audiovisual materials should be made available to students to remind them of their susceptibility to substance use, its consequences, and the benefits of abstaining.
- Government functionaries, including the National Drug Law Enforcement Agencies (NDLEA), should consistently engage in the surveillance of "student joints," which are establishments owned by students in proximity to their dormitories and classrooms. The goal is to restrict the availability of substances.
- Fostering self-confidence: School health Nurses and University counsellors should be actively involved in fostering self-confidence in students and combating the pervasive problem of low self-confidence.
- The academic curriculum, activities, and learning modules should be more user-friendly and should not place learners under undue stress or burden.

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