

## IMPACT OF EXAMINATION ANXIETY AND DOMESTIC VIOLENCE ON SUBSTANCE USE AMONG PUBLIC UNIVERSITY STUDENTS IN ANAMBRA STATE

By

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### ABSTRACT

This study examined the influence of examination anxiety and domestic violence and substance use among public university students in Anambra State. A total of 400 students ( $M = 22.6$ ,  $SD = 5.38$ ) were purposively selected from Chukwuemeka Odumegwu Ojukwu University, Igbariam. Data were collected over a three-month period (June to August 2024) using the Examination Anxiety Scale, Domestic Violence Scale, and Substance Use Scale. Hierarchical linear regression

analysis indicated that domestic violence significantly predicted substance use ( $\beta = 0.029, p < .05$ ), as did examination anxiety ( $\beta = 0.647, p < .05$ ). Together, the two predictors accounted for 26.1% of the variance in substance use ( $R^2 = .261$ ). These findings highlight the need for targeted interventions such as psychotherapy and counselling for anxiety and trauma associated with substance use behavior.

**Keywords:** *Examination Anxiety, Domestic violence, Substance use*

## **Introduction**

Substance use and abuse represent a growing crisis with far-reaching impacts on individuals and society [1]. Beyond statistical data, these behaviours tends to be influenced by factors like domestic violence and examination anxiety experienced by students. While the distinctions between students who engage in substance use and those who do not may appear subtle, the repercussions on mental health and academic performance are profound. Substance use transcends being a personal issue, emerging as a societal challenge that demands urgent attention. Research has consistently highlighted the intricate relationships between substance use and mental health disorders such as mood swings, anxiety, and depression. Understanding the connections between domestic violence, examination anxiety and substance use is essential for crafting effective prevention and intervention strategies [2].

Substances, whether natural or synthetic, alter an individual's mood, cognition, and behavior upon ingestion. The World Health Organization (WHO), as cited by the United Nations [3], defines a drug as any substance that changes perception, mood, cognition, behavior, and motor function when

introduced into a living organism. This encompasses both psychoactive substances, which can be legal (e.g., alcohol, nicotine, sedatives) or illegal (e.g., cannabis, cocaine, heroin). Drug abuse refers to the non-medical use of substances that deviate from approved or socially acceptable patterns, often carrying negative connotations compared to the notion of "responsible drug use" [4, 25].

Commonly abused substances include alcohol, cocaine, cannabis, heroin, sedatives, inhalants, anabolic steroids, and hallucinogens. The misuse of legal or prescription drugs for euphoric effects has become a global issue with significant social and economic consequences. Frequent arrests and drug-related incidents worldwide underscore the severity of this problem [5]. The United Nations International Drug Control Program [6] identified heroin, cocaine, and cannabis as the most commonly abused natural drugs and psychotropic substances.

## **Substance Use among Nigerian Students**

In Nigeria, substance use, particularly cannabis, is alarmingly prevalent among the students. Anderson and Dill [7] noted widespread cannabis dependence, while Ezeonuegbu and Okonkwo [1] reported that 7% to 37% of students admitted to marijuana

addiction. Marijuana, the most abused substance in Nigeria, is linked to psychological dependence and withdrawal symptoms such as restlessness. Its effects include impaired thinking, reduced coordination, concentration issues, mood swings, panic attacks, anxiety, paranoia, psychosis, and other physical health problems [6, 25].

### **Examination Anxiety and Substance Use**

The Nigerian education system's reliance on a grade-based examination structure creates intense pressure on students, fostering a competitive environment that often leads to examination anxiety. This psychological condition, marked by fear of failure, negative self-evaluation, and physical symptoms, undermines academic performance and emotional well-being [8, 22]. To cope, students may turn to substances like alcohol, cannabis, and sedatives, seeking temporary relief. However, this can create a vicious cycle where substance use exacerbates anxiety, further impairing academic outcomes [1, 9]. Self-medication theory explains this relationship, suggesting that students use substances to manage psychological distress. While these behaviours provide short-term relief, they often lead to long-term consequences such as addiction and cognitive decline.

### **Domestic Violence and Substance Use**

Domestic violence, including physical, emotional, economic, and sexual abuse, is a widespread issue that profoundly affects families, with women often being the primary victims [7, 10, 21]. For students who witness

domestic violence at home—such as parents engaging in physical altercations or instances of one parent abusing the other—the emotional and psychological toll can be significant. Exposure to such volatile environments often leads to heightened stress, anxiety, and feelings of helplessness, which may push students toward substance use as a coping mechanism. Research has indicated a strong correlation between substance abuse rates and domestic violence in a population [11, 20, 24]. Theories suggest multiple pathways linking these phenomena. Acute intoxication can lead to impulsive, high-risk behaviours, while substance use disorders might emerge as a way to manage the emotional distress stemming from domestic violence. For students, witnessing domestic violence disrupts their sense of safety and stability, which can negatively impact their emotional resilience and academic focus. The relationship between these experiences and substance use emphasizes the importance of addressing domestic violence as part of broader efforts to support students' mental health and reduce substance dependency.

### **Statement of the Problem**

Substance use is a growing global crisis, with alarming statistics emerging from regions such as America, Sweden, France, Canada, and increasingly, Africa. The 2019 report by the West African Commission on Drugs underscores the disturbing rise in drug dependency among youths, which has been linked to a range of criminal activities including rape, sexual abuse, arson, murder, theft, armed robbery, and kidnapping. The

repercussions of substance abuse are severe, affecting physical health through damage to vital organs, psychological well-being with issues like insomnia, withdrawal symptoms, and hallucinations, and societal problems including terrorism, rape, and murder. These profound effects have sparked significant concern among parents, healthcare providers, counselors, governments, and the public, leading to extensive research on substance use. Despite this research, there remains a notable gap in understanding how examination anxiety and domestic violence contribute to substance use among university students. While these factors are acknowledged as risk contributors, their combined influence has not been comprehensively studied. This research seeks to address this gap by examining the relationship between examination anxiety, domestic violence, and substance use behavior among university students. The study aims to assess if examination anxiety and domestic violence predicts substance use among students in public university, with hypotheses tested at a significance level of 0.05.

1. Examination anxiety will significantly predict substance use among public university students.
2. Domestic violence will significantly predict substance use among public university students.

## Method

### Participants

A total of 400 students from Chukwuemeka Odumegwu Ojukwu University (COOU), Igbariam Campuses, participated in the

study. The sample comprised 276 males (61.4%) and 124 females (38.6%). Ethnic distribution included 355 participants identifying as Igbo (88.75%), 20 as Hausa/Fulani (5%), 15 as Yoruba (3.75%), and 10 (2.5%) from other minority ethnic groups. Participants ranged in age from 18 to 35 years, with a mean age of 22.6 and a standard deviation of 5.38. Faculties and departments were selected using simple random sampling, while participants were chosen through convenience sampling, a non-probability sampling technique, ensuring the inclusion of willing and available students.

### Instruments

#### Examination Anxiety Scale

This 20-item scale developed by Spielberg [26] measures examination anxiety using a five-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." Scores between 41 and 80 indicate high examination anxiety, while scores from 0 to 40 reflect low anxiety. The scale has demonstrated strong reliability, with a Cronbach's alpha of 0.80. A pilot study reported an even higher Cronbach's alpha of 0.88. Construct validation was conducted by the use of exploratory factor analysis through Principal Component Analysis. Measure of sampling adequacy was obtained as .717; which is high to conduct the Principal Component, Test of Sphericity  $\chi^2 (190) = 5330.158, P < .000$ ) Based on the results of the exploratory factor analysis (EFA), Examination anxiety scale is adequate.

### Domestic Violence Questionnaire

This self-report instrument developed by Abolmaali et al. [27] consists of 43 items that measure domestic violence across four dimensions: physical, psychological, sexual, and economic violence. Responses are rated on a Likert scale from 1 ("Not at all true of my spouse") to 5 ("Extremely true of my spouse"). A pilot study found a high reliability score of 0.92 for the overall scale, with subscale reliabilities of 0.91 for psycho-physical violence and 0.79 for control violence. Construct validation was conducted by the use of exploratory factor analysis through Principal Component Analysis. Measure of sampling adequacy was obtained as .873; which is high to conduct the Principal Component, Test of Sphericity  $\chi^2$  (378) = 7562.423,  $P < .000$ ). Based on the results of the exploratory factor analysis (EFA), Domestic violence anxiety scale is adequate.

### Substance Use Scale

This 12-item scale developed by Mateo et al. [28] evaluates the use of substances (e.g., tranquilizers, marijuana, alcohol, cocaine) without a prescription, using a five-point Likert scale from "Strongly Agree" to "Strongly Disagree." The scale initially showed good internal consistency with a coefficient of 0.81. A pilot study subsequently reported a Cronbach's alpha of 0.87. In addition, construct validation was also conducted by the use of exploratory factor analysis through Principal Component

Analysis. Measure of sampling adequacy was obtained as .722; which is high to conduct the Principal Component, Test of Sphericity  $\chi^2$  (66) = 1924.589,  $P < .000$ ). Based on the results of the exploratory factor analysis (EFA), substance use scale was adequate.

### Procedure

Data were collected over a period of three months, from June 2024 to August 2024. Faculties and departments were randomly selected by writing their names on folded papers and drawing them randomly. Convenience sampling was employed to recruit participants from Chukwuemeka Odumegwu Ojukwu University (COOU) who met the inclusion criteria of being full-time students. Exclusion criteria included students unwilling to participate. To ensure accuracy and consistency in data collection, the class representatives who served as research assistants were given a brief but structured orientation on the study's objectives, ethical considerations, and procedures for questionnaire administration. This training included instructions on how to maintain respondent confidentiality, how to explain the purpose of the study to participants, and how to handle questions or uncertainties from respondents without introducing bias. The orientation session was conducted by the researcher prior to questionnaire administration and lasted approximately 45 minutes. Participants were thoroughly briefed on the purpose and scope of the study and assured of the confidentiality of their responses. Ethical approval was obtained from the university which ensured that the research adhered to established



ethical standards for human subject research, and informed consent was secured from all participants. Questionnaires were completed in person under the direct supervision of the research team, ensuring a 100% response rate.

### Design and Statistics

The study adopted a cross-sectional survey design. Hierarchical linear regression was used to test the hypotheses and analyze the data, as the study aimed to ascertain the influence level among the variables.

### Results

**Table 1: Descriptive Statistics of domestic violence, examination anxiety and substance use of students**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic		Statistic	
Age	400	18	35	22.6	5.38	0.50	.122	-0.82	.243
Domestic violence	400	46	181	78.5	13.0	0.81	.122	1.60	.243
Exam anxiety	400	20	50	30.3	8.09	0.50	.122	0.48	.243
Substance use	400	23	56	41.1	9.13	0.59	.122	0.56	.243
Valid N (listwise)	400								

#### Source: Questionnaire Primary Data

Table 1 shows the descriptive statistics and skewness for substance use, examination anxiety, and domestic violence among the students. The substance use variable ( $M = 59$ ,  $SD = 9.13$ ) was positively skewed (0.59), indicating that the majority of students exhibited high levels of substance use. The standard deviation of 9.13 shows a wide variation in substance use among the students. Examination anxiety ( $M = 50$ ) was also positively skewed (0.50), suggesting that higher levels of examination anxiety are associated with increased substance use. Similarly, domestic violence ( $M = 81$ ) was positively skewed (0.81), indicating that students experiencing domestic violence were more likely to engage in substance use. The kurtosis value for substance use (0.56) suggests a wider distribution of substance use experiences among the sampled students.

**Table 2: Pairwise Inter-Variable Correlations using Pearson Product Moment Correlations**

Correlations between the variables of study (N = 400)

	1	2	3	4	5
1. Age	1				
2. Gender	-.085	1			
3. Domestic violence	.018	-.01	1		
4. Exam anxiety	-.173	-.02	.115*	1	
5. Substance Use	.217*	.014	.274**	.281**	1

\*Correlation is significant at the 0.05 level (2-tailed).

\*\*Correlation is significant at the 0.01 level (2-tailed).

Gender was Coded as (1 = male, 2 = female)

The results presented in Table 2 show significant correlations between several variables in the study. Age was positively correlated with substance use ( $P \leq .001$ ;  $r = .217$ ;  $N = 400$ ), indicating that older students reported higher levels of substance use. Domestic violence also exhibited a positive correlation with substance use ( $P \leq .001$ ;  $r = .274$ ;  $N = 400$ ), suggesting that students who experienced domestic violence were more likely to engage in substance use. Additionally, examination anxiety was significantly correlated with substance use ( $P \leq .001$ ;  $r = .281$ ;  $N = 400$ ), highlighting that students with higher levels of examination anxiety were more likely to report increased substance use.

**Table 3: Hierarchical Regression Model Statistics of Domestic violence, Examination Anxiety and Substance Use**

Sources	R	R <sup>2</sup>	Adj. R <sup>2</sup>	$\Delta R^2$	Std. E.E	F	Df	$\beta$	T	Sig.
<b>Step 1</b>	.291	.085	.075	-	7.780	9.136	4			
Age								0.280	5.770	.000
<b>Step 2</b>	.309	.095	.079	.010	7.765	5.896	7			
Age								0.278	5.737	.000
Domestic violence								0.029	2.438	.048
<b>Step 3</b>	.511	.261	.238	.166	7.064	11.379	12			

Age	0.198	4.317	.000
Domestic violence	0.026	2.434	.040
Examination anxiety	0.647	5.278	.000

#### Dependent Variable: Substance Use

Table 3 presents the results of the hierarchical linear regression analysis

In Step 1, age explained 8.5% of the variance in substance use ( $R^2 = .085$ ,  $F = 9.136$ ,  $p < 0.01$ ). Within this block, age emerged as a significant predictor of substance use ( $\beta = .280$ ,  $t = 5.770$ ,  $p < .001$ ), indicating that older students reported higher levels of substance use.

In Step 2, domestic violence was added to the predictors. The  $R^2$  increased to .095, representing an  $R^2$  change ( $\Delta R^2$ ) of .010, which was statistically significant ( $F$  change = 5.896,  $p < 0.05$ ). This suggests that domestic violence contributed an additional 1.0% to the explained variance in substance use, beyond age. Domestic violence had a small but significant positive predictive effect ( $\beta = .029$ ,  $t = 2.438$ ,  $p < 0.05$ ).

#### Discussion

This study investigated the roles of examination anxiety and domestic violence in substance use among public university students. The findings offer valuable insights into the complex relationships between these variables, with implications for understanding and addressing substance use in this demographic.

In Step 3, examination anxiety was introduced. This model accounted for 26.1% of the variance in substance use ( $R^2 = .261$ ,  $F = 11.379$ ,  $p < 0.001$ ), indicating a substantial increase in explanatory power. The  $R^2$  change from Step 2 to Step 3 was .166, suggesting that the addition of examination anxiety alone explained an extra 16.6% of the variance in substance use. Examination anxiety had a strong and significant positive effect on substance use ( $\beta = .647$ ,  $t = 5.278$ ,  $p < 0.001$ ), making it the most powerful predictor in the final step. Age ( $\beta = .198$ ,  $p < 0.001$ ) and domestic violence ( $\beta = .026$ ,  $p < 0.05$ ) also remained significant.

#### Examination Anxiety and Substance Use

Contrary to the initial hypothesis, which proposed that examination anxiety would not significantly predict substance use, the results revealed a significant positive relationship. Students with higher levels of examination anxiety were more likely to engage in substance use. This aligns with existing research showing that anxiety



disorders often co-occur with substance use disorders. For instance, the prevalence of substance use disorders is higher among individuals with anxiety disorders (48%) compared to those without (29%) [2]. Examination anxiety, characterized by heightened stress before and during exams, frequently acts as a precursor to substance use as students seek coping mechanisms to alleviate their distress [12].

Academic-related stress has consistently been linked to increased substance use. For example, research involving high school and tertiary students demonstrates that academic pressures elevate anxiety levels, reduce coping effectiveness, and strain social relationships, ultimately increasing substance use [13, 14]. Conversely, protective factors, such as perceived social support from parents, peers, and educational institutions, are associated with reduced substance use. These findings highlight the importance of promoting supportive academic environments to mitigate the negative impact of examination anxiety on substance use.

The self-presentation theory of anxiety [15] provides a framework for interpreting these findings. According to this theory, examination anxiety stems from students' efforts to create favorable impressions on evaluators despite doubts about their ability to succeed. This heightened self-awareness and fear of failure can drive students toward substances they believe may enhance their performance or alleviate stress.

### **Domestic Violence and Substance Use**

The second hypothesis, which posited that domestic violence would not significantly predict substance use, was also refuted. The findings demonstrated a significant predictive relationship, suggesting that students exposed to domestic violence are at greater risk of engaging in substance use. Witnessing or experiencing domestic violence, such as parental conflicts or abuse, disrupts students' emotional stability and fosters maladaptive coping strategies, including substance use.

Research corroborates the association between domestic violence and substance use. Children from violent households often report higher exposure to parental substance use, which in turn influences their own behaviours [16, 17]. Social learning theory [18] explains how such behaviours are transmitted intergenerationally, with children observing and modeling parental substance use.

Moreover, societal norms and attitudes that perpetuate domestic violence and substance abuse exacerbate this issue. Stigma, particularly against women, often drives victims to use substances as a coping mechanism, further entrenching cycles of abuse and substance dependency [19, 24]. Addressing these societal factors is crucial for breaking the link between domestic violence and substance use.

### **Practical Implications**

The findings of this study have important implications for student mental health and substance use prevention programs in public

universities. Given the significant predictive role of domestic violence and examination anxiety in substance use, universities should consider implementing trauma-informed counselling services specifically tailored to students who may be exposed to domestic violence. Furthermore, interventions designed to reduce examination anxiety—such as test preparation workshops, relaxation training, and academic support programs—could play a critical role in reducing students' vulnerability to substance use. These implications are grounded in the present findings and reflect the key psychosocial factors identified in the study.

### Limitations and Future Directions

While this study offers significant insights, it is not without limitations. The cross-sectional design precludes causal inferences, and the reliance on self-reported data introduces potential biases. Future research should employ longitudinal designs to explore causal relationships more robustly. Additionally, further studies could examine other moderating factors, such as personality traits, cultural influences, and socioeconomic status that may interact with examination anxiety and domestic violence to influence substance use.

### Recommendations

Based on the findings, the following recommendations are offered:

1. University counselling units should regularly screen students for experiences of domestic violence and

provide confidential support services for affected students to prevent maladaptive coping behaviours such as substance use.

2. Examination anxiety management workshops should be integrated into student support services, especially during midterms and final exams.
3. School authorities should sensitize lecturers and academic staff on identifying signs of extreme exam stress and referring students to appropriate mental health support services.
4. Policymakers and education stakeholders should allocate more funding to mental health interventions in universities, with specific attention to reducing domestic stressors and academic anxiety.

### Conclusion

The findings of this study highlight examination anxiety and domestic violence as significant factors contributing to substance use, highlighting the necessity for targeted interventions like psychotherapy and cognitive behavioral therapy (CBT). Professional psychotherapy has shown to be an effective complement to existing drug treatment services for individuals dealing with post-traumatic stress disorder, anxiety, and substance use disorders. However, it is crucial to recognize that psychotherapy alone is not a cure for substance use; it should be

integrated with other essential services, such as drug counseling and a comprehensive treatment plan. Despite this, psychotherapy can provide valuable and clinically significant benefits, particularly in addressing factors like examination anxiety and domestic violence that drive substance use among students.

### **Author's contribution**

Udemezue Chisom Peter conceived the idea for the project and wrote the first draft of the research. Ezeonuegbu chinyereugo and Diana Uwaila Oboite edited the original draft after making suggestions for improvements. Momoh Abdulrazaq and Rockson Amoah-Saah created the study design, and participants for inclusion. Ezeonuegbu chinyereugo contributed to the methodology and statistical analysis. Udemezue Chisom and Kenneth Ugwu Contributed to the data collection and interpretation. Udemezue Chisom Peter and Ezeonuegbu chinyereugo contributed to ethics and application. All authors contributed to the final revision of the

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Not applicable

### **Competing interests**

The authors declare no competing interests

work and agreed to be personally accountable for their contributions.

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### **Availability of data and materials**

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

### **Ethical approval and consent to participate**

This study was approved by the Ethics committee of Chukwuemeka Odumegwu Ojukwu University, Anambra State, and abided by the ethical standards of the institutional and national research committees, as well as the 1964 Helsinki Declaration and its later amendment. All participants gave their consent before participating in the study.

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