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Lifestyle and Academic Burnout as Predictors of Opioid Misuse among Selected University Undergraduates in Ogun State

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Abstract

This study assessed lifestyle, academic burnout and opioid misuse among University undergraduates in Ogun state Nigeria. A multi-staged sampling technique was used to select 200 participants each from Olabisi Onabanjo University and Chrisland University responded to Maslach Burnout Inventory-Student Survey (MBI-SS), Simple Lifestyle Indicator Questionnaire (SLIQ), and Screener and Opioid Assessment for Patients with Pain- Revised (SOAPP-R). Descriptive and inferential statistics were used in data analysis. The result revealed that 55% displayed a mild form of opioid misuse, 28.0% displayed a moderate form of opioid misuse, and 11.5% displayed a severe form of opioid misuse. Also,diet (β = .11, t = 2.40, p<.05), alcohol (β = .13, t = 2.54, p<.01), smoking (β = .35, t = 7.10, p<.01) and stress (β = .16, t = 3.81, p<.01) significantly and independently predicted opioid misuse. Academic burnout (emotional exhaustion, depersonalization and professional efficacy) significantly and jointly predicted opioid misuse [F (3,396) = 32.72, p<.01].No significant correlation was observed between age and opioid misuse. Male participants scored higher on opioid misuse compared to females. Authors conclude that there is a high prevalence of opioid misuse among university undergraduates, and that lifestyles and academic burnout are strong contributors of opioid misuse among Nigerian university students. Implementation of effective prevention and psychological intervention programs to reduce the incidence of opioid misuse and its related negative consequences is recommended.

Keywords: Opioid misuse, lifestyle, academic burnout, undergraduates, Nigeria

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Introduction

Opioids are a class of psychoactive substances that are commonly used for pain management. The analgesic and sedative effects of opioids make them to be frequently prescribed for the treatment and management of pain. They include morphine and codeine, as well as semi-synthetic drugs like oxycontin and illicit heroin, and synthetic drugs like fentanyl, tramadol, and methadone (UNODC, 2021). The euphoric properties of opioids have been linked to their widespread use and misuse of prescription opioids. The misuse of opioids is a significant global public health concern. In many countries, including Nigeria, opioid usage has become a serious public health concern, especially among university students (Ohale et al., 2017).

According to the results of the Nigerian Drug Use Survey, almost 2.4 million persons admitted to using cough syrups with codeine or dextromethorphan for non-medical purposes in 2017. In the same vein, 62 million people reported using opioids in 2019, which contributed to about 300,000 deaths globally (UNODC, 2021). Tramadol and other prescription opioids are being trafficked illegally across West Africa, which has led to worrisome rates of opioid misuse, addiction, and other associated harms (UNODC, 2021). The Nigerian Epidemiological Network on Drug Use (NENDU) reported that in 2015, 71% of opioid users used Tramadol for non-medical purposes. According to the UNODC (2019), 62 million people worldwide admitted to taking pharmaceutical opioids like tramadol, codeine, or morphine for non-medical reasons. In line with the foregoing, social research findings have shown that the use of Tramadol and Codeine is widespread in Nigeria (Yunusa et al., 2017; Duru, et al., 2017).

In North America, there are myriad reports of opioid overdose deaths, and the rate skyrocketed after the COVID-19 pandemic (UNODC, 2021). Tramadol is a prescriptive drug in Nigeria;however, individuals that misuse and abuse it have their ways of sourcing this drug without a prescription from street vendors and nearby pharmacies (Adedoye, 2019). University students are found to be more likely to misuse opioids as a result of their relentless academic pressure and harmful lifestyle (Quintero et al., 2017). Studies show escalating opioid crisis in several countries, for instance according to the Centers for Disease Control and Prevention (CDC) (NIDA, 2019) opioid overdose deaths account for more than 70% of all overdose deaths in the United States. Also Opioid addiction accounts for 74% of all deaths nationwide, and this number rises to 92.8% in Spain (WHO, 2020).

According to Farhud (2015), the term "lifestyle" is frequently used to refer to how people live and the choices they make about different aspects of their lives. A range of personal behaviour including diet/nutrition, physical activity/exercise, substance use, and stress management are included in the concept of lifestyle (McSharry et al., 2017). In the literature, opioid use is linked to lifestyles of individuals. For instance, University students who smoke cigarette are more likely to also engage in other risky behaviours, such as consumption of alcohol and using opioids, as a coping mechanism for burnout

(Flanagan, 2018). In addition to the above, students who struggle to manage the numerous lecturing issues and academic obligations are more likely to experience stress and eventually burnout (Mostafavian et al., 2018). However, the more pressures placed on university students, the more burnout they experience. To this end, many may start living unhealthy lives due to poor time management and few opportunities to engage in healthy behaviours (McSharry et al., 2017).

A key factor in determining people's health and wellness is lifestyle. It encompasses all routines and actions that have an impact on daily life. When a person leads an unhealthy lifestyle, there is a higher chance that he might use opioids and other drugs for self-medication, which could have negative financial effects on him and his family (Gooding et al., 2015). Numerous modifiable risk factors of lifestyle, such as smoking, inactivity, and poor food are linked to the clinically severe impairment or suffering that opioid users experience (GBD, 2019). According to several research, people who lead healthy lifestyles tend to live longer and are less likely to misuse opioids in general (Li et al., 2018). Adolescents and young adults who lead healthy lifestyles are more likely to experience less opioid usage than adults who do (Gooding et al., 2015).

Academic burnout is a situation in which students experience exhaustion from the demands of their studies, lose interest in lectures, feel pessimistic, and feel inadequate and incompetent as learners. University undergraduates are required to adapt to a learning environment, a teaching style, and a social milieu that is different from those they encountered in high school. The completion of lecture assignments is one of the many problems that students are expected to be able to handle. These activities predispose them to stress, fatigues and eventually burnout, often resulting in poor time management and few opportunities to engage in healthy behaviours (McSharry et al., 2017). Although there are numerous factors contributing to opioid misuse, research suggests that certain lifestyle choices and academic stress may also be important predictors. University students may be more susceptible to opioid usage due to lifestyle variables such as poor diet, inactivity coupled with stress, and academic pressure (Apare & Enakpoya, 2024).Research studies on the use of opioids among Nigerian undergraduates are available but there are few that examine the roles of lifestyles and academic burnout on opioid misuse among this population. Hence this study seeks to contribute to bridge this knowledge gap.

Research Questions

The following research questions that this study seeks to provide answers to include:
1. What is the prevalence and pattern of academic burnout, and opioid misuse among university undergraduates in Ogun state?
2. To what extent will lifestyle factors (diet, exercise, alcohol, smoking, and stress) independently and jointly predict opioid misuse among university undergraduates in Ogun state?

3. Will academic burnout (emotional exhaustion, depersonalization, and academic efficacy) independently and jointly predict opioid misuse among university undergraduates in Ogun state?
4. To what extent will lifestyle and academic burnout jointly predict opioid misuse among university undergraduates in Ogun state?
5. Will socio-demographic factors (age, gender) influence opioid misuse among university undergraduates in Ogun state?

Materials and Methods
Participants

A multi-staged sampling technique was used in this study. In the first stage, a stratified sampling technique was utilized to categorize the institutions into State-owned (public) and privately-owned institutions in Ogun state. In the second stage, a simple random sampling was adopted to select one State-owned (Olabisi Onabanjo University) and one privately-owned (Chrisland University) institution in Ogun state. Lastly, the accidental sampling technique was adopted in the selection of 400 respondents from the two universities.

Measures
Three instruments were used to measure the variables of interest in this study. These are:
Simple Lifestyle Indicator Questionnaire (SLIQ) by Godwin et al., (2008). The SLIQ assesses four dimensions (diet, exercise, alcohol intake, smoking, and psycho-social stress) as well as composite score. The SLIQ consists of 12 items, including 3 items each for diet, exercise, and alcohol use; 2 items for smoking, and 1 item for stress.

Based on the raw scoring of questions of each component, a category score of 0, 1, or 2 is given. Except for alcohol usage, higher raw scores represent healthier behaviour. According to the scoring guide, the raw scores are translated into category values ranging from 0 to 2, where 0 represents a poor score in that dimension, 1 is an intermediate score in that dimension, and 2 is a healthy score in that dimension. On a scale of 0 to 10, the category scores are added to get the total score, which is then divided into three categories: unhealthy (scoring 0-4), intermediate (score 5-7), and healthy (score 8–10). For diet, the responses are given a value as indicated in the scoring template and the value for each of the three questions is added to give a diet raw score of between 0 and 15. A diet category score is assigned such that a raw score of 0-5 is assigned a value of zero indicating a poor diet; 6-10 is assigned a value of 1 indicating an intermediate diet; and 11-15 is given a value of 2 indicating a healthy diet.

For exercise, the respondents indicate the number of times per week respondents do light, moderate, and vigorous physical activity, with examples given for each. The frequency of each type of activity is given a weight (score). The physical activity raw score is a sum of these three scores. The physical activity category score is the highest level in which they do any activity. So if they only do a light activity they score 0 indicating an unhealthy level of

physical activity; if they do any moderate activity they score 1 indicating an intermediate lifestyle for physical activity; and if they do any vigorous activity they are given a category score of 2 indicating a health level of physical activity. For alcohol consumption, the respondent indicates the number of each type of alcohol (wine, beer, liquor) they drink in an average week. The numbers are added to give an alcohol raw score. The alcohol category score is calculated using the following formula: 14 or more drinks per week, the category score is zero for unhealthy; 8-13 drinks per week, the category score is 1 for intermediate health; and 0-7 drinks per week, the category score is 2 for healthy.

For smoking, the raw score and category score are the same: 0 if current smoker; 1 if past smoker; 2 if never smoked. For stress, the respondents indicate self-perceived level of stress on a scale of 1 to 6 with 1 being low stress and 6 being high stress. For scoring, the numbers are reversed to be consistent with the other factors where a high raw score indicates a healthy lifestyle and a low raw score indicates an unhealthy lifestyle. The stress raw score has a range of 1 to 6. 1 and 2 indicate an unhealthy stressful lifestyle; 3 and 4 are intermediate; and 5 and 6 indicate a healthy lifestyle. The overall SLIQ score is determined by adding the 5 category raw scores (each category score is 0, 1, or 2), hence the range for the SLIQ score is from 0 -10. The overall SLIQ lifestyle category score is zero for unhealthy if the overall score is 0-4; 1 for intermediate if the overall SLIQ score is 5-7; and 2 for healthy if the overall score is 8-10.

Maslach Burnout Inventory- Student Survey (MBI-SS)

Academic burnout was assessed using the MBI-SS, a modified version of the MBI-GS (Schaufeli et al., 1996) which was adapted for use in student samples (Schaufeli et al., 2002). The MBI-SS is a 15-item scale that is made up of three sub-scales, namely; exhaustion (5 items: items 1, 4, 7, 10 & 13), cynicism (4 items: items 2, 5, 8 & 11), and professional efficacy (6 items: item 3, 6, 9, 12, 14 & 15). An example of one of the items from the exhaustion sub-scale includes “I feel emotionally drained by my studies.” An example of one of the items from the cynicism sub-scale includes “I have become less enthusiastic about my studies”, while an example of one of the items from the academic efficacy scale includes “I can effectively solve the problems that arise in my studies.” The scale comprises seven points, with 1 being the strongest disagreement and 7 being the strongest agreement. Burnout is indicated by high exhaustion and cynicism scores and low professional efficacy ratings. According to Schaufeli et al. (2002), Cronbach's alpha coefficients for weariness, cynicism, and professional efficacy were between .66 and .85; .64 and .78; .73 and .74, and .73 and .74, respectively. While Cronbach's alpha value for the MBI-SS was .60, it was .77; .79, and .66 for tiredness, cynicism, and professional efficacy, respectively.

Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP-R)

The 24-item Screener and Opioid Assessment for Individuals with Pain-Revised (SOAPP-R) questionnaire, created by Butler et al., (2004) is used to identify individuals who are most likely to misuse opioids. Each of the items is scored on a five-point scale (0 = "never," 1 = "seldom," 2 = "sometimes," 3 = "often," 4 = "very often"). Sample items include, "How often do you have mood swings?" In its original validation study, the SOAPP-R was found to exhibit adequate sensitivity (0.81) and specificity (0.68). In a pilot study among Nigerian samples the SOAPP-R had a good reliability coefficient of **.85.**

Results

Descriptive Analysis of the Socio-demographic Characteristics of Respondents

Socio-demographic data of participants revealed that 400 respondents took part in the study with 75.5% being male, and 24.5% female. Also 50% of the participants were in Olabisi Onabanjo University, while 50% were in Chrisland University. Furthermore, 44.3% of the participants were in the faculty of physical sciences, 20.3% of the participants were in the faculty of social sciences, 12% in the faculty of Law, 1% in natural and applied sciences, 6.5% in management sciences, 5% in the faculty of chemical sciences and 11% in the faculty of health sciences. Also 43.5% of the participants were from the department of computer science, 13.3% were from the mass communications department, 6.5% were from the Business Administration Department, 1% from the department of Political Science, 6% were from the accounting department, 12% were from the department of Law, 1.8% were from the chemistry department, 1% were from the department of statistics, 3% were from the department of microbiology, and 12% were from the nursing department. Again 18.3% of respondents were at 100 level, 30.3% were at 200 level, 22.3% at 300 level, 24.8% at 400 level and 4.5% of the respondents are at 500 level. Additionally, 56.5% of the participants were identified as Christians, 42.5% as Muslims, and 1% as practicing traditional religions. Demographic characteristics based on the ethnicity of respondents revealed that 71.3% of the participants were Yoruba, 12% were Hausa, 15.8% were Igbo, and 1% were from other ethnic groups. The participants' age ranged between 16 years and 26 years (M = 20.00±2.14).

Test of Prevalence

Table 1

Frequency, Percentage, Mean, and Standard Deviation Showing the Prevalence of the Variables of the Study

				Prevalence						Pattern	
				None		Mild		Moderate		Severe	
	N	Mean	SD	F	%	F	%	F	%	F	%
Opioid	40	21.2	15.0	2	5.	22	55.	11	28.	46	11.

Misuse	0	5	8	2	5	0	0	2	0		5
Academic Burnout	400	50.39	15.42	38	9.5	151	37.8	171	42.8	40	10.0

The findings on the prevalence and pattern of opioid misuse as indicated in Table 1 revealed that 55% displayed a mild form of opioid misuse, 28.0% displayed a moderate form of opioid misuse, and 11.5% displayed a severe form of opioid misuse. The findings on academic burnout indicated that 37.8% experienced a mild level of academic burnout, 42.8% had moderate experience burnout, and 10.0% had severe experience of academic burnout.

Test of Relationship

Table 2: *Correlation Matrix Showing Relationships among Study Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Age	1										
2. Sex	-.01	1									
3. Name of University	-.04	.02	1								
4. Faculty	.09	.12*	.17**	1							
5. Department	.15**	.15**	.19**	.79**	1						
6. Level of Education	.13**	.06	.14**	-.18**	.01	1					
7. Religion	.09	.00	.14**	-.01	-.09	-.05	1				
8. Ethnicity	.03	.01	.01	-.01	-.05	-.03	-.06	1			
9. Academic Burnout	.04	.02	.04	.20**	.21**	-.09	-.20	.07	1		
10. Lifestyle	-.09	-.17**	-.00	.05	.08	-.02	-.03	-.11*	.04	1	
11. Opioid Misuse	-.03	-.06	-.03	.02	-.01	-.08	-.05	.09	.41**	-.03	1
Mean	20.00	1.25	1.50	2.64	4.82	2.67	1.45	1.47	50.39	14.6	21.2

										7	5
SD											1
					4.	1.				6.	5.
	2.1			2.0	9	1	.5	.7	15.	1	0
	4	.43	.50	8	2	6	2	9	42	4	8

Note: ** p < .01, *p < .05, n= 400.

The result in Table 2 showed the test of the relationship between variables indicated in the study. From the table, it was revealed that academic burnout had a significant positive relationship with opioid misuse [*r* (398) = .41; *p* <.05], which implies that an increase in academic burnout tends to increase opioid misuse among university undergraduates in Ogun state. Lifestyle had no significant relationship with opioid misuse [*r* (398) = -.03; *p*>.05]. The demographic characteristics of respondents based on the institutions revealed no significant association with opioid misuse [*r* (398) = -.03; *p*>.05],

The socio-demographic factors indicated that age [*r* (398) = -.03; *p*>.05], gender [*r* (398) = -.06; *p*>.05], faculty [*r* (398) = .02; *p*>.05], department [*r* (398) = -.01; *p*>.05], level of education [*r* (398) = -.08; *p*>.05], religion [*r* (398) = -.05; *p*>.05], and ethnicity [*r* (398) = .09 *p*>.05] of respondents had no significant relationship with opioid misuse.

Test of Hypotheses

Hypothesis One

This hypothesis stated that lifestyle factors (diet, exercise, alcohol, smoking and stress) will significantly, independently and jointly predict opioid misuse among university undergraduates.

This hypothesis was tested using multiple regression analysis, and the result is presented in Table 3.

Table 3: *Summary Table of Multiple Regression Analysis Showing the Prediction of Opioid Misuse by Lifestyle Factors*

Variables	**Beta (β)**	**T**	**P**	**R**	**R^2**	**F**	**Sig**	**P**
Diet	.11	2.40	<.05					
Exercise	-.28	-6.11	<.01					
Alcohol	.13	2.54	<.01	.58	.33	38.87	0.00	<.01
Smoking	.35	7.10	<.01					
Stress	.16	3.81	<.01					

The results of the analysis presented in Table 3 revealed that diet (β = .11, t = 2.40, p<.05), alcohol (β = .13, t = 2.54, p<.01), smoking (β = .35, t = 7.10, p<.01) and stress (β = .16, t = 3.81, p<.01) significantly and independently predicted opioid misuse among the university undergraduates. This implies that an increase in lifestyle factors (such as diet, alcohol, smoking and stress) will cause a significant increase in opioid misuse. However, exercise significantly and independently predicted opioid misuse negatively (β = -.28, t = -6.11, p<.01). This means that opioid misuse tends to decrease with a significant increase in physical exercise. The result in Table 3 further revealed that lifestyle factors (such as diet, exercise, alcohol, smoking and stress) significantly and jointly predicted opioid misuse among the participants [F (5,394) = 38.87, p<.01], which also accounted for 33% variance in the dependent variable (R^2= .33). In other words, about 67% of the variance in opioid misuse could be attributed to other variables outside that being studied.

Hypothesis Two

This hypothesis stated that academic burnout (emotional exhaustion, depersonalization and professional efficacy) will significantly, and jointly predict opioid misuse among university undergraduates in Ogun state. The hypothesis was tested using multiple regression analysis, and the result is presented in Table 4.

Table 4: *Summary Table of Multiple Regression Analysis Showing the Prediction of Opioid Misuse by Academic Burnout*

Variables	Beta (β)	T	P	R	R^2	F	Sig	P
Emotional exhaustion	.09	1.32	>.05					
Depersonalization	.35	5.56	<.01	.45	.20	32.72	.00	<.01
Professional efficacy	.80	1.67	>.05					

Table 4 revealed that the three sub-scales of academic burnout (emotional exhaustion, depersonalization and professional efficacy) significantly and jointly predicted opioid misuse among university undergraduates [F (3,396) = 32.72, p<.01], which also accounted for 20% variance in the dependent variable of opioid misuse (R^2= .20). In other words, about 80% of the variance in opioid misuse could be attributed to other variables outside the ones included in the study.Results in Table 4 further revealed that academic burnout (depersonalization) significantly and independently predicted opioid misuse among the participants (β = .35, t = 5.56, p<.01). This means that an increase in depersonalization will significantly cause an increase in the misuse of opioids. Table 4 also revealed that emotional exhaustion (β = .09, t = 1.32, p>.05) and

professional efficacy (β = .80, t = 1.67, p>.05) did not significantly and independently predict opioid misuse.

Hypothesis Three

This hypothesis stated that lifestyle and academic burnout will significantly and jointly predict opioid misuse among university undergraduates in Ogun state. The hypothesis was tested using multiple regression analysis, and the result is presented in Table 5 below:

Table 5: *Summary Table of Regression Showing the Prediction of Opioid Misuse by Lifestyle and Academic Burnout*

Variables	Beta (β)	R	R^2	F	Sig	P
Lifestyle	-.05					
		.41	.17	39.59	.00	<.01
Academic burnout	.41					

The result summarized in Table 5 showed that lifestyle and academic burnout significantly and jointly predicted opioid misuse among university undergraduates [F (2,397) = 39.59, p<.01], accounting for 17% variance in the dependent variable of opioid misuse (R^2 =.17). Based on this research finding, it is concluded that lifestyle and academic burnout are significant joint predictors of opioid misuse among university undergraduates.

Hypothesis Four

This hypothesis stated that there will be a significant relationship between age and opioid misuse among university undergraduates in Ogun state. The hypothesis was tested using Pearson Product Moment Correlation (PPMC) and the result is presented in Table 6.

Table 6: *Summary Table Showing the Relationship Between Age and Opioid Misuse*

Variables	N	Mean	Std. Deviation	Df	r	Sig	P
				398	-.03	.51	>.05
Age	400	20.00	2.14				
Opioid Misuse	400	21.25	15.08				

The result in Table 6 above revealed that the relationship between age and opioid misuse among university undergraduates in Ogun state was not significant [rxy (398) = -.03; P >.05]. This implies that changes in age are not significantly associated with opioid misuse.

Hypothesis Five

This hypothesis stated that gender will significantly influence opioid misuse among participants. The independent sample t-test was used to test the hypothesis and the result is presented in Table 7.

Table 7: *Independent t-test showing the Influence of Sex on Opioid Misuse*

Dependent Factors	gender	N	Mean	Std. Deviation	Df	t	Sig. (2-tailed)	P
Opioid Misuse	Male	302	21.79	16.05	398	1.26	.21	<.05
	Female	98	19.58	11.49				

The result summarized in Table 7 showed that gender had significant influence on opioid misuse [t (398)= 1.26; P <.05]. This was in such a way that male undergraduates (M= 21.79; SD= 16.05) displayed a higher mean score on opioid misuse compared to their female counterparts (M= 19.58; SD= 11.49).

Discussions

This study examined the prevalence and patterns of opioid misuse and its interaction with lifestyle and academic burnout among undergraduates in Olabisi Onabanjo University and Chrisland University in Ogun state. Consistent with previous studies (Akpunne et al., 2020; Akinnawo et al., 2021) the finding of this study showed a high prevalence of opioid misuse among undergraduates. According to a meta-analysis by Jordan et al. (2017), prescription opioid usage is more widespread than previously believed among people between the ages of 11 and 30. Also,10.1 million people between the age of 12 years and older were projected to have abused opioids in 2019, according to the National Survey on Drug Use and Health (NSDUH) (Substance Abuse and Mental Health Services Administration, 2020). This is consistent with that of Al-Qahtani et al., (2022), who showed in their study that non-medical use of opioid medications is prevalent among university students. The study claimed that most of the affected students abuse opioids mainly to enhance concentration while studying, maintain mental alertness, reduce sleep time and anxiety associated with preparation for the semester–end - examinations. This study's findings validate the findings of previous studies.

This study also found that that diet, alcohol, smoking and stress significantly and independently predicted opioid misuse. This supports the previous findings that opined that the lifestyle decisions such as diet, alcohol and nicotine (e.g. cigarette) consumption, as well as the use of psychoactive substances are some lifestyle choices common in the society which has harmful health consequences

(Balwan & Kour, 2021). Prior studies have shown that smoking and alcohol serve as a gateway to other substances including opioids (Makanjuola, et al., 2014; Osman et al., 2016). Daily diet is a very essential lifestyle decision that has a big impact on our health. The majority of students reported having poor diets, which include foods heavy in fat, salt, and sugar, low in fiber, and lacking in healthful foods (Man et al. 2020). The use of opioids causes anorexia, decreased food consumption, constipation and reduced gastrointestinal motility, all leading to malnutrition. However, a person's vulnerability to misusing opioids may be increased by poor nutrition and unhealthy eating habits. Unbalanced and deficient nutrition can affect mental health and lead people to turn to substance use for comfort (Mahundru et al., 2023). According to Makanjuola et al.'s (2014), drug addiction may be utilized by young people to deal with stress, preparation or reading for exams, building confidence, and burnout, which explains why its use is so rampart among undergraduates.

This study also found that regular physical exercise has significant inverse predictive influence on opioid misuse. In other words, opioid misuse tend to decrease with a significant increase in physical exercise. A possible reason for this outcome may be that physical exercise has been shown to have beneficial effects on mental health, relieve stress, and provide an enjoyable replacement for substance use (Lardier et al., 2021). The "endorphin hypothesis" states that physical activity causes the brain to produce more endogenous opioid peptides, which reduce pain and boost mood. Furthermore, considering the joint prediction among these variables, the findings revealed that lifestyle factors (such as diet, exercise, alcohol, smoking and stress) significantly and jointly predicted opioid misuse among the university undergraduates. The outcome of this finding supports previous research conclusions that unhealthy lifestyles such as poor diet, inactivity, substance abuse coupled with stress, as well as academic pressure may predispose people to psychoactive substance misuse.

This study also found that academic burnout (depersonalization) significantly and independently predicted opioid misuse among the university undergraduates. The finding is consistent with Salihu et al., (2017) that psychoactive substance users had about three times the chance of experiencing burnout. The outcome of this study further revealed that emotional exhaustion and diminished professional efficacy did not significantly and independently predict opioid misuse among the participants. This is contrary to the study conducted by Moghadam et al., (2020), which revealed that out of the three burnout factors, two: emotional exhaustion and diminished professional efficacy were found to predict opioid misuse. A possible reason for the outcome of this study may be because emotional exhaustion which refers to the feeling of being tired, and overloaded to the detriment of academic duties and responsibilities (Moghadam et al. 2020). Thus, individuals who consider themselves as lacking in resources and energy might be expected to manifest withdrawal, indifference, and apathy toward opioid use (Moghadam et al., 2020).

Furthermore lifestyle and academic burnout significantly and jointly predicted opioid misuse among undergraduates. This findings supports prior research (Apare & Enakpoya, 2024; Ballestar-Tarín et al., 2022; Smith & Flatley, 2011).Thus university students may be more susceptible to opioid usage due to lifestyle variables such as poor diet, inactivity, substance abuse coupled with stress, and academic pressure.No significant relationship was found between age and opioid misuse among the participants. This research finding negates that of Soremekunet al. (2021) who reported that students ages 18 to 24 misused opioids due to risk factors such as major depressive disorder, panic disorders, and generalized anxiety disorder due to extreme stress and pressure to perform well, not just academically but socially, athletically, and professionally.

Finally gender had a significant influence on opioid misuse with male reporting higher opioid than female participants. The result of this study supports previous literature which suggested that males may be more likely to misuse prescription opioids and prescription stimulants (Dumbili et al., 2021; NSDUH 2017; SAMHSA, 2016). Research show that females use drugs differently and respond to substance differently (NIDA, 2020) and may be more susceptible to cravings and relapse (Hitschfeld et al., 2015).However, when viewed from the functionary theory of deviance it seems more appropriate to view drug use as the preserve of either gender, because some drug types are viewed as socially acceptable in society, and people use drugs in society even to the point of misuse or addiction.

Conclusion

There is a high prevalence of Opioid misuse among undergraduates of Olabisi Onabanjo and Chrisland Universities. Also, diet, alcohol consumption, smoking (nicotine) and stress are significantly and independently predictors of opioid misuse. Also academic burnout (emotional exhaustion, depersonalization and professional efficacy) are strong joint predictors of opioid misuse. Gender also has significant influence on opioid misuse with males scoring higher than females. Based on the findings of this study, it is essential to implement effective prevention and intervention programs to reduce the incidence of opioid misuse and its related negative consequences as opioid misuse is found to be prevalent among university undergraduates in Ogun State.

Limitations of the study

This study was carried out on a sample of 400 undergraduates who to the best of our knowledge had no previous diagnoses of substance use. Hence the results might be different from that of institutionalized or out patients with substance use disorder. Also due to the limited number of participants, generalization of the results of this study should be approached with caution.
Conflicts of interests. Authors declare that no conflict of interests exists in this study

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