Original Article

Relationship Between Psychopathological Symptoms, Psychoactive Substances, And Antisocial Behaviour Among Undergraduate Students of The University of Lagos, Nigeria

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ABSTRACT

Background

Antisocial behaviour and its attendant effect are undesirable as it often negatively impacts individuals, communities, and overall social cohesion. Given that its threat to students' mental health and the smooth operation of post-secondary institutions is global, this unsettling trend has raised serious research concerns among interested stakeholders worldwide.

Objective

The study assessed the relationship between psychopathological symptoms, substance abuse, alcohol use, and antisocial behaviour among undergraduate students.

Method

The research utilised a cross-sectional survey method with one hundred (100) undergraduates purposively selected as participants. The Psychopathic Deviate scale, Symptom Distress Checklist (SCL-90), Drug Abuse Screening Test (DAST), and Alcohol Screening Questionnaire (AUDIT) were adopted to gather data for the study.

Result

The findings showed that there is a significant positive correlation ($r = 0.582$, $p<.01$) between substance abuse and antisocial behaviour; additionally, there is a significant positive correlation ($r = 0.501$, $p<.01$) between alcohol abuse and antisocial behaviour. Psychopathology factors (somatization, obsessive, interpersonal, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, neuroticism, overall SDC) and antisocial behaviour also show a significant positive correlation at ($r = 0.248$, $p<.05$; $r = 0.238$, $p<.05$; $r = 0.449$, $p<.01$; $r = 0.404$, $p<.01$; $r = 0.400$, $p<.01$; $r = 0.461$, $p<.01$; $r = 0.503$, $p<.01$; $r = 0.314$, $p<.01$; $r = 0.408$, $p<.01$; $r = 0.314$, $p<.01$ & $r = 0.471$, $p<.01$) respectively.

Conclusion

The study concluded that psychopathological symptoms and substance and alcohol abuse are positively associated with antisocial behaviour, thus likely to induce antisocial behaviour among undergraduates in Nigeria.

Keywords: Psychopathology, Antisocial behaviour, Substance and alcohol abuse, undergraduates

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Introduction

The global quest for adolescents and young adults to seek and be offered university admission cannot be quantified, especially in Africa. Nigeria's literacy rate grew by 13.9% between 2010 and 2021 to stand at 77.62% (1), leading to a rise in the number of university students. The increase in enrolment is accompanied by diversities in students' nature, character, and attributes, with attendant challenging behaviour and habits. Given the unpredictable nature of challenges on campus, entrance to the University without appropriate psychological and emotional preparation for what lies ahead—even for those who seem to have had some preparation—seems inadequate. Ordinarily, the University, as a citadel of learning, is expected to be a serene environment with every student paying close attention to their primary assignment on campus. However, the psychological, social, academic, and associated university challenges result in psychological distress and adjustment issues on campus, resulting in conditions such as acting-out behaviour, antisocial behaviour, substance and alcohol use, and abuse, among other social vices abound on campus, sometimes it appears as a stand-alone condition while in most times present as a co-occurring or co-morbid condition.

Antisocial behaviour is any conduct that disregards other people and can potentially harm society, whether intentionally or accidentally. Antisocial behaviour is conceptualised as such when it is deemed contrary to prevailing norms for social conduct (2) and bordering on crime and criminalities or damaging behaviours marked by deliberate aggression and overt and covert hostility toward others (3). According to (4), various factors (biological, psychopathological, psychological, family, and social) that typically function in concert might impact violent or antisocial behaviour. Accordingly, investigations proving a direct correlation between mental health challenges and committing a crime or violent or antisocial conduct are scarce because it is a widely held misconception (5). Over the years, several researchers have examined the relationship between substance abuse and antisocial behaviour and have found a significant association between antisocial behaviour and substance use disorder (6,7,8,9,10,11).

Furthermore, psychopathic and antisocial personality disorder (APD) are significant risk factors for criminal behaviour and incarceration (12,13,14), and young undergraduates with behavioural disorders are faced majorly with the challenges of poor academic performance, dysfunctional families, drug use, mental suffering, suicide, and criminal activity (15). However, not much has been said by available pieces of literature about the relationship between psychopathological symptoms and antisocial behaviour. Thus, the association between psychopathology and these influencing factors for antisocial behaviour should be established, nevertheless. It is, therefore, pertinent to look into the relationship between psychological distress and antisocial behaviour among undergraduate students at the University.

Undergraduate years in the University are a phase in the development and transition trajectories characterised by daily academic and social challenges resulting in confusion, doubt, and emotional strain affecting the undergraduate's ability to deliver on their primary assignment in the University – psychopathological symptoms. Psychopathological symptoms refer to the non-specific symptoms of stress, anxiety, depression, and others experienced by undergraduates due to challenges on campus. High levels of psychopathological symptoms are signs of common mental illnesses like depression and anxiety disorders, but a few are signs of poor mental health (16). Undergraduates, during their period in the University, encounter numerous adjustments and challenges, which are categorised into (i) internalizing disorders, which include emotional issues like sadness, depression, and anxiety, and (ii) externalizing disorders, where internal conflicts are expressed via violent and delinquent behaviour (17).

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According to (18), one of college campuses' most common mental health problems is adjustment problems manifesting in anxiety, depression, and violent and delinquent behaviour. As a result, universities and other tertiary institutions are constantly working to improve the mental health services they offer their student populations (19). Violent and Delinquent behaviour is a function of antisocial behaviour, a sign of externalizing illnesses in teenagers and university undergraduates, is diagnosed medically as conduct disorder or antisocial personality disorder (ASPD) and affects 6–18% of men and 2-9% of women under the age of 18. Its prevalence has increased recently (20). Several scholars have delved into the cause of antisocial behaviour among toddlers, adolescents, and young adults, which have yielded varying results, but that of the university undergraduate has largely been neglected. For example, active empathy impairments are associated with antisocial behaviour among toddlers, and early identification of empathy deficits in toddlers may be aided in the identification of those who may develop ASPD and psychopathy later in life (21,22). Studies have also shown considerable overlap between psychopathological syndrome (depression, anxiety, psychosis, thought problem) and antisocial behaviour among adolescents through to middle adulthood (23,24). Therefore, for this study, psychopathological symptoms are conceptualised as and limited to those symptoms captured by Symptom Checklist – 90 (SCL-90). One variable that correlated highly with antisocial behaviour is alcohol/substance abuse.

Drug and substance abuse, as defined by the World Health Organisation, is the harmful use of psychoactive substances like alcohol and illicit drugs (25). Due to the fact that substance abuse kills young people morally, socially, psychologically, and physically, it has become a concerning global issue. According to (26), In 2021, there were more than 296 million drug users worldwide, up by 23% from the decade before, and 2.2% of people suffered from substance use disorders. In the meantime, 39.5 million people worldwide suffer from drug use disorders, a 45% increase in the previous ten years (27).

Similarly, in a survey by the United Nations Office on Drug and Crime in Nigeria, 14.4% (14.3 million) of adults in Nigeria between the ages of 15 and 64 engage in drug addiction (28). In addition, drug and other substance abuse, as well as related crimes, have contributed to a notable increase in the number of young people incarcerated in Nigeria in recent years (29). Substance abuse has also been linked to student unrest on campus, disruptions to the academic calendar, and subpar academic performance. It has been found to lower undergraduate chances of graduating from school or obtaining and maintaining a stable job. On the other hand, a number of studies have demonstrated a positive correlation between alcoholism and antisocial behaviour in families, both in childhood and adulthood. Years later, there is still a significant chance that someone who started antisocial behaviour later in adolescence will become dependent on alcohol, nicotine, or cannabis (11,30,7).

Additionally, several other works of literature have established a relationship between antisocial behaviour and alcohol dependence. Others have examined the etiology of the relationship over time (31,32). While some others contend that conduct disorder is a genetically influenced risk factor for alcohol dependence and that alcohol dependence precedes conduct disorder as a result of genetic factors (31). Hence, launching a probe into the relationship between and among these variables is a necessary expedition that must be undertaken.

Finally, since antisocial behaviour in the Universities is a trend that the university authority has tried to minimize and, if possible, eradicate, the variables that contribute to or elicit the behaviour are often neglected. Accordingly, this study deemed it worthy of examining the role of psychopathology, substance, and alcohol abuse on antisocial behaviour among undergraduate students since the

afore-stated variables have not been holistically investigated on antisocial behaviour previously. Doing this provide in-depth information on why undergraduate students get involved in antisocial behaviour in Nigeria.

Therefore, this study examines the role of psychopathology symptoms, alcohol use, substance abuse, and life satisfaction on antisocial behaviour among university undergraduate students. Based on the forging and the review of relevant literature, we proposed the following research hypotheses:

1. There will be a significant positive relationship between undergraduate students' scores on psychopathology (SCL-90) and antisocial behaviour (PD scale) among undergraduate students.
2. There will be a significant positive relationship between undergraduate students' scores on substance abuse (DAST) and antisocial behaviour (PD scale) among undergraduate students.
3. There will be a significant positive relationship between undergraduate students' scores on alcohol abuse (AUDIT) and antisocial behaviour (PD scale) among undergraduate students.

MATERIALS AND METHODS

Research Setting

The study was conducted at the University of Lagos, located in the southwestern region of Nigeria. University of Lagos is a public university founded in 1962 by the Federal Government of Nigeria. As of the year 2022, the population of students in the University was 62,215 (Male = 51.5% & Female = 48.5%), including undergraduate and postgraduate students. During the same period, the University has twelve faculties, six institutes, twenty-six centres, 110 undergraduate and 129 postgraduate programmes.

Participants

The participants were undergraduate students of the University of Lagos and were selected through snowball sampling. A sample of 111 undergraduate students participated in the research study. Out of the 111 questionnaires administered, 100 duly completed questionnaires were retrieved and analysed for the research study; some were not returned, and others were filled haphazardly, rendering the questionnaire invalid. They were made up of 66 males and 34 females. The participants' ages ranged between 16 and 30 years.

Design

The research utilised a cross-sectional survey method. A survey was used because the researcher gave a questionnaire to the respondents, and none of the variables were manipulated. The dependent variable is antisocial behaviour, while the independent variables are: psychopathological symptoms, substance abuse, and Alcohol use.

Sampling Technique

The study employed purposive and snowball sampling techniques to elicit participant responses. The purposive sampling technique was used because the researcher had already chosen the kind of people who participated in this study. The snowball sampling method was also adopted because the researcher used one participant who helped identify other participants in this study. Therefore, it is by referral of one substance abuser to the other because substance use is prohibited on campus.

Research Instruments

A Self-developed Questionnaire by the Researchers to obtain the sociodemographic variables such as age, sex, marital status, level, birth order, and department.

Antisocial Behaviour: This variable was measured using the Nigerian-validated version of the Psychopathic Deviate (PD) scale by (33). Scale 4 of the Minnesota Multiphasic Personality Inventory (MMPI) is a 72-item assessment. It is given as an independent test because it can be used to evaluate various populations. Thirty of the 72 items comprise the K Scale, one of the MMPI's correction/validity

scales that measures how much a client truly responded to the entire set of questions. Of the 72 items, 51 are intended to gather clinical information about the respondent's personality. Certain items are shared by both the PD scale and the K scale, creating an overlap. (34) provided the original psychometric properties for American samples, while those for Nigerian samples were provided by (33). According to (34), the scale has a coefficient reliability of .80.

Psychopathology: This variable was measured using the Nigerian-validated version of the Symptom Checklist (SCL-90). This 90-item inventory was created by (35) to assess ten categories of symptoms linked to distress in psychiatric outpatients and the anguish that results from finding it difficult to live with others. The categories are:

A. Somatization- body pain, discomfort, and dysfunction.
B. Obsessive-compulsive- irresistible thoughts, impulses, and actions.
C. Interpersonal sensitivity- discomfort in social situations.
D. Depression – loss of vital energy, interest, and motivation.
E. Anxiety- restlessness, nervousness and tension
F. Hostility – the feeling of anger, hatred, repression, and unfriendliness.
G. Phobic anxiety- irrational fear and avoidance of objects, places, and situations.
H. Paranoid ideation – suspiciousness, distrustfulness, and blaming others.
I. Psychoticism - hallucinations, delusions, and externally manipulated thought.
J. Neuroticism – poor sleep and appetite, feelings of un-wellness.

The SCL-90 was normed on the population of 1002 psychiatric outpatients, 423 psychiatric patients with 973 adult non-patients, 973 adolescents, and 806 normal children aged 13-19 adolescent non-patients. The total samples are made up of males' and females' samples. The inventory's alpha internal consistency reliability coefficient in a psychiatric population ranged from .77 (psychoticism) to .90 (depression), and the test-retest reliability coefficient from .78 (hostility) to .90 (phobic anxiety), indicating the construct validity of the tool.

Drug Abuse: This variable was measured using the Drug Abuse Screening Test (DAST) developed by (36) to measure drug abuse with an alternate rating format ranging from Yes to No. It is made up of 20 items. The authors of the scale reported internal consistency of .99.

The Alcohol Use Disorders Identification Test (AUDIT), a 10-item screening tool, was created by (37) in order to evaluate drinking habits, alcohol consumption, and problems related to alcohol. A study including patients from six different countries validated it. The AUDIT screening tool is a valid and dependable way to detect problem behaviours related to alcohol abuse and a valid way to gauge the extent of alcohol dependence. The AUDIT appears less accurate in older adults, but there is evidence that it is effective in adolescents and young adults. It seems appropriate for use with women, minorities, and college students. Participants are encouraged to answer the AUDIT questions regarding standard drinks in administering the questionnaire. The researcher ran a pilot study with 30 undergraduate students and obtained a Cronbach alpha reliability of 0.94. Each response has a score ranging from 0 to 4. All response scores are added for a total score. The lowest score is 0, and the highest score is 40.

Procedure

Ethical approval was obtained from the university research ethics committee, while consent was obtained from the participants. The researcher approached the participants in various places within the school premises and sought their consent. Questionnaires were given to participants who

agreed to participate after establishing rapport. The researcher ensured that participants understood the contents of the questionnaire and that they were completed correctly before collecting them. Ample time was given to the participants to read the questionnaire and ask questions where they were confused. The questionnaires were collected after filling them, and they were scored according to the manual of the scales.

Data Analysis

The data collated was entered into a Statistical Package of Social Science (SPSS). The data was analyzed using both descriptive and inferential statistics. Pearson moment correlation was used to test the relationships among the variables, while an independent t-test was used to compare the variables' differences.

RESULTS

Table 1 revealed that male participants had a lower mean score of (M= 27.51; SD= 5.60) in Antisocial behaviour than the female participants, with a mean score (M= 28.43; SD= 4.90). Likewise, younger participants (16 – 20 years) had a higher mean score (M= 26.31; SD= 5.08) compared to the older participants (21 – 25 years) (M= 26.77; SD= 5.59) and (21 – 25 years) (M= 29.13; SD= 4.73) Also, married participants had a higher mean (M= 30.11; SD= 5.41) compared single participants (M= 26.92; SD= 4.02). Also, a participant who scored low on substance abuse had a low score on antisocial behaviour (M= 24.64; SD= 3.95) compared to those who scored high (M= 32.72; SD= 3.60). Further, a participant who scored low on alcohol abuse had a low score on antisocial behaviour (M= 25.06; SD= 4.35) compared to those who scored high (M= 31.01; SD= 4.99). Additionally, a participant who scored low on psychopathology had a low score on antisocial behaviour (M= 24.04; SD= 3.80) compared to those who scored high (M= 29.69; SD= 5.15). Finally, participants who scored low on life satisfaction had low scores on antisocial behaviour (M= 26.61; SD= 5.57) compared to those who scored high (M= 277.77; SD= 5.12).

Table 2 shows a significant positive correlation between psychopathology factors: somatization ($r = 0.248$, $p<.05$), obsessive ($r = 0.238$, $p<.05$), interpersonal ($r = 0.449$, $p<.01$), depression ($r = 0.404$, $p<.01$), anxiety ($r = 0.400$, $p<.01$), hostility ($r = 0.461$, $p<.01$), phobic anxiety ($r = 0.503$, $p<.01$), paranoid ideation ($r = 0.314$, $p<.01$), psychoticism ($r = 0.408$, $p<.01$), neuroticism ($r = 0.314$, $p<.01$), overall SDC ($r = 0.471$, $p<.01$) and antisocial behaviour. This shows that participants who score high on psychopathology factors also reported high scores on antisocial behaviour. This indicates that participants with high psychopathology are prone to antisocial behaviour.

Table 3 shows a significant and positive correlation between substance abuse and antisocial behavior ($r = 0.582$, $p<.01$). This revealed that high substance abuse will lead to higher antisocial behaviour among undergraduate students.

Table 4 shows a significant and positive correlation between alcohol abuse and antisocial behaviour ($r = 0.501$, $p<.01$). This shows that high alcohol abuse will lead to higher antisocial behaviour among undergraduate students.

DISCUSSION

The study sought to determine the relationship between psychopathology, psychoactive substances and antisocial behaviour among undergraduate students of the University of Lagos. Three hypotheses were tested and formed the basis for the discussion.

The first hypothesis concerned establishing the relationship between psychopathology and antisocial behaviour among undergraduate students. The result revealed a significant positive correlation between psychopathology factors (somatization, obsessive, interpersonal, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, neuroticism, and overall SCL-90) and antisocial behaviour. This implies those participants who scored high on psychopathological symptoms also reported high scores on antisocial behaviour,

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except for the studies of (23,24) that found considerable overlap between psychopathological syndrome (depression, anxiety, psychosis, though problem) and antisocial behaviour, there is no other study that is either for or against our finding, which attests to the paucity of literature in this direction. One main reason for the paucity of literature may be because antisocial behaviour has often been categorized as part of the psychopathological symptom rather than a stand-alone condition.

Hypothesis two examined the relationship between substance abuse and antisocial behaviour among undergraduate students. The result indicated a significant and positive correlation between substance abuse and antisocial behaviour. This finding is supported by the study of (6), who reported that antisocial behaviour is associated with substance abuse disorders, but the nature of the relationship is complex. Additionally, they reaffirmed that there is disagreement over whether substance abuse causes antisocial behaviour or vice versa, but it is undeniable that antisocial behaviour and substance use disorders are closely associated during adolescence and adulthood. Teens with conduct disorders are, therefore, more likely to develop substance use disorders than people without them, and they also frequently do so more severely (6). Furthermore, the association between antisocial behaviour and substance use problems extends into adulthood, as reported by (7), in which they found that drug addiction is the most prevalent secondary diagnosis for individuals diagnosed with an antisocial personality disorder.

The third hypothesis sought to establish a positive relationship between alcohol abuse and antisocial behaviour among undergraduate students. The result indicates a significant positive correlation between alcohol abuse and antisocial behaviour. This corroborates the finding of (30), which revealed that alcoholism is positively related to antisocial behaviours of both childhood and adulthood and runs in families. Our finding is also in line with the work of (7). Researchers studying people with antisocial personality disorder discovered that alcoholism and drug addiction were the most common secondary diagnoses (7). They also discovered that people who start antisocial behaviours later in adolescence are still at a high risk of abusing alcohol (11,30, 31).

Conclusion

It is evident from this study that psychopathological symptoms, substance use, and alcohol abuse as factors are positively associated with and likely to influence antisocial behaviour among undergraduates in Nigeria. However, whether psychopathological symptoms, substance use, and alcohol abuse influence antisocial behaviour or vice versa is an unending debate, but it is safe to say that there is a strong relationship between these variables, especially among university undergraduates.

Limitations of the Study

Despite the conclusion of the present study, the data obtained was gathered from one university campus and cannot form the basis for generalizing our findings, and the fact that psychoactive substances are highly prohibited on campus affected our sample size. Another potential limitation of the study is the use of a self-reporting instrument, which raises concerns about the potential tendency for demand characteristics the participants may want to show.

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Table 1: Means and Standard Deviations of participants' scores on the variables

Variables	Level	N	Antisocial Behaviour	
			Mean	SD
Sex	Male	66	27.51	5.60
	Female	34	26.43	4.90
Age	16 – 20	21	26.31	5.08
	21 – 25	59	26.77	5.59
	≤ 26	20	29.13	4.73

Marital status	Single	93	26.92	5.41
	Married	7	30.11	4.02
Level	1	15	27.68	6.09
	2	23	27.42	4.99
	3	30	28.45	5.68
	4	13	25.74	6.23
	5	19	23.70	3.32
Birth-order	1st	41	27.09	5.52
	2nd	31	26.92	5.80
	3rd	17	26.31	4.78
	4th	7	30.66	4.96
	5th	4	25.80	0.00
Substance abuse	Low	69	24.64	3.97
	High	31	32.72	3.60
Alcohol abuse	Low	65	25.06	4.35
	High	35	31.01	4.99
Psychopathology	Low	45	24.04	3.80
	High	55	29.69	5.15
Life Satisfaction	Low	54	26.61	5.57
	High	46	27.77	5.12

Hypotheses 2: There will be a significant positive relationship between undergraduate students' scores on substance abuse (DAST) and antisocial behavior (PD scale) among undergraduate students.

Table 3: Relationship between substance abuse and antisocial behaviour

Variables	Mean	SD	1	2
1. Substance abuse	6.37	7.26	-	
2. Antisocial behaviour	27.14	5.37	.582**	-

*p <.05; **p <.01

Hypotheses 3: There will be a significant positive relationship between the scores of undergraduate students on measures of alcohol abuse (AUDIT) and antisocial behavior (PD scale) among undergraduate students

Table 4: Relationship between alcohol abuse and antisocial behaviour

Variables	Mean	SD	1	2
1.Alcohol abuse	6.22	8.29	-	
2.Antisocial behaviour	27.14	5.37	.501**	-

*p <.05; **p <.01

Hypothesis 1: There will be a significant positive relationship between the scores of undergraduate students on measures of psychopathology (SCL-90) and antisocial behaviour (PD scale) among undergraduate students.

Table 2: Relationship between Psychopathology

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Antisocial behaviour												
2. Somatization	.248*	1										
3. Obsessive	.238*	.471**	1									
4. Interpersonal	.449**	.669**	.456**	1								
5. Depression	.404**	.669**	.568**	.754**	1							
6. Anxiety	.400**	.574**	.422**	.687**	.667**	1						
7. Hostility	.461**	.529**	.379**	.518**	.583**	.609**	1					
8. Phobic anxiety	.503**	.432**	.264**	.516**	.493**	.679**	.760**	1				
9.Paranoid ideation	.314**	.543**	.479**	.398**	.534**	.644**	.629**	.618**	1			
10. Psychoticism	.408**	.554**	.464**	.562**	.739**	.704**	.729**	.699**	.655**	1		
11. Neuroticism	.314**	.574**	.355**	.540**	.594**	.629**	.822**	.708**	.642**	.745**	1	
12.Symptom Distress Checklist	.471**	.771**	.624**	.791**	.863**	.837**	.810**	.757**	.751**	.869**	.819**	1
Mean	27.14	16.06	15.64	12.63	18.47	12.00	7.74	6.92	8.60	11.86	8.24	118.2
Std	5.37	8.20	7.73	8.01	11.28	8.12	6.45	6.47	5.24	8.86	6.83	61.4

(SCL90) and Antisocial behaviour

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

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

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