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Aggressive Behaviour in Nigerian University: Examining the Role of Sleep Quality and Examination Anxiety

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Abstract

Recently, aggressive behaviour has taken another dimension from being perpetrated only in secondary schools but tertiary institutions. This disturbing trend has generated immense research concern among concerned stakeholders in an emerging country like Nigeria. This is because this menace can affect students' psychics and, simultaneously, the smooth running of tertiary institutions. The study investigated the roles of insomnia and examination anxiety on aggressive behaviour among undergraduates. The study adopted a cross-sectional survey design with four hundred eighty-five (485) undergraduates purposively selected as participants. The Aggressive Behaviour Scale (ABS), Sleep Quality Scale (SQS), and Test Anxiety Scale (TAS) were used to gather data for the study. The results revealed that 35% of the respondents significantly reported low-level aggression, while 65% reported high aggression. There was a significant positive relationship between insomnia ($r=.242, p<0.01$) and aggressive behaviour. Also, examination anxiety ($r=.26, p<0.01$) had a significant positive association with aggressive behaviour. There was a significant joint influence of insomnia and examination anxiety on aggressive behaviour [$F(2,483) = 42.96, R^2 = .151; p < .01$]. Further results show that insomnia ($\beta=.29; t=6.88, p<.05$) and examination anxiety ($\beta=.31; t= 7.26, p<.01$) were significant predictors of aggressive behaviour among undergraduate sampled. While demographic variables- age, sex, and ethnicity have no significant individual and joint prediction of aggressive behaviour. Therefore, the study recommended educating students on the impact of insomnia and examination anxiety on themselves and others while taking steps to mitigate its effect is essential to prevent aggressive behaviour in the university.

Key words: Aggressive behaviour, Sleep quality, Examination Anxiety, University.

1. Introduction

Aggressive behaviour among university students has thus lately become a significant concern for teachers, parents, psychologists, and society. This is due to the negative consequences of this behavior in the school environment and society (Ojukwu, Chukwuemeka, & Awoke, 2020). Several studies have reported a high prevalence of aggressive behaviour among university students. For example, in a study conducted by Taillieu, Brownridge, Sareen, Afifi, and Reyes (2015), they reported 29% physical aggression, 68% verbal aggression, and 54% relational aggression among Canadian undergraduate students. Similarly, O'Connor, Tan, and Manochio (2020) reported 21% physical and 43% verbal aggression among Australian undergraduates.

Scholars have defined aggressive behaviour from diverse perspectives; aggressiveness refers to any behaviour which is intended to harm other people (Obiagaeri & Isiguzo 2017). It is characterized by applying physical force to damage or injure. It involves acts that are intended to destroy or kill. Paul-Cookey and Iwuama (2011) see aggression among students as all shapes of violent acts by youth perpetrated in the school environment affect the schooling process. Also, Brehm, Kassin, and Fein (2015) saw aggression as behaviour intended to harm another individual. Thus, aggressive behaviour refers to any behavioural act that hurts, harms, or destroys, which must be intended or deliberate.

Pearl (2013) studied aggression in three ways: physical-verbal, passive, and direct-indirect. Some examples of physical aggression include pushing, forcing, pulling, beating, and biting. Other instances of aggression towards peers



are upsetting and hurting, which could lead to emotional trauma on the part of peers being assaulted. Aggression may also be categorized in two ways: active aggression, a goal-oriented behaviour meant to upset another person to make that person suffer. Secondly is passive aggression, demonstrated by hurting the other person and preventing them from achieving their aim. Another kind of aggression is direct aggression which occurs due to sending directly to the counter person the damaging stimulators which might aggravate the counter person. Indirect aggression, on the other hand, is the damaging stimulators sent to the counter person indirectly (Dehila, 2012).

Researchers have concluded that adolescents who are aggressive at school exhibit a very forceful need for social recognition; they would like to be considered energetic, socially welcomed, distinguished, and stubborn by their peers or classmates. Being expressed differently, aggression to some authorities suggest the quest for being demotic, rulership, and power results in the engagement of numerous adolescents in unwholesome behaviours, giving them a chance to develop the social values they desire. Indeed, it has been recorded that aggressive adolescent usually showcase negative attitudes that oppose authorities such as the police, the constitution, the law, the school, and teachers (Obiagaeri & Isiguzo 2017). Nevertheless, aggressive behaviour can be reduced because it is not inherited but a learned behaviour. Studies have searched for factors responsible for aggressive behaviour tendencies, but the role of insomnia and examination anxiety has been given less attention.

Insomnia, also called loss of sleep, is a psychological disorder characterized by the inability to have sufficient sleep and has been observed to be responsible for poor daily functioning. Conversely, sleeplessness that emanates from trouble with sleep initiation (falling asleep), sleep maintenance (remaining asleep), sleep duration (waking early in the morning), and non-restorative sleep (waking up and feeling un-refreshed) are all referred to as insomnia (Poceta & Mitler, 2018). Ideally, an individual is expected to sleep for 9 hours and 15 minutes of sleep children need 10 hours, and adults need 8 1/4 hours (Kutluhan, Ayse, Neriman, & Seval, 2011). The person living with insomnia has difficulty falling asleep, staying asleep, and experiencing frequent waking up during the night with difficulty going back to sleep. It is also characterized by waking up too early in the morning or having unrefreshing sleep (APA 2013).

Insomnia symptoms meet diagnostic criteria when it causes one to be unable to experience restorative sleep. This non-restorative sleep can be linked to insomnia if any other condition or disorder does not create it, and symptoms must have persisted for at least three months, even when the chance of refreshing sleep is available. Daily functioning must also be impaired before it can be considered an insomniac disorder; insomnia caused by other disorders is called secondary insomnia, and what is now called insomnia disorder is called primary insomnia (APA 2013). The prevalence of insomnia and its impacts have consistently been reported. Traumatic events, poor living conditions, and night activities have increased the possibility and incidence of insomnia among Nigerian undergraduates. In addition, some studies have highlighted alcohol use, high-stress levels due to academic pressures, financial concerns, and social issues as factors contributing to the high prevalence of aggressive behaviour among undergraduate students (Testa, Livingston, Collins, & Theil, 2019; Krieger, Yeomans-Maldonado, & Smith, 2019). However, a lack of awareness of the impact of insomnia among undergraduates might have given it an unfettered incursion into the learning domains of students, with the propensity of leaving behind colossal adverse effects on their academic output. Research findings have reported that those who are victims of insomnia are three times more in danger of experiencing mental health challenges than people without insomnia disorder (Ohayon and Roth, 2003). Studies have also demonstrated that individuals with shorter sleep duration have a higher level of hostility, partly related to psychiatric issues. Others concluded that poor sleep experience and low sleep quality were related to increased reactive aggression and lower sleep quality is related to poor tendencies to control anger and higher susceptibility to becoming angry (Granö, Vahtera, Virtanen, Keltikangas-Järvinen, & Kivimäki, 2008; Freitag, Ireland, & Niesten, 2017; Hisler 2016). It can, therefore, be said that undergraduates who find it difficult to sleep or avoid sleeping may turn aggressive due to their lack of sleep.

Examination anxiety, also called test anxiety in the research literature, is an uneasiness or apprehension experienced before, during, and after an examination because of concern, worry, or fear of uncertainty (Nnorom, Anyanwu, & Ezenwagu 2019). It was defined by Zeidner (2008) as a set of phenomenological, physiological, and behavioural responses that accompany concern about possible negative consequences or failure on an examination or similar evaluative situation. It is a feeling that someone might have in a situation where performance counts or the pressure to do well is intense. Some behavioural manifestations of test anxiety among students include (but are not limited to) the following: wanting to cry, leaving the test-taking room not to take the test, and feeling of anger or helpless and shaky hands. If this experience persists, it can constitute a severe problem affecting the academic performance of the



individuals involved. Test anxiety is not entirely bad; in fact, a low level of test anxiety is normal and necessary among students to maintain focus and galvanize them into action, preparing, plotting, and perfecting strategies that will guarantee optimum success in the examinations. It is needed to motivate and help the students to stay mentally and physically alert (Birjandi & Alemi, 2010).

Examination anxiety has an immense negative impact, hence students' low academic performance in schools. This is a physiological condition with students' extreme stress, anxiety, and discomfort during or before taking examinations. Anxiety creates significant barriers to learning and academic performance (Andrews & Wilding, 2004). Similarly, examination anxiety is prevalent among the student population of Nigerian tertiary institutions (Onyeizugbo, 2010). However, when the anxiety or level of arousal exceeds that optimal level, the result is a decline in performance. When anxiety is in its severe form, some students experience genuine academic problems. Their minds go blank, they experience shakes, their hands go numb, and they suffer from several sudden disabilities associated with anxiety during the examination. However, the impact of examination anxiety is not limited to poor academic performance but could also result in aggressive behaviour. Chung et al. (2019) investigated the relationship between anxiety proneness and aggressive behaviour in adolescents in a quantitative, large-scale cross-sectional study conducted in Korea and found that a higher risk of anxiety was associated with total aggression scores. Thus, it may be deduced that when undergraduates have intense examination anxiety, it may lead them to engage in aggressive behaviour. Based on this premise, the present study examines the role of insomnia and examination anxiety in aggressive behaviour among undergraduates.

Aggressive behaviour has taken on a new dimension, from secondary schools to universities and other post-secondary institutions, with its attendant problems. Despite the growing body of research on aggressive behaviour, the role of insomnia and examination anxiety is relatively scarce in the literature. However, few studies on aggressive behaviour focused more on secondary school students, with a little study on university students. Thus, the present study aims to fill the gap in the literature by investigating the role of sleep quality and examination anxiety on aggressive behaviour among undergraduates through the following specific objectives.

- i. To determine the prevalence rate of aggressive behaviour among undergraduates
- ii. To examine the role of quality of sleep on aggressive behaviour among undergraduates.
- iii. To determine the impact of examination anxiety on aggressive behaviour among undergraduates.
- iv. To ascertain the joint prediction of sleep quality and examination anxiety on aggressive behaviour.
- v. To examine the influence of socio-demographic factors (age, gender, and family type) on aggressive behaviour among undergraduates.

2. Research Methods

The study adopts cross-sectional survey research. With 486 Participants (305 males and 181 females), undergraduates selected using a purposive sampling technique. The ages of the participants ranged from 17 to 31 years. The study population comprises male and female undergraduate students from various departments and faculties attending Universities in Lagos State. The instruments for data collection were divided into four sections A - D, with section A collecting socio-demographic data. Other instruments are Buss & Perry's (1992) Aggressive Behaviour Scale used to collect data on aggressive behaviour, while Yi, Shin, & Shin, (2006) 25-items Sleep Quality Scale was used to collect data on sleep quality. The Driscoll (2006) 10-items Test Anxiety Scale was used to gather data on examination anxiety.

The Psychology Ethics Committee (PEC) of the University of Lagos approved the concept for this study. Data for this study were collected from the students across levels in different rendezvous and libraries within the last ten days of the examination. The data were collected after the researcher and research assistant met the students and briefed them about the purpose of the study, seeking their cooperation. Those who indicated interest by volunteering were allowed to participate in the study by issuing a set of questionnaires and consent forms to fill out and return to the researchers. While the data analysis was done using the statistical package for Social Sciences (SPSS) version 24.

3. Analysis of Result

The result of the descriptive statistics shows that 113(23.3%) of the respondents fall between the age bracket of 17-21 years, larger percent 369(75.9%) belong to the age bracket of 22-26 years, 4(0.8%) fall between the age range of 27 years old and above. As regards the gender of the respondents, 305 (62.8%) were male, and 181 (37.2) were female. In respect to the ethnicity of the respondents, majority 374(77%) were Yoruba, 18(3.7%) were Hausa, 94(19.3%) were Igbo. In addition, 420 (86.4%) of the respondents were Christians, 64(13.2%) were Muslims, and 2(0.4%) practiced



other religions. Based on the level of study, 77(15.8%) were in 100 level, 162(33.3%) were in 200 level, 103(21.2%) were in 300 level, 143(29.4%) were in 400 level, 1(0.2%) in 500 level. on the faculty the respondents belong to, 33(6.8%) were in faculty of education, majority, 244(50.2%) were in faculty of Arts, 131(27%) were in management science, 46(9.5%) were in faculty of Law, 20(4.1%) were in social sciences faculty and 12(2.5%) were faculty of engineering.

Table 1: Prevalence Statistics of Aggressive Behaviour

	Frequency	Percent
Low	170	35.0
High	316	65.0
Total	486	100.0

Table 1 revealed the prevalence of aggressive behaviour among undergraduate students at University of Lagos. The result revealed that 170(35%) significantly reported low-level aggression, while 316 (65%) reported high-level aggression.

Table 2 Pearson product-moment correlation showing the relationship between insomnia and aggressive behaviour

	Mean	SD	1	2
1. Insomnia	64.3971	17.80411	-	
2. Aggressive behaviour	92.9424	14.18496	.242**	-

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

Table 2 shows a significant positive relationship between insomnia ($r=.242$, $p<0.01$) and aggressive behaviour. The result shows that increased insomnia significantly relates to increased aggressive behaviour among undergraduates of the University of Lagos.

Table 3: Pearson product-moment correlation showing the relationship between examination anxiety and aggressive behaviour

	Mean	SD	1	2
1. Examination anxiety	43.9671	21.14015	-	
2. Aggressive behaviour	92.9424	14.18496	.261**	-

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

Table 3 shows a significant positive relationship between examination anxiety ($r=.26$, $p<0.01$) and aggressive behaviour. The result shows that an increase in examination anxiety significantly increases aggressive behavior among undergraduates of the University of Lagos.

Table 4: Summary of Multiple Regression table showing the joint and independent influence of insomnia and examination anxiety on aggressive behaviour

Predictors	B	SEb	β	t	R	R ²	F	P
Sleep Quality	.233	.034	.292	6.877	.389	.151	42.96	<.05
Examination Anxiety	.207	.029	.309	7.261				

Dependent Variable: Aggressive behaviour

Table 4 shows a significant joint influence of insomnia and examination anxiety on aggressive behaviour [$F(2,483) = 42.96$, $R^2 = .151$; $p < .01$], with the variables accounting for 15.1% of the variance in aggressive behaviour. Further results show that insomnia ($\beta=.29$; $t=6.88$, $p<.05$) and examination anxiety ($\beta=.31$; $t= 7.26$, $p<.01$) were significant predictors of aggressive behaviour among undergraduate sampled.

4. Discussion

This study investigates the role of sleep quality and examination anxiety on aggressive behaviour among undergraduates. The following findings were obtained based on the hypothesis set out for this study. The result of the



first hypothesis revealed a high prevalence rate of aggressive behaviour among undergraduates. This result aligns with several previous studies, such as Taillieu et al. (2015), who reported that 29% of the participants engaged in physical aggression, 68% verbal aggression, and 54% relational aggression among Canadian undergraduate students. Similarly, a study conducted among Australian undergraduate students by O'Connor et al. (2020) found that 21% of the participants reported engaging in physical aggression, while 43% reported engaging in verbal aggression. However, several studies have highlighted factors contributing to the high prevalence of aggressive behaviour among undergraduate students, such as alcohol use, high-stress levels due to academic pressures, financial concerns, and social issues (Testa et al., 2019; Krieger et al., 2019) and now insomnia.

The second hypothesis revealed a significant positive relationship between insomnia and aggressive behaviour. The result shows that increased insomnia significantly relates to increased aggressive behaviour among undergraduates of the University of Lagos. Specifically, the study found that individuals with more severe insomnia symptoms were likelier to engage in aggressive behavior. This suggests that this relationship may be due to the negative impact of insomnia on cognitive and emotional regulation. The result is in line with the study by Granö et al. (2008), who found that individuals with shorter sleep duration have a higher level of hostility, partly related to psychiatric issues. Similarly, Freitag et al. (2017) concluded that poor sleep experience and low sleep quality were related to increased reactive aggression in British participants. At the same time, Hisler (2016) stated that lower sleep quality is related to poor tendencies to control anger and higher susceptibility to becoming angry. Thus, disrupted sleep seems to represent one risk factor for dispositions towards aggression and committing acts of aggression.

The third hypothesis revealed a significant positive relationship between examination anxiety and aggressive behaviour. The result shows that an increase in examination anxiety significantly increases aggressive behavior among undergraduates of the University of Lagos. The study suggests that students who experience high levels of examination anxiety are more likely to exhibit aggressive behavior, which can negatively impact their academic performance and social relationships. The result supports the study by Chung et al. (2019), who investigated the relationship between anxiety proneness and aggressive behaviour in adolescents in a quantitative, large-scale cross-sectional study conducted in Korea. The results demonstrated that a higher risk of anxiety was associated with total aggression scores.

The fourth hypothesis revealed a significant joint influence of insomnia and examination anxiety on aggressive behaviour. Further results show that insomnia and examination anxiety were significant predictors of aggressive behaviour among undergraduate samples. One possible explanation for the link between insomnia, examination anxiety, and aggressive behaviour is that insomnia and examination anxiety can increase stress levels. When individuals cannot sleep or are experiencing anxiety about an upcoming exam, their stress levels can rise, leading to frustration and irritability. This, in turn, can make individuals more likely to engage in aggressive behaviour. Another possible explanation is that individuals who experience insomnia and examination anxiety may also have other underlying psychological problems that increase their likelihood of engaging in aggressive behaviour. For example, individuals with anxiety disorders may be more likely to have difficulty regulating their emotions, leading to impulsive behaviour and aggression.

5. Conclusions

The study investigated the role of insomnia and examination anxiety on aggressive behaviour among undergraduate students. Based on the results of the findings, it was concluded that there was a high prevalence rate of aggressive behaviour among the undergraduate sampled. Also, insomnia and examination anxiety had a significant positive relationship with aggressive behaviour. At the same time, Insomnia and examination anxiety had significant joint and independent predictions of aggressive behaviour. This conclusion has far-reaching implications first for students' health, wellness, and academic performance and the university, such as directing efforts at keeping the level of insomnia and examination anxiety low in the universities by ensuring that any action or activity that potentially encouraged insomnia, examination anxiety, and aggression are eliminated and not allowed to fester on the university campus. Lastly, despite our general conclusion and significant contributions to knowledge, it should be noted that the data for this study was gathered from one campus out of the numerous universities that exist in Nigeria and other countries, providing no room for comparison of data and result, this might have affected our findings. Thus, future studies need a broader spread in data collection.



6. Recommendations

This study has demonstrated that insomnia and examination anxiety can both contribute to aggressive behaviour among undergraduate students. As such, it is crucial to take steps to mitigate the adverse effects of these factors. Therefore, universities are encouraged to:

1. Provide support on sleep and stress management: Many students may not realize how important it is to manage their stress level, get adequate sleep and maintain good sleep habits. The university authority can offer workshops, seminars, and other resources to educate students on the danger of stress and insomnia and the importance of sleep and sleep hygiene.
2. Provide academic support: Examination anxiety can be exacerbated by academic pressures and feelings of inadequacy. Providing academic support, such as tutoring or study skills workshops, can help students feel more confident in their abilities and reduce their anxiety surrounding exams.

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