

THE INFLUENCE OF IMPULSIVITY AND ANTI-SOCIAL BEHAVIOUR ON ACADEMIC PERFORMANCE OF UNIVERSITY UNDERGRADUATE STUDENTS IN NIGERIA

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Abstract

Many personal and societal harm is caused by negative behaviour, which usually involved antisocial behaviour practices. Such behaviour tends to mislead youth, and consequently affect their academic performance. The current study investigates the effects of impulsivity, anti-social behaviour on academic performance. A total of 379 survey questionnaire were distributed to the undergraduate students in Nigeria. A statistical analysis was conducted using structural equation modelling with Smart-Partial Least Squares (PLS). The findings of the study revealed that there is a significant negative correlation on antisocial behaviour and academic performance, while significant relationship between impulsivity and academic performance was indicated. The practical and research implications of these findings are discussed as well as the justification of the rejected hypothesis. This study suggests that Stakeholders in education should provide recommendations based on the enforcement of relevant laws to limit students' actions without thinking, expedite cognitive decision-making, and encourage students to demonstrate positive attitudes toward academic activities. Similarly, it is suggested that universities generally employ student-engagement measures to ensure that students understand their purpose for attending and complete the programs they are enrolled into.

Keywords: Academic performance, Anti-social Behaviour, Impulsivity, Higher Education

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INTRODUCTION

Academic performance is seen as an integral part of student success and is another significant behavioural effect. The extent to which a student, teacher, or institution has accomplished their short- or long-term educational goals is referred to as academic performance (Latri, et al., 2020; Masud, et al., 2019). Academic performance is thought to be closely related to academic success. In addition to the student's academic growth and learning process, it becomes one of the many significant factors in determining the academic success of the student (Bakar, et al., 2023; Brew, et al., 2021; Masud, et al., 2019). Higher academic performance typically reflects a person's intelligence, the standard of their academic work, and their personality. Low academic performance may also have familial or educational roots, as well as personal characteristics of the student. To comprehend the factors influencing students' academic performance, it is necessary to assess the relationship between the socioeconomic level of the family, the campus culture, and the study habits of the students (Nisar, et al., 2017; Sivrikaya, 2019).

One of the emerging variables that has been associated with academic performance or failure is student antisocial behaviour. Notwithstanding the fact that numerous nations experience this phenomenon, the forms of behaviour, their prevalence, and the degree and size of it vary according on the social, cultural, political, and economic environments in each country. For this group to become productive and increase their academic performance, nations must manage their behaviour efficiently (Bakar, et al., 2023; Masud, et al., 2019). After taking into consideration the child's gender, socioeconomic status, affiliation with troubled peers, and self-esteem, various studies have demonstrated a significant correlation between antisocial behaviour and a greater likelihood of academic failure (Allen, et al., 2021; Hwang, et al., 2021).

Students' continuous participation in demonstrations, uprisings, and other rebellious behaviour has become the latest trend in most Nigerian universities (Aboh, et al., 2015; Maiyeri, et al., 2021; Nnadozie, et al., 2022; Sunday, et al., 2022). Many people argue that this tendency of unrest, violence, and insecurity has fostered social tension and may have fuelled the growth in antisocial behaviour, even though it may not directly be tied to the deterioration of Nigeria's national ideals (Aboh et al., 2015; Diwe, et al., 2016; Mbagwu, et al., 2018; Onyeme, et al., 2020). Numerous elements, including attitudes, learning prowess, motivation, family, friends, financial resources, and many others, can have an impact on a student's academic performance. A prior study demonstrates that the success of graduate students in higher education depends on their academic performance (Bakar, et al., 2023; Udayakumar, et al., 2022; Khan, et al., 2019). Several other studies have been proposed to explain this pattern (Allen, 2017; Girma, et al., 2019; Rashid, et al., 2020). Additionally, there is evidence that antisocial behaviour substantially reduced because of academic achievement-focused interventions (Aboh, et al., 2015; Maneiro et al., 2017; Marzilli, et al., 2021; Otto, et al., 2021).

Marzilli, et al. (2021) observed that limited literature existed to link anti-social behaviour, impulsivity, and academic performance. The notion is that studies tend to concentrate on the linkage between antisocial behaviour, adolescent antisocial behaviour, and academic performance but neglect to look at the effects of impulsivity on academic performance. Despite this empirical evidence of the linkage between academic performance and antisocial behaviour, the studies failed

to clearly explain the variable of impulsivity, antisocial behaviour and academic performance in the public university context attributing this shortfall to lack of previous literature. The study seeks to understand impact of impulsivity, anti-social behaviour and academic performance in developing nations, specifically Nigerian public university and in other open settings.

LITERATURE REVIEW

Academic performance or school outcome is the result of a student's accomplishments at a particular institution, over a specific period, and while following a particular instruction with the intention of doing what is right (Brew, et al., 2021; Hwang, et al., 2021; Soki, et al., 2021). Observations, tests, and exams are some of the ways to evaluate a student's academic achievement in relation to their mental capacity. Observations are typically used to evaluate the academic performance of first-grade students. While tests and exams are the most effective ways to evaluate students' academic performance or comprehension in high school. Because they are administered by the school administration (Said, et al., 2018; Song, et al., 2015;).

Impulsivity and Academic Performance

According to characterologist Eysenck (1993), impulsivity is characterized by unexpected risky behaviours and hasty decision-making. According to Dickman (1993) theory, people with dysfunctional impulsivity behave and act more quickly and without as much consideration as many people with same skill and knowledge. This shows that impulsivity comprises the willingness to act in an unplanned, quick manner in reaction to both internal and external stimuli without thinking about the potential negative effects on others or on oneself. According to Sokić, et al. (2021) findings, attention impulsivity was associated with low prosperity and low levels of satisfaction with standard of living, health, personal achievements, safety, and future security. Another empirical study of Marzilli, et al. (2021) showed a predictive effect of parental behavioural control, motor impulsivity, and empathetic concern in antisocial personality problems. Based on this argument, the following hypothesis is proposed:

H₁: *Impulsivity is inversely related with Academic performance.*

Anti-social Behaviour and Academic Performance

Antisocial behaviour is described as actions that go against societal norms and is frequently conceptualized in terms of the developmental stage of the person. For instance, students engaged in antisocial behaviours including lying, stealing, bullying, or taunting other students, and fighting with them and many misconducts (Aboh, et al., 2015; Danioni and Barni, 2017). As people mature, antisocial behaviour frequently develops to encompass violent as well as nonviolent behaviours, such as drug use, truancy, theft, vandalism, and assault (Brenna and Grekin, 2015; Girma, et al., 2019; Otto, et al., 2021).

Many academics concur on a set of traits that characterize this kind of behaviour, including disregard for social norms, disobedience, and other people's rights (Álvarez-García, et al, 2019;

Egaga, et al, 2021; Massey, et al., 2018; Said, et al., 2018). Research on this developmental stage is quite interesting because adolescence is when antisocial behaviour manifests itself to its fullest (Gázquez et al., 2015; Inglés et al., 2014; Light et al., 2013; Sullivan, 2017). The research by Nnadozie, et al. (2022) revealed an association between antisocial behaviour and antisocial personality. In another different study by Hwang, et al. (2021), the magnitude of the associations was greater between antisocial behaviour and academic performance, indicating a greater negative impact between school engagement and anti-social behaviour. From the above argument, the following hypothesis is proposed:

H₂: *Anti-social behaviour is inversely related with Academic performance.*

Theoretical Framework

The Social Learning Theory (SLT) is predicated on the notion that people learn by seeing others and that psychological processes play a role in character comprehension. According to the theory, when a new behaviour is noticed an individual forms a notion of it and uses this stored information as a guide when it is later encountered. SLT is appropriate for this study because lecturers, counsellors, and peers with whom they interact serve as their own role models. In addition, the individuals will teach students who are at risk of engaging in antisocial behaviour good social, academic, and behavioural skills that will help them adjust. Moreover, Figure 1 below shows how the study's conceptual framework was depicted.



Figure 2.1: Conceptual model

METHODOLOGY

Sample and Data Collection

To achieve the objectives of the current study, the positivist research paradigm was combined with quantitative research methods (Hair et al., 2014; Sekeran and Bougie, 2013). The researchers therefore administrated questionnaire to the target respondents (undergraduate students). The questionnaire's items are close-ended questions that classify behavioural differences according to their relevance on a five-point scale. Additionally, descriptive correlational survey was used for this research. The population of the study is made up of 30,126 Bayero university students who were obtained from the University Centre for Information Technology as of June 2023. In this study, the researchers distributed and apportioned the study sample to reflect every stratum of the study population without any bias, giving each respondent in the population an equal chance of being selected. A total of 379 student were selected from the overall research population in accordance with the sample size requirements established by Krejcie and Morgan (1970). A total

of 310 of the 379 questionnaires that were administered to the study respondents completed and returned were utilized as part of the data collection process. Additionally, the present study employed PLS-SEM through Smart-PLS version 4.0.8.9 to test the proposed hypotheses of the study.

Measures

The current research was developed to analyse university student's academic performance and its association with impulsivity and antisocial behaviour. In accordance with the structured model proposal impulsivity and antisocial behaviour are measured using a combination of Barrat impulsivity scale (1995) and Burt and Donnellan (2009) Subtypes of antisocial behaviour scale with eight items each, measuring impulsive behaviour (cognitive impulsivity and behavioral impulsivity) and antisocial behaviour (social aggression, and rule Breaking). The final semester average grade received at the end of the session in form of CGPA, which is recorded on a scale from 1 (lowest achievement) to 5 (highest achievement), was used to evaluate the academic performance of the students. This scale was adopted from the study of Lara and Saracosti (2019). All items were rated on a five-point Likert scale, with 1 being the most strongly disagreed and 5 being the most strongly agreed. The scale was used in the previous studies of Bakar, et al. (2023), Nnadozie, et al. (2022), Lara and Saracosti (2019) and Khan, et al. (2019).

RESULTS AND DISCUSSION

With a total of 310 valid responses, the means of the study ranges from 3.337 to 4.195, while that of the standard deviation ranges from 0.400 to 0.879. Academic performance has the highest mean and standard deviation, then followed by impulsivity in terms of mean and last in standard deviation. The results show that all the item values are within the admissible skewness range of +1 to -1 and that kurtosis and univariate normality are within a lenient range of +3 to -3. Therefore, the empirical measurements of skewness and kurtosis for all the constructs from the questionnaires show that the data set has no issues with multivariate non-normality, thus, satisfying the normality assumptions as recently suggested for PLS path modelling.

Figures 2 and 3 show how SmartPLS 4.0 was used to evaluate the research model. To calculate the t-values, the standard error of the estimate, and the significance of the association, the current study bootstrapped 10,000 samples from 310 cases. Henseler, et al. (2015) argue that by accounting for the error that reduces correlations and increases the theory's validity.

Assessment of Measurement Model

The convergent validity test evaluates the degree of alignment between various items measuring the same concept. The research subsequently identified the discriminating validity (DV), which is defined by low correlations between the measurement of interest and the measurements of other variables and suggests that the measure does not represent other factors. Evaluating DV was achieved by comparing the squared correlations between the constructs and the extracted variance (Henseler, et al., 2015; Hair, et al., 2014). Cronbach's alpha coefficient was used to assess the inter-item consistency of the measurement items in Figure 2 and Table 1. Henseler et al. (2015)

criticised Fornell and Larcker's (1981) and cross loading approach for being too liberal in establishing validity, and instead recommended using HTMT based on the multitrait-multimethod matrix to assess DV.

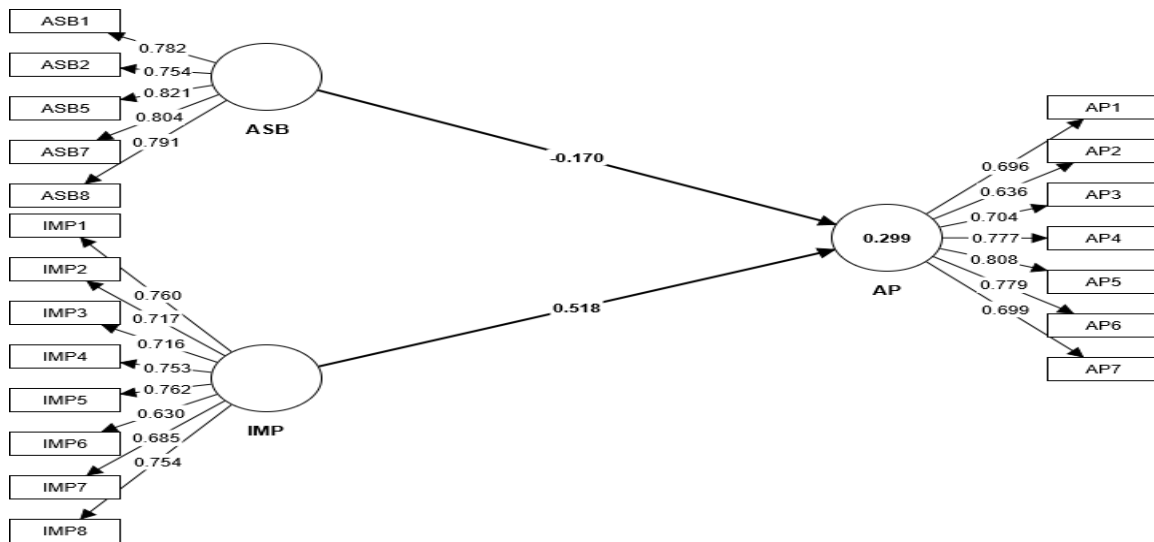


Table 1: Items Loadings, Composite Reliability and Average Variance Extracted

Constructs and Items	loadings	Cronbach's Alpha	CR	AVE
ASB1	0.782			
ASB2	0.754	0.776	0.849	0.529
ASB3	Deleted			
ASB4	Deleted			
ASB5	0.821			
ASB6	Deleted			
ASB7	0.804			
ASB8	0.791			
IMP1	0.760			
IMP2	0.717	0.838	0.890	0.668
IMP3	0.716			
IMP4	0.753			
IMP5	0.762			
IMP6	0.630			
IMP7	0.685			
IMP8	0.754			
AP1	0.696			
AP2	0.636			
AP3	0.704	0.870	0.897	0.522
AP4	0.774			
AP5	0.804			
AP6	0.779			
AP7	0.699			

Note: ASB=anti-social behaviour; IMP = Impulsivity; AP= Academic performance

Table 2: *Fornell-Larcker criterion*

	IMP	AP	PV
IMP	0.817		
ASB	-0.006	0.740	
AP	-0.033	0.372	0.728

Table 3: *Heterotrait-Monotrait Ratio (HTMT)*

	IMP	ASB	AP
IMP			
ASB	0.765		
AP	0.805	0.700	

A diagnostic approach was used to evaluate the model’s goodness of fit (GOF) (Hair, et al., 2014). GOF demonstrate the efficiency of the model structures by describing how often the suggested structured model fits a set of observations. The parameters for evaluating the findings of the GOF analysis are small (0.02), medium (0.25), and large (0.36) (Hair et al., 2014, 2020). The proposed model of the relationship between the research’s constructs is validated by the current study’s GOF value of 0.25, demonstrating that the model performs relatively well. Additionally, as shown in Figure 2, the outcomes of testing the measurement model reveal that anti-social behaviour and impulsivity account for 29.9% ($R^2 = 0.299$) of the variance of academic performance (AP).

Assessment of Structural Model

The research hypothesis served as the foundation for evaluating the relationship between the anti-social behaviour, impulsivity, and academic performance constructs. The model’s t-values were estimated using a bootstrapping method.

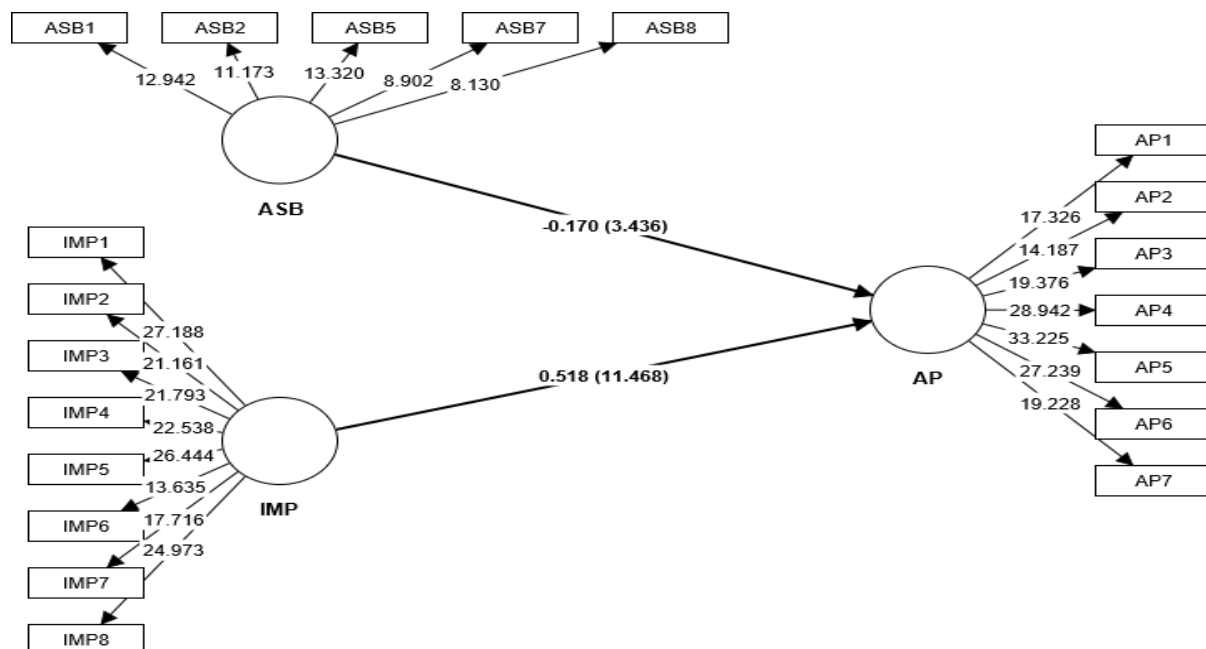


Figure 3: Structural Model

Table 4: Results of Direct Structural Model

Paths	Beta coefficient	Standard error	t- statistics	p-values	VIF	Decision
IMP ->AP	0.518	0.047	11.468	0.000	1.4	Not Supported
ASB -> AP	-0.427	0.051	3.436	0.000	1.2	Supported

Note: $p < **p < .01$; $*** p < .001$. ASB=anti-social behaviour; IMP = impulsivity; AP= academic performance

The models' direct influences on the constructs demonstrate that impulsivity and academic performance have a significant positive relation ($\beta = 0.518$, $t = 11.468$, $p < 0.000$) (H 1). Therefore hypotheses 1 is not supported. A statistically significant inverse relationship was found between students' antisocial behaviour and their academic performance ($\beta = -0.427$, $t = 3.43$, $p < 0.000$). Therefore hypotheses 2 is supported. Moreover, this indicates that the two developed direct hypotheses one is supported. Additionally, as suggested by Tabachnik and Fidell (2007), the VIF values specifically range from 1.00 to 1.05, which all fall below 10. However, PLS provides another VIF in structural model to further validate and prevent results from being misleading (Hair et al., 2017). Depending on the number of linkages involved, the VIF in the structural model compares exogenous and endogenous constructs. The results of the present study demonstrate that VIF is not a problem using all the applicable thresholds of 3.3, 5 and 10.

The outcomes of this study showed a strong correlation between university students' impulsivity and their academic performance. The outcome of this study contradicts the conclusions of studies conducted by Sokić et al. (2021), Maneiro et al. (2017), Lozano, et al., (2014), Zhang et al. (2015), and others that demonstrated a negative correlation between impulsivity and academic performance. Similarly, hypothesis two shows that there is an inverse association between students' academic performance and antisocial behaviour in accordance with the outcomes. The findings indicate a negative correlation between students' academic performance and their exhibits of antisocial behaviour. Therefore, performance in the university will decrease with increasing levels of antisocial conduct exposed by students, while academic performance will increase with decreasing levels of antisocial behaviour exhibition. This is in line with the studies of Bakar, et al. (2023), Girma, et al. (2019), Said, et al. (2018), Savage, et al., (2017), Brenna and Grekin, (2015) that antisocial behaviour has an adverse effect on students' academic achievement.

CONCLUSION AND IMPLICATIONS

The findings of this study shows that no statistically significant relationship exists between impulsivity and academic performance of university students. Additionally, the findings also established that antisocial behavior has significant bearing on students' academic performance. High disposition of antisocial behavior brings about a lower level of academic performance while low disposition of antisocial behavior brings about high level of academic performance. Thus, the findings of this research as well as those of other earlier studies make clear that student behavior affects academic performance. Antisocial behaviors, on the other hand, have been shown to have

a negative impact on university students' learning and performance, whereas prosocial behaviors have been found to influence learning and performance in academia.

Particularly at new student orientation, the university administration should coach students on the advantages of practicing prosocial behaviour and make explicit the consequences of engaging in antisocial behaviour. To reduce issues linked to antisocial behaviour, the university and student unions should plan events that will encourage student contact. These events should also aim to pair students who struggle with antisocial behaviour with prosocial students' execution to determine the prevalence of antisocial behaviour among students at Kano State's other tertiary institutions, including Science and Technology, a comparable study must be carried out. Additional research is required because the study's findings indicate that students' antisocial behaviours increase with poorer academic performance and decrease with higher academic performance. The academic performance of students in tertiary institutions will suffer significantly as a result. The results of additional research will assist in providing long-term remedies for students who engage in antisocial behaviour.

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