



## Empirical Analysis of the Socio-Economic Influence of Sports Betting on Academic Performance of Students in Nigerian Tertiary Institutions

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### Abstract

The study investigated the socio economic and psychological drivers behind the effect of sport betting on academic performance in tertiary institution using descriptive analysis and multinomial logistic regression model. Descriptive survey design was adopted utilizing simple random sampling method in choosing students from the targeted population. The study's findings revealed that academic performance was affected significantly by demographic statistics (age and sex), influence of loss of dignity, peer influence, hobby, immoral act and unnecessary additions. Additionally, there was no significant effect of religious belief and entertainment towards sport betting influencing academic performance among tertiary institutions student. Consequently, suggestions on how to mitigate identified significant predictors that influence academic performance of students via sport betting and strategies for interventions to reduce the mayhems in educational institutions were given.

**Keywords:** Gambling, Sport Betting, Academic performance, Survey, multinomial logistic regression.

### Introduction

Gambling can be defined as a process of putting something, especially money, at risk for an uncertain outcome in order to acquire more substantial commodities. According to Binde (2014), gambling can also be defined as the well-known activity of placing bets with cash or other valuables on events or games that have unpredictable results. The public's perception of gambling is frequently deceptive; most people are aware that those who are inclined to gamble run significant risks. On the other hand, it is also recognized that gambling can be a fun hobby for people and that it can benefit communities (for instance, by giving athletic teams or charitable organizations a source of income) (Vong, 2009). There is a wealth of data demonstrating that people's attitudes regarding gambling are reliable indicators of their betting behavior and likelihood of developing gambling-related issues. Prior researches have established correlation between increased risks of adolescent gambling and problem gambling, as well as mental health conditions, impulsive and sensation-seeking personality traits, parental gambling, and sociodemographic characteristics such as male gender (Dowling et al., 2017; Svensson & Sundqvist, 2019; Claesdotter-Knutsson et al., 2022; Wahlström & Olsson, 2023). Gambling as a survival strategy is a complex issue of particular concern for Nigerian youth, particularly tertiary institution students, as this behavior may redefine them to pathological gambler (Oyebiri et al., 2012). Sports betting is a kind of gambling that has evolved over time. (Aguocha & Sanju, 2020). Nigeria is not an exception to the rising acceptance of legalized sports betting around the world due to the extreme love Nigerians and other Africans have enjoying watching matches from leagues such as English Premier League, Spanish La Liga, and others global leagues (Akinlotan, 2022). Most of the older generation used to be passionate about European soccer matches, but these days, the younger generation dominates the scene resulting from universal sports gaming liberalism fueled by growing advertising. Sport betting is one of the most famous forms of gambling that entails placing bets on sports due to its capitalization on the passion of sports fans, its portray from the advertising agencies as profitable, alluring, stylish, and sensual. (Riley et al., 2021; Freud et al., 2022). The identification of sports gaming networks in Nigeria has raised national alarm in recent years. (Omanchi & Dannap, 2024). Although it has become commonplace in Nigeria, university students are particularly prone to sport betting. Due to their increased freedom and frequent use of the internet, tertiary students have been identified as an at-risk group. The quick and simple cash that can be made by placing bets on sporting events attracts several students. The widespread availability of smartphones and internet connectivity, along with numerous online betting platforms, have made it simpler for students to wager on different

forms of sporting events from the luxury of their lecture halls or dorm rooms. Palmer (2013) contends that research on sports betting is required due to the rapidity of change in sports betting and the technologies that facilitate it, the relative ease with which bettors can access sports betting sites, and the connections to youth markets where betting brands are thought to have altered audiences' experiences with sport. The influence of betting addictions on students' academic performance has detrimental effects on the socioeconomic development of countries, particularly those in the developing world (Odame et al., 2021). Anxiety, depression, and exposing students to drug abuse are merely some of the detrimental effects (Kyei-Gyamfi et al., 2022). Numerous scholars have conducted research on the subject to determine how gambling affects the national economy and students' academic performance. (Akinlosotu et al., 2019; Agbonzikilo & Ogebe, 2020; Falade & Abanum, 2022; Noble et al., 2022). Due to earlier research showing that the alarming rate of students engaging in online sports betting could be attributed to the daily advertisements on all media platforms and the related addictions, especially those in higher education institutions, this study aims to critically investigate the socio economic and psychological drivers behind the effect of placing wagers on sporting events on academic performance of students using descriptive analysis and multinomial logistic regression model.

### Objectives of the Study

Specifically, the study seeks to;

- i) To examine the relationship between student motivations predictors of sport betting and sport betting.
- ii) To investigate the relationship of student motivations with sport betting and their academic performance.
- iii) To evaluate the relationship of student morals with sport betting and their academic performance
- iv) To find out the significant effects of sport betting on academic performance in tertiary institutions

### Materials and Methods.

For this study, a descriptive survey design was chosen. Students from the targeted population were chosen using a straightforward random sampling technique. Questionnaire was utilized in the study to get pertinent data from participants regarding how sports betting affected their academic performance at tertiary institutions. The study population included both male and female students aged 16 and older who were in their final year of undergraduate studies at Tai Solarin University of Education, Ijagun, Ogun State, Nigeria and Tai Solarin college of Education Omu, Ogun State, Nigeria. The study population was selected using random sampling techniques, yielding an aggregate of three hundred respondents. The questionnaires were not exclusively administered to individuals who participated in sports betting; rather, opinions were also gathered from individuals detached from the practice in order to evaluate how sports betting affects them. The data collection tool was a five-point structured questionnaire based on a continuum of strongly disagreed (SD), disagree (DA), neutral (N), strongly agree (SA), and agree (A). This instrument assessed students' preferences for sport betting, the reliability of the instrument was assessed using Cronbach alpha reliability with a coefficient of 0.72. The socio economic and psychological drivers behind the effect of sport betting on academic performance in tertiary institution were investigated in the study using, frequencies, charts, descriptive and multinomial logistic regression model.

#### Multinomial logistic function

The logistic function can be used to derive the logistic model;  $z$  is expressed in equation (2) as the linear sum

$$a = \alpha + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_q x_q \quad (1)$$

where the  $x$ 's signifies the explanatory variables,  $\beta_i$ 's and  $\alpha$  are constant terms function  $f(a)$  is binary response defined as

$$f(a) = \frac{1}{1+e^{-a}} \quad (2)$$

$a$  varies from  $-\infty$  to  $+\infty$ .

combining equation (1) and equation (2) gives equation (3) below;

$$f(a) = \frac{1}{1+e^{-(\alpha+\sum \beta_i x_i)}} \quad (3)$$

probability statement is denoted as  $q(x)$  where  $x$  is a notation for the collection of variables  $x_1$  through  $x_t$

Thus, the logistic model may be written as

$$q(x) = \frac{1}{1+e^{-(\alpha+\sum \beta_i x_i)}} \quad (4)$$

Though logistic model equation (4) is non-linear, it can be made linear by applying the logit transformation, which is provided by

$$\text{Logit } q(x) = \ln \left[ \frac{q(x)}{1-q(x)} \right] \quad (5)$$

$$\text{where } q(x) = \frac{1}{1+e^{-(\alpha+\sum \beta_i x_i)}} \quad (6)$$

In a multinomial logistic regression model, the logit transformation is obtained by taking the logarithms of the odds ratios after selecting the baseline category.

Combining equation (5) and Equation (4), it gives

$$\ln \left[ \frac{q(x)}{1-q(x)} \right] = \ln \left[ \frac{\frac{1}{1+e^{-(\alpha+\sum \beta_i x_i)}}}{\frac{e^{-(\alpha+\sum \beta_i x_i)}}{1+e^{-(\alpha+\sum \beta_i x_i)}}} \right] \quad (7)$$

$$= \ln [e^{(\alpha+\sum \beta_i x_i)}] \quad (8)$$

$$= \alpha + \sum \beta_i x_i \quad (9)$$

Thus, the logit of  $q(x)$  simplifies the linear sum which is the logit transformation for a binary response

$$h(x) = \ln \left\{ \frac{q(Y=1|X)}{q(Y=0|X)} \right\} = \beta_{10} + \beta_{11}X_1 + \beta_{12}X_2 = x' \beta_1 \quad (10)$$

$$h(x) = \ln \left\{ \frac{P(Y=2|X)}{P(Y=0|X)} \right\} = \beta_{20} + \beta_{21}X_1 + \beta_{22}X_2 = x' \beta_2 \quad (11)$$

where  $h_j(x)$  is the logit function for response level  $j$ ,

$$\pi_j(x) = P(Y=j|x) = \frac{e^{h_j(x)}}{\sum_{k=0}^2 e^{h_k(x)}} \quad (12)$$

$j=0,1,2$ , with  $\pi_j(x)$  is the probability level of  $j$ th response.

### Results

The descriptive and inferential analysis were analyzed with the aid of descriptive analysis and multinomial logistic regression.

Table 1: Demographic Data of Respondents

Gender	Frequency	Percentage (%)
Male	134	44.66
Female	164	54.66
Prefer not to say	2	0.006
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Source: 2025 Author Survey.

Table 2: Age Distribution of Respondents

Age	Frequency	Percentage (%)
16-19 years	63	21
20-29 years	212	70.66
30 and above	25	8.33
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Source: 2025 Author Survey.

Table 1 above indicates that 300 responses were recorded, 44.66% were male, the majority of respondents (54.66%) were female while the remaining 0.066 % prefer not to disclose their sex, Table 2 also shows the age distribution of the respondents, 21% of the respondents falls within the age of 16-19, 70.66% are within the range of 20-29 which represent significant portion of the population while 8.33% covers the age of 30 years and above.

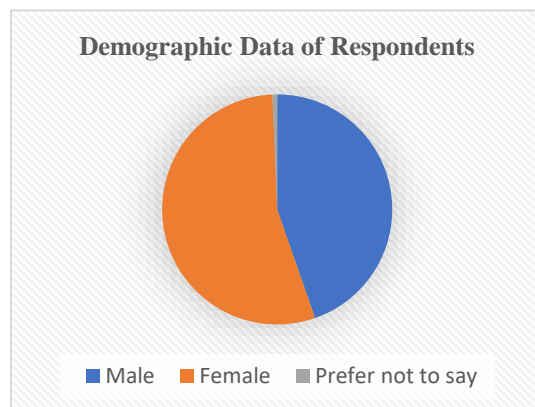


Fig 1: Pie chart showing the demographic distribution of the respondents.

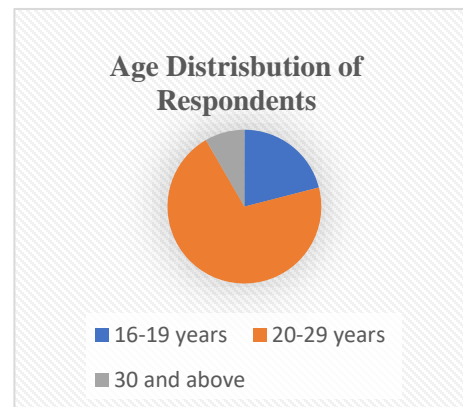


Fig 2: Pie chart showing the Age distribution of the respondents.

Fig 1 and Fig 2 shows the graphical illustrations of the demographic and age distribution of the respondents under study. The majority of respondents fell into the category of those who are most sensitive to issues surrounding economic growth, per the survey's findings.

**Table 3: Descriptive Statistics of Moral predictors**

Variables	Mean	Standard Deviation
Immoral Act	7.22	0.813
Religion Beliefs	1.38	0.291
Addiction	13.11	0.124
Loss of Dignity.	9.07	0.254

Table 3 portrays the descriptive analysis of moral predictors of sport betting that influence student's academic performance. Table 3 revealed that unnecessary addition to sport betting influence the performance of the students in their academics.

**Table 4: Relationship of student morals with sport betting and their academic performance ANOVA**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.197	5	0.658	0.331	0.726 <sup>b</sup>
	Residual	17.643	91	.235		
	Total	17.643	96			

$$R = 0.25 \quad R^2 = 0.2203, \quad Adj \ R^2 = 0.2750$$

a. Dependent Variable: Sport betting b. Predictors: (Constant), Immoral Act, Religious belief, addiction, Loss of Dignity,

The ANOVA results in Table 4 revealed insignificant effect of the predictors on sport betting in Nigeria tertiary institutions. Moreover, the Table also reveals a weak relationship between student morals and sport betting. Moreover, the independent variables accounted for only 27% of the variance in students' academic performance.

**Table 5: Regression analysis of effect of student's moral predictors on the response variables.**

Coefficients <sup>a</sup>		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.427	0.139	0.764	1.603	0.000
	Immoral Act	0.275	0.312	0.825	0.449	0.322
	Religion Beliefs	-0.193	0.221	.0336	-0.612	0.126
	Addiction	0.442	0.734	.009	0.203	0.005
	Loss of dignity	-0.299	0.164	0.02	-0.425	0.446

Dependent Variable: Sport betting

The relationship between the addition to sport betting and sport betting in Table 5 is significant positive while religion belief and loss of dignity has a negative insignificant effect on sport betting in tertiary institution. Moreso, immoral act towards sport betting and sport betting has a positive relationship but insignificant.

**Table 6: Descriptive Statistics of Motivation Predictors.**

Variables	Mean	Standard Deviation
Source of Income	2.97	0.197
Entertainment	2.36	0.320
Hobby	4.90	0.551
Peer Influence.	12.16	0.045

Table 6 gives the descriptive analysis of motivation factors of sport betting that influence student's academic performance. It was revealed in Table 6 that peer influence stands as one of the major influences of sport betting that determines the academic grades of students in tertiary institutions.

Table 7: Relationship of student motivations with sport betting and their academic performance  
ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.197	5	0.658	0.331	0.0012
	Residual	17.643	91	.235		
	Total	17.643	96			
R = 0.65 R <sup>2</sup> = 0.613, Adj R <sup>2</sup> = 0.790						

The ANOVA results in Table 7 showed the significance of the predictors on sport betting in Nigeria tertiary institutions. Moreso, the Table also reveals a strong relationship between student motivations predictors of sport betting and sport betting. Moreso, the independent variables accounted for 79% of the variance in students' academic performance.

Table 8: Regression analysis of effect of the student's motivation Predictors on the response variables.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.336	0.209	0.764	1.603	0.000
	Source of Income	0.636	0.025	0.430	1.228	0.03
	Entertainment	0.275	0.312	0.825	0.449	0.002
	Hobby	-0.193	0.221	.0336	0.612	0.126
	Peer Influence.	0.642	0.734	.009	0.203	0.015

Dependent Variable: Sport betting

The relationship between source of income, peer influence and sport betting in Table 8 has a higher significant positive while hobby has a negative insignificant effect on sport betting in tertiary institution. Relationship of entertainment motivations enabling sport betting and sport betting is low and significant.

**Table 9: Multinomial Logistic Regression showing Significant Effects of Sport betting on academic performance in tertiary Institutions**

Sport Betting Decision		Estimate	SE	Wald	Df	p (Sig.)	Odds ratio
1. Demography	Intercept	4.424	0.809	15.145	1	0.000	
	AGE	<b>0.044</b>	<b>0.068</b>	<b>11.017</b>	<b>1</b>	<b>0.047</b>	<b>1.0449</b>
	SEX	<b>1.018</b>	<b>.304</b>	<b>11.237</b>	<b>1</b>	<b>0.011</b>	<b>2.2767</b>
2. Moral Behavior	Intercept	5.107	1.289	15.698	1	0.000	
	Immoral Act	<b>-0.998</b>	<b>0.188</b>	<b>9.750</b>	<b>1</b>	<b>0.009</b>	<b>0.3682</b>
	Religion	-0.016	0.0691	10.242	1	0.254	

3. Motivation	Beliefs						
	Addiction	-1.321	.516	6.569	1	0.010	0.2668
	Loss of dignity	-1.175	0.071	16.728	1	.0315	0.3088
	Intercept	3.757	1.226	9.393	1	0.002	
	Source of Income	1.3429	0.1529	18.3927	1	0.6013	3.8301
	Entertainment	0.269	0.120	5.051	1	0.159	1.309
	Hobby	-0.246	0.1526	13.152	1	0.0346	0.3214
	Peer Influence.	-0.903	0.4631	10.813	1	0.032	0.3672

Results in Table 9 showed that academic performance was affected significantly by demographic statistics (age and sex), influence of loss of dignity, peer influence, hobby, immoral act and unnecessary additions. There was no significant effect of religious belief and entertainment towards sport betting influencing academic performance among tertiary institutions student. The results support the predictions from previous studies (Falade & Abanum, 2022; Wahlström & Olsson, 2023). The expected predictions of the predictors' impact on the academic performance of students who bet on sports at tertiary institutions are provided by the expected odds ratio in Table 9. For example, when all other independent variables are held constant, it is predicted that the odds ratio of supporting academic performance of students who participate in sport betting that is influenced by immoral acts will increase roughly by 0.3682 for each attempt. It also suggests that we might anticipate a roughly 63% decrease in the likelihood that students' involvement in sports betting will significantly affect their leaning outcome in tertiary institution.

Also, the odds ratio of academic performance of students who engage in sport betting that is influenced by using it as source of income is predicted to grow by about 3.8301 for each attempt keeping all other independent variables constant. It also implies that we may expect to see about a 38 % increase in the odds of students participating in sport betting will have a significant effect on their grade point average in tertiary institution. Moreso, the estimated coefficients of the predictors from the multinomial regression illustrate the predictions of the logit of the impact of the predictors on the leaning results of students involved in sport betting in tertiary institutions.

**Table 10: Pseudo R-Square**

Cox and Snell	0.2995
Nagelkerke	0.3217
McFadden	0.2206

N=300, Model chi-square =78.26;  $p < 0.0001$ ,  $-2\log\text{likelihood} = -1825.317$ ,

Given the extremely low p value in Table 10 above, the overall model evaluation output indicates that the final model is statistically significant.

**Table 11: Coefficient, Standard Error and Reverse Risk Ratio Estimates and P values of the Multinomial Logistic Regression Model.**

Parameters	Estimates			
	RRR	Std. Err.	Z	Probability>z
Constants	2.3737	140.2999	9.02	0.000
Immoral Act	0.0708	9.2103	3.45	0.000
Religion Beliefs	6.9274	6.1401	0.75	0.000
Addiction	0.0328	1.5478	-0.29	0.000
Loss of dignity	0.0711	0.0442	0.86	0.019
Source of Income	1.0578	0.3815	0.38	0.002
Entertainment	1.0281	0.0175	-0.73	0.000
Hobby	0.0238	0.0162	-1.56	0.005
Peer Influence.	0.2709	0.1679	2.16	0.000

Table 11 revealed that immoral act is significant at 1 percent and having relative risk ratio less than one, which infers that there is a greater risk of students with immoral act to be affected in their academic performance in relation to

sport. Moreover, similar inferences with regards to peer influence, loss of dignity, unnecessary addition to sport betting, also, statistically significant of hobby lies in the range of one to five percent. However, from Table 11, the perspectives of students who wager on sports regarding their religion beliefs, serving as means of income and entertainment were found to be statistically insignificant in influencing academic performance of students in tertiary institutions. Table 12 and 13 gives the estimated probability of success among statistically significant independent variables.

**Table 12: Probability of effect of sport betting on academic performance**

	Probability	Std. error	Z	P value	95 % CI UCL	95% CI UPL
Strongly disagree	0.5477	0.0034	16.63	0.0023	0.4181	0.0290
	0.4480	0.0000	39.17	0.0046	0.2150	0.0281
Disagree	0.2072	0.0306	56.34	0.0610	0.2592	0.1151
Neutral	0.0516	0.0084	39.10	0.0009	0.44.23	0.0723
Agree	0.0034	0.0015	48.16	0.0173	0.2091	0.1523
Strongly agree						

It can be seen from Table 12 that the academic performance in tertiary institutions is significantly not associated with sport betting as the students that strongly agree had lower probability of failing (0.0034) and student that strongly disagree had a high probability of 0.5477 in failing, student that are neutral also had a probability of 0.2072 in failing in tertiary institutions. Students that partially agree had a probability of 0.0516 and students that partially disagree that sport betting have important influence on academic performance also had a higher probability of failing.

**Table 13: Probability of association between engagement in sport betting and study habit.**

	Probability	Std. error	Z	P value	95 % CI UCL	95% CI UPL
Strongly disagree	0.0412	0.0016	23.02	0.0015	0.5522	0.0186
	0.1480	0.0000	28.05	0.0022	0.3425	0.0932
Disagree	0.5120	0.0246	45.11	0.0070	0.4251	0.0225
Neutral	0.5905	0.0010	21.22	0.00165	0.5128	0.1330
Agree	0.7100	0.0028	48.16	0.0173	0.2091	0.1523
Strongly agree						

It can be seen from Table 13 that the study habit of students that engaged in sport betting in tertiary institutions is statistically significantly as the students that strongly agree had higher probability of creating lesser time for their study and student that strongly disagree had a very low probability making out lesser time for their study. Moreover, student that are neutral and partially agree also had a moderate probability of creating time to study in tertiary institutions and students that partially disagree that sport betting have a significant influence on their study habit also had a very low probability of making time for their study. The results commensurate the findings of Mfinanga, Mroso



& Bushibura (2020) that also revealed that football betting affects study habit among students which may yields poor academic performance.

## Discussion

This study investigated the socio economic and psychological drivers behind the effect of sport betting on academic performance in tertiary institution using descriptive analysis and multinomial logistic regression model. The demographic and age distribution of the respondents under study shows that majority of respondents fell into the category of those who are most sensitive to issues surrounding economic growth. The results from the multinomial regression infers greater risk of students with immoral act, peer influence, hobby, loss of dignity, unnecessary addition to sport betting of being affected in their academic performance. However, the perspectives of students who wager on sports regarding their religion beliefs, serving as means of income and entertainment were found to be statistically insignificant in influencing academic performance of students in tertiary institutions, the study established a low and significant relationship among entertainment motivations enabling sport betting and sport betting. Moreover, the Probability of association between engagement in sport betting and study habit is found to be statistically significant.

## Conclusion

In Nigeria today, the majority of young people are involved in sports betting, a type of gaming that has become a permanent social activity. Using Tai Solarin University of Education Ijagun, Ogun State Nigeria final-year undergraduate students and Tai Solarin college of Education Omu, Ogun State, Nigeria third year students as a case study, the study investigated the impact of sports bidding on Nigerian students' learning outcomes in tertiary institutions. Systematic survey instrument was employed in the study to get pertinent information from participants regarding how sports betting affected their academic performance at tertiary institutions. The study's findings revealed that academic performance was affected significantly by demographic statistics (age and sex), influence of loss of dignity, peer influence, hobby, immoral act and unnecessary additions. Additionally, no significant effect of religious belief and entertainment towards sport betting influencing academic performance among tertiary institutions student was revealed.

## Recommendations.

The study put forward these recommendations among other things;

1. Decrease online sports betting anti-gambling regulations policies must be erected at tertiary educational institutions.
2. University officials should also start raising awareness of the menaces related to addictions to sport gaming.
3. The study recommended necessity of enforcing academic, moral, cultural, and good behavioral values in students both inside and outside of the classroom.

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