DEMOGRAPHIC AND INSTITUTIONAL PREDICTORS OF ACADEMIC PERFORMANCE AMONG GRADUATES OF THE FEDERAL UNIVERSITY OF AGRICULTURE, ABEOKUTA (FUNAAB): EVIDENCE FROM THE 2024 NYSC MOBILIZATION LIST

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Abstract

Growing evidence points to the increasing need for higher institutions of learning to produce graduates who can not only lead innovations but also compete globally. As a measure of potential, academic performance has become a subject of scrutiny, with growing attention directed towards the factors influencing the academic outcomes of graduates.
This study employed a cross-sectional study approach to assess the association and effect of gender, age, and college affiliation on academic performance using the chi-square test of independence and multinomial logistic regression on secondary data from the 2024 FUNAAB NYSC mobilization list.
The results revealed a strong association between gender and academic performance ($p < 0.01$). Similarly, a strong association was found between college affiliation and academic performance ($p < 0.01$). Furthermore, the study revealed that age has a negative but insignificant effect on academic performance, while gender and college affiliation both exert significant effects on academic performance.
Based on the findings of this study, there is a need for targeted support programs to assist male students. Likewise, the university body should strengthen academic resources and review instructional practices in all colleges except COLVET.

Keywords: Academic Performance, Age, Gender Differences, Chi-square Test of Independence, Multinomial Logistic Regression, College Affiliation, Federal University of Agriculture, Abeokuta.

1.0 Introduction

The concept of academic performance has gained considerable global attention over the years, with numerous studies exploring the effect or influence of various factors on academic performance. According to Oti *et al.* (2023), academic performance is the evaluation of a student's academic achievement across scores of scholarly subjects; put differently, it is the reflection of a student's capability to walk within a specific academic terrain together with its peculiarity. The level of a student's academic performance plays a critical role in charting a leveraged path for

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further academic and professional pursuit (Vijayamalar *et al*., 2024). More importantly, in developing nations, it is generally believed that socio-economic development and technological advancement are connected to the level of academic success of graduates from higher institutions of learning (Mukhtar & Usman, 2025). Nevertheless, numerous higher institutions of learning have reported having a rise in the number of dropouts and students who do not graduate when due, with both pointing to an effect of the level of academic performance of these students (Al-Tameemi *et al.,* 2023). More often than not, for many graduates, students, parents, and educators, the primary concern is not the overall level of academic performance but the concentration of students at the lower end of the performance spectrum. In fact, researchers, as noted by Shahjahan *et al.* (2021), have become increasingly concerned about the persistent imbalance in academic performance, and they emphasize that this imbalance is growing worse year by year. A report by Jeremiah (2024) brings this to context; out of 15,768 National Open University graduates of 2024, only 22 graduated with a first-class degree, 1886 with a second-class upper degree, 8427 with a second-class lower degree, and 3782 with a third-class degree. This distribution highlights the need to investigate the underlying reasons for such a performance pattern. While this pattern may not recur consistently across higher institutions of learning globally, it is notably pronounced within Nigeria's higher institutions of learning, particularly among institutions that are financially accessible to the majority of Nigerians.

At its core, academic performance of students is heavily dependent and often influenced by a host of factors, ranging from student-related factors to lecturer-related factors to institution-related factors and finally home-related factors (Eseohe Glory Okoedion et al., 2019). Also, demographic factors such as race, language, gender, and age have a significant influence on students' academic performance (Sommerville & Singaram, 2018). Several studies associate age with varying levels

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of academic maturity, motivation, determination, grit, and learning capacity. Similarly, gender is attributed to socio-cultural expectations and opportunities, although growing evidence indicates that socio-cultural expectations and opportunities have no hold on female students relative to years past (Parajuli & Thapa 2017). Likewise, higher institutions of learning are associated with varying academic rigor, grading policies, and student support structures.

Building on the broad perception of predictors and their effect on academic performance, much of the existing research has focused on academic institutions within individual countries. The Nigeria context is no exception, with several studies examining the predictors of academic performance within local higher institutions of learning. For instance, Akporuarho et al. (2024) explored the relationship between social identity factors and academic performance among Nigeria colleges of education students. Similarly, Mukhtar and Usman (2025) used a case study of Federal Polytechnic, Bali, to determine the predictors of academic performance. While these studies have established certain variables as predictors of academic performance, few have examined how demographic and college-related factors jointly shape academic outcomes among university graduates in Nigeria. Consequently, this study addresses this gap by analyzing data from the list of FUNAAB graduates mobilized for NYSC in 2024. Specifically, this study seeks to assess the association between gender and academic performance, assess the association between college affiliation and academic performance, and ultimately explore the effect of age, gender, and college affiliation on the class of degree obtained by FUNAAB graduates.

2.0 Study Design and Methods

This research employed a cross-sectional study approach where secondary data from FUNAAB 2024 National Youth Service Corps (NYSC) mobilization list was used to explore the effect of

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some variables on academic performance and also assess the association between academic performance and some influencing factors.

2.1 Data Description

The dataset used for this study was obtained from FUNAAB senate. It comprises 3406 entries of date of birth, class of grade, gender, department, college, and matriculation number of graduates mobilized for NYSC in 2024. The analysis was done on R version 4.5.1, with necessary variable coding handled by R. For multinomial logistic regression, third-class was designated as the reference category of the dependent variable. Also, COLAMRUD was designated as the reference category against which other colleges were compared, and male was designated as the reference category against which female was compared.

2.2 Descriptive Statistics

A clear and simple overview of the dataset for the study was achieved using descriptive statistics such as mean and standard deviation for the nominal variable (age) and frequency for the categorical variables (college, sex, and class of degree).

2.3 Chi-square Test of Association

The non-parametric chi-square test of association, otherwise known as the chi-square test of independence, was used to establish the association between class of degree attained and gender. Similarly, the chi-square test of association was used to test the independence of college affiliation on class of degree attained. This test utilizes a contingency table and was employed for the investigation because the variables of interest align perfectly with the variable type assumption of the chi-square test of association (categorical variables). The test statistic for the chi-square test of association is mathematically denoted by $\chi 2$ and is computed as:

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$$\chi^2 = \sum_{i=1}^{R}\sum_{j=1}^{C}\frac{(o_{ij}- e_{ij})^2}{e_{ij}} \quad (1)$$

and e_{ij} is computed as:

$$e_{ij} = \frac{row\ i\ total \times column\ j\ total}{grand\ total} \quad (2)$$

Where:

o_{ij} is the observed cell count in the i^{th} and j^{th} column of the table

e_{ij} is the expected cell count in the i^{th} and j^{th} column of the table

The quantity $(o_{ij} - e_{ij})$ is sometimes referred to as the residual of cell (i, j) denoted by r_{ij}

For the chi-square test of independence, one of the key assumptions is that the expected frequencies in each cell should not be too small. More specifically:

1. no more than 20% of cells should have expected count < 5
2. the expected frequency for each cell is at least one

Whenever this assumption is violated, the chi-square approximation becomes unreliable. Consequently, Monte Carlo Simulation, which is offered by most statistical software, is adopted as a method for estimating the *p-value* of the test. Monte Carlo Simulation randomly simulates a large number of contingency tables that preserve the observed row and column totals, calculates the chi-square statistic for each simulated table, and estimates the *p-value* as the proportion of simulated test statistics that are as extreme as the observed one

2.4 Hypothesis

H_1**:** There is no association between gender and class of degree.

H_2**:** There is no association between college affiliation and class degree.

2.5 Post Hoc Test

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Conventionally, a post hoc test is carried out when there is an indication or inference that there exists an association between two categorical variables of more than two levels. It is used to decipher which pair of categories are significantly different from one another; put differently, which pair of categories contribute significantly to the association observed by the chi-square test. This test is based on the chi-square test statistic, which is given by eqn (1).

2.6 Multinomial Logistic Regression

Multinomial logistic regression was observed to be the best-fitting and most parsimonious logistic regression type to model the odds of class of grade as a function of age, gender, and college in this study. For the four-outcome category model, we need three logit functions parameterized in terms of the logit of $Y = 1$ versus $Y = 0$, $Y = 2$ versus $Y = 0$ and $Y = 3$ versus $Y = 0$, where $Y = 0$ is the referent or baseline outcome. Assuming we have p covariates and a constant term denoted by the vector x of length $p + 1$ where $x_0 = 1$, we develop the model and denote the three logit functions as:

$$g_1(\mathrm{x}) = \ln\left[\frac{P(Y = 1|x)}{P(Y = 0|x)}\right]$$

$$= \beta_{i0} + \beta_{i1} x_1 + \beta_{i2} x_2 + \ldots + \beta_{ip} x_p$$

$$= x^T \beta_1 \,, \tag{3}$$

$$g_2(\mathrm{x}) = \ln\left[\frac{P(Y = 2|x)}{P(Y = 0|x)}\right]$$

$$= \beta_{i0} + \beta_{i1} x_1 + \beta_{i2} x_2 + \ldots + \beta_{ip} x_p$$

$$= x^T \beta_2 \tag{4}$$

and

$$g_3(\mathrm{x}) = \ln\left[\frac{P(Y = 3|x)}{P(Y = 0|x)}\right]$$

$$= \beta_{i0} + \beta_{i1} x_1 + \beta_{i2} x_2 + \ldots + \beta_{ip} x_p$$

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$$= x^T \beta_3 \quad (5)$$

Where:

β_i represent the coefficient of the covariate

x represent the explanatory variable

A multinomial logistic regression that satisfies its assumptions has:

1. A nominal dependent variable with at least 3 mutually exclusive categories
2. Independence of observation
3. No multicollinearity
4. Linearity of the log-odds

3.0 Result and Discussion

3.1 Descriptive Statistics

Table 1 presents a descriptive summary of the age characteristics, gender distribution, college affiliation, and academic performance, herein referred to as class of degree of graduates of the Federal University of Agriculture, Abeokuta (FUNAAB) mobilized for the National Youth Service Corps in 2024.

Academic performance distribution indicates that a good number of the graduates obtained a Second Class Upper Division, representing 48% (n = 1637) of the total sample. This category is followed by the Second Class Lower Division, which accounts for 45% (n = 1541) of the total sample. The relatively high proportion of graduates in these two categories points to the fact that majority of the graduates achieved satisfactory to above average academic performance. In contrast, only 3.6% (n = 122) of the graduates achieved a First Class, while 3.1% (n = 106) obtained a Third Class degree. A typical instance of the pattern of academic performance within Nigerian higher institutions, where the middle-degree categories tend to dominate, is reflected by this

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distribution. Similarly, the competitive academic standard within higher institutions in Nigeria is reflected by the low proportion of first-class graduates.

A not-so-pronounced male dominance was observed in the distribution of the gender of the graduates under study, with the male graduates constituting 53% (n = 1,789) of the total sample and their female counterparts constituting the remaining 47% (n = 1,617). This indicates a significant shift toward female inclusion in higher institutions of learning. The parity observed can be linked to the growing shift in socio-cultural beliefs and norms, which traditionally constrained females from pursuing education beyond the basic level. This growing shift indicates a positive effect of the increased advocacy for gender equality, along with interventions that promote women's education. Generally speaking, the almost equal proportion of the male and female gender points to the gradual recognition of women's intellectual capacity and their expanding presence across academic disciplines, including those historically dominated by men.

The distribution of graduates across colleges suggests that the graduate mobilized for NYSC in 2024 were predominantly from science-oriented colleges, with the College of Physical Sciences (COLPHYS) accounting for 18% (n = 608) of the graduates, the College of Animal Science (COLANIM) accounting for 15% (n = 524), the College of Plant Science (COLPLANT) accounting for 14% (n = 462), both the College of Biological Sciences (COLBIOS) and College of Food Science and Human Ecology (COLFHEC) accounting for 13% each, the College of Agricultural Management and Rural Development (COLAMRUD) accounting for 11% (n = 361), the College of Environmental Resources Management (COLERM) accounting for 10% (n = 353), the College of Engineering (COLENG) accounting for 5.7% (n = 193), the College of Veterinary

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Medicine (COLVET) accounting for 1% (n = 33), and the College of Entrepreneurial and Development Studies (COLENDS) accounting for a measly <1% of the graduates in the study.

With respect to age, the majority of graduates fall within the 19–24 years bracket, which accounts for 64% (n = 2,175) of the graduates, while 35% (n = 1,189) are aged 25–30 years, and only 1.2% (n = 42) are above 30 years. The mean age of the respondents is 24 years with a standard deviation of 2.14, indicating a relatively young and homogenous population typical of university graduates. The small variability in age of graduates in this study suggests that most graduates complete their studies within the conventional academic timeframe.

Table 1: Descriptive Statistics

Variable	Frequency	Percentage	Mean(SD)
Class of degree			
First Class	122	3.6%	
Second Class Upper	1637	48%	
Second Class Lower	1541	45%	
Third Class	106	3.1%	
Gender			
Male	1789	53%	
Female	1617	47%	
College			

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COLAMRUD	361	11%	
COLANIM	524	15%	
COLBIOS	438	13%	
COLENG	193	5.7%	
COLERM	353	10%	
COLFHEC	433	13%	
COLENDS	1	<1%	
COLPHYS	608	18%	
COLPLANT	462	14%	
COLVET	33	1%	
Age Group			24(2.14)
19 -24	2175	64%	
25-30	1189	35%	
>30	42	1.2%	

3.2 Chi-Square Test of Association

Figure 1 and Figure 2 below provide a visual representation of the distribution of gender and college affiliation across all levels of academic performance. They show how male and female graduates of

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9 colleges are spread out across the different levels of academic performance, namely; First Class, Second Class Upper, Second Class Lower, and Third Class. While some observable patterns are revealed by Figure 1 and 2, they do not offer conclusive evidence of a statistically significant association between gender and academic performance.

Figure 1: Distribution of Gender by Class of Degree

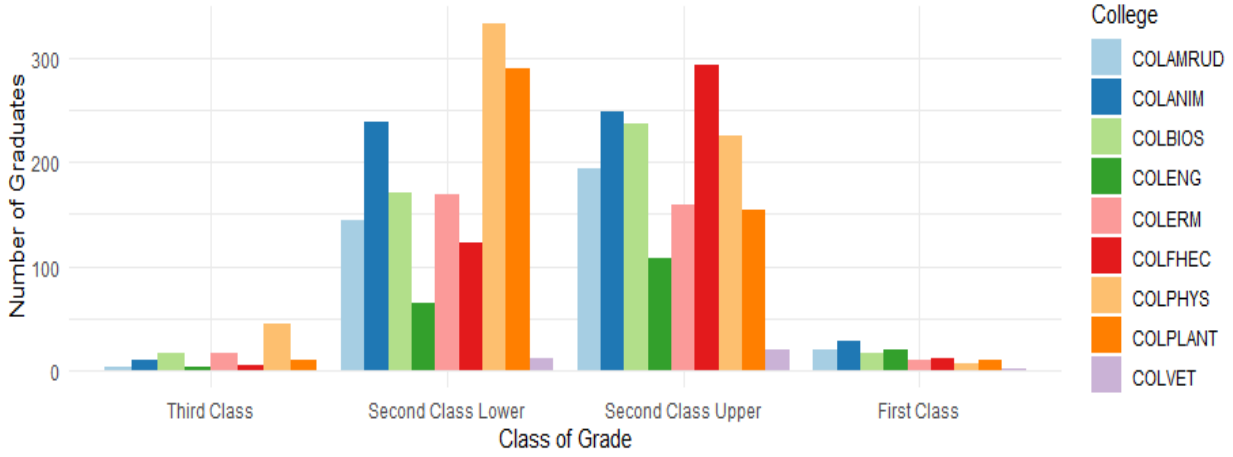

Figure 2: Distribution of College by Class of Degree

The result of the chi-square test of association at a 5% level of significance between gender and class of degree is presented in table 2 below. With a p-value less than 0.01, a strong association between academic performance and gender is established for the population under study.

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Table 2: Pearson's Chi-squared Test Summary

χ^2	df	p-value
134.31	3	<2.2e-16

Similarly, the result of the chi-square test of association at 5% level of significance between college affiliation and class of degree is presented in table 3 below. With a simulated p-value less than 0.01, a strong association between college affiliation and academic performance is established for the population under study as well.

Table 3: Pearson's Chi-squared Test Summary

χ^2	df	p-value
266.99	NA	0.000294

3.2.1 Post Hoc Test

Following the inference made about the association between college affiliation and academic performance, Table 4 presents results of the pairwise comparison carried out to identify where exactly this significant association exists. The result revealed multiple significant associations among colleges. For instance, the College of Agricultural Management and Rural Development (COLAMRUD), at a 5% level of significance showed significant association with the College of Environmental Resources Management (COLERM), the College of Food Science and Human Ecology (COLFHEC), the College of Physical Sciences (COLPHYS) and the College of Plant Science (COLPLANT). Likewise, at 5% level of significance, the College of Animal Science (COLANIM) exhibited strong dependencies with all other colleges except the College of Veterinary Medicine (COLVET) and the College of Agricultural Management and Rural

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Development (COLAMRUD). Also, The magnitude of the associations, as reflected by Cramer's V, ranged from weak to moderate association.

Table 4: Pairwise Comparison Summary

Comparison	p.Fisher	p.adj.Fisher	p.Chisq	p.adj.Chisq	Cramer V
COLAMRUD : COLANIM	0.2100	0.244000	0.211000	0.245000	0.0707
COLAMRUD : COLBIOS	0.037300	0.049700	0.040600	0.054100	0.1020
COLAMRUD : COLENG	0.126000	0.156000	0.137000	0.168000	0.0996
COLAMRUD : COLERM	0.000588	0.001320	0.000588	0.001180	0.1560
COLAMRUD : COLFHEC	0.001180	0.002240	0.000882	0.001670	0.1500
COLAMRUD : COLPHYS	0.000294	0.000756	0.000294	0.000706	0.2520
COLAMRUD : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.2450
COLAMRUD : COLVET	0.783000	0.805000	0.797000	0.820000	0.0473
COLANIM : COLBIOS	0.032000	0.044300	0.028200	0.039000	0.0983
COLANIM : COLENG	0.011200	0.016800	0.013800	0.020700	0.1250
COLANIM : COLERM	0.029700	0.042800	0.020600	0.029700	0.1040
COLANIM : COLFHEC	0.000294	0.000294	0.000294	0.000706	0.2030
COLANIM : COLPHYS	0.000294	0.000756	0.000294	0.000706	0.2070
COLANIM : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.1840
COLANIM : COLVET	0.460000	0.518000	0.430000	0.484000	0.0698
COLBIOS : COLENG	0.006470	0.010100	0.006170	0.010600	0.1400
COLBIOS : COLERM	0.060900	0.078300	0.055000	0.070700	0.0964
COLBIOS : COLFHEC	0.000882	0.001870	0.000588	0.001180	0.1510

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COLBIOS : COLPHYS	0.000294	0.000756	0.000294	0.000706	0.2060
COLBIOS : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.2400
COLBIOS : COLVET	0.550000	0.582000	0.545000	0.591000	0.0678
COLENG : COLERM	0.000294	0.000756	0.000294	0.000706	0.2080
COLENG : COLFHEC	0.001180	0.002240	0.000588	0.001180	0.1690
COLENG : COLPHYS	0.000294	0.000756	0.000294	0.000706	0.2970
COLENG : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.2990
COLENG : COLVET	0.933000	0.933000	0.847000	0.847000	0.0692
COLERM : COLFHEC	0.000294	0.000756	0.000294	0.000706	0.2390
COLERM : COLPHYS	0.005880	0.009620	0.004700	0.008460	0.1160
COLERM : COLPLANT	0.000588	0.001320	0.000294	0.000706	0.1580
COLERM : COLVET	0.138000	0.166000	0.140000	0.168000	0.1180
COLFHEC : COLPHYS	0.000294	0.000756	0.000294	0.000706	0.3290
COLFHEC : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.3530
COLFHEC : COLVET	0.507000	0.553000	0.558000	0.591000	0.0650
COLPHYS : COLPLANT	0.000294	0.000756	0.000294	0.000706	0.1380
COLPHYS : COLVET	0.002650	0.004770	0.008530	0.013400	0.1580
COLPLANT : COLVET	0.004120	0.007060	0.006470	0.010600	0.1680

3.3 Multinominal Logistic Regression

Table 5 presents the results of the multinomial logistic regression analysis examining the influence of age, gender, and college affiliation on academic performance, measured by class of degree. Controlling for other covariates, the analysis reveals that with every one-year increase in age, the odds of obtaining a first-class degree rather than a third-class degree decreases by 3.54% ($p > 0.05$). Similarly, for every unit increase in age, the odds of obtaining a second-class upper degree

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relative to a third-class degree decreases by 8.79% ($p > 0.05$). Likewise, for every unit increase in age, the odds of obtaining a second-class lower degree relative to a third-class degree decreases by 6.89% ($p > 0.05$). While this evidence indicates that older students have a lower chance of doing well academically, the results corroborate with the findings of Cabras et al. (2024), which emphasized that age is not a significant predictor of academic performance.

With respect to gender, holding other variables constant, the result shows that the odds of male graduates obtaining a first-class degree rather than a third-class degree when compared to their female counterparts decreases by 78.06% ($p < 0.05$). Furthermore, the odds of male graduates obtaining a second-class upper degree rather than a third-class degree relative to their female counterparts decreases by 75.27% ($p < 0.05$). Also, the odds of male graduates obtaining a second-class lower degree rather than a third-class degree when compared to the female gender decreases by 52.62% ($p < 0.05$). In line with the conclusion of Takeuchi (2022), this finding points to the fact that gender is a significant predictor of academic performance and indicates that across all classes of degree, females perform better.

Regarding college affiliation, holding other covariates constant, the result reveals that the odds of obtaining a first-class degree rather than a third-class degree among COLANIM graduates compared to COLAMRUD decreases by 55.68% ($p > 0.05$). The second-class upper degree and second-class lower degree comparison with the third-class degree, with respect to COLANIM graduates benchmarked on COLAMRUD, follows this pattern too, although the second-class upper degree comparison with the third-class degree decreases by 59.26% and is significant at $p < 0.05$. Furthermore, the result shows that across all classes of degree, COLBIOS, COLENDS and COLERM exhibit a significant decrease in odds when compared to COLAMRUD. Similarly,

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COLPLANT and COLPHYS exhibit a decrease in odds compared to COLAMRUD, although, for their respective second-class lower degree comparison with the third-class degree, the effect is not significant. In contrast, across all classes of degree, COLVET exhibits an increase in odds, although the second-class upper comparison with the third-class degree is not significant. In addition, the odds of COLFHEC graduates obtaining any of first-class degree, second-class upper degree and second-class lower degree compared to third-class degree when benchmarked against COLAMRUD are low, although the effect is not significant. Finally, the odds of obtaining a first-class degree rather than a third-class degree among COLENG graduates compared to COLAMRUD increases by 36.11% ($p > 0.05$), decreases by 25.6% ($p < 0.05$) and 50.75% ($p > 0.05$) for the second-class upper degree comparison with the third-class degree comparison and the second-class lower degree comparison with the third-class degree. Although some colleges exhibit an insignificant effect on academic performance, this result indicates that college affiliation is a significant predictor of academic performance.

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Table 5: Multinominal Logistic Regression Summary

						95% Confidence Interval	
	Value	Std. Error	t-value	Odds ratio	p-value	Lower Bound	Upper Bound
First Class							
Intercept	4.5691	1.6697	2.7363	96.4617	6.2124e-03	1.2964	7.8418
age	-0.0668	0.0624	-1.0706	0.9353	0.2843	-0.1892	0.0555
collegeCOLANIM	-0.8136	0.7298	-1.1148	0.4432	0.2649	-2.2440	0.6167
collegeCOLBIOS	-2.2885	0.7208	-3.1748	0.1014	0.0014	-3.7013	-0.8757
collegeCOLENG	0.3082	0.8839	0.3487	1.3611	0.7272	-1.4242	2.0408
collegeCOLERM	-2.5131	0.7416	-3.3887	0.0810	0.0007	-3.9666	-1.0595
collegeCOLFHEC	-1.6910	0.8287	-2.0406	0.1843	0.0412	-3.3152	-0.0668
collegeCOLENDS	-32.4570	1.2234e-13	-2.6529e+14	8.0182e-15	<0.01	-32.4570	-32.4570
collegeCOLPHYS	-3.8455	0.7630	-5.0394	0.0213	4.6679e-07	-5.3411	-2.3499
collegeCOLPLANT	-2.0167	0.7802	-2.5846	0.1330	0.0097	-3.5461	-0.4874
collegeCOLVET	9.8870	0.5128	19.2782	19674.34	<0.01	8.8818	10.8922
genderM	-1.5165	0.3219	-4.7112	0.2194	2.4625e-06	-2.1475	-0.8856

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Second Class Upper							
Intercept	7.3937	1.2993	5.6901	1625.7233	1.2689e-08	4.8469	9.9404
age	-0.0918	0.0462	-1.9868	0.9122	1.4453e-01	-0.1824	-0.0012
collegeCOLANIM	-0.8978	0.6751	-1.3298	0.4074	3.7569e-02	-2.2210	0.4253
collegeCOLBIOS	-1.8710	0.6424	-2.9123	0.1539	2.1641e-02	-3.1301	-0.6118
collegeCOLENG	-0.2957	0.8284	-0.3569	0.7440	3.9973e-03	-1.9193	1.3279
collegeCOLERM	-0.7301	0.6407	-3.1253	0.1349	4.0882e-05	-3.2583	-0.7467
collegeCOLFHEC	-1.6910	0.7458	-0.9789	0.4818	8.3530e-01	-2.1920	00.7316
collegeCOLENDS	-32.8179	8.1451e-13	-4.0291e+13	5.5890e-15	<0.01	-32.8179	-32.8179
collegeCOLPHYS	-2.5363	0.6098	-4.1590	0.07915	1.7248e-12	-3.7316	-1.3410
collegeCOLPLANT	-1.4383	0.6773	-2.1236	0.2373	9.2170e-13	-2.7658	-0.1108
collegeCOLVET	9.9461	0.3116	31.9126	20871.62	4.4667e-01	9.3352	10.5570
genderM	-1.3969	0.2549	-5.4787	0.2473	5.1788e-21	-1.8966	-0.8971
Second Class Lower							
Intercept	6.2049	4.8145	4.8145	495.2098	1.4753e-06	3.6789	8.7309
age	-0.0713	0.0457	-1.5600	0.93111	0.1187	-0.1609	0.0182
collegeCOLANIM	-0.6230	0.6754	-0.9223	0.5363	0.35632	-1.9468	-0.7008
collegeCOLBIOS	-1.7374	0.6435	-2.6995	0.1759	0.00694	-2.9988	-0.4760

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collegeCOLENG	-0.7081	0.8324	-0.8507	0.4925	0.39491	-2.3397	0.9233
collegeCOLERM	-1.5801	0.6403	-2.4678	0.2059	0.0135	-2.8351	-0.3251
collegeCOLFHEC	-1.0243	0.7491	-1.3673	0.3590	0.1715	-2.4926	0.4439
collegeCOLENDS	-32.4975	1.0502e-12	-3.0943e+13	7.7001e-15	<0.01	-32.4975	-32.49753
collegeCOLPHYS	-1.8863	0.6089	-3.0976	0.1516	1.95035	-3.0799	-0.6928
collegeCOLPLANT	-0.4507	0.6750	-0.6677	0.6371	0.50429	-1.7738	0.8723
collegeCOLVET	9.6605	0.3360	28.7491	15685.97	<0.01	9.0019	10.3191
genderM	-0.7467	0.2548	-2.9299	0.4738	3.3905e--03	-1.2463	-0.2472

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4.0 Conclusion and Recommendation

The main finding of the study suggests that while some colleges are insignificant predictors of academic performance, numerous others, under varying classes of grade, are significant predictors of academic performance. Also, the results revealed that graduates from COLVET are more likely to attain higher classes of degrees, whereas those from COLPHYS, COLENDS, COLPLANT, COLFHEC, COLERM, COLBIOS, and COLANIM tend to experience the opposite. In general, the results indicate that college affiliation is a significant predictor of academic performance. Similarly, the study suggests that gender is a significant predictor of academic performance, with the chances of females doing better academically greater than that of their counterparts. Finally, the results revealed that the likelihood of older students doing better academically is low, although age itself is not a significant predictor of academic performance.

Since the study concludes that gender and college affiliation are significant predictors of academic performance, and results revealed that their effects are negatively strong on the academic performance of graduates, it is necessary to chart a path towards establishing academic support systems and institutional policies that can guard against the adverse effect of these predictors.

To this end, higher institutions of learning should consider implementing targeted mentorship that strengthens their academic motivation and engagement programs that encourage male students to adopt effective learning strategies. Similarly, colleges where students generally perform poorly should be given special attention through tailored academic interventions, improved instructional methods, and equitable resource allocation. By adopting these measures, higher institutions of learning can help bridge the performance gap and promote a more balanced academic environment across gender and college lines.

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