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## Assessment of Private Costs of University Education among Final-Year Undergraduate Students in University of Benin, Edo State, Nigeria

OGBEIDE, Agbons Kennedy<sup>1</sup>

Email: [Ogbeidekennedy9@gmail.com](mailto:Ogbeidekennedy9@gmail.com)

+2348032431469

EDEKI, Oghomwen Mine<sup>1</sup>

Email: [oghomen.agbonaye@uniben.edu.ng](mailto:oghomen.agbonaye@uniben.edu.ng)

+2349032676798

<sup>1</sup>Department of Educational Management, University of Benin, Benin City.

### Abstract

This study analyzed the private costs of university education among final-year Nursing undergraduates at the University of Benin, Edo State, Nigeria. Using a descriptive survey research design, data were collected from all 310 final-year Nursing students via a validated questionnaire (PECQ-NS,  $\alpha=0.84$ ). Data were analyzed using descriptive statistics, *t*-tests, correlation analysis, and simple linear regression at a 0.05 significance level. Findings revealed that clinical materials (Mean=3.65), off-campus accommodation (Mean=3.57), and transportation to teaching hospitals (Mean=3.48) were the most significant cost components. A moderate positive relationship existed between socio-economic background and private costs ( $r=0.381$ ,  $p<0.001$ ), indicating greater hardship for lower-income students. Private costs significantly affected academic experiences and completion rates, explaining 20% of the variation ( $R^2=0.200$ ,  $p<0.001$ ). Interestingly, male students incurred significantly higher average private costs (Mean=70.84) than female students (Mean=67.13,  $p=0.006$ ). The study concludes that substantial private costs, influenced by socio-economic status and gender, negatively impact Nursing students' academic journey. Recommendations include subsidizing clinical materials, prioritizing support for disadvantaged students, expanding hostel spaces, and developing gender-sensitive financial policies.

**Keywords:** Private cost of education, Nursing students, academic engagement, gender disparities, socio-economic status,

### Introduction

University education plays a vital role in shaping the intellectual and professional development of individuals, particularly in a developing nation like Nigeria. Nursing education, as a subset of university training in health sciences, is critical to the healthcare delivery system. Final-year students in medical related programs undergo intensive academic and clinical training, which prepares them to meet professional standards and contribute to public health. However, behind this essential academic pursuit lies a significant burden of private cost of education borne by students and their families. Private cost of education is a critical component for service delivery in the school system. According to Obano and Ogbeide (2021), private cost of education is an investment incurred by individual students and their family through payment of tuition fees, purchase of admission form, books, dues, among others. These costs often go beyond tuition and include expenditures on accommodation, clinical materials, transportation to health facilities, feeding, and departmental charges. As observed by Oyetakin (2018), such hidden or non-tuition expenses can sometimes outweigh official school fees, placing enormous pressure on students, particularly in professional courses like Nursing. Despite government subsidies for public university education in Nigeria, the financial reality for students remains daunting. Nursing undergraduates, especially in their final year, encounter a surge in private spending due to increased clinical responsibilities and extended hospital postings. These out-of-pocket costs can create barriers to effective academic engagement and performance. For instance, Okorie and Alabi (2021) note that the increasing financial demands of clinical materials and transportation to clinical sites affect students' focus and attendance. The burden becomes more challenging for students from low socio-economic backgrounds, who may already struggle with basic needs. This link between private cost and socio-economic status underscores the importance of analyzing financial disparities among students and their effect on academic continuity. Therefore, examining these costs is critical to understanding how they influence access, engagement, and outcomes in higher education. Further complicating the picture are gender-based and socio-cultural dimensions of private educational spending. Some empirical studies suggest that female students incur more on personal security and hygiene-related expenses, while male students often face higher costs for housing and feeding due to lifestyle and living arrangements (Eze & Ibeh, 2022). These gender variations in spending patterns can influence academic persistence differently. In the context of Nursing education—a field



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traditionally dominated by female students—it becomes essential to explore whether these differences exist and how they impact educational attainment. Additionally, as final-year Nursing students handle more complex academic and clinical responsibilities, the influence of financial burden on their ability to complete their education on time becomes a pressing concern. Understanding these dynamics can help institutions implement gender-sensitive and socio-economic inclusive support systems. Moreover, several studies have addressed private cost of education among undergraduates in Nigeria, but few have focused specifically on Nursing students or captured current data from Southern Nigeria. For instance, Nwachukwu (2019) and Nyarko and Adomako (2020) revealed a direct link between financial hardship and students' intention to drop out, with accommodation and transport costs being the most burdensome. However, their focus was primarily on general university students. There is a gap in literature focusing on professional disciplines like Nursing, which involve unique academic structures and extended fieldwork. This research therefore seeks to fill that gap by providing an in-depth analysis of the private costs of university education among final-year Nursing undergraduates at the University of Benin, Edo State, Nigeria. Several studies have explored the theme of private cost of education in Nigerian universities. Ogundele and Adegoke (2021) studied private costs among undergraduates in Delta State and found that accommodation and transport made up over 50% of total private costs, with students relying heavily on family support and side businesses. However, their study lacked focus on academic discipline or year of study. Oyetakin (2018), focusing on postgraduate students across six universities in South-West Nigeria, reported that science and engineering students had higher educational costs compared to arts, but did not explore how these costs impacted academic engagement or differed by gender.

Eze and Ibeh (2022) examined gender-specific effects of educational costs and found that females incurred higher personal costs for safety and health, which influenced class attendance. Similarly, Giwa and Sheu (2022) analyzed private costs across institutional types and concluded that while ownership and housing affected cost levels, field of study was not a major determinant. However, they did not disaggregate data for Nursing students, nor did they assess final-year student experiences. Mwangi and Githinji (2021) explored cost differences in engineering departments in Kenyan universities and highlighted that department-specific demands affect expenditure levels. Meanwhile, Nwachukwu and Etim (2019) showed that over one-third of Nigerian undergraduates considered dropping out due to unaffordable private costs. Nyarko and Adomako (2020), using Ghanaian data, confirmed similar findings, especially for students from rural areas studying in urban centers. These studies underscore the urgent need to examine financial realities among Nursing students, who often face intense practical and academic demands.

### **Statement of the Research Problem**

Despite government efforts to subsidize tuition in public universities, students in professional courses like Nursing continue to face high private educational costs. These expenses, especially in final year, include accommodation near clinical sites, daily transportation, clinical tools, protective kits, textbooks, and data subscriptions for digital learning. Many students, particularly those from low-income families, struggle to meet these financial demands. This affects their academic engagement, attendance at clinical rotations, and, in some cases, leads to delays in graduation or dropout. Preliminary observations at the University of Benin suggest that many final-year Nursing students take on extra financial responsibilities not covered by tuition, such as purchasing medical gloves, syringes, and clinical manuals. These realities are rarely captured in institutional financial aid policies, creating gaps in support. Although some existing studies touch on educational cost burdens, few provide discipline-specific insights, especially for health-related programs like Nursing. Even fewer examine gender-based differences and the influence of socio-economic status on private educational costs in Nursing education. Therefore, this study aims to analyze the private costs of university education among final-year Nursing undergraduates at the University of Benin, considering the unique demands of their academic and clinical workload.

### **Objectives of the study**

The primary purpose of this study is to analyze the private costs incurred by final-year Nursing undergraduate students at the University of Benin, Edo State, in the pursuit of their university education. Specifically, the study seeks to:

1. Identify the major components of private costs of education incurred by final-year Nursing undergraduate students at the University of Benin.
2. Examine the extent to which students' socio-economic backgrounds influence the level of private cost of education spending among Nursing students.



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3. Assess how private costs of education affect the academic experiences and completion prospects of final-year Nursing undergraduate students.
4. Determine whether there are significant differences in private cost of education between male and female Nursing students at the University of Benin.

### Research Questions

1. What are the major components of private costs of education incurred by final-year Nursing undergraduate students at the University of Benin?
2. To what extent do socio-economic backgrounds influence the level of private costs of education spending among Nursing students?
3. How do private costs of education affect the academic experiences and completion prospects of final-year Nursing students?
4. Are there significant differences in private costs of education between male and female Nursing students at the University of Benin?

### Hypotheses

- H<sub>01</sub>: There is no significant relationship between students' socio-economic background and the level of private costs of education incurred in their university education.
- H<sub>02</sub>: Private costs of education have no significant effect on the academic experience and completion rates of final-year Nursing students.
- H<sub>03</sub>: There is no significant difference in the average private costs of university education between male and female Nursing students.

### Research Methodology

This study used a descriptive survey research design to examine the private costs of university education among final-year Nursing students at the University of Benin. This method helped the researcher collect real-life data without changing or influencing anything. It was useful in understanding the types and levels of personal expenses students face, such as transportation, accommodation, and learning materials. The study focused on all 310 final-year Nursing students in the 2023/2024 academic year. Since the population was small and manageable, the researcher used all the students as the sample through a census method. This made the results more accurate and reliable because every student's experience was included. The data were collected using a questionnaire called the *Private Education Cost Questionnaire for Nursing Students (PECQ-NS)*. It included questions about students' background, personal expenses, how these costs affect their studies, how they cope, and their views on support from the school and government. Experts in education and nursing reviewed the questionnaire to make sure it was valid, and a pilot test with 30 students from another university showed it was reliable, with a Cronbach Alpha score of 0.84. Data were collected in both paper and online formats over three weeks. The collected data were analyzed using SPSS software, where averages, percentages, and standard deviations were used to answer the research questions. For testing the hypotheses, the researcher used t-tests, correlation analysis, and simple linear regression, all tested at a 0.05 significance level.

### Presentation of Results

#### Descriptive Analysis of Research Question One

What are the major components of private costs incurred by final-year Nursing undergraduate students at the University of Benin?

**Table 1: Mean and Standard Deviation of Major Private Educational Cost Components (N = 310)**

Cost Components	Mean	Std. Dev.	Decision
Clinical Materials and Kits	3.65	0.59	Agreed
Accommodation (Off-Campus Housing)	3.57	0.66	Agreed
Transportation to Teaching Hospitals	3.48	0.70	Agreed
Feeding and Personal Upkeep	3.42	0.71	Agreed
Academic Levies and Charges	3.15	0.74	Agreed
Data and Internet Subscription	3.10	0.68	Agreed



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Cost Components	Mean	Std. Dev.	Decision
Nursing Council Registration Fees	3.39	0.64	Agreed
Project Printing and Binding	3.22	0.73	Agreed

Result from table 1 show that the most significant components of private cost of education among final-year Nursing students are clinical materials (Mean = 3.65), off-campus accommodation (Mean = 3.57), and transportation to teaching hospitals (Mean = 3.48). These reflect the clinical and practice-based nature of Nursing education. All listed components had means above 2.50, indicating general agreement among respondents that these costs are substantial. Financial planning and institutional support should prioritize these areas to reduce student financial stress.

**Hypothesis One:** There is no significant relationship between students' socio-economic background and the level of private costs incurred in their university education.

**Table 2: Pearson Correlation Between Socio-Economic Background and Private Educational Costs**

Variables	N	r-value	Sig. (2-tailed)	Decision
Socio-economic background	310	0.381	0.000	Reject $H_{01}$
Private cost of Education				Significant

Result from table 2 of the Pearson correlation value of 0.381 indicated a moderate positive relationship between students' socio-economic background and the level of private cost of education incurred. The p-value of 0.000 (less than 0.05) shows this relationship is statistically significant. This suggests that students from lower-income households bear greater hardship from private cost of education, which may affect their academic participation, especially during clinical postings that demand extra spending on transport and materials.

**Hypothesis Two:** Private costs of education have no significant effect on the academic experience and completion rates of final-year Nursing students.

**Table 3: Simple Linear Regression – Effect of Private Educational Costs on Academic Experience and Completion**

Statistic / Component	Value
R	0.447
R Square	0.200
Adjusted R Square	0.197
Std. Error of the Estimate	0.496
F-value	75.13
Sig. (p-value)	0.000
Decision	Reject $H_{02}$

The regression results from table 3 revealed a significant positive relationship between private educational costs and students' academic experience/completion. The  $R^2$  value of 0.200 suggests that 20% of the variation in academic experience is explained by private costs. The p-value (0.000) confirms that this is statistically significant. This indicates that higher private costs negatively affect students' academic progress, often leading to missed classes, delayed assignments, or extended graduation due to financial hardship.

**Hypothesis Three:** There is no significant difference in the average private costs of university education between male and female Nursing students.



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**Table 4: Independent Samples t-Test Showing Gender Differences in Private Educational Costs**

Gender	N	Mean Cost	Std. Dev.	t-value	df	Sig. (2-tailed)	Decision
Male	72	70.84	11.94	2.786	308	0.006	Reject H <sub>03</sub>
Female	238	67.13	10.45				Significant

The results from table 4 showed a statistically significant difference in private educational costs between male and female Nursing students. Male students had a higher average cost (Mean = 70.84) than females (Mean = 67.13), and the p-value = 0.006 shows this difference is significant. This may be due to gendered patterns of accommodation, lifestyle, or family responsibilities. However, it is also possible that more male students live independently or take on extra financial responsibilities related to clinical rotations or transportation.

### Discussion of Findings

The findings from this study provide a comprehensive view of the private cost of education borne by final-year Nursing undergraduate students at the University of Benin. The descriptive analysis showed that major cost components include clinical materials, accommodation, transportation to clinical sites, and feeding. These costs reflect the practical and field-based nature of Nursing education, where students are required to participate in hospital rotations, community postings, and laboratory activities. The high mean for clinical kits and transport expenses supports earlier findings by Okorie and Alabi (2021), who emphasized that Nursing students incur significant extra-budgetary expenses due to clinical practicum demands not covered by institutional fees. The result of the first hypothesis revealed a statistically significant relationship between students' socio-economic backgrounds and the level of private costs of education incurred. Students from low-income families reported a higher level of financial strain. This aligns with Eze & Oladele (2022), who reported that students from disadvantaged socio-economic backgrounds often struggle to keep up with financial demands in healthcare-based courses, leading to emotional stress and reduced academic performance.

The regression analysis in Hypothesis Two revealed that private cost of education significantly affects the academic experience and completion rates of Nursing students. This implies that as educational expenses increase, students are more likely to experience difficulties such as late fee payments, absenteeism from clinical postings, or even delayed graduation. This is consistent with Gyang, Ibrahim, and Okechukwu (2020), who found that financial constraints among health sciences students led to low attendance and reduced academic output during final year programs. Hypothesis Three tested for gender differences in private cost of education and found that male students incurred significantly higher costs than female students. This is a reversal of the common assumption that female students usually have higher personal upkeep expenses. A possible explanation may lie in male students' higher likelihood of independent accommodation, part-time job-related transport costs, or family responsibilities. This trend supports findings by Adebayo and Bello (2021), who noted that male Nursing students in urban universities tend to rent apartments further from campus due to accommodation shortages, leading to increased financial burdens.

### Conclusion

The study concludes that private cost of education significantly impacts the academic experience and persistence of final-year Nursing students at the University of Benin. Students incur substantial personal expenses, especially in clinical-related materials, accommodation, and transportation. Socio-economic background strongly influences the level of financial stress, with students from poorer households facing greater challenges. In addition, private costs have measurable effects on students' ability to stay focused and complete their academic programs on time. Gender also plays a role, with male students experiencing higher average private costs than their female counterparts. These insights underscore the need for targeted financial interventions to support student success and equity in Nursing education.

### Recommendations

Based on the findings, the following recommendations are made:

1. The University of Benin and relevant health agencies should establish dedicated support schemes to subsidize clinical materials and transportation to teaching hospitals. This would reduce the financial burden specific to practical Nursing education.



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2. Socio-economically disadvantaged students should be prioritized for bursaries and flexible payment options. These measures would improve access, retention, and completion among financially vulnerable students.
3. Since off-campus housing is a major cost driver, university management should prioritize hostel spaces for final-year students to reduce high rent and transport expenses, especially during clinical postings.
4. Given that male students were found to have higher private costs, financial support policies should not only target female students but also consider the specific financial patterns of male students, such as independent living and job-related mobility.
5. The university should regularly track and review private cost trends among students, particularly in practice-based programs like Nursing, to ensure that policy responses are timely, data-driven, and student-focused.

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