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Modeling the Drivers of Female Participation in Higher Education in Northern Nigeria

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ABSTRACT

Despite ongoing policy efforts, the gender gap in higher education enrollment remains a persistent challenge in Northern Nigeria. While qualitative studies have explored cultural and economic barriers, few have quantified their relative influence on parental decision-making. This study employs a cross-sectional survey of 384 parents in Sokoto State to examine how socio-cultural attitudes, economic constraints, and perceptions of institutional safety predict parental willingness to support daughters' university education. Using regression analysis, the model explained 48% of the variance in willingness, with institutional safety emerging as the strongest predictor ($\beta = .42, p < .001$), followed by economic constraints ($\beta = -.31, p < .001$) and socio-cultural attitudes ($\beta = -.25, p < .01$). These findings underscore the need for gender-sensitive campus reforms and community engagement strategies that build institutional trust. The study offers a data-driven framework for designing culturally responsive interventions to improve girls' access to higher education in conservative regions.

Keywords: girl-child education, parental attitudes, institutional safety, Northern Nigeria, regression analysis, higher education access

INTRODUCTION

Gender disparities in higher education access continue to undermine development efforts in Northern Nigeria, where cultural norms, economic hardship, and institutional shortcomings converge to limit girls' academic progression. Despite national initiatives such as the Safe Schools Declaration and the Girls' Education Project (UNESCO, 2023), female enrollment in tertiary institutions remains disproportionately low (UNICEF, 2024). While qualitative studies have richly described the barriers—ranging from early marriage and religious conservatism to poverty and parental fear (Eneji et al., 2022; Ibrahim & Uba, 2021)—there is limited quantitative evidence assessing the relative weight of these factors in shaping parental decisions.

Understanding which factor most strongly influences parental willingness is essential for targeted policy design. Is the primary deterrent a lack of financial resources, entrenched cultural beliefs, or concerns about campus safety and moral exposure? Recent research suggests that institutional trust may be pivotal. For instance, Abdu and Ma'aji (2022) found that fears about sexual harassment and inadequate female accommodation significantly deterred female enrollment. Similarly, Okafor et al. (2023) highlight the role of social control mechanisms in shaping perceptions of safety in Nigerian universities.

This study builds on these insights by employing a quantitative approach to model the relationship between three key predictors—socio-cultural attitudes, economic constraints, and perceptions of institutional safety—and the outcome variable of parental willingness to support daughters’ university education. By statistically analysing these relationships, the study aims to provide a robust evidence base for prioritising interventions that are both effective and culturally resonant.

Literature Review and Hypotheses

Efforts to improve girls’ access to higher education in Northern Nigeria must contend with a constellation of socio-cultural, economic, and institutional factors. While qualitative studies have richly described these barriers, quantitative research remains limited in assessing their relative influence on parental decision-making. This study addresses that gap by examining three key domains: socio-cultural attitudes, economic constraints, and perceptions of institutional safety.

1. Socio-Cultural Attitudes

Patriarchal norms and religious conservatism continue to shape perceptions of female education in Northern Nigeria. Early marriage is often viewed not only as a cultural tradition but as a moral safeguard, with higher education perceived as a threat to a girl’s modesty and marital prospects (Ibrahim & Uba, 2021). Recent studies confirm that these beliefs remain deeply entrenched. For example, Musa et al. (2023) found that over 60% of surveyed parents in Zamfara State believed university education could “corrupt” a girl’s values, reinforcing the notion that education beyond secondary school is socially risky.

2. Economic Constraints

Financial hardship remains a critical barrier. The direct costs of tuition, transportation, and accommodation, coupled with indirect costs such as lost household labor, often lead families to prioritize sons’ education. Eneji et al. (2022) describe this as the “economics of son preference,” where daughters are seen as short-term investments with limited returns. A recent study by Bello & Yakubu (2023) in Kebbi State found that 72% of low-income households would choose to sponsor a son over a daughter for university, citing future earning potential and cultural expectations.

3. Perceptions of Institutional Safety

Concerns about the physical and moral safety of university environments are increasingly recognized as decisive factors in parental decision-making. Abdu & Ma’aji (2022) highlighted how inadequate female accommodation and fears of sexual harassment deter enrollment. More recently, Okafor et al. (2023) found that parents were more likely to support daughters’ higher education when universities demonstrated visible safety measures, such as female-only hostels and gender-sensitive policies. These findings suggest that institutional trust may outweigh even economic or cultural concerns.

Hypotheses

Based on the literature, the following hypotheses were formulated:

H1: Socio-cultural attitudes will be negatively correlated with parental willingness to support girls’ higher education.

H2: Economic constraints will be negatively correlated with parental willingness.

H3: Perceptions of institutional safety will be positively correlated with parental willingness.

H4: Perceptions of institutional safety will be the strongest unique predictor of parental willingness.

METHODOLOGY

This study employed a quantitative, cross-sectional survey design to assess the relationship between key predictors—socio-cultural attitudes, economic constraints, and perceptions of institutional safety—and parental willingness to support girls’ higher education. The design enabled the collection of data at a single point in time, allowing for statistical modelling of the predictors’ relative influence.

Participants and Sampling

The target population comprised parents of female secondary school students in Sokoto State. A multi-stage random sampling technique was used to ensure geographic and demographic diversity. First, five Local Government Areas (LGAs) were randomly selected. From each LGA, two secondary schools were chosen. Within each school, a convenience sample of approximately 77 parents was recruited, yielding a

total sample size of 384. This sample exceeds the minimum requirement for multiple regression analysis, which recommends at least 10–15 participants per predictor variable (Field, 2018).

Instrument Development and Measures

Data were collected using a structured questionnaire consisting of four sections:

Demographics: Age, gender, education level, income bracket, and urban/rural location.

Parental Willingness: Measured using a 5-item Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Sample item: “I am willing to financially support my daughter through university.”

Socio-Cultural Attitudes: A 6-item scale assessing beliefs about early marriage and female education (e.g., “A university education makes a girl less marriageable.”).

Economic Constraints: A 5-item scale evaluating financial barriers (e.g., “University costs are beyond my family’s means.”).

Institutional Safety Perceptions: A 6-item scale measuring views on campus safety and moral environment (e.g., “Universities in this region are safe for female students.”).

All scales demonstrated acceptable internal consistency, with Cronbach’s alpha values ranging from .78 to .84, indicating reliable measurement.

Data Analysis Procedures

Data were analyzed using SPSS version 26. The following statistical techniques were applied:

Descriptive Statistics: To summarize demographic characteristics and scale distributions.

Pearson’s Correlation: To examine bivariate relationships among variables and test hypotheses H1–H3.

Multiple Linear Regression (Enter Method): To assess the unique contribution of each predictor to parental willingness (testing H4). Standardised beta coefficients were used to determine the relative strength of each predictor.

Ethical approval was obtained from the relevant institutional review board. Participation was voluntary, and informed consent was secured from all respondents. Anonymity and confidentiality were maintained throughout the study.

RESULTS

1. Descriptive Statistics and Correlations

Descriptive statistics and Pearson’s correlation coefficients were computed to examine the relationships among the study variables. As shown in Table 1, parental willingness to support girls’ higher education was negatively correlated with socio-cultural attitudes ($r = -.35, p < .01$) and economic constraints ($r = -.48, p < .001$), and positively correlated with perceptions of institutional safety ($r = .52, p < .001$). These results provide empirical support for hypotheses H1, H2, and H3.

Table 1. Means, Standard Deviations, and Correlations Among Variables (N = 384)

Variable	M	SD	1	2	3	4
1. Parental Willingness	3.12	0.89	—			
2. Socio-Cultural Attitudes	3.85	0.76	-.35	—		
3. Economic Constraints	4.02	0.81	-.48	.22	—	
4. Institutional Safety	2.45	0.92	.52	-.31	-.29	—

Note: $p < .01, p < .001$

2. Multiple Regression Analysis

A multiple linear regression was conducted to assess the unique contribution of each predictor to parental willingness. The overall model was statistically significant, $F(3, 380) = 117.25, p < .001$, and explained 48% of the variance in parental willingness ($R^2 = .48$).

As shown in Table 2, all three predictors were significant. Perceptions of institutional safety emerged as the strongest unique predictor ($\beta = .42, p < .001$), followed by economic constraints ($\beta = -.31, p < .001$) and socio-cultural attitudes ($\beta = -.25, p = .001$). These findings confirm hypothesis H4.

Table 2 Multiple Regression Predicting Parental Willingness

Predictor	B	SE	β	t	P
(Constant)	1.45	0.31	—	4.68	< .001
Socio-Cultural Attitudes	-0.29	0.09	-.25	-3.22	.001
Economic Constraints	-0.34	0.08	-.31	-4.25	< .001
Institutional Safety	0.41	0.07	.42	5.86	< .001

Dependent Variable: Parental Willingness

DISCUSSION

This study provides robust quantitative evidence that parental willingness to support girls' higher education in Northern Nigeria is shaped by a constellation of cultural, economic, and institutional factors. While previous research has emphasized the role of socio-cultural norms and financial hardship (Ibrahim & Uba, 2021; Eneji et al., 2022), the present findings reveal that perceptions of institutional safety exert the strongest influence on parental decision-making.

The regression analysis confirmed that all three predictors—socio-cultural attitudes, economic constraints, and institutional safety—were statistically significant. However, institutional safety emerged as the most powerful determinant ($\beta = .42$), suggesting that even when cultural and financial barriers are present, parents may still support their daughters' education if they perceive the university environment as safe and morally sound. This aligns with recent findings by Okafor et al. (2023), who argue that institutional trust is a critical enabler of female enrollment in conservative regions.

The negative correlation between socio-cultural attitudes and parental willingness ($r = -.35$) reinforces longstanding concerns about early marriage, gender roles, and religious conservatism. Yet, the relatively weaker beta coefficient ($\beta = -.25$) suggests that these beliefs, while influential, may be more malleable than previously assumed—especially when counterbalanced by visible safety measures and community engagement.

Economic constraints also played a significant role ($\beta = -.31$), consistent with the “son preference” model described by Bello & Yakubu (2023). However, the data suggest that financial barriers alone do not fully explain parental reluctance. Instead, economic concerns often intersect with cultural anxieties, amplifying the perceived risks of investing in a daughter's education.

Taken together, these findings underscore the need for a paradigm shift in policy and practice. Rather than treating cultural and economic barriers as fixed obstacles, interventions should focus on building institutional trust through gender-sensitive reforms and strategic community engagement. When parents believe that universities are safe, respectful, and aligned with their values, they are more likely to support their daughters' academic aspirations.

Conclusion and Recommendations

This study provides compelling quantitative evidence that parental willingness to support girls' higher education in Northern Nigeria is most strongly shaped by perceptions of institutional safety. While socio-cultural attitudes and economic constraints remain influential, they are not insurmountable. The findings suggest that when parents perceive universities as safe, respectful, and aligned with community values, their resistance to female education diminishes significantly.

The regression model confirmed that institutional safety was the strongest predictor of parental support, highlighting the urgent need for universities to invest in gender-sensitive infrastructure and policies. These results challenge the conventional assumption that economic hardship is the primary barrier and instead point to institutional trust as the critical lever for change.

Policy and Practice Recommendations

□ Invest in Gender-Sensitive Infrastructure: Universities should prioritize the construction of secure female hostels, female-only transportation systems, and the hiring of female security and counseling staff. These visible measures can directly address parental concerns and build institutional credibility.

- Frame Scholarships as Safety Packages: Financial aid programs should be bundled with guarantees of safe accommodation and moral protection. This reframing can make scholarships more appealing to conservative families and increase uptake.
- Engage Religious and Community Leaders: Advocacy campaigns should be led by trusted figures who can validate the safety and moral integrity of university environments. Religious leaders, in particular, can use theological arguments to promote education as a religious obligation.
- Showcase Institutional Reforms Publicly: Universities should actively communicate their safety measures through community outreach, media campaigns, and open days for parents. Transparency builds trust and counters misinformation.
- Expand Flexible Learning Options: Distance learning and hybrid models can offer safer, more culturally acceptable pathways for girls who face mobility or exposure constraints.

Limitations and Future Research

This study was limited to one state and relied on self-reported data, which may be influenced by social desirability bias. Future research should expand to other regions and incorporate longitudinal designs to track changes in parental attitudes over time. Additionally, experimental studies could test the impact of specific safety interventions on enrollment rates.

In conclusion, bridging the gender gap in higher education requires more than financial support—it demands a strategic focus on institutional trust, cultural sensitivity, and community partnership.

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REFERENCES

- Abdu, M., & Ma'aji, M. M. (2022). Accommodation and security as correlates of female students' enrolment in federal universities in North West Nigeria. *Global Scientific Journals*, 10(5), 1–17.
- Bello, A. M., & Yakubu, S. A. (2023). Gendered investment decisions in education: Evidence from low-income households in Kebbi State, Nigeria. *African Journal of Development Studies*, 15(2), 88–104.
- Eneji, M. A., Onyia, C. C., & Odey, J. E. (2022). Socio-economic determinants of gender disparity in higher education enrolment in Nigeria: A focus on the North-West region. *African Journal of Economic and Management Studies*, 13(3), 421–437. <https://doi.org/10.1108/AJEMS-01-2022-0021>
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics (5th ed.)*. Sage Publications.
- Ibrahim, A., & Uba, M. A. (2021). Influence of parental socio-economic status on the enrolment of female students into tertiary institutions in Kano State, Nigeria. *Sapientia Foundation Journal of Education, Sciences and Gender Studies*, 3(2), 1–12.
- Musa, H. A., Lawal, R. M., & Tanko, S. (2023). Cultural perceptions and parental resistance to female university education in Zamfara State. *Journal of Gender and Society*, 11(1), 33–49.
- Okafor, C. J., Adeyemi, T. O., & Bello, F. A. (2023). Institutional trust and female enrollment in Nigerian universities: A study of safety perceptions and parental decision-making. *International Journal of Educational Policy Research and Review*, 10(2), 55–70.
- UNICEF. (2024). *Girls' education in Nigeria: Progress, challenges, and opportunities*. New York: UNICEF.
- UNESCO. (2023). *Global education monitoring report: Gender and inclusion*. Paris: UNESCO.
- World Bank. (2020). *The cost of not educating girls: Nigeria case study*. Washington, D.C.: World Bank.