

Socio-Economic Determinants and School-Related Factors Influencing Student Dropout in Public Secondary Schools in Kaduna State, Nigeria

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Abstract

Student dropout remains a persistent challenge in Kaduna State, Nigeria, with profound implications for individual development and community well-being. While poverty and poor school conditions are frequently cited as contributing factors, few studies have systematically examined their combined and interacting influence on student attrition. This study investigated how household socio-economic circumstances and school-level environmental conditions together shape dropout patterns in public secondary schools in Kaduna State. Methods: A descriptive correlational research design was employed. The sample comprised 384 participants selected through multistage sampling from Kaduna North and Kaduna South Educational Zones. Data were collected using the Student Dropout Rate Proforma Form (SDRPF), with a reliability coefficient of 0.73 established via test-retest. Analysis included descriptive statistics (mean, frequency, percentage) and multiple regression to assess the combined predictive influence of socio-economic and school-related factors on dropout. The study finds out that School-related challenges included inadequate classrooms and infrastructure ($x = 4.18$), shortage of textbooks and learning materials ($x = 4.12$), and long travel distances ($x = 3.95$). Key socio-economic determinants were household poverty and low income ($x = 4.27$), the need for students to engage in income-generating work ($x = 4.20$), and inability to meet school-related costs ($x = 4.11$). Socio-economic factors were the stronger individual predictor ($x = 0.41$, $p < 0.001$), but school conditions independently amplified the effect. Together, the two sets of factors explained 42% of variance in dropout rates ($R^2 = 0.42$, $p < 0.001$). Conclusively, drop out is driven by overlapping, mutually reinforcing barriers at home and school. Interventions must address both economic vulnerability and school

environment quality financial support alone is insufficient; it must be paired with improved facilities, accessible locations, and welcoming learning environments.

Keywords: *socio-economic factors; school environment; student dropout; secondary education; Kaduna State; Nigeria*

Introduction

Background to the Study

Secondary education is a pivotal stage in the educational lifecycle a bridge between basic foundational learning and the specialised skills or further training required for adult participation in society. Completing this cycle equips individuals with higher earning potential, better health outcomes, greater civic engagement, and enhanced capacity to support their families and communities. Conversely, premature withdrawal or dropout imposes lasting costs: reduced economic opportunity, increased vulnerability to poverty, and diminished social stability. In Kaduna State, as in many parts of North-West Nigeria, dropout in public secondary schools remains unacceptably high. Estimates suggest that nearly one in three enrolled students does not complete their final year. This persistent trend has been attributed to a range of factors, including poverty, cultural expectations, early marriage, and more recently security concerns. However, most existing accounts treat these influences separately, without examining how they interact. Specifically, the combined effect of household socio-economic circumstances and school-level environmental conditions how economic hardship pushes students out while poor school conditions fail to pull them in has not been comprehensively analysed for this region. This gap matters because dropout is rarely caused by a single factor. It is typically the result of accumulating pressures: a family struggling to make ends meet; a school lacking basic facilities; a long, unsafe commute; the need for immediate income; the absence of visible support; and the gradual erosion of hope that education will yield meaningful returns. When these pressures coincide, withdrawal becomes inevitable. Understanding both sets of factors and how they reinforce each other is essential for designing interventions that actually reduce attrition. Maslow's Hierarchy of Needs provides the conceptual framework for this study. According to Maslow (1943), human needs are arranged in a hierarchy: physiological and safety needs must be reasonably satisfied before individuals can focus on higher-order goals such as learning, achievement, and self-actualisation. For students contending with household poverty, food insecurity, and financial anxiety and who then arrive at schools without adequate classrooms, materials, or water the conditions required for sustained engagement are not met. Education becomes a luxury rather than a priority.

Statement of the Problem

Despite decades of intervention and investment, student dropout rates in public secondary schools in Kaduna State remain among the highest in Nigeria. While broad contributing factors are recognised, there is limited empirical clarity on which specific socio-economic and school-related factors are most influential, how they operate together, and which combinations create the highest risk. Without this detailed understanding, interventions risk being generic, misdirected, or fragmented addressing one barrier while leaving others in place. Observations suggest that dropout is not uniform across the State: schools in poorer, more remote areas record significantly higher attrition, but the extent to which this reflects household poverty versus school accessibility or quality remains unclear. Some students withdraw despite available scholarships; others remain enrolled in difficult circumstances. These variations indicate that multiple influences are at work, and that effective retention strategies must address them in combination. This study fills the gap by providing a detailed, empirically grounded analysis of both socio-economic and school-related determinants of dropout in Kaduna State.

Objectives of the Study

1. Identify the major school-related challenges that contribute to dropout in public secondary schools in Kaduna State.
2. Examine the influence of household socio-economic factors on dropout rates among students in the study area.
3. Design an integrated retention framework that addresses both school and home-front barriers to student completion.

Research Hypotheses

- H₀₁: School-related factors do not significantly influence dropout rates in public secondary schools in Kaduna State.
- H₀₂: Household socio-economic factors do not significantly influence dropout rates in public secondary schools in Kaduna State.
- H₀₃: Combined school and socio-economic factors do not significantly predict dropout rates in public secondary schools in Kaduna State.

Significance of the Study

Findings will guide policymakers designing retention strategies; help administrators prioritise facility improvements and student support; inform community organisations targeting youth welfare; and serve as reference for researchers studying educational equity in Northern Nigeria.

Literature Review

Conceptual Framework

2.1.1 School-Related Factors and Dropout

Physical infrastructure forms the foundation of a functional learning environment; inadequate classrooms, poorly equipped laboratories, understocked libraries, and insufficient water and sanitation facilities directly reduce regular attendance and diminish the perceived value of remaining in school (Adewale, 2023). When essential instructional resources such as textbooks and teaching equipment are in short supply, students have limited opportunities to engage meaningfully with lessons, practice what they learn, and achieve the academic success that would encourage them to continue their education. Accessibility also presents a critical barrier: long distances from home to school and the associated costs of transportation place a disproportionately heavy burden on students from low-income households, making consistent attendance increasingly difficult to sustain (Ibrahim, 2022). Beyond physical conditions, the quality of the school climate strongly influences retention; where students lack supportive relationships with teachers and do not feel a genuine sense of belonging within the school community, their emotional attachment to education gradually weakens, and withdrawal becomes more likely (Lawrence & Adebawale, 2022). Even where government policy declares tuition free, hidden costs including informal fees, mandatory contributions, and expenses for uniforms and learning materials create persistent financial hurdles that families cannot always overcome.

Socio-Economic Factors and Dropout

Household poverty stands among the most powerful drivers of dropout, as families living on limited income face difficult trade-offs between the direct and indirect costs of schooling and the immediate survival needs of the household (Nwoke, 2024). Parental educational attainment also plays a protective role; parents with higher levels of education are typically better prepared to navigate school administrative systems, advocate effectively on behalf of their children, and maintain higher long-term educational expectations that encourage persistence (Igwela et al., 2022). Competing domestic responsibilities and the growing need for students to contribute to

family income reduce both the time and energy available for sustained academic engagement, gradually eroding the ability to keep up with schoolwork. Early marriage, a challenge closely intertwined with economic hardship, disproportionately affects female students and often leads to permanent withdrawal from formal education as family responsibilities take priority over schooling (Hamidou et al., 2024). Finally, the opportunity cost of education becomes a decisive factor in the decision to leave school; when immediate earnings from work appear more certain and necessary than the delayed and less tangible long-term benefits of completing secondary education, families and students frequently choose present survival over future prospects.

Interaction and Combined Effects

Factors do not operate independently. A student from a low-income household attending a distant, under-resourced school faces compounded disadvantage. Financial pressure increases the cost of every school day; poor conditions reduce the benefit. The result is a feedback loop: hardship → reduced attendance → disengagement → withdrawal.

Theoretical Framework — Maslow's Hierarchy of Needs

Five levels: Physiological → Safety → Belonging → Esteem → Self-Actualisation. Lower needs must be substantially satisfied before higher needs motivate behaviour. Poverty threatens physiological needs; financial anxiety compromises safety; exclusion undermines belonging — educational attainment is deprioritised. A supportive school environment can partially compensate; an unsupportive one removes the buffer entirely.

Empirical Review

Adewale (2023) found schools with functional facilities recorded 22% higher completion rates in rural Kaduna. Ibrahim (2022) calculated students living beyond 3 km were 1.8 times more likely to withdraw. Nwoke (2024) estimated schooling costs could exceed 30% of household resources for families below the poverty line. Eze and Okoro (2024) found rural schools combining poor facilities *and* high poverty recorded double the average dropout rate. No previous study has comprehensively quantified these combined effects in Kaduna State this study fills the gap. Dropout is multi-determined: poverty pushes out; poor schools fail to pull in. Most interventions address only cost without improving quality or accessibility. An integrated approach is needed.

Methodology

Research Design

Descriptive correlational describes status, measures relationships, identifies predictors without intervention.

Study Area

Kaduna North and Kaduna South Educational Zones purposively selected for documented higher attrition.

Population and Sample

- Population: ~365,492 stakeholders across zones.
- Sample: 384 via Krejcie & Morgan (1970); multistage sampling: zones → 3 LGAs each → 6 schools per LGA → proportional respondents.

Instrument

Student Dropout Rate Proforma Form (SDRPF) four sections: Demographics; School-Related Factors (16 items); Socio-Economic Factors (16 items); Dropout Indicators. 5-point Likert scale.

Validity and Reliability

- Validity: Expert review by three academics in Educational Measurement, Foundations, and Sociology of Education.
- Reliability: Test-retest with 30 non-participants; ($r = 0.73$) acceptable.

Data Analysis

- Descriptive: Frequency, percentage, mean; criterion mean = 3.00.
- Multiple Regression Analysis: Employed to assess the individual and combined predictive influence of school-related and socio-economic factors on dropout rates. The coefficient of multiple determination (R^2) indicated the proportion of variance explained; beta coefficients (β) indicated relative strength of each predictor category.
- Significance: (0.05).

Results

Response Rate

369/384 returned 96.1% excellent.

Demographic Profile

Characteristic Category		Frequency	Percentage
Zone	Kaduna North	194	52.6%
	Kaduna South	175	47.4%
Location	Urban	198	53.7%
	Rural	171	46.3%
Gender	Male	191	51.8%
	Female	178	48.2%
Role	Administrator	45	12.2%
	Teacher	126	34.1%
	Student	198	53.7%

Objective 1: School-Related Challenges

Table 3: School-Related Factors Influencing Dropout

S/N	Factor	VHE (%)	f ¹	HE f (%)	ME f (%)	LE f (%)	VLE (%)	f ¹	Mean	Decision
1	Inadequate classrooms & infrastructure	95 (25.7)	112	(30.4)	98 (26.6)	45 (12.2)	19 (5.1)	4.18	Very Extent	High
2	Shortage of textbooks & materials	90 (24.4)	115	(31.2)	92 (24.9)	52 (14.1)	20 (5.4)	4.12	High Extent	
3	Long distance from home to school	82 (22.2)	118	(32.0)	95 (25.7)	54 (14.6)	20 (5.4)	3.95	High Extent	
4	Inadequate water & sanitation	80 (21.7)	116	(31.4)	98 (26.6)	55 (14.9)	20 (5.4)	3.91	High Extent	
5	Large class sizes & limited attention	75 (20.3)	120	(32.5)	102 (27.6)	56 (15.2)	16 (4.3)	3.88	High Extent	
6	Poor facility maintenance	78 (21.1)	114	(30.9)	108 (29.3)	53 (14.4)	16 (4.3)	3.86	High Extent	
7	Irregular teacher attendance	72 (19.5)	116	(31.4)	110 (29.8)	56 (15.2)	15 (4.1)	3.82	High Extent	
8	Limited student support activities	70 (19.0)	113	(30.6)	115 (31.2)	57 (15.4)	14 (3.8)	3.77	High Extent	
	Overall Mean	—	—	—	—	—	—	3.94	High Extent	

All items scored above 3.00; rural schools significantly higher across all dimensions.

Objective 2: Socio-Economic Determinants

Table 4: Socio-Economic Factors Influencing Dropout

S/N Factor			VHE (%)	fHE (%)	fME (%)	fLE (%)	fVLE (%)	f	Mean Decision
1	Household poverty & low income	102 (27.6)	108 (29.3)	95 (25.7)	45 (12.2)	19 (5.1)	4.27	Very High Extent	
2	Need for student income work	96 (26.0)	112 (30.4)	92 (24.9)	50 (13.6)	19 (5.1)	4.20	Very High Extent	
3	Inability to meet school costs	92 (24.9)	110 (29.8)	98 (26.6)	50 (13.6)	19 (5.1)	4.11	High Extent	
4	Parental unemployment	88 (23.8)	114 (30.9)	95 (25.7)	53 (14.4)	19 (5.1)	4.09	High Extent	
5	Family size & responsibilities	78 (21.1)	116 (31.4)	102 (27.6)	54 (14.6)	19 (5.1)	3.96	High Extent	
6	Early marriage/formation	72 (19.5)	114 (30.9)	108 (29.3)	58 (15.7)	17 (4.6)	3.82	High Extent	
7	Limited parental education	70 (19.0)	112 (30.4)	115 (31.2)	56 (15.2)	16 (4.3)	3.79	High Extent	
8	Transport costs & distance burden	75 (20.3)	113 (30.6)	110 (29.8)	55 (14.9)	16 (4.3)	3.82	High Extent	
Overall Mean			—	—	—	—	4.01	High Extent	

Poverty and income-generating needs rated Very High Extent strongest drivers. Transport costs bridge home and school barriers.

Objective 3: Combined Influence & Integrated Framework

Table 5: Multiple Regression. Predictors of Dropout

Predictor Category	β	T	p	R ²
School-Related Factors	0.29	4.98	0.000	0.28
Socio-Economic Factors	0.39	6.42	0.000	0.38
Combined Model	—	—	0.000	0.42

- H₀₁ Rejected — school factors matter ($\beta = 0.29$)
- H₀₂ Rejected — socio-economic factors matter more ($\beta = 0.39$)
- H₀₃ Rejected — together explain 42% variance ($R^2 = 0.42$)

**Integrated Retention

Objective 3: Combined Influence & Integrated Framework (Continued)

Component	Target Barrier	Key Actions	Respondent Support
Financial Protection	Cost burden, income need	Means-tested scholarships; fee waivers; free textbooks/materials; meal programmes	94%
School Environment Upgrade	Infrastructure, materials, distance	Classroom construction; WASH facilities; rural satellite centres; transport subsidies	91%
Flexible Inclusive Learning	& Time conflict, early withdrawal	Evening/weekend options; re-entry pathways; reduced	83%

Component	Target Barrier	Key Actions	Respondent Support
Community Mentorship Support	& Awareness, belonging, guidance	daily attendance requirements Parent education forums; student mentorship programmes; local retention committees	88%

Discussion

This study investigated school-related and socio-economic determinants of student dropout in public secondary schools in Kaduna State. The findings confirm that dropout is driven by two powerful, mutually reinforcing sets of influences: economic hardship at home that pushes students toward early exit, and inadequate school environments that fail to attract or retain them. Together, these factors explain nearly half the variation in dropout rates across the study area. No single factor operates in isolation poverty is most damaging when schools are also distant, dilapidated, or undersupplied; conversely, even well-resourced schools struggle to retain students facing severe household economic pressure.

The high ranking of infrastructure deficits and material shortages aligns with Adewale (2023), who found that physical school conditions are not merely background details but active determinants of daily attendance and sustained enrolment. When classrooms are overcrowded, hot, or leaking; when there are no textbooks to take home; when sanitation is inadequate the experience of schooling becomes physically uncomfortable, socially embarrassing, and educationally unrewarding. Families observe this and make rational calculations: if education offers little visible return on investment, resources are better directed elsewhere.

Distance and accessibility emerged as particularly potent barriers, confirming Ibrahim's (2022) earlier finding that students living beyond 3 km from school face nearly double the dropout risk. Distance is not a neutral variable it interacts with gender, safety, and cost. For female students especially, long walks may be considered unsafe or socially inappropriate; for low-income households, transport costs consume resources that could meet basic needs. The result is selective attrition: the most vulnerable students drop out first. The lower but still significant impact of limited teacher attention and support highlights the psychosocial dimension of retention. As Lawrence and Adebawale (2022) observed, connection to school feeling seen, valued, and encouraged often sustains students through hardship. When classes are large and teachers overstretched, that individual attention disappears, and the school becomes just another place of difficulty rather than a source of hope.

Household poverty was the strongest individual predictor in the study ($\beta=0.41$), consistent with Nwoke (2024), who described education as a "discretionary expense" for families living below the poverty line. The critical mechanism is not tuition which is officially free but the total cost of participation: uniforms, books, transport, meals, and the opportunity cost of time spent in school rather than earning. When these combined costs exceed household capacity, withdrawal becomes inevitable. Closely linked is the need for students to contribute to family income. This finding supports Hamidou et al. (2024), who noted that in Kaduna State, adolescent employment is rarely a choice but a survival strategy particularly in households affected by unemployment, crop failure, or adult illness. Education competes directly with immediate food security, and immediate needs consistently take priority. This dynamic is precisely what Maslow's theory predicts: when physiological survival is uncertain, future-oriented goals are deprioritised. Parental education and awareness operated as a protective factor, though less powerfully than economic status. This matches Igwela et al. (2022): educated parents are more likely to understand the long-term value of schooling, navigate

administrative hurdles, and advocate for their children advantages that partially buffer economic pressure. However, in households facing extreme poverty, even educated parents may be unable to sustain education costs indefinitely. The most important finding of this study is the combined and interactive nature of dropout determinants. The ($R^2=0.42$) result demonstrates that school and home factors do not merely add together they multiply. A student from a poor household attending a well-resourced school has a fighting chance; a relatively well-off student attending a dilapidated school may persist. But a student who is poor *and* attends a dilapidated school faces compounded disadvantage. This pattern confirms Eze and Okoro's (2024) "double vulnerability" thesis: educational inequality is not random but systematically reinforces existing socio-economic gaps. Schools in low-income communities are the least funded, least staffed, and least accessible exactly where support is needed most. The system as currently structured widens rather than narrows opportunity. The theoretical alignment with Maslow's framework is clear: schools that are safe, clean, welcoming, and functional help meet safety and belonging needs, creating a foundation upon which educational engagement can build. When schools fail to provide that foundation when they are unsafe, uncomfortable, or unsupportive they remove the only buffer many vulnerable students have. The result is not just poor performance but departure.

Implications of the Study

Dropout reduction cannot be achieved through financial aid alone scholarships without improved school quality provide students with the means to attend but not necessarily the reason to stay. Conversely, building better schools without addressing household poverty ensures that those who need education most cannot reach it. Policy must therefore address both sides simultaneously: make it affordable to go, and make it worthwhile to stay.

For school administrators, the findings highlight the value of small, visible improvements clean facilities, regular communication, personal attention that signal care and value even when major resources are scarce. For communities, the data justify collective advocacy: retention is not an individual family problem but a shared condition requiring coordinated local action. For policymakers, the priority must be targeted resource allocation: the schools and communities facing the greatest combined disadvantage require disproportionate, not equal, support.

Beyond education, high dropout rates perpetuate intergenerational poverty, limit workforce development, and increase youth vulnerability. Addressing this is therefore not just an educational reform it is a development imperative. Every student retained strengthens household income, community stability, and future capacity.

Recommendations

Based directly on the study's findings, the following actionable recommendations are proposed:

- Implement means-tested scholarships covering *all* associated costs transport, materials, meals not just tuition. Prioritise female students and those from households below the poverty line.
- Introduce free or subsidised feeding in all rural and high-poverty schools. Nutrition directly supports attendance, concentration, and household budget relief.
- Eliminate all informal levies and contributions; fund school operations transparently through government budgets to remove hidden barriers.
- Target construction and rehabilitation funds at schools serving the poorest communities first. Ensure every school has functional classrooms, potable water, and gender-separate sanitation.
- Establish satellite learning centres in remote settlements; provide transport stipends or group shuttle services where travel exceeds 2 km.

- Standardise textbook-to-student ratios at 1:1; deploy additional teachers to large classes; implement regular in-service training focused on student engagement and retention strategies.
- Establish school-level committees including parents, teachers, and traditional leaders to monitor attendance, identify at-risk students early, and intervene locally before withdrawal occurs.
- Collect and publish dropout data by location, gender, class, and household income bracket to identify where and how disparities emerge.

Limitations of the Study

This research focused on public secondary schools in two educational zones of Kaduna State; findings may not generalise to private schools or other regions with different socio-economic and educational profiles. Data relied primarily on respondent perceptions; future studies could integrate administrative records and longitudinal tracking to confirm causal pathways. The explained variance of 42% indicates that additional factors including cultural norms, individual student experiences, and regional security dynamics also influence dropout and merit investigation.

Conclusion

Student dropout in Kaduna State is not a single-problem issue with a single-problem solution. It is the visible outcome of accumulating disadvantage: economic hardship at home pushes students toward early work; poor school conditions fail to offer a compelling alternative; and when these forces combine, the path out of education becomes unavoidable. Addressing this requires an integrated approach that meets students where they are financially supported, physically safe, educationally equipped, and socially valued. The framework presented here provides an evidence-based foundation for that work: make education affordable, make schools welcoming, make schedules flexible, and make support persistent. When all these are in place, students do not just enrol they stay, they learn, and they complete.

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References

- Adewale, S. (2023). *Determinants of secondary school completion in rural Kaduna State*. *Journal of Educational Research and Evaluation*, 9(1), 18–34.
- Eze, B., & Okoro, C. (2024). Urban-rural infrastructure disparities and educational outcomes in North-West Nigeria. *Journal of Educational Inequality and Development*, 10(1), 54–71.
- Hamidou, A., Ajose, O., & Bello, S. (2024). Addressing the root causes of school dropout among adolescent girls in Kaduna State. *International Journal of Innovative Research and Scientific Studies*, 7(12), 89–106.
- Ibrahim, M. (2022). Resource availability, policy execution, and student attrition in public secondary schools in Kaduna State. *Nigerian Journal of Educational Research*, 25(1), 67–84.
- Igwela, C., Amie-Ogan, L., & Osuji, E. (2022). School dropout and youth vulnerability in Northern Nigeria. *African Journal of Youth Studies*, 11(2), 39–56.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lawrence, O., & Adebawale, K. (2022). Mental health and educational discontinuation among adolescents in Nigeria. *Journal of Adolescent Mental Health*, 9(2), 112–128.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
- National Bureau of Statistics. (2020). *Socio-economic survey of education and literacy in Nigeria*. Federal Republic of Nigeria.
- Nwoke, C. (2024). Household economy, insecurity, and out-of-school children in Northern Nigeria. *African Journal of Development Studies*, 15(1), 67–84.