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Home-Based and School-Based Parental Involvement as Correlates of SS2 Students' Perceived Academic Performance in Public Senior Secondary Schools in Anambra State, Nigeria

Nwagbata, Amaka Rose [1]; Nwuba, Chinyeaka Peace [2] and Chinedu Emmanuel Udoka [3]

[1]Department of Educational Foundations and Administration, Nwafor Orizu College of Education, Nsugbe, Nigeria. [2]Federal Government Girls College, Onitsha, Anambra State, Nigeria. [3]Department of Educational Management, Ignatius Ajuru University of Education, Port Harcourt, Nigeria.

Corresponding author: himalaya385@gmail.com

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Abstract

This study examined the relationship between parental involvement and students' perceived academic performance in public secondary schools in Anambra State, Nigeria. Specifically, it examined how home-based and school-based parental involvement are associated with students' perceived academic performance, individually and jointly. A cross-sectional correlational design was adopted, involving 500 Senior Secondary Two (SS2) students from 25 public secondary schools across the six education zones of Anambra State. Data were collected using a researcher-developed questionnaire and analysed using Pearson correlation and multiple regression with school-clustered standard errors. Both home-based ($r = .271$, $p < .001$) and school-based ($r = .319$, $p < .001$) parental involvement were positively related to students perceived academic performance, and together they accounted for 13.9% of its variance ($R^2 = .139$). The standardised coefficient for school-based involvement ($\beta = .265$) was numerically larger than that for home-based involvement ($\beta = .199$), but the difference was not statistically significant ($z = 0.93$, $p = .35$). Because the design is cross-sectional and relies on student self-report, the findings indicate association, not causation. The study recommends that principals and teachers provide accessible channels for parent–school communication and practical guidance on supporting learning at home; those parents keep regular contact with teachers and take an active interest in their children's progress; that Parent-Teacher Associations (PTAs) encourage regular engagement; and that education authorities support school–family partnership programmes.

Keywords: Parental Involvement, Home-Based Involvement, School-Based Involvement, Perceived Academic Performance, Public Secondary Schools, Anambra State.

Introduction

Parents and guardians are widely regarded as an important influence on adolescents' educational trajectories (Castro et al., 2015; Epstein, 2018; Fan & Chen, 2001; Hill & Tyson, 2009; Jeynes, 2007). Through domestic learning support, academic goal-setting, parent–

teacher communication and participation in school events, parents may help students to build structured study routines, strengthen academic self-efficacy (Bandura, 1997) and cope with the social and academic challenges of adolescence.

Within secondary education, parental involvement manifests along distinct operational dimensions. At home, parents monitor daily homework completion, discuss academic progress, provide study materials, and reinforce structured learning hours. At school, involvement includes attending Parent-Teacher Association (PTA) meetings, engaging in academic open days, communicating directly with subject teachers, and supporting institutional quality assurance initiatives. Although home-based and school-based involvement frequently complement one another, they are functionally distinct. A parent may offer intensive homework supervision at home while rarely visiting the school premises; conversely, another parent may actively participate in PTA decision-making but exercise minimal direct monitoring of home study routines.

Epstein's (1995) seminal framework of school, family, and community partnerships provides a foundation for categorising these diverse engagement modalities. Epstein conceptualises six typologies of involvement: parenting, communicating, volunteering, learning at home, decision-making, and collaborating with the community. The framework posits that effective educational governance requires synchronised, overlapping spheres of influence across families and schools rather than isolated or ad-hoc interactions.

Empirical evidence regarding parental involvement and academic outcomes, however, reveals substantial contextual variation. Shute et al. (2011), in a comprehensive review of secondary school student achievement, noted that observed associations depend heavily on the specific involvement dimensions measured. While parent-child academic discussions and educational expectations consistently exhibited positive relationships with achievement, the overall direct influence was characterised as modest, highlighting the danger of assuming uniform effects across all forms of engagement. Meta-analyses report positive associations that vary by form of involvement and are generally small to moderate in size (Castro et al., 2015; Erdem & Kaya, 2020; Hill & Tyson, 2009; Kim & Hill, 2015), and the same pattern has been reported for urban elementary, urban secondary and minority students (Jeynes, 2003, 2005, 2007). The relationship has been examined across educational systems with similar conclusions about its variability (Driessen et al., 2005).

Nigerian empirical literature similarly shows divergent findings. Ananomo et al. (2021) investigated parental involvement and academic achievement in English Language and Mathematics among SS2 students in Awka Education Zone, Anambra State, and reported no statistically significant relationship in either subject. In contrast, Anierobi and Unachukwu (2020) reported a moderate, positive relationship between parental involvement and academic engagement among SS2 students in Nnewi North Local Government Area. These studies differ in outcome (examination achievement versus engagement), location and design, which may partly explain the divergence. Other Nigerian studies report positive associations between parental involvement and students' outcomes, including homework assistance, participation in school activities and

communication with the school (Adeyeye, 2024; Emeri, 2022; Oni & Soji-Oni, 2024). Evidence from Uganda shows a similar picture in which involvement is more common at home than at school (Sekiwu & Kaggwa, 2019), although individual aspects of engagement may predict performance when their combined effect does not (Mugumya et al., 2023).

These mixed empirical signals underscore the analytical imperative of examining parental involvement against clearly defined, conceptually sound outcome measures. The present study focuses specifically on students' perceived academic performance (SPAP) rather than raw examination scores extracted from school registries. This operational distinction is critical: students' subjective self-appraisals of academic competence, satisfaction, and goal progress reflect psychological self-efficacy and academic self-concept, which do not always align perfectly with externally recorded continuous assessment grades. As Rosen et al. (2017) demonstrated, the fidelity of student self-reports varies significantly depending on the domain and nature of academic information requested.

Against this background, this study investigates home-based and school-based parental involvement as distinct analytical dimensions and evaluates their joint and relative predictive relationships with students' perceived academic performance among public secondary school students in Anambra State, Nigeria.

Statement of the Problem

Parental involvement is widely promoted by policymakers, school administrators and community leaders as a contributor to students' academic success. Nonetheless, the evidence from Nigerian secondary schools is mixed. In Anambra State, Ananomo et al. (2021) reported no significant relationship between parental involvement and examination achievement in English Language and Mathematics, while Anierobi and Unachukwu (2020) reported a moderate positive relationship with academic engagement. These studies used different outcomes, so they do not necessarily contradict one another, but they show that the relationship depends on how involvement and student outcomes are defined.

Existing studies in the state have largely examined examination achievement or engagement. Students' own appraisals of their academic performance (their satisfaction, goal attainment and confidence) have received less attention, although perceived performance is a meaningful outcome in its own right: it is linked to academic self-concept, motivation and persistence (Bandura, 1997; Marsh & Martin, 2011). Evidence that separates home-based from school-based involvement in relation to this outcome across the six education zones of Anambra State appears limited in the sources reviewed. The issue is relevant in the state because Ananomo et al. (2021) reported concern over declining performance in English Language and Mathematics in external examinations, which makes it important to understand which family and school factors are associated with how students view their own performance.

This study addresses this gap by examining the individual and joint associations of home-based and school-based parental involvement with students' perceived academic

performance, and by comparing their relative contributions, among SS2 students in public secondary schools in Anambra State, Nigeria.

Aim and Objectives of the Study

The primary aim of this study is to examine the relationship between parental involvement and students perceived academic performance in public secondary schools in Anambra State, Nigeria. Specifically, the study sought to:

1. Examine the relationship between home-based parental involvement (HBPI) and students' perceived academic performance (SPAP).
2. Examine the relationship between school-based parental involvement (SBPI) and students' perceived academic performance (SPAP).
3. Determine the joint predictive contribution of home-based and school-based parental involvement to students' perceived academic performance.
4. Compare the relative contributions of home-based and school-based parental involvement to students' perceived academic performance.

Research Questions and Delimitation

Corresponding to the four objectives, the study answered four research questions: (1) What is the relationship between home-based parental involvement and students perceived academic performance? (2) What is the relationship between school-based parental involvement and students perceived academic performance? (3) What is the joint predictive contribution of home-based and school-based parental involvement to students' perceived academic performance? (4) How do the relative predictive contributions of home-based and school-based parental involvement compare?

Delimitation: The study was delimited to Senior Secondary Two (SS2) students in public secondary schools in the six education zones of Anambra State, Nigeria. It examined two dimensions of parental involvement (home-based and school-based) as reported by students, and students' perceived rather than recorded academic performance.

Research Hypotheses

The following null hypotheses were tested at the .05 level of significance:

H_{o1}: There is no statistically significant relationship between home-based parental involvement and students' perceived academic performance.

H_{o2}: There is no statistically significant relationship between school-based parental involvement and students' perceived academic performance.

H_{o3}: Home-based and school-based parental involvement do not jointly make a statistically significant predictive contribution to students' perceived academic performance.

H_{o4}: The standardised regression coefficients of home-based and school-based parental involvement do not differ significantly in their prediction of students' perceived academic performance.

Literature Review and Theoretical Framework

Concept of Parental Involvement

Parental involvement encompasses the multifaceted array of educational behaviours, expectations, interest, and direct participation demonstrated by parents and legal guardians in supporting children's formal learning journeys. It spans actions within the domestic domain, direct consultations with school leadership and instructional staff, participation in PTA structures, and community-wide educational advocacy. These behaviours systematically communicate to adolescents the intrinsic value placed on education, provide tangible cognitive resources, and establish a collaborative feedback loop between home and school environments.

Contemporary scholarship emphasises that parental involvement must not be treated as a monolithic or homogenous construct. Epstein's (1995, 2018) foundational framework delineates six operational modalities of partnership: parenting (helping families establish home environments supporting students), communicating (designing effective school-to-home and home-to-school communications), volunteering (recruiting parent help and support), learning at home (providing information and guidance to assist with homework and curriculum activities), decision-making (including parents in school governance and advocacy), and collaborating with the community (identifying and integrating community resources). For analytical precision and empirical clarity, this study synthesises these modalities into two operational dimensions: Home-Based Parental Involvement (HBPI) and School-Based Parental Involvement (SBPI).

Home-Based Parental Involvement

Home-based parental involvement encompasses educational support mechanisms situated directly within the domestic sphere. Key practices include structuring daily homework time, supervising continuous assignment completion, discussing classroom experiences, procuring recommended textbooks and learning supplies, monitoring time allocated to television or social media, and offering emotional encouragement during academic difficulty. Meta-analytic evidence suggests that the association between parental involvement and achievement is positive but varies by form of involvement. Fan and Chen (2001) reported that parental aspirations and expectations were more strongly related to achievement than home supervision, and Hill and Tyson (2009) found that involvement reflecting academic socialisation had the strongest positive association with achievement in middle school, whereas parental help with homework was the exception. Castro et al. (2015) likewise found the strongest associations where families held high academic expectations and communicated with children about school.

Evidence on home-based involvement and achievement is therefore mixed. Shute et al. (2011) described the overall association between parental involvement and secondary school achievement as modest, and Ananomo et al. (2021) found no significant relationship between parental involvement and examination scores in English Language and Mathematics among SS2 students in Awka Education Zone. Parental involvement has also

been linked to students' academic self-efficacy, engagement and intrinsic motivation (Fan & Williams, 2010; Gonzalez-DeHass et al., 2005), and its association with outcomes among urban adolescents has been examined through school engagement (Dotterer & Wehrspann, 2016). Altschul (2011) asked which kinds of involvement matter most, which is the question this study addresses for home and school dimensions.

School-Based Parental Involvement

School-based parental involvement denotes formal and informal engagement situated directly within the institutional school environment. This includes attending statutory PTA meetings, participating in academic consultation open days, engaging in face-to-face or digital dialogue with class teachers regarding academic progress, responding to administrative queries, participating in school fundraising or infrastructural development projects, and serving on school decision-making committees. School-based involvement establishes institutional visibility, signalling to both educators and students that the family is actively invested in school standards.

Evidence on school-based involvement is similarly varied. Jeynes (2007), in a meta-analysis of studies of secondary students, reported that subtler aspects of involvement such as parental style and expectations had a larger association with achievement than more visible aspects such as attending school functions, and Hill and Tyson (2009) found that school-based involvement was positively but less strongly associated with achievement than academic socialisation. Erdem and Kaya (2020) compared home-based and school-based strategies and reported a positive but small overall effect. Parental involvement has also been associated with students' academic self-efficacy, engagement and intrinsic motivation (Fan & Williams, 2010), and Wang and Wei (2024) reported a positive association between parental involvement and students' mathematics performance. Chen and Gregory (2010) examined involvement as a protective factor during the transition to high school. Evidence on how school-based involvement relates to students' own appraisals of their performance in Nigeria is limited. Where parents maintain direct contact with teachers, academic difficulties may be identified earlier, but this proposition requires direct testing.

Students' Perceived Academic Performance

Perceived academic performance refers to a student's subjective self-evaluation of their academic achievements, classroom mastery, progress toward personal academic goals, and satisfaction with overall academic trajectory. Grounded in Bandura's (1997) social cognitive theory and self-efficacy framework, academic self-perception represents a vital psychological construct distinct from recorded examination scores or teacher-assigned grades. Students evaluate their academic competence by integrating continuous assessment feedback, comparisons with peers, personal expectations, and perceived parental approval. Academic self-concept and achievement are reciprocally related (Marsh & Martin, 2011).

Methodologically, relying exclusively on recorded examination scores can introduce measurement error attributable to test anxiety, institutional grading disparities, or administrative recording inconsistencies. Rosen et al. (2017) showed that the accuracy of student self-reports of academic performance varies with the information requested, so self-report instruments should focus on specific self-appraisal dimensions rather than retrospective grade recall. In this study, perceived academic performance is measured via a structured, multi-item self-report scale capturing satisfaction, goal attainment, classroom test confidence, perceived teacher alignment and standing relative to classmates. Parental involvement has also been linked to students' academic motivation in meta-analytic work (Özyıldırım, 2024), which is closely tied to how students judge their own performance.

Theoretical Framework

This study is theoretically anchored in Epstein's (1995, 2018) Theory of Overlapping Spheres of Influence and School, Family, and Community Partnerships. Epstein posits that the educational development of a child is optimised when the three central contexts (the family, the school, and the community) interlock and operate collaboratively. The framework conceptualises two major structural forces: external models (representing the institutional interactions between families, schools, and communities) and internal models (representing the interpersonal interactions and social relationships that occur within each setting). Bandura's (1997) social cognitive theory informs the conceptualisation of perceived performance as a self-appraisal.

Applied to the present investigation, Epstein's model provides a conceptual rationale for operationalising parental involvement into home-based and school-based dimensions. Home-based involvement maps onto Epstein's 'Parenting' and 'Learning at Home' typologies, where families reinforce academic values within the home sphere. School-based involvement maps onto 'Communicating' and, in part, 'Volunteering' and 'Decision-Making' (through attendance at PTA meetings and school events); the SBPI items measure attendance and communication but not volunteering or governance roles directly, and 'Collaborating with the Community' was not measured. The mapping of items to typologies is shown in Table 1. Epstein's model also proposes that overlapping spheres reinforce one another; the present additive regression model does not test this interaction.

Summary of Empirical Literature Gap

While the national literature broadly attests to the relevance of parental involvement, gaps remain within the secondary education sector of Anambra State. First, local studies differ in their outcomes and measures (e.g., Ananomo et al., 2021; Anierobi & Unachukwu, 2020), which makes comparison difficult. Second, studies from Nigeria and the wider sub-Saharan region (Adeyeye, 2024; Mugumya et al., 2023; Oni & Soji-Oni, 2024; Sekiwu & Kaggwa, 2019) largely use examination or school-reported outcomes. Third, the relative contributions of home-based and school-based involvement to students' perceived performance have received limited attention in the state. Fourth, students' self-perceptions

of performance remain underexplored in south-eastern Nigeria. This study addresses these gaps in part, using a state-wide sample of SS2 students; being correlational, it cannot establish causal or mediating effects.

Methodology

Research Design

The study adopted a quantitative, cross-sectional correlational research design. This design is appropriate for examining the direction, magnitude, and predictive relationships among naturally occurring variables (home-based involvement, school-based involvement, and perceived academic performance) without experimental manipulation. Ordinary Least Squares (OLS) multiple linear regression with school-clustered standard errors was used to determine the joint and relative predictive weights of the predictor variables.

Area of the Study

The study was conducted in Anambra State, situated in the South-East geopolitical zone of Nigeria. The state comprises six administrative Education Zones managed by the Post Primary Schools Service Commission (PPSSC): Aguata, Awka, Nnewi, Ogidi, Onitsha, and Otuocha. Involving all six education zones ensured geographic coverage of the state. Urban–rural location and socio-economic status were not recorded, so no claim of representativeness on these dimensions is made.

Target Population and Sample

The target population for this study comprised N = 21,667 Senior Secondary Two (SS2) students enrolled across all 267 public secondary schools in the six education zones of Anambra State (Post Primary Schools Service Commission / Ministry of Education census data, 2025). SS2 students were purposively targeted because they possess established secondary school track records, are free from the immediate administrative pressures of terminal external examinations (WAEC/NECO), and demonstrate mature cognitive self-appraisal capabilities.

A sample of N = 500 completed and validated student questionnaires was used for statistical analysis. This exceeds the approximately 377 respondents recommended for a population of about 21,667 (Krejcie & Morgan, 1970). Because respondents were clustered within schools, the effective sample size is smaller than 500 (see Section 7.8). A four-stage sampling procedure was used. Stage 1: the six education zones served as strata. Stage 2: 25 public secondary schools were selected by stratified random sampling across the zones, with respondents allocated in proportion to zone population density (Aguata = 61, Awka = 115, Nnewi = 89, Ogidi = 63, Onitsha = 90, Otuocha = 82). Stage 3: in each school, two SS2 class arms of approximately 30 learners each were selected by balloting. Stage 4: approximately 20 learners were drawn at random from these arms in each school, giving about 20 respondents × 25 schools = 500. Data were collected over an 8-week period between October and December 2025 across all 25 participating public secondary schools.

Ethical Considerations

Because this study involved adolescent students in public secondary schools, ethical standards for research with human participants were followed:

1. **Institutional Ethics and Administrative Approval:** Ethical approval was granted by the Institutional Research Ethics Committee of Nwafor Orizu College of Education, Nsugbe (approval reference number NOCEN/REC/2025/084). Formal administrative clearance was also obtained from the Post Primary Schools Service Commission (PPSSC), Awka, and official letters of introduction were presented to the principals of all participating public secondary schools prior to data collection.
2. **Parental/Guardian Informed Consent:** Parental informed consent was obtained through structured written consent forms distributed through school management and the Parent-Teacher Association (PTA) executive bodies to parents and guardians, outlining the purpose, scope and voluntary nature of the study.
3. **Student Assent and Voluntary Participation:** Written student assent was obtained from all participating SS2 students prior to questionnaire administration. Students were explicitly informed that participation was entirely voluntary, that they retained the right to withdraw at any point without penalty, and that non-participation would have zero impact on their academic standing or teacher evaluations. For students aged 18 years and above (43 respondents, 8.6%), direct written informed adult consent was obtained.
4. **Anonymity and Data Confidentiality:** Strict anonymity was preserved by directing students NOT to write their names, admission numbers, or any identifying markers on the PISPAPQ instrument. All completed questionnaires were aggregated, kept in secure password-protected storage, and utilised strictly for academic research purposes.

Research Instrument

Data were collected using a researcher-developed structured instrument titled the Parental Involvement and Students' Perceived Academic Performance Questionnaire (PISPAPQ). The instrument comprises four structured sections:

Section A: Demographic information (Education Zone, Gender, Age Group).

Section B: Home-Based Parental Involvement Scale (HBPI) – 8 items measured on a 5-point Likert frequency scale (5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never).

Section C: School-Based Parental Involvement Scale (SBPI) – 8 items measured on a 5-point Likert frequency scale (5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never).

Section D: Students' Perceived Academic Performance Scale (SPAP) – 6 items measured on a 5-point Likert agreement scale (5 = Strongly Agree, 4 = Agree, 3 = Undecided, 2 = Disagree, 1 = Strongly Disagree).

Table 1: Mapping of PISPAPQ Items to Epstein's Typologies

Item	Item content (abridged)	Epstein typology
HBPI 1	Checks completion of assignments	Learning at Home
HBPI 2	Encourages a regular study routine	Learning at Home
HBPI 3	Asks about what was learned in school	Learning at Home
HBPI 4	Provides educational materials	Parenting
HBPI 5	Discusses academic progress and results	Learning at Home
HBPI 6	Helps or arranges support with difficulties	Learning at Home
HBPI 7	Shows interest in time management for schoolwork	Parenting
HBPI 8	Praises and rewards academic effort	Parenting
SBPI 1	Attends PTA meetings	Communicating (partly Decision-Making)
SBPI 2	Communicates directly with teachers	Communicating
SBPI 3	Responds promptly when the school makes contact	Communicating
SBPI 4	Participates in open days and exhibitions	Volunteering (attending school events)
SBPI 5	Follows up on reports sent home	Communicating
SBPI 6	Visits the school to collect results or report card and meet teachers	Communicating
SBPI 7	Contacts the school about learning difficulties	Communicating
SBPI 8	Shows interest in school programmes to raise standards	Communicating

Note. Collaborating with the Community was not measured, and Decision-Making is represented only through PTA attendance. Source: Authors' mapping of the PISPAPQ items.

Validity and Reliability

Content and face validity of the PISPAPQ were established through expert evaluation by three senior academics in Educational Management, Measurement, and Evaluation from Nnamdi Azikiwe University, Awka. Suggestions regarding item ambiguity and framing were incorporated into the final draft. A content validity index was computed across items, yielding an overall scale CVI of 0.88, which indicates high content validity (Lynn, 1986). Construct validity was evaluated through an exploratory factor analysis of the pilot data (n = 40), using principal component analysis with Varimax rotation. The analysis confirmed a three-factor structure corresponding to the HBPI, SBPI and SPAP, with all item loadings exceeding .55. Item overlaps identified during review were corrected.

Internal consistency was first assessed through a pilot study with 40 SS2 students in public secondary schools in Enugu State. Pilot Cronbach's alpha coefficients were HBPI (α = .708), SBPI (α = .698) and SPAP (α = .688); the SBPI and SPAP values fell slightly below the conventional .70 and indicated modest reliability. Reliability was then computed for the

main sample (N = 500): HBPI (α = .742), SBPI (α = .755) and SPAP (α = .718). All three coefficients meet the established psychometric standard of α ≥ .70 (Nunnally & Bernstein, 1994).

Common-Method Variance Diagnostic Check

Because data for both predictor variables (HBPI, SBPI) and the criterion variable (SPAP) were gathered simultaneously via self-report student questionnaires, Harman's single-factor test was run to examine potential common-method variance (CMV). All 22 items were subjected to an unrotated exploratory factor analysis. Three factors had eigenvalues greater than 1.0, and the largest factor accounted for 23.4% of the total variance. Because no single factor accounted for more than 50% of the variance, there was no evidence that a single factor dominated the data. However, Harman's test is a weak diagnostic and cannot rule out CMV (Podsakoff et al., 2003); the findings are interpreted with this limitation in mind.

Method of Data Analysis

Data were analysed using descriptive and inferential statistical techniques in SPSS version 27. Descriptive statistics (frequencies, percentages, means, and standard deviations) summarised demographic characteristics and study variables. Pearson product-moment correlation evaluated zero-order relationships for Research Questions 1 and 2 (testing H01 and H02); these tests do not account for clustering of students within schools. Ordinary Least Squares (OLS) multiple linear regression with standard errors clustered at the school level (25 schools; Cameron & Miller, 2015) answered Research Questions 3 and 4 (testing H03 and H04). The relative contributions were compared by testing the difference between the two unstandardised coefficients. All hypotheses were tested at the .05 level of significance. The intraclass correlation (ICC) was not estimated. Two observations give indirect, but not conclusive, evidence on the influence of clustering. First, the cluster-robust standard errors in Table 6 (0.046 and 0.042) were similar to, and slightly smaller than, the standard errors expected under independence (approximately 0.047 and 0.046, computed from the reported correlations, standard deviations and R^2), which suggests that clustering did not materially inflate the uncertainty of the coefficients. Second, as a sensitivity check, with about 20 respondents per school an assumed ICC of .10 or .20 would reduce the effective sample size for the correlations to about 172 or 104; the correlations reported for Research Questions 1 and 2 would remain significant at $p < .01$ in both cases.

Results

Preliminary checks of normality, linearity, homoscedasticity and multicollinearity were conducted before the main analyses. Tables 2 and 3 describe the respondents and the study variables, and Figure 1 shows the distribution of home-based involvement scores. Multicollinearity was not a concern (VIF = 1.08; tolerance = .93, computed from the correlation between the two predictors).

Table 2: Demographic Characteristics of Respondents (N = 500)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Education Zone	Aguata	61	12.2%
	Awka	115	23.0%
	Nnewi	89	17.8%
	Ogidi	63	12.6%
	Onitsha	90	18.0%
	Otuocha	82	16.4%
Gender	Female	277	55.4%
	Male	223	44.6%
Age Group	14–15 years	93	18.6%
	16–17 years	364	72.8%
	18+ years	43	8.6%

Source: Field survey data, 2025.

Table 3: Descriptive Statistics for Main Study Variables (N = 500)

Variable	Mean	SD	Min	Max
Home-Based Parental Involvement (HBPI)	3.320	0.549	1.75	4.88
School-Based Parental Involvement (SBPI)	3.130	0.560	1.50	4.75
Perceived Academic Performance (SPAP)	3.295	0.592	1.67	4.83

Source: Field survey data, 2025.

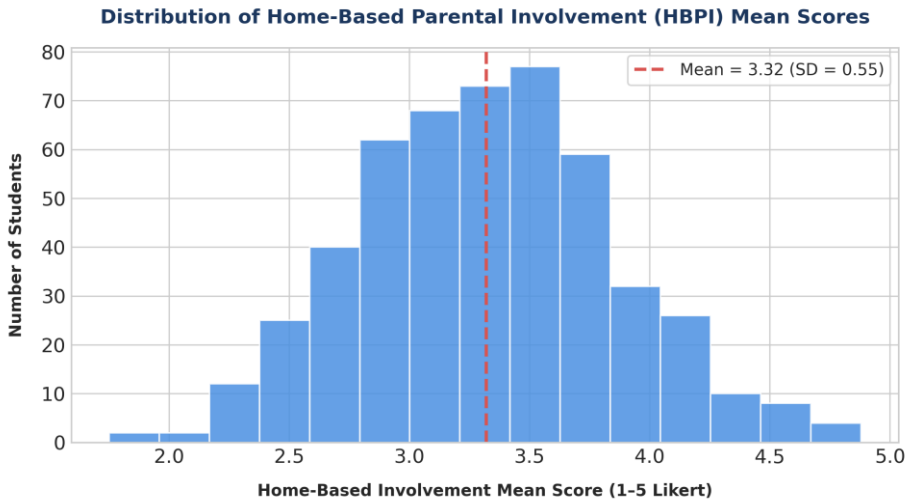


Figure 1: Histogram Showing Distribution of Home-Based Parental Involvement (HBPI) Mean Scores.

Source: Field survey data, 2025.

Table 4: Pearson Correlation Matrix Among Study Variables (N = 500)

Variable	1. HBPI	2. SBPI	3. SPAP
1. Home-Based Involvement (HBPI)	1.000	—	—
2. School-Based Involvement (SBPI)	.272**	1.000	—
3. Perceived Academic Performance (SPAP)	.271**	.319**	1.000

Note. ** p < .01 (two-tailed). Source: Field survey data, 2025.

Research Question 1 & Hypothesis Ho1: The correlation between home-based parental involvement and perceived academic performance (Table 4; Figure 2) was r(498) = .271 (p < .001, 95% CI [0.188, 0.350]). Because the p-value is well below the .05 significance threshold, Null Hypothesis 1 is rejected. A statistically significant, positive relationship exists between home-based parental involvement and students' perceived academic performance.

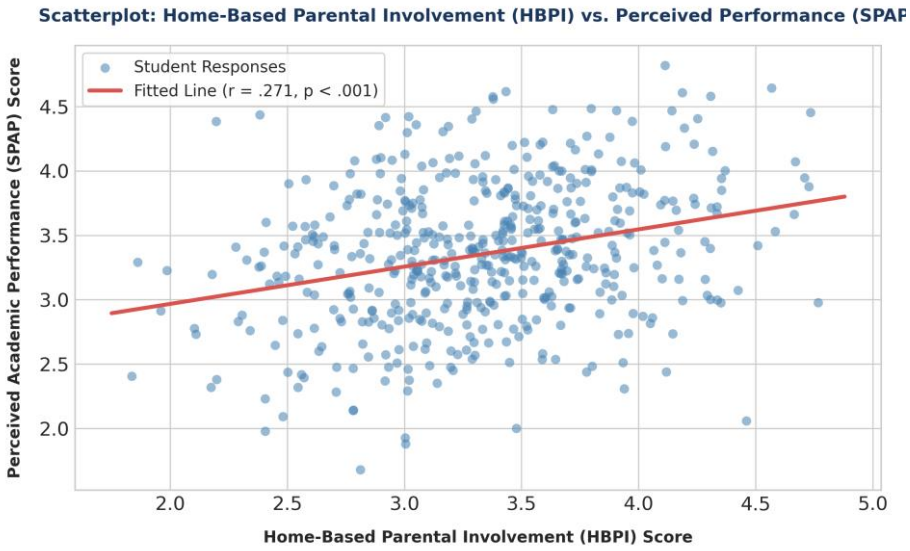


Figure 2: Scatterplot of Home-Based Parental Involvement (HBPI) vs. Students' Perceived Academic Performance (SPAP).
Source: Field survey data, 2025.

Research Question 2 & Hypothesis Ho2: The correlation between school-based parental involvement and perceived academic performance (Table 4; Figure 3) was r(498) = .319 (p < .001, 95% CI [0.238, 0.396]). Because the p-value is less than .05, Null Hypothesis 2 is rejected. A statistically significant, positive relationship exists between school-based parental involvement and students' perceived academic performance.

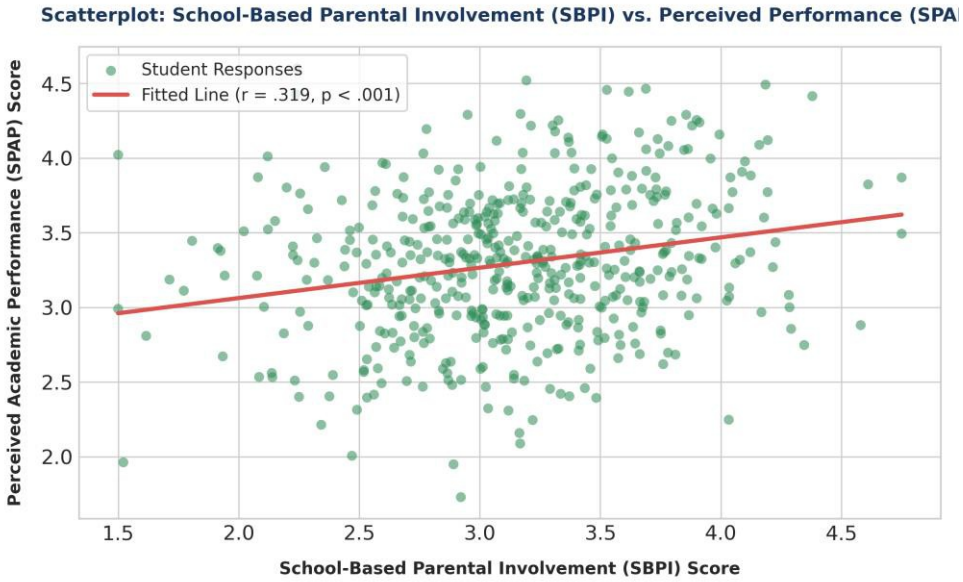


Figure 3: Scatterplot of School-Based Parental Involvement (SBPI) vs. Students' Perceived Academic Performance (SPAP).

Source: Field survey data, 2025.

Table 5: OLS Multiple Regression Model Summary for Joint Prediction

Model	R	R^2	Adj. R^2	Std. Error	F-stat	p-value
1	.373	.139	.135	0.551	40.050	< .001

Note. F = 40.050 implies R^2 = .1388 before rounding. Adjusted $R^2 = 1 - (1 - R^2)(N - 1)/(N - k - 1)$ = .135; Cohen's f^2 = .16. The F-test is OLS-based. Source: Field survey data, 2025.

Research Question 3 & Hypothesis Ho3: The joint prediction model (Table 5) was statistically significant, F(2, 497) = 40.050, p < .001, R = .373, R^2 = .139, adjusted R^2 = .135, with a standard error of estimate of 0.551. Home-based and school-based parental involvement together therefore accounted for 13.9% of the variance (13.5% adjusted) in students' perceived academic performance, a medium effect (Cohen's f^2 = .16; Cohen, 1988). Because the p-value is well below the .05 significance threshold, Null Hypothesis 3 is rejected. A statistically significant joint predictive contribution exists. The intercept was 1.705, the VIF was 1.08 for both predictors, and the two predictors were correlated at r = .272. The F-test is OLS-based and does not account for clustering.

Table 6: Regression Coefficients for Relative Predictive Contributions (Cluster-Robust SE)

Predictor	B	Cluster SE	Beta (β)	t-stat	p-value	95% CI Low	95% CI High
HBPI	0.215	0.046	.199	4.697	< .001	0.125	0.305
SBPI	0.280	0.042	.265	< .001	0.198	0.362	

Note. B = unstandardised coefficient; 95% CI = B ± t(497, .975) × SE, with cluster-robust SE.

Source: Field survey data, 2025.

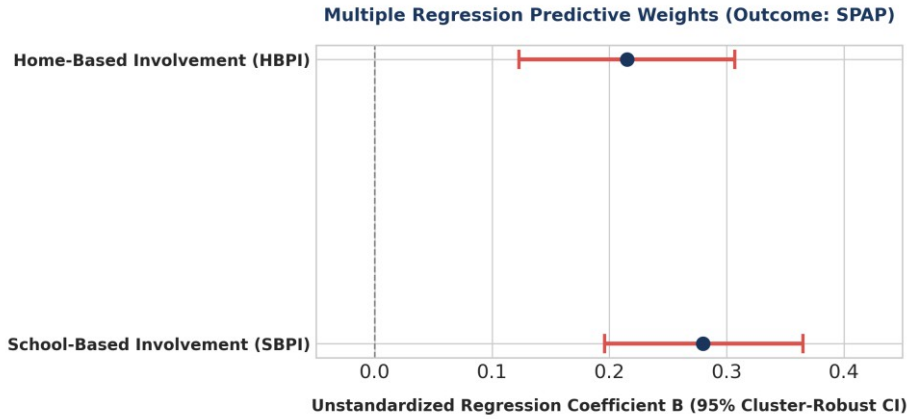


Figure 4: Regression Coefficient Forest Plot with 95% Cluster-Robust Confidence Intervals.
Source: Field survey data, 2025.

Research Question 4 & Hypothesis Ho4: With the other predictor held constant (Table 6; Figure 4), home-based involvement (B = 0.215, SE = 0.046, β = .199, t = 4.697, p < .001, 95% CI [0.125, 0.305]) and school-based involvement (B = 0.280, SE = 0.042, β = .265, t = 6.693, p < .001, 95% CI [0.198, 0.362]) each made a statistically significant unique contribution. The squared semi-partial correlations, computed from these values, indicate unique contributions of about 3.7% (home-based) and 6.5% (school-based) of the variance in perceived performance, with about 3.7% shared between the two. The standardised coefficient for school-based involvement was larger than that for home-based involvement, but the difference between the unstandardised coefficients (ΔB = 0.065) was not statistically significant, z = 0.93, p = .35 (computed from the reported cluster-robust standard errors and the covariance implied by the predictors' correlation, r = .272). Because the p-value is above the .05 threshold, Null Hypothesis 4 is retained: the data do not show that either dimension contributes more than the other.

Discussion

The findings provide context-specific evidence on how dimensions of parental involvement relate to students' perceived academic performance among public secondary school students in Anambra State. Because the design is cross-sectional, the results are interpreted as associations.

The significant positive correlation between home-based parental involvement and perceived academic performance (r = .271, p < .001) is consistent with Epstein's (1995, 2018) 'Learning at Home' typology: students who report that parents check assignments, encourage study routines and discuss classroom learning also tend to report greater academic confidence and satisfaction. The modest size of the correlation fits meta-analytic evidence that home supervision is less strongly related to achievement than parental expectations (Castro et al., 2015; Fan & Chen, 2001) and that academic socialisation shows stronger associations than direct help with schoolwork (Hill & Tyson, 2009). It also agrees with Nigerian reports of positive associations with homework assistance and

communication (Adeyeye, 2024; Emeri, 2022). The result differs from Ananomo et al. (2021), who found no significant relationship between parental involvement and examination scores in Awka Education Zone. Possible reasons include the outcome (self-perceived performance versus examination scores), the instrument, the sample (six zones versus one) and the shared source of self-reported data.

Similarly, the significant positive correlation between school-based parental involvement and perceived academic performance ($r = .319$, $p < .001$) is consistent with Epstein's 'Communicating' typology. Parental attendance at PTA meetings, participation in open days and contact with teachers may be associated with a sense of shared responsibility between home and school. The SBPI items did not measure decision-making directly, so no conclusion is drawn about that typology. The result is in line with small-to-moderate positive associations in meta-analyses of home-based and school-based strategies (Erdem & Kaya, 2020; Hill & Tyson, 2009). Jeynes (2007) reported that visible forms of involvement were less strongly related to achievement than parental expectations, so the present finding for perceived performance should not be read as evidence that attendance matters more than expectations.

The two dimensions jointly accounted for 13.9% of the variance in perceived academic performance ($R^2 = .139$, $F = 40.050$, $p < .001$), a medium effect by Cohen's (1988) conventions ($f^2 \approx .16$). The remaining 86.1% of the variance is associated with factors not measured here, such as student motivation, teacher instructional quality, classroom resources, peer influences and socio-economic status.

School-based involvement had a numerically larger standardised coefficient ($\beta = .265$) than home-based involvement ($\beta = .199$), but the difference was not statistically significant, so the study does not show that either dimension is the stronger correlate. One possible interpretation, which this design cannot test, is that students who see parents engaging with school staff may feel their education is valued; the reverse direction (students who feel they are doing well prompting more parent–school contact) is equally plausible. The two dimensions were also positively correlated, and Epstein's model suggests they may reinforce each other; this interaction was not tested. Meta-analytic evidence also suggests that the strength of the association depends on how involvement is defined and measured (Castro et al., 2015; Kim & Hill, 2015).

Conclusion

This study investigated the relationships between home-based parental involvement, school-based parental involvement, and students' perceived academic performance across public secondary schools in Anambra State, Nigeria. Both home-based ($r = .271$) and school-based ($r = .319$) involvement were significantly and positively associated with perceived academic performance, and together they accounted for 13.9% of its variance. School-based involvement had a numerically larger standardised coefficient, but the difference was not statistically significant. The study contributes evidence on perceived academic performance, an outcome that has received less attention than examination scores in the

state, and separates home-based from school-based involvement in relation to it. Because the design is cross-sectional and self-reported, the findings show association and not causation.

Recommendations

Based on the empirical findings, the following recommendations are advanced for key educational stakeholders:

1. School Principals and Administrators: School leadership should institutionalise structured, welcoming platforms for parent-teacher interaction—such as mandatory terminal Academic Consultation Days, open exhibition events, and accessible digital communication channels—to actively lower barriers to school-based involvement. This is supported by the positive association between school-based involvement and perceived performance (r = .319).
2. Class Teachers and Subject Masters: Instructional staff should provide parents with practical, actionable guidance on how to supervise home study routines, monitor assignment completion, and offer constructive feedback without adopting overly punitive or stress-inducing tactics. This is supported by the positive association between home-based involvement and perceived performance (r = .271).
3. Parent-Teacher Associations (PTAs): PTA executive bodies should organise sensitisation workshops that encourage parents to stay engaged with school activities, since school-based involvement was positively associated with students' perceived performance and self-confidence (r = .319).
4. Parents and Guardians: Parents should maintain supportive home routines (such as checking assignments and discussing academic progress) and keep regular contact with teachers, since both home-based (r = .271) and school-based (r = .319) involvement were positively associated with students' perceived performance.
5. Education Authorities (PPSSC and Ministry of Education): Authorities should support school-level parent engagement through guidelines for open days and parent–teacher communication and through training for principals, given the associations found across all six education zones.

Limitations and Directions for Further Research

Several methodological limitations should be considered when interpreting these findings:

1. Cross-Sectional Correlational Design: The observational design restricts conclusions to statistical association and prediction; direct causal relationships cannot be inferred.
2. Perceived vs. Objective Performance: The outcome variable reflects students' subjective self-reported academic appraisals rather than verified external examination records (e.g., WAEC or NECO grades).
3. Self-Report Measurement: Predictor and outcome data came from a single informant source (students), which introduces potential self-report bias and

common-method variance. Harman's single-factor test is a weak diagnostic and cannot rule out this bias. Involvement was reported by students, not parents.

4. Measurement Quality: Pilot reliability (n = 40) was modest, with two alphas slightly below .70, although the main-sample alphas met the .70 criterion (HBPI = .742, SBPI = .755, SPAP = .718). Construct validity rests on an exploratory factor analysis of a small pilot sample (n = 40), and no confirmatory analysis of the main sample is reported.
5. Clustering and Covariates: Students were clustered within schools, Pearson tests ignore clustering, and gender, age and zone were collected but not used as covariates. The analysis used 25 school clusters, a modest number for cluster-robust inference that may make the standard errors slightly too small (Cameron & Miller, 2015); the intraclass correlation was not estimated, and the indirect evidence and sensitivity check in Section 7.8 do not replace it.
6. Scope: The study covered public schools, one grade (SS2) and one state, so the findings may not generalise. The interaction between home-based and school-based involvement was not tested.

Future research should adopt longitudinal designs to track changes in parental involvement and academic self-efficacy over time, include parent and teacher reports, test the interaction between home-based and school-based involvement with multilevel models and relevant covariates, and combine student self-appraisals with verified achievement data across public and private schools.

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Appendix A: Parental Involvement and Students' Perceived Academic Performance Questionnaire (PISPAPQ)

Dear Respondent,

This questionnaire is designed to collect information on parental involvement and students' perceived academic performance in public secondary schools in Anambra State. Your honest responses are highly appreciated and will be treated with strict confidentiality. Do NOT write your name.

Section A: Demographic Information

1. Name of School: _____
2. Education Zone: [ ] Aguata [ ] Awka [ ] Nnewi [ ] Ogidi [ ] Onitsha [ ] Otuocha
3. Gender: [ ] Female [ ] Male
4. Age Group: [ ] 14–15 years [ ] 16–17 years [ ] 18+ years

Section B: Home-Based Parental Involvement (HBPI)

Rating Scale: 5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never.

S/N	Item Description	5	4	3	2	1
1	My parents/guardians check whether I have completed my school assignments.	[ ]	[ ]	[ ]	[ ]	[ ]
2	My parents/guardians encourage me to maintain a regular daily study routine at home.	[ ]	[ ]	[ ]	[ ]	[ ]
3	My parents/guardians ask me questions about what I learned in school.	[ ]	[ ]	[ ]	[ ]	[ ]
4	My parents/guardians provide necessary educational materials (books, stationery) when needed.	[ ]	[ ]	[ ]	[ ]	[ ]
5	My parents/guardians discuss my academic progress and continuous assessment results with me.	[ ]	[ ]	[ ]	[ ]	[ ]
6	My parents/guardians offer help or arrange support when I experience academic difficulties.	[ ]	[ ]	[ ]	[ ]	[ ]
7	My parents/guardians show active interest in how I manage my time for schoolwork.	[ ]	[ ]	[ ]	[ ]	[ ]
8	My parents/guardians praise and reward my academic efforts at home.	[ ]	[ ]	[ ]	[ ]	[ ]

Section C: School-Based Parental Involvement (SBPI)

Rating Scale: 5 = Always, 4 = Often, 3 = Sometimes, 2 = Rarely, 1 = Never.

S/N	Item Description	5	4	3	2	1
1	My parents/guardians attend Parent-Teacher Association (PTA) meetings at my school.	[ ]	[ ]	[ ]	[ ]	[ ]
2	My parents/guardians communicate directly with my teachers regarding my academic progress.	[ ]	[ ]	[ ]	[ ]	[ ]
3	My parents/guardians respond promptly when the school contacts them about my performance.	[ ]	[ ]	[ ]	[ ]	[ ]
4	My parents/guardians participate in school academic open days or exhibition events.	[ ]	[ ]	[ ]	[ ]	[ ]
5	My parents/guardians follow up on reports or information sent home by the school management.	[ ]	[ ]	[ ]	[ ]	[ ]
6	My parents/guardians visit the school to collect my report card or results and to meet my class teachers.	[ ]	[ ]	[ ]	[ ]	[ ]
7	My parents/guardians contact the school when they notice I am having learning difficulties.	[ ]	[ ]	[ ]	[ ]	[ ]
8	My parents/guardians show interest in school programmes designed to improve academic standards.	[ ]	[ ]	[ ]	[ ]	[ ]

Section D: Students' Perceived Academic Performance (SPAP)

Rating Scale: 5 = SA, 4 = A, 3 = U, 2 = D, 1 = SD.

S/N	Item Description	SA	A	U	D	SD
1	Overall, I am satisfied with my current academic performance in secondary school.	[ ]	[ ]	[ ]	[ ]	[ ]
2	I perform very well in my classroom continuous assessment tests and assignments.	[ ]	[ ]	[ ]	[ ]	[ ]
3	My recent academic results meet my personal academic expectations.	[ ]	[ ]	[ ]	[ ]	[ ]
4	I am successfully achieving the academic goals I set for myself this term.	[ ]	[ ]	[ ]	[ ]	[ ]
5	My academic performance aligns well with what my teachers expect from me.	[ ]	[ ]	[ ]	[ ]	[ ]

S/N	Item Description	SA	A	U	D	SD
6	My academic performance in school is better than or equal to that of most of my classmates.	[ ]	[ ]	[ ]	[ ]	[ ]

Appendix B: Summary of Research Questions, Statistical Tests, and Null Hypothesis Decisions

Research Question / Objective	Null Hypothesis (Ho)	Statistical Test Applied	Empirical Result	Decision at $\alpha = .05$
1. Examine HBPI & SPAP Relationship	Ho1: No significant relationship between HBPI and SPAP	Pearson Correlation	$r = .271$, $p < .001$ (95% CI [0.188, 0.350])	Rejected
2. Examine SBPI & SPAP Relationship	Ho2: No significant relationship between SBPI and SPAP	Pearson Correlation	$r = .319$, $p < .001$ (95% CI [0.238, 0.396])	Rejected
3. Joint Predictive Contribution	Ho3: HBPI and SBPI do not jointly predict SPAP	OLS Multiple Regression (Overall Model F-test)	$R = .373$, $R^2 = .139$, Adj $R^2 = .135$, $F(2, 497) = 40.050$, $p < .001$	Rejected
4. Relative Predictive Contributions	Ho4: The standardised coefficients of HBPI and SBPI do not differ significantly	Multiple regression (cluster-robust SE); test of difference between coefficients	$\Delta B = 0.065$; $z = 0.93$, $p = .35$; not significant	Retained

Source: Field survey data, 2025.