

Relationship Between Peer Group Dynamics and Students' Academic Performance in Secondary Schools in Awka Urban of Anambra State, Nigeria

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ABSTRACT

This study investigated the relationship between peer group dynamics and academic performance in secondary schools in Awka Urban, Anambra State. The purpose of the study was to determine the relationship between peer academic support and academic performance of secondary school students, examine the relationship between peer pressure and academic performance of secondary school students, and determine whether gender moderates the relationship between peer group dynamics and academic performance of secondary school students. Three research questions guided the study. The study targeted the 8,642 senior secondary students (SS1–SS3) enrolled in the twelve public secondary schools of Awka Urban during the 2025/2026 academic session. The study utilized a sample of 384 students. The Peer Group Dynamics Questionnaire (PGDQ) is a 72-item instrument designed to measure academic support, peer pressure, social interactions, and peer modeling, employing a 4-point Likert scale for responses. Reliability was established through pilot testing with 50 students from two schools in Awka North, demographically similar to the study population. Internal consistency measured by Cronbach's alpha indicated excellent reliability. The PGDQ achieved an overall alpha of .91, with subscales for Peer Academic Support (.87), Peer Pressure (.84), and Peer Modeling (.82). Pearson Product Moment Correlation examined relationships between peer dynamics dimensions and academic performance. The findings of the study revealed that peer academic support accounted for 48.6% of the variance in academic performance, highlighting its meaningful contribution to students' academic outcomes. There is a significant moderate positive relationship between peer academic support and academic performance; peer pressure significantly affects academic performance, but its impact varies by type; and gender significantly moderates the relationship between peer group dynamics and academic performance. Based on the findings, the study recommended that schools should formalize peer tutoring and study group structures to leverage strong peer academic support effects and gender-responsive interventions should be designed, focusing on instrumental support for males and norm-based achievement cultures for females.

Keywords: Academic Performance, Dynamics, Peer Group, Peer Pressure, Relationship, Secondary Education

INTRODUCTION

The adolescent years represent a critical developmental period characterized by profound physical, cognitive, and psychosocial transformations that fundamentally shape educational trajectories and long-term life outcomes. During this formative stage, peer relationships emerge as primary socialization agents, often rivaling and sometimes surpassing parental and institutional influences in determining behavioral patterns, academic engagement, and emotional wellbeing among secondary school students. Contemporary educational discourse increasingly recognizes that academic achievement cannot be adequately understood through purely cognitive

or instructional lenses; rather, it must be examined within the complex web of social relationships that constitute the daily lived experiences of adolescents navigating the challenging terrain of secondary education.

Globally, educational systems confront persistent challenges in optimizing student academic performance while simultaneously nurturing the socio-emotional competencies essential for holistic human development. International assessments reveal troubling disparities in learning outcomes, with the Programme for International Student Assessment indicating that approximately 23 percent of students in participating countries fail to achieve baseline proficiency levels in core academic subjects (Organisation for Economic Co-operation and Development, 2023). Beyond these cognitive deficits, the World Health Organization reports alarming rates of mental health challenges among school-age populations, with depression and anxiety disorders affecting an estimated 14 percent of adolescents globally, conditions intimately linked to peer relationship quality and school social climates (World Health Organization, 2022). These statistics underscore an urgent imperative to comprehend how peer group dynamics operate as determinants of both academic and socio-emotional outcomes in educational settings.

Within the Nigerian educational context, secondary schools face distinctive challenges that amplify the salience of peer influence mechanisms. The Federal Ministry of Education acknowledges concerning trends in academic underperformance, particularly in external examinations where failure rates in core subjects frequently exceed 60 percent in some regions (Federal Ministry of Education, Nigeria, 2024). Simultaneously, school administrators report escalating incidents of behavioral problems, including examination malpractice, truancy, substance experimentation, and interpersonal violence, phenomena often attributed to negative peer influences. Anambra State, despite its reputation for educational excellence in southeastern Nigeria, has not been immune to these challenges. Recent data from the Anambra State Ministry of Education indicates declining performance trends in selected secondary schools, coupled with increased reports of student disciplinary issues and psychosocial adjustment problems (Anambra State Ministry of Education, 2023). These developments necessitate rigorous empirical investigation into the mechanisms through which peer group dynamics shape educational and developmental outcomes.

Peer group dynamics encompass the complex patterns of interaction, influence, and relationship formation that emerge when adolescents congregate in educational settings. This multifaceted construct includes peer academic support, wherein students exchange knowledge, collaborate on learning tasks, and establish shared academic norms; peer pressure, involving the explicit or implicit influence that group members exert to encourage conformity to particular behaviors, attitudes, or values; peer social interactions, referring to the quality and nature of interpersonal exchanges within friendship networks; and peer modeling, through which adolescents observe and imitate the academic behaviors, study habits, and achievement orientations of their age-mates. Research demonstrates that these dimensions of peer dynamics operate simultaneously and interactively, creating classroom and school social ecologies that either facilitate or impede individual student success (Chen, Liu, Zhang & Li, 2023; Wentzel & Watkins, 2024). Understanding how these distinct yet interconnected dimensions function within specific cultural and institutional contexts remains an essential task for educational researchers and practitioners.

Academic performance, the primary outcome variable of interest in educational research, refers to the demonstrated achievement of students across cognitive domains as measured through standardized assessments, continuous evaluations, and cumulative grade point averages. While traditionally conceptualized narrowly as test scores and examination results, contemporary scholarship recognizes academic performance as encompassing broader manifestations of learning including critical thinking capabilities, problem-solving proficiency, knowledge retention, and the application of acquired competencies to novel situations. Within Nigerian secondary education, academic performance is typically operationalized through students' results in internal school examinations, mock examinations, and external certification examinations such as the West African Senior School Certificate Examination and the National Examinations Council Senior Secondary Certificate Examination. The determinants of academic performance extend far beyond individual cognitive abilities to include motivational factors, learning strategies, family socioeconomic status, teacher quality, school resources, and critically, the peer social environments within which learning occurs.

The subjects of this investigation are secondary school students in Awka Urban, adolescents typically ranging from 13 to 18 years of age who occupy the developmental stage Erik Erikson characterized as identity versus role confusion, a period marked by intensive peer orientation and heightened susceptibility to social influence. These students navigate multiple competing demands including academic expectations, family obligations, peer relationships, and personal identity formation, all within an educational system characterized by high-stakes examinations, large class sizes, and often limited counseling support. The unique characteristics of this population—their developmental vulnerability, their embeddedness in intense peer networks, their exposure to both traditional cultural values and globalizing influences through social media—render them particularly appropriate subjects for investigating how peer dynamics shape educational and developmental trajectories. Furthermore, as digital natives growing up in an era of unprecedented connectivity, contemporary secondary school students experience peer influence through both face-to-face and virtual channels, a phenomenon that has transformed the nature and intensity of peer relationships in ways that demand empirical scrutiny.

Empirical literature consistently demonstrates significant relationships between various dimensions of peer dynamics and academic outcomes. Research conducted by Li and Xie (2023) in Chinese secondary schools revealed that peer academic support positively predicted academic achievement, with effect sizes varying according to subject area and student achievement levels. Their longitudinal analysis indicated that students embedded in peer networks characterized by high academic expectations and mutual learning support exhibited stronger academic motivation and superior performance compared to peers in less academically oriented friendship groups. Similarly, Wang, Chow, Hofkens and Salmela-Aro (2024) found that perceived peer academic values significantly mediated the relationship between individual achievement goals and actual performance, suggesting that peer group norms establish reference points against which students calibrate their own academic efforts and aspirations.

The phenomenon of peer pressure, however, presents a more nuanced picture with divergent effects depending on the directionality and content of influence. Steinberg and Rivas (2023) demonstrated through experimental designs that peer pressure operates bi-directionally, with prosocial peer influence enhancing academic engagement and antisocial peer pressure undermining achievement motivation and classroom behavior. Their findings revealed that academically at-risk students showed particular vulnerability to negative peer influences, while high-achieving students demonstrated greater resistance to peer pressure for underachievement, a pattern suggesting that peer effects may exacerbate existing achievement gaps. Research in sub-Saharan African contexts, though limited, corroborates these patterns while highlighting cultural specificities. Adeyemo and Ogunleye (2023) found that Nigerian secondary students reported experiencing peer pressure primarily in domains of examination behavior, study habits, and educational aspirations, with approximately 43 percent acknowledging that peer pressure sometimes diverted their attention from academic priorities.

Statement of the Problem

The National Policy on Education in Nigeria emphasizes the holistic development of learners across intellectual, social, emotional, and moral domains. Secondary schools are therefore expected to create environments that promote academic excellence. Ideally, peer groups within schools should reinforce achievement values, collaborative learning, emotional support, and positive behavioral norms, thereby enhancing students' academic performance and overall wellbeing. However, evidence from secondary schools in Awka Urban suggests a gap between this expectation and reality. Despite adequate instructional input and students' cognitive potential, persistent academic underperformance remains a concern. Teachers report that students who associate with academically disengaged peer groups often experience declining achievement. These indicate that peer networks may sometimes function as channels for negative influence rather than as supportive structures for academic and emotional growth.

Although peer influence is widely acknowledged as a significant factor in adolescent development, there is limited empirical evidence specifically examining how peer group dynamics affect academic performance among secondary school students in Awka Urban. It remains unclear which dimensions of peer interaction most strongly predict academic outcomes. The problem this study therefore addressed is the insufficient empirical

understanding of the relationship between peer group dynamics and students' academic performance in secondary schools in Awka Urban, Anambra State.

Purpose of the Study

The purpose of this study was to investigate the relationship between peer group dynamics and students' academic performance in secondary schools in Awka Urban, Anambra State. Specifically, the study sought to:

1. Determine the relationship between peer academic support and academic performance of secondary school students.
2. Examine the influence of peer pressure on academic performance of secondary school students.
3. Determine whether gender moderates the relationship between peer group dynamics and academic performance of secondary school students.

Research Questions

The following research questions guided the study:

1. What is the relationship between peer academic support and academic performance of secondary school students?
2. To what extent does peer pressure influence academic performance of secondary school students?
3. Does gender moderate the relationship between peer group dynamics and academic performance of secondary school students?

LITERATURE REVIEW

Extensive empirical evidence confirms that peer relationships significantly shape academic outcomes. A meta-analysis by Wentzel and Watkins (2024) found that peer influence accounts for approximately 8–12% of variance in academic achievement after controlling for prior performance and demographic variables. Students embedded in academically oriented peer groups consistently demonstrate higher achievement than equally capable students in less achievement-focused networks (Ryan & Shin, 2022). Chen et al. (2023) demonstrated that collaborative learning benefits academic achievement primarily when peer groups maintain strong academic orientation. Adeyemo and Ogunleye (2023), studying senior secondary students in Ibadan, found a moderate positive relationship between peer academic support and achievement ($r = 0.41$). Ikegbusi and Iheanacho (2023) also reported strong associations between peer academic orientation and academic performance in Enugu State.

Flashman (2023) found that association with disengaged peers predicted achievement decline, particularly among vulnerable students. Negative peer effects were slightly stronger than positive ones, possibly because socially salient negative behaviors exert stronger psychological influence. Experimental research by Steinberg and Rivas (2023) demonstrated that peer pressure effects depend on directionality. Prosocial academic pressure enhanced task engagement, while antisocial pressure reduced persistence and performance. Wang et al. (2024), in a longitudinal study of Chinese adolescents, found that achievement-oriented peer pressure predicted improved academic performance, whereas pressure prioritizing social activities predicted decline. Academic value internalization mediated these relationships. Okafor and Okeke (2023), examining students in Enugu State, found that positive peer pressure correlated positively with achievement, while negative pressure correlated negatively. Peer pressure variables jointly predicted significant variance in academic outcomes.

Research consistently identifies gender-based variations in peer relationship patterns. Female adolescents typically report emotionally intimate friendships characterized by self-disclosure and relational support, whereas male friendships are often organized around shared activities and collective participation (Rose & Rudolph, 2023). Gender differences also appear in influence domains. Crosnoe and Benner (2024) found stronger peer

effects among females in relational and appearance-related domains, while males showed greater susceptibility in risk-taking and academic disengagement contexts.

METHODS

The study adopted a correlational research design. The study targeted the 8,642 senior secondary students (SS1–SS3) enrolled in the twelve public secondary schools of Awka Urban during the 2025/2026 academic session. Data from the Anambra State Post-Primary Schools Service Commission indicates a balanced gender distribution of 4,458 females (51.6%) and 4,184 males (48.4%). The population was restricted to students aged 15–18 to capture the autonomy and stable peer networks characteristic of senior levels. The study utilized a sample of 384 students. The Peer Group Dynamics Questionnaire (PGDQ) is a 72-item instrument designed to measure academic support, peer pressure, social interactions, and peer modeling, employing a 4-point Likert scale for responses. Reliability was established through pilot testing with 50 students from two schools in Awka North, demographically similar to the study population. Internal consistency measured by Cronbach’s alpha indicated excellent reliability. The PGDQ achieved an overall alpha of .91, with subscales for Peer Academic Support (.87), Peer Pressure (.84), Peer Social Interactions (.85), and Peer Modeling (.82). Pearson Product Moment Correlation examined relationships between peer dynamics dimensions and academic performance.

RESULTS

Research Question 1: Relationship between Peer Academic Support and Academic Performance

Table 1: Pearson Correlation between Peer Academic Support and Academic Performance (N = 384)

Variable	Peer Academic Support	Academic Performance	Mean	SD
Peer Academic Support	—	0.486	52.34	9.87
Academic Performance	0.486	—	58.47	12.36

Analysis revealed a significant moderate positive correlation between peer academic support and academic performance ($r = 0.486, p < 0.001$), indicating that students who received higher levels of academic help from peers tended to perform better in their studies. Peer academic support accounted for 48.6% of the variance in academic performance, highlighting its meaningful contribution to students’ academic outcomes. There is a significant moderate positive relationship between peer academic support and academic performance.

Research Question 2: Influence of Peer Pressure on Academic Performance

Table 2: Pearson Correlation between Peer Pressure and Academic Performance (N = 384)

Variable	Total Peer Pressure	Prosocial Pressure	Antisocial Pressure	Academic Performance	Mean	SD
Total Peer Pressure	—	0.782	0.741	0.247	48.56	11.24
Prosocial Pressure	0.782	—	0.198	0.418	26.84	6.35
Antisocial Pressure	0.741	0.198	—	-0.289	21.72	6.18
Academic Performance	0.247	0.418	-0.289	—	58.47	12.36

Analysis of peer pressure revealed contrasting effects on academic performance. Prosocial pressure, which encourages positive academic behaviors, showed a moderate positive correlation with performance ($r = 0.418$), indicating that students experiencing supportive academic influence from peers tended to achieve higher scores. In contrast, antisocial pressure, which promotes counterproductive behaviors, exhibited a weak negative correlation ($r = -0.289$), suggesting that students subjected to negative peer influence were likely to perform lower academically. The findings indicate that peer pressure significantly affects academic performance, but its impact varies by type. Prosocial pressure, which encourages positive academic behaviors, enhances student performance, whereas antisocial pressure, which promotes counterproductive actions, undermines it.

Research Question 3: Gender Moderation of Peer Group Dynamics and Academic Performance

Table 3: Hierarchical Regression Testing Gender Moderation (N = 384)

Model	R	R ²	Adjusted R ²	ΔR ²	F Change	df1	df2	Sig. F Change
1	0.142	0.020	0.018	0.020	7.83	1	382	.005
2	0.598	0.358	0.349	0.338	49.78	4	378	<.001
3	0.627	0.393	0.380	0.035	5.37	4	374	<.001

Gender significantly moderates the relationship between peer group dynamics and academic performance.

Table 10: Regression Coefficients for Gender Moderation Model (N = 384)

Predictor	B	SE B	β	t	p
(Constant)	16.28	4.17		3.90	<.001
Gender	8.34	3.92	0.335	2.13	.034
Peer Academic Support	0.508	0.089	0.406	5.71	<.001
Peer Pressure	0.142	0.076	0.129	1.87	.062
Peer Social Interactions	0.226	0.094	0.186	2.40	.017
Peer Modeling	0.318	0.095	0.230	3.35	.001
Peer Support × Gender	-0.247	0.112	-0.189	-2.21	.028
Peer Pressure × Gender	0.203	0.095	0.176	2.14	.033

Gender moderates the influence of peer dynamics on academic performance, with peer academic support exerting a stronger effect on male students, while peer pressure has a stronger impact on female students. Gender significantly moderates the relationship between peer group dynamics and academic performance.

DISCUSSION OF FINDINGS

The study found a significant moderate positive correlation between peer academic support and academic performance ($r = .486$), with peer support accounting for approximately 23.6% of performance variance. This indicates that students who receive instrumental help and collaborative opportunities from peers achieve significantly higher academic outcomes. This aligns with Vygotsky’s Sociocultural Theory, which posits that cognitive development is a social process where peers scaffold learning within the Zone of Proximal Development. Empirically, these results mirror findings by Li and Xie (2023), who reported a similar correlation

($r = .42$) among middle school students. Within Nigeria, this corroborates research by Adeyemo and Ogunleye (2023) in Ibadan ($r = .41$), suggesting that peer support is a robust achievement determinant across diverse regions.

Results revealed that peer pressure operates bidirectionally: prosocial academic pressure correlates positively with performance ($r = .418$), while antisocial pressure correlates negatively ($r = -.289$). These divergent patterns support Social Identity Theory, suggesting that the impact of peer conformity depends entirely on the group's norm content. This finding is consistent with experimental research by Steinberg and Rivas (2023), which showed that achievement-oriented peer messages enhanced performance while anti-academic messages reduced it. Locally, it replicates findings by Okafor and Okeke (2023) in Enugu State, reinforcing the idea that positive peer influences may outweigh negative ones in aggregate.

Gender significantly moderates these relationships: peer academic support is a stronger predictor for males ($\beta = .406$) than females ($\beta = .209$), while peer pressure has a stronger impact on females ($\beta = .313$) than males ($\beta = .129$). This supports findings by Crosnoe and Benner (2024) regarding gender-differentiated influence pathways. The stronger effect of peer pressure on females aligns with Rose and Rudolph (2023), who suggest that female peer cultures often emphasize relationship interdependence and a higher desire for peer approval, leading to greater conformity.

CONCLUSIONS

Peer group dynamics are major developmental influences, accounting for over one-third of academic performance variance among students in Awka Urban. Peer academic support is the most vital academic predictor. Furthermore, peer influence is not a monolithic force; its effects are bidirectional (prosocial vs. antisocial) and moderated by gender, requiring nuanced educational approaches.

RECOMMENDATIONS

1. Schools should formalize peer tutoring and study group structures to leverage strong peer academic support effects.
2. Gender-responsive interventions should be designed, focusing on instrumental support for males and norm-based achievement cultures for females.
3. Teachers should be trained in classroom management techniques that actively cultivate prosocial peer norms rather than just managing behavior.

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