



Emotional Regulation, Peer Influence, Parenting Styles, Social Support, and Socio-Economic Status on Academic Performance among In-School Adolescents in Osogbo, Nigeria: A Structural Equation Modelling Approach

OLUKEMI YETUNDE AKINYEMI
University of Ibadan, Nigeria.

Abstract. Academic performance is a critical determinant of student success and overall educational outcomes. Understanding the factors that influence academic achievement is essential for developing effective strategies to improve educational practices and support student success. This study investigated the influence of emotional regulation, peer influence, parenting styles, social support, and socio-economic status on academic performance among secondary school students in Osogbo, Osun State, Nigeria. Using a quantitative research design, the study involved 420 students from different academic streams (Science, Arts, and Commercial) in Senior Secondary 2 (SS2). A multi-stage sampling procedure was employed to ensure a diverse and representative sample. Data were collected through self-administered questionnaires, and academic performance data were obtained from school records. Structural Equation Modelling (SEM) was used to analyse the relationships between these factors and academic performance. The results indicated a significant predictive relationship between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance. Specifically, emotional regulation had a moderate positive relationship with academic performance ($\beta = 0.45$, $p = 0.001$), while peer influence also showed a significant positive effect ($\beta = 0.32$, $p = 0.002$). Parenting styles and social support were both found to significantly influence academic performance, with estimates of $\beta = 0.28$ ($p = 0.002$) and $\beta = 0.40$ ($p = 0.001$), respectively. Additionally, socio-economic status (SES) was a significant predictor of academic success, with a positive relationship ($\beta = 0.35$, $p = 0.000$). Furthermore, the study found a significant interaction between these factors, which suggests that academic performance cannot be attributed to one factor alone but is instead shaped by the combined effects of emotional

regulation, peer influence, parenting, social support, and socio-economic factors. The findings highlight the importance of considering the complex interplay of these variables in promoting academic success. This study provides important insights for educators, policymakers, and parents, particularly in socio-economically disadvantaged regions, and underscores the need for a holistic approach to addressing the factors that contribute to academic achievement in secondary education.

Keywords: Emotional Regulation, Peer Influence, Parenting Styles, Social Support, Academic Performance

1. Introduction

Globally, academic performance remains a fundamental aspect of educational research due to its critical role in shaping the future of individuals and societies. Academic success is associated with better economic opportunities, improved social mobility, and overall well-being (OECD, 2020). However, the factors that contribute to academic performance are multifaceted and vary significantly across different contexts. In developed countries, educational achievement is often tied to individual cognitive ability, access to resources, and quality of teaching. In contrast, in developing regions, including sub-Saharan Africa, external factors such as socio-economic conditions, mental health, and social support structures play a more pronounced role in shaping educational outcomes (UNESCO, 2019). Thus, a broader understanding of these contextual factors is essential for addressing the disparities in academic performance seen in different regions.

In Africa, the challenge of improving educational outcomes is compounded by socio-economic instability, inadequate infrastructure, and the rapid growth of the student population. According to the African Union (2021), despite progress in education, many African nations still struggle with high dropout rates and low levels of academic achievement. The educational landscape is often marked by large class sizes, poorly resourced schools, and limited access to mental health services, which in turn negatively affect students' academic performance (Akinyemi & Aremu, 2018). In particular, psychological factors, such as emotional regulation and peer influence, have emerged as crucial determinants of academic success, as they directly affect students' ability to concentrate, engage in learning, and manage academic stress (Gross, 2015; Parker & Salovey, 2020). Therefore, understanding how these factors intersect to influence educational outcomes in African contexts is key to developing effective intervention strategies.

Nigeria, as the most populous country in Africa, faces its own set of educational challenges. The country's education system is characterised by significant disparities between urban and rural areas, with rural areas often facing more severe educational disadvantages (Omopo, 2024). The academic performance of students in Nigeria is frequently affected by issues such as overcrowded classrooms, poor teaching quality, and limited access to educational resources, including textbooks and technology (Fehintola & Akinyemi, 2022). Moreover, socio-economic inequalities contribute to a large gap in educational opportunities. In regions such as Osun State, where Osogbo is located, the disparities in educational access are particularly stark, despite the state's urban status. These disparities create a complex environment in which students' academic success is influenced not only by individual ability but also by external psychological, social, and environmental factors.

In Osogbo, the capital of Osun State, socio-economic and psychological factors have a significant influence on the academic performance of students. The city, though urban, struggles with issues like high poverty rates, limited mental health support, and familial stress, which directly impact students' well-being and academic success (Akinyemi et al., 2018). Peer influence, as well as parenting styles, plays a major role in shaping students' educational trajectories. Research has shown that adolescents in urban settings like Osogbo are heavily influenced by their peer groups, with both positive and negative consequences for their academic motivation and outcomes (Ukpabi & Akinyemi, 2021). Negative peer pressure, such as

distractions from academics, and exposure to substance abuse or truancy, can significantly lower academic achievement, whereas supportive peer relationships can foster higher motivation and engagement in schoolwork (Quadri, Omopo, & Ukpere, 2025).

Furthermore, psychological well-being, particularly emotional regulation, is critical in determining how students perform academically. Studies have shown that students with high levels of emotional intelligence and effective emotion regulation strategies tend to experience better academic performance, as they are able to manage stress and emotional setbacks more efficiently (Parker & Salovey, 2020). In Osogbo, as in many Nigerian cities, students face significant emotional challenges due to social pressures, family stress, and economic hardship, which can negatively affect their academic engagement and performance (Omopo, 2024). Interventions focused on enhancing emotional regulation may therefore be crucial in improving academic outcomes in such contexts. Given the growing recognition of the importance of mental health in education, programmes aimed at improving emotional regulation could offer a promising avenue for boosting students' academic performance in Osogbo.

Parenting styles also have a profound impact on academic outcomes. The influence of authoritative parenting, which is characterised by warmth, support, and clear expectations, has been consistently linked to better academic performance, while authoritarian and permissive parenting styles have been associated with poorer academic outcomes (Fehintola & Akinyemi, 2022). In Osogbo, family structures and parenting styles vary widely, with some students benefitting from highly supportive and involved parents, while others face challenges due to the lack of parental guidance or engagement. Research suggests that children from families with high parental involvement are more likely to demonstrate positive academic behaviours, such as consistent study habits and goal-setting, which are essential for success in school (Akinyemi & Aremu, 2018). Understanding the role of parenting in shaping academic performance in Osogbo is therefore crucial for the development of localised interventions aimed at enhancing students' academic outcomes.

In addition to psychological and social factors, social support networks including family, peers, and teachers serve as key determinants of academic success. Students with strong support systems are better able to navigate the challenges of school and perform well academically (Omopo, 2025). In Osogbo, where many

families face economic strain and psychological stress, the role of social support is particularly significant. Research indicates that students with access to emotional support from family members, friends, and teachers show higher levels of resilience, motivation, and academic success (Akinyemi et al., 2018). Therefore, exploring how social support systems influence academic outcomes in Osogbo can offer valuable insights into the development of targeted educational interventions that could help at-risk students overcome their challenges and improve their academic performance.

Lastly, socioeconomic status (SES) remains one of the most influential factors affecting academic performance. In Osogbo, as in many Nigerian cities, there is a marked disparity between students from wealthy and low-income backgrounds. Students from lower SES households often face multiple barriers to academic success, such as inadequate access to learning materials, poor living conditions, and higher rates of absenteeism due to financial pressures (UNICEF, 2020). However, studies have shown that while SES significantly influences behaviours, its effects can be mitigated through the provision of adequate emotional support and the cultivation of skills such as emotional regulation and resilience (Gross, 2015; Quadri et al., 2025). Understanding the intersection of SES with other psychological and social factors in Osogbo is vital for developing effective strategies to improve academic performance, particularly for students from disadvantaged backgrounds.

Given the complexity of these factors, Structural Equation Modelling (SEM) offers an appropriate analytical approach to explore the interrelationships between them and academic performance. SEM allows for the examination of direct and indirect pathways through which various factors, including peer influence, emotional regulation, social support, and socio-economic status, affect academic outcomes (Kline, 2016). Applying SEM in the context of Osogbo will provide a comprehensive understanding of the mechanisms that underlie academic performance in the region, offering valuable insights for the design of interventions aimed at improving educational outcomes in Osogbo and similar Nigerian contexts.

1.1 Purpose of the Study

The purpose of this study is to examine the factors influencing academic performance among secondary school students in Osogbo, Osun State, Nigeria. Specifically, it aims to explore the roles of emotional

regulation, peer influence, parenting styles, social support, and socio-economic status in shaping academic outcomes. The study will employ Structural Equation Modelling (SEM) to analyse the relationships between these factors and academic performance. Specific objectives of the study are:

- To examine the relationship between emotional regulation and academic performance among secondary school students in Osogbo.
- To assess the impact of peer influence on academic performance among students in Osogbo.
- To analyse the role of parenting styles in shaping students' academic performance in Osogbo.
- To explore the effect of social support networks on academic performance in Osogbo.
- To determine the relationship between socio-economic status and academic performance among students in Osogbo.
- To develop a Structural Equation Model (SEM) to predict academic performance based on the identified factors.
- To provide recommendations for educational policies and interventions aimed at improving academic performance in Osogbo.

1.2 Hypotheses

The following hypothesis were tested at 0.05 level of significance:

- There is no significant relationship between emotional regulation and academic performance among secondary school students in Osogbo, Osun State.
- There is no significant correlation between peer influence and academic performance among students in Osogbo, Osun State.
- There is no significant link between parenting styles and students' academic performance in Osogbo, Osun State.
- There is no significant relationship between social support networks and academic performance in Osogbo, Osun State.
- There is no significant relationship between socio-economic status and academic performance among students in Osogbo, Osun State.
- There is no significant predictive relationship between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance in Osogbo, Osun State.

- There is no significant interaction between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance in Osogbo, Osun State.

2. Theoretical Framework

This study was grounded in Ecological Systems Theory (Bronfenbrenner, 1979), which posits that individual development, including academic performance, is influenced by multiple, interconnected layers of environmental factors. These layers include the microsystem (immediate environments such as family and school), the mesosystem (interactions between these immediate environments), the exosystem (broader social structures such as community and media), and the macrosystem (the overarching societal and cultural influences). According to this theory, academic outcomes are not determined by individual traits alone, but are shaped by the dynamic interactions between a student and their various environmental contexts. This holistic view allows for the exploration of how personal, familial, social, and structural factors converge to impact students' educational success.

In applying this theory to the context of Osogbo, Osun State, the study recognised that students' academic performance was shaped by a combination of emotional regulation, peer influence, parenting styles, social support, and socio-economic factors. For example, emotional regulation, situated in the microsystem, can affect a student's ability to manage stress and engage in academic tasks effectively, while peer influence within the mesosystem can impact motivation and academic behaviour. Parenting styles, another microsystem factor, influence students' attitudes toward education and their capacity for self-discipline. Moreover, socio-economic status (SES), located within the macrosystem, affects access to educational resources, the quality of schooling, and even family involvement in academic activities. By utilising this framework, the study examined how these interrelated factors influenced academic outcomes in Osogbo, an urban area with distinct socio-economic challenges.

Bronfenbrenner's ecological approach also allowed for a broader understanding of the exosystem and macrosystem influences on academic performance, particularly in the context of the socio-political and educational structures in Nigeria. National educational policies, local government support, and community-level resources directly impact students' learning opportunities and outcomes. The interplay between

these factors, personal capabilities, family dynamics, peer groups, and the socio-economic environment shapes students' educational experiences in Osogbo. Using Structural Equation Modelling (SEM), this study explored the relationships between these multiple systems to offer insights into the combined effects of emotional regulation, peer pressure, parenting styles, social support, and SES on academic performance. This ecological perspective helped provide a comprehensive framework for understanding how various environmental influences interact to shape students' success in secondary education.

Methods

The study utilised a quantitative research design with a multi-stage sampling procedure to select 420 secondary school students from Senior Secondary 2 (SS2) in Osogbo Local Government Area (LGA), Osun State, Nigeria. In the first stage, 10 secondary schools were randomly selected from a list of both public and private schools in Osogbo. In the second stage, stratified sampling was employed to divide the students by their academic stream (e.g., science, arts, and commercial), ensuring that each academic stream was represented proportionally. From each stream, 42 students were randomly selected, yielding a final sample of 420 students. This method ensured a diverse and representative sample of SS2 students from various schools and academic backgrounds, making the findings generalisable to the larger population of secondary school students in Osogbo.

The data collection process involved the use of standardised instruments to measure the key variables in the study. The Emotional Regulation Questionnaire (ERQ) developed by Gross and John (2003) was used to assess students' emotional regulation skills, which are essential in coping with academic stress. Peer influence was measured using the Peer Influence Scale (PIS), a validated instrument that evaluates the extent to which peers affect academic behaviours and choices. Parenting Styles were assessed using the Parenting Styles and Dimensions Questionnaire (PSDQ), which categorises parenting into authoritative, authoritarian, and permissive styles. To measure social support, the Social Support Questionnaire (SSQ) developed by Sarason et al. (1983) was employed, evaluating the perceived support from family, friends, and teachers. Socio-economic status (SES) was assessed using a composite index based on family income, parental education level, and occupation, a widely used measure in educational research. Students' academic performance was obtained from official school records, which provided objective and up-to-date information on their

grades. The data were then analysed using Structural Equation Modelling (SEM) to test the hypothesised relationships between emotional regulation, peer influence, parenting styles, social support, SES, and academic performance. Ethical considerations were

prioritised, ensuring informed consent was obtained from students and their parents, and participants' anonymity and confidentiality were maintained throughout the study.

3. Results

Demographic Representation of the Participants

Table 1: Demographic Characteristics of Participants

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	198	47.1
	Female	222	52.9
Age Range	15-16 years	136	32.4
	17-18 years	168	40.0
	19-20 years	116	27.6
Grade Level	SS2 Science	129	30.7
	SS2 Arts	139	33.1
	SS2 Commercial	152	36.2
Socio-Economic Status	Low SES	160	38.1
	Middle SES	179	42.6
	High SES	81	19.3
Total		420	100.0

The demographic characteristics of the study participants are outlined in Table 1. The sample consisted of 420 secondary school students from Osogbo, Osun State. The gender distribution was slightly skewed, with 47.1% male participants (198 students) and 52.9% female participants (222 students). The age distribution revealed that 32.4% of the students were between 15-16 years old, 40.0% were between 17-18 years, and 27.6% were in the 19-20-year age range. Regarding academic streams, 30.7% of the participants were from the SS2 Science stream, 33.1% were from the SS2 Arts stream, and 36.2% came from the SS2 Commercial stream. The socio-economic status of the students was also diverse: 38.1% were from low socio-economic backgrounds, 42.6% were from middle socio-economic status households, and 19.3% were from high socio-economic status households. This distribution ensures that the study captured a broad representation of students from varying socio-economic conditions. The balanced representation across gender, age, grade level, and socio-economic status enables the findings to reflect the experiences of a wide range of secondary school students in Osogbo, Osun State, ensuring the results are generalizable to the larger student population in the region.

Hypothesis 1: There is no significant relationship between emotional regulation and academic performance among secondary school students in Osogbo, Osun State.

Table 2: Emotional Regulation and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Emotional Regulation → Academic Performance	0.45	0.12	3.75	0.001	Significant

The SEM analysis indicated a significant positive relationship between emotional regulation and academic performance ($\beta = 0.45$, $p = 0.001$). This suggests that students with better emotional regulation are likely to perform better academically. The significant positive coefficient indicates that the ability to manage emotions like stress, anxiety, and frustration can enhance focus, motivation, and engagement in academic tasks, ultimately leading to better academic outcomes.

In line with Bronfenbrenner’s Ecological Systems Theory, emotional regulation is seen as a skill developed within the microsystem, the student’s immediate environment, including their family, school, and peers. Emotional regulation

aids in managing the stresses and challenges that students face in these environments, particularly within the educational context. Students who can regulate their emotions are better able to deal with academic pressures and setbacks, which enhances their resilience and persistence. According to Bronfenbrenner's model, the microsystem directly impacts students' development, including their academic performance, as the way students emotionally respond to external challenges in their immediate environment can directly influence their engagement and academic success. Additionally, emotional regulation aligns with Bronfenbrenner's idea of self-regulation in learning, where students are better able to engage in academic tasks when they are emotionally balanced. The microsystem (family and school) provides the foundation for developing emotional regulation, and this skill enhances the student's ability to manage academic pressures and engage with the learning process. This is consistent with research by Parker et al. (2020), which found that students with higher emotional regulation tend to perform better academically due to their ability to manage stress and stay focused on their tasks.

This result corroborates Goleman's (2006) work on emotional intelligence, which emphasized that emotional regulation is a key factor in academic success. Fehintola and Akinyemi (2021) also found that students with better emotional regulation performed better academically because they were less distracted by stress and emotional upheaval. In the context of Ecological Systems Theory, these findings support the view that students' emotional experiences and their ability to regulate them are shaped by their immediate environments and significantly impact academic performance.

Hypothesis 2: There is no significant correlation between peer influence and academic performance of students in Osogbo, Osun State.

Table 3: Parenting Styles and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Peer Influence → Academic Performance	0.32	0.10	3.20	0.002	Significant

The SEM analysis revealed a significant positive relationship between peer influence and academic performance ($\beta = 0.32$, $p = 0.002$). This indicates that peer groups, especially those with a strong academic orientation, significantly contribute to students' academic behaviours and performance. Peer influence in this study likely reflects the role of both academic motivation and the shared academic behaviours that are fostered within peer groups.

This finding supports Bronfenbrenner's Ecological Systems Theory, which places a strong emphasis on the mesosystem, the interactions between different environments, such as school and peer groups. In this case, peer influence reflects how social interactions within the peer group can impact academic motivation and performance. Peer groups provide a space where students adopt social norms, including those related to academic behaviours. Students who associate with academically motivated peers are more likely to engage in positive academic behaviours, such as studying, attending class, and setting academic goals. The mesosystem interaction between peers and the school environment creates a shared academic culture that can positively influence academic achievement. According to Bandura's Social Learning Theory, students are likely to model the behaviours of their peers, and when they are surrounded by motivated and engaged students, they are more likely to perform well academically. This underscores the importance of fostering supportive peer networks within educational settings, as positive peer pressure can encourage academic success.

This result aligns with *Wentzel's (2010)* research, which emphasized the importance of peer influence in academic achievement, particularly when students are part of peer groups that value academic success. Similarly, Aremu and Akinyemi (2019) found that students who had positive peer relationships showed better academic performance, as they were encouraged and motivated to excel academically. The role of peer influence is further validated by Ukpabi and Akinyemi (2021), who demonstrated that students in academically supportive peer groups tend to perform better due to shared motivation and academic collaboration.

Hypothesis 3: There is no significant link between parenting styles and students' academic performance in Osogbo, Osun State

Table 4: Social Support Networks and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Parenting Styles → Academic Performance	0.28	0.09	3.11	0.002	Significant

The SEM analysis indicated a significant positive effect of parenting styles on academic performance ($\beta = 0.28, p = 0.002$). This suggests that the way parents interact with and support their children plays a significant role in shaping their academic outcomes. Authoritative parenting, characterized by warmth, structure, and clear expectations, has a particularly strong impact on students' academic success.

In line with Bronfenbrenner's Ecological Systems Theory, parenting styles are a critical element of the microsystem, directly influencing students' academic behaviour and performance. Authoritative parents, who provide both emotional support and clear expectations, create an environment that fosters academic motivation and self-regulation in their children. These students are more likely to be self-disciplined, have a positive attitude toward learning, and exhibit higher academic performance. In contrast, authoritarian or permissive parenting styles can result in lower levels of academic engagement and self-control, negatively impacting academic outcomes. Moreover, Bronfenbrenner's model emphasizes that the interactions within the microsystem such as between parents and children are crucial in shaping a child's development. In the academic context, these interactions provide the foundation for building self-regulation and academic competence. As such, the study highlights the importance of parental involvement in the educational process, supporting the idea that positive parenting directly enhances students' academic performance.

This finding is consistent with Fehintola and Akinyemi (2022), who found that authoritative parenting was associated with higher academic achievement in Nigerian secondary school students. Similarly, Berk (2013) demonstrated that authoritative parenting fosters academic success by providing a supportive and structured environment. Additionally, Akinyemi et al. (2018) highlighted that students with supportive, involved parents tend to outperform their peers due to greater emotional and academic support, aligning with the results of this study.

Hypothesis 4: There is no significant relationship between social support networks and academic performance in Osogbo, Osun State

Table 5: Social Support Networks and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Social Support → Academic Performance	0.40	0.11	3.64	0.001	Significant

The SEM analysis revealed a significant positive effect of social support on academic performance ($\beta = 0.40, p = 0.001$). This suggests that students who have strong social support networks, including support from family, friends, and teachers, are more likely to perform better academically. Social support plays a crucial role in enhancing students' emotional well-being, reducing academic stress, and boosting motivation.

Social support operates within the microsystem and mesosystem by influencing students' immediate environment and interactions with family, peers, and educators. According to Bronfenbrenner's Ecological Systems Theory, these interactions are vital for students' academic and emotional development. Social support provides the emotional resources needed to cope with academic challenges and stress, which in turn enhances academic performance. Students who feel supported by their families, friends, and teachers are more likely to stay engaged with their academic work and overcome obstacles that may impede their success. Moreover, social support helps buffer the negative effects of stress, a critical factor in academic performance. Students with strong support systems tend to exhibit higher resilience, as they are better equipped to manage setbacks and continue pursuing academic goals. This is consistent with the stress-buffering model, which suggests that social support reduces the impact of stress on academic performance, fostering a more positive and productive learning environment.

This result aligns with the work of Omopo (2025), who found that social support positively affected academic performance by improving students' emotional well-being and motivation. Similarly, Sarason et al. (1983) highlighted that social support helps reduce academic stress, leading to better performance. Additionally, Akinyemi et al. (2018) confirmed that social support networks were essential for improving students' academic outcomes by enhancing their resilience and motivation to succeed.

Hypothesis 5: There is no significant relationship between socio-economic status (SES) and academic performance among students in Osogbo, Osun State.

Table 6: Socio-Economic Status (SES) and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Socio-Economic Status → Academic Performance	0.35	0.09	3.89	0.000	Significant

The SEM analysis showed a significant positive relationship between socio-economic status (SES) and academic performance ($\beta = 0.35$, $p = 0.000$). This indicates that students from higher socio-economic backgrounds are more likely to perform better academically, likely due to better access to educational resources and a more stable home environment that supports their learning.

Socio-economic status, as part of the macrosystem in Bronfenbrenner’s model, affects students’ access to resources, quality of education, and family involvement. Students from higher SES backgrounds tend to have more access to learning materials, extracurricular activities, and tutors, all of which contribute to better academic outcomes. Additionally, these students often come from families with higher educational aspirations and more involvement in their children's schooling, providing further academic support. Bronfenbrenner’s theory suggests that socio-economic factors shape the broader environment in which students learn. For students in lower SES households, the lack of resources and stability may limit their ability to focus on academics, leading to poorer performance. Conversely, students in higher SES households benefit from enriched environments that support academic success, as they are provided with the necessary resources to thrive academically.

The findings align with UNICEF (2020), which highlighted that students from higher SES backgrounds have better academic outcomes due to greater access to resources and support. Similarly, Akinyemi et al. (2018) found that socio-economic factors significantly influenced academic performance, with higher SES students having better educational opportunities. This study further supports the notion that SES continues to be a major determinant of academic success, particularly in contexts with significant disparities in access to education.

Hypothesis 6: There is no significant predictive relationship between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance in Osogbo, Osun State.

Table 7: Predictive Relationship between Emotional Regulation, Peer Influence, Parenting Styles, Social Support, Socio-Economic Status, and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Emotional Regulation, Peer Influence, Parenting Styles, Social Support, Socio-Economic Status → Academic Performance	0.38	0.10	3.80	0.000	Significant

The SEM analysis showed a significant predictive relationship between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance ($\beta = 0.38$, $p = 0.000$). This indicates that when combined, these factors significantly predict academic performance among students in Osogbo, Osun State. The relationship between these variables collectively demonstrates a moderate-to-strong effect on students’ academic outcomes, implying that emotional regulation, peer influence, and other socio-environmental factors are important predictors of academic success. In line with Bronfenbrenner’s Ecological Systems Theory, the significant predictive relationship supports the idea that a student's academic performance is shaped by multiple, interacting systems within their environment. Emotional regulation, peer influence, parenting styles, and socio-economic status operate at various levels of the microsystem (family, school), mesosystem (peer interactions), and macrosystem (societal and economic factors). These interconnected factors influence how students engage with their academic environment, manage challenges, and ultimately perform in school. Emotional regulation allows students to manage stress, while positive peer influence encourages academic motivation, and supportive parenting styles promote self-regulation and goal-setting.

Furthermore, socio-economic status provides access to resources and stability, which can positively affect academic focus and persistence. The combined predictive effect of these factors on academic performance suggests that academic outcomes cannot be attributed to a single factor but rather to the dynamic interplay of emotional, social, and environmental influences. This holistic view aligns with Bronfenbrenner’s framework, which emphasizes the importance of the interactions between various systems in shaping a child’s development, including their educational success.

This result is consistent with the findings of Parker et al. (2020), who demonstrated that emotional regulation and social support together predict academic success in students. Similarly, Goleman (2006) highlighted the role of emotional intelligence and external factors like peer support in influencing academic outcomes. Fehintola and Akinyemi (2022) also found that parenting styles and socio-economic status had a combined predictive effect on students' academic performance. These studies support the notion that academic success is the result of a complex interaction between personal, familial, social, and environmental factors.

Hypothesis 7: There is no significant interaction between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance in Osogbo, Osun State.

Table 8: Interaction between Emotional Regulation, Peer Influence, Parenting Styles, Social Support, Socio-Economic Status, and Academic Performance

Path	Estimate	Standard Error (S.E.)	Critical Ratio (C.R.)	P-Value	Conclusion
Emotional Regulation, Peer Influence, Parenting Styles, Social Support, Socio-Economic Status ↔ Academic Performance	0.27	0.08	3.38	0.001	Significant

The SEM analysis revealed a significant interaction between emotional regulation, peer influence, parenting styles, social support, socio-economic status, and academic performance ($\beta = 0.27, p = 0.001$). This finding suggests that these factors do not independently affect academic performance; instead, they interact in a way that collectively influences students' academic outcomes. The significant interaction highlights the dynamic relationships between these factors, emphasizing that students' academic success is influenced by the combined effects of these interrelated variables.

Bronfenbrenner's Ecological Systems Theory provides a framework for understanding these findings by highlighting how the various systems surrounding a student the microsystem, mesosystem, and macrosystem interact to shape their academic development. The interaction between emotional regulation, peer influence, parenting styles, and socio-economic status underscores the complexity of the academic experience. For example, a student with strong emotional regulation skills may perform better academically, but their academic success may also depend on the quality of their peer group or the socio-economic resources available to them. This interaction effect suggests that a holistic approach, considering multiple environmental and personal factors, is essential for understanding academic performance. Moreover, the interaction between these factors supports the view that no single variable can be treated in isolation when assessing academic outcomes. Instead, the collective influence of these factors, as they interact with each other, plays a critical role in shaping students' academic trajectories. Emotional regulation may buffer the effects of socio-economic stress, while peer influence can enhance or diminish the impact of parenting styles. The combined effect of these interwoven factors provides a more

comprehensive understanding of academic performance.

The finding aligns with research by Wentzel (2010), who emphasized that the interaction of social and emotional factors such as peer relationships, emotional regulation, and parental support plays a critical role in academic success. Similarly, Omopo (2025) highlighted that students' academic performance is influenced by a combination of peer support, emotional intelligence, and socio-economic resources. Akinyemi et al. (2018) also found that the interaction of parental involvement and socio-economic status significantly shaped academic outcomes, suggesting that a multifaceted approach to academic achievement is essential for understanding the various influences that come into play. These studies further validate the significant interaction between the identified factors in predicting academic performance.

4. Conclusion

This study highlighted the significant roles that emotional regulation, peer influence, parenting styles, social support, and socio-economic status play in shaping academic performance among secondary school students in Osogbo, Osun State. The results from the Structural Equation Modelling (SEM) analysis demonstrated that these factors are not independent but interact with each other to collectively impact students' academic success. Emotional regulation, peer influence, and social support were found to have the most substantial influence, emphasizing the importance of fostering supportive, emotionally regulated, and academically motivated environments for students. The study's findings suggest that interventions aimed at improving these factors could lead to better academic outcomes, particularly in socio-economically disadvantaged contexts.

5. Limitations

Despite the valuable insights provided, this study had several limitations. First, the sample was limited to secondary school students in Osogbo, Osun State, and may not be generalizable to other regions or educational settings in Nigeria or beyond. Second, the cross-sectional nature of the study restricts the ability to draw causal inferences between the variables. Third, self-reported data on emotional regulation, peer influence, and social support could introduce response biases, as students may have underreported or overreported certain behaviours or perceptions. Additionally, the study did not explore other potential factors, such as teacher-student relationships or school-specific variables that could also affect academic performance.

6. Recommendations

Based on the findings of this study, several recommendations can be made for improving academic performance among secondary school students in Osogbo, Osun State:

First, schools should implement programmes focused on developing emotional regulation skills, as they are crucial for managing academic stress and improving focus and engagement.

Second, creating peer support networks and fostering positive peer influence in the school environment could enhance motivation and academic achievement.

Third, parental involvement in students' education should be encouraged through workshops and community initiatives that promote authoritative parenting styles.

Finally, socio-economic support structures should be strengthened, particularly for students from disadvantaged backgrounds, to provide equal opportunities for academic success. Policymakers and educators should consider these fact

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