



**PARENTING STYLES AND SELF-EFFICACY AS DETERMINANTS OF MATHEMATICS TEST ANXIETY AMONG IN-SCHOOL ADOLESCENTS IN ABUJA**

**BY**

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**Abstract**

*Mathematics is a compulsory subject at the primary and secondary schools in Nigeria, such that students' performance in mathematics have become a worrisome narratives among stakeholders. Adolescents often experience academic pressure because school success is closely linked to academic progression, prestige, and family pride. This study therefore examined parenting styles and self-efficacy as predictors of test anxiety among in-school adolescents in Abuja, Nigeria. The objectives of the study were to determine the prevalent parenting styles among parents of adolescents, assess the level of self-efficacy and test anxiety among students, and examine the relationship between parenting styles, self-efficacy, and test anxiety. The study adopted a descriptive research design of a correlational type. The population comprised all students in government secondary schools across the six area councils of the Federal Capital Territory (FCT), Abuja, while the target population consisted of Senior Secondary School II students in Government Senior Secondary Schools. A multistage sampling procedure was used to select 360 students from 18 sampled schools. Data were collected using a structured self-developed questionnaire titled Parenting Styles, Self-Efficacy, and Test Anxiety Questionnaire (PSTEAO). The instrument was validated by experts and its reliability established through Cronbach's Alpha of which 0.82 were ascertained as the reliability coefficient. Descriptive statistics and inferential statistics were used for data analysis, with Pearson's Product Moment Correlation and multiple linear regression tested at 0.05 level of significance. The findings revealed that Parenting styles and self-efficacy jointly predicted Mathematics test anxiety among the adolescents. Based on the findings, the study recommended that schools should implement programmes aimed at strengthening students' academic self-efficacy through mentoring, counselling, and confidence-building learning strategies in order to help students effectively manage test-related anxiety.*

**Keywords: Mathematics, Parenting styles, Self-efficacy, Test anxiety and Adolescent**

**Introduction**

Mathematics is the bedrock of any meaningful scientific and technological development in Nigeria and the world at large. However, mathematics has continued to witness an unimpressive students' performance despite making it compulsory at the Senior Secondary Schools in Nigeria (Akamu et al, 2016). Mathematics is one of the field of study that is universally used for the advancement of technology and human development, which knowledge is necessary for the study of everything in life (Samuel & Sunday, 2024). Mathematics is the science of patterns and relationships which explores the possible relationships among abstractions without concern for whether those abstractions have counterpart in the real world (Sunday, 2017). FRN (2013) states that the broad aims of secondary education should be preparation for useful living within the society and preparation for higher



education. In other to realize the aim and objectives of mathematics education necessitated the development of the present senior secondary school mathematics curriculum in Nigeria. In the Nigerian educational system, success in school examinations is not only a determinant of academic progression but also a source of prestige and family pride. Consequently, many adolescents experience academic pressure, which often times translate into test anxiety. Adolescence represents a sensitive and formative stage in human development, marked by numerous physiological, psychological, and social transformations. During this period, individuals begin to establish their identity, develop autonomy, and build personal and academic aspirations.

However, adolescents are also increasingly exposed to external expectations, particularly in academic environments where standardized assessments and examinations are used to measure performance. In the Nigerian educational system, success in school examinations is not only a determinant of academic progression but also a source of prestige and family pride. Consequently, many adolescents experience academic pressure, which often times translate into test anxiety. Test anxiety is a specific type of performance anxiety that arises in evaluative situations and is characterized by excessive fear and apprehension related to testing conditions. It is a multidimensional construct that includes cognitive components such as worry and negative thoughts, emotional components such as fear and dread, and physiological components such as increased heart rate, sweating, and muscle tension (Nwosu et al., 2016).. Test anxiety typically manifests before or during examinations and can severely impair concentration, information retrieval, and effective problem-solving, leading to poor performance even when the student is well-prepared. Test anxiety has been classified into two primary components: cognitive anxiety and emotionality. Cognitive anxiety involves the presence of negative expectations, self-critical thoughts, and worry about the consequences of failure, while emotionality refers to the physiological arousal experienced in testing situations. These components interact to undermine an adolescent's ability to focus on examination tasks, thereby reducing academic effectiveness. Moreover, prolonged experience of test anxiety can lead to avoidance behaviours, school refusal, low self-esteem, and emotional distress, impacting not only academic outcomes but also overall well-being (Balogun et al., 2017). In Nigeria, mathematics test anxiety is increasingly recognized as a common challenge among adolescents, particularly within urban academic settings where competition and the emphasis on high achievement are prevalent. Emerging studies such as Ojediran and Oludipe (2016) and Ugbe et al. (2020) report a rising prevalence of test anxiety among secondary school students, underscoring the need to understand the factors contributing to its occurrence.

Despite its prevalence, test anxiety often remains under-addressed within the school system, leaving many adolescents to struggle in silence during critical academic periods. In urban centers like Abuja, the federal republic of Nigeria, anecdotal reports from teachers and school counsellors indicates that test anxiety is common but often under-addressed issue among in-school adolescents. Emerging studies such as Ojediran and Oludipe (2016) as well as Ugbe et al. (2020) indicates a growing prevalence of test anxiety among secondary school students, and several factors contribute to the development and persistence of test anxiety among adolescents. These may include fear of negative evaluation, unrealistic expectations from teachers, parental pressure, and the competitive nature of the educational system. While these factors play significant roles, the family environment, particularly the nature of parenting style, has been identified as a crucial factor influencing adolescents' emotional and academic outcomes. The quality of the parent-child relationship, the level of parental expectations, and the strategies parents use to motivate or discipline their children all contribute to shaping adolescents' perceptions of academic challenges. In this regard, it becomes essential to consider parenting style as a predictive factor that may influence adolescents' test anxiety.

Parenting styles refer to the broad patterns of strategies, behaviours, and attitudes that parents use in raising their children, shaping the emotional climate in which parent-child interactions occur. These styles encompass the overall approach to discipline, communication, nurturance, and expectations, which collectively affect how children perceive authority, develop autonomy, and form relationships. The concept is central to educational psychology, as it provides a framework for understanding the long-term impact of parental behaviour on child



outcomes. Baumrind in 1971 and later researchers such as Estlein (2016) identified four main parenting styles, including authoritative, authoritarian, permissive, and neglectful (uninvolved). These styles are defined along two key dimensions: responsiveness (warmth and supportiveness) and demandingness (control and expectations). Given this backdrop, the present study investigated the predictive roles of parenting styles and self-efficacy on test anxiety among in-school adolescents in Abuja. Understanding these relationships is essential for developing context-sensitive interventions aimed at reducing mathematics test anxiety and improving adolescents' academic and emotional well-being.

Furthermore, parenting styles are directly associated with the emergence and intensity of test anxiety. Adolescents exposed to authoritarian parenting environments are more likely to experience heightened performance pressure, fear of punishment, and internalized expectations, which contribute to excessive anxiety during evaluations (Onyango, 2015). These students may associate academic performance with parental approval or punishment, thereby increasing cognitive worry and emotional distress. In permissive households, the absence of academic structure and expectations can result in poor preparation, which in turn fuels anxiety due to perceived incompetence. Authoritative parenting, on the other hand, appears to buffer students against test anxiety by fostering realistic expectations, open communication, and emotional support. A Nigerian study by Adubale (2017) confirmed that students with authoritative parents exhibited lower levels of test anxiety compared to those from more authoritarian or permissive homes, suggesting that parental style is a significant predictor of emotional responses to testing situations. Adding to this, Akpunne et al. (2020) investigated the influence of parenting styles on the psychosocial wellbeing of adolescents in Osun State. In a purposive sample of 332 students, the study found that authoritarian and permissive parenting were significantly associated with low emotional, social, and psychological wellbeing. Authoritative parenting again emerged as the most adaptive style, contributing to healthier psychosocial outcomes and lower levels of anxiety. The findings reinforce a growing consensus that emotionally engaged and appropriately demanding parenting fosters resilience in Nigerian adolescents. Aniemeka et al. (2021) explored the link between parenting styles and psychopathological symptoms, including anxiety, among 1,028 in-school adolescents in Ogun State. The cross-sectional study found that negligent and authoritarian parenting styles were associated with higher severity of mental health symptoms, including anxiety. These results highlight the compounded effects of emotionally distant parenting and lack of behavioural regulation on adolescent mental health.

Further emphasizing this relationship, Lawal et al. (2017) studied academic self-confidence as a predictor of test anxiety. Their study involving 206 undergraduates found that students with high academic self-confidence reported lower levels of performance impairment and intrusive worry, two key components of test anxiety. Notably, first-year students reported higher levels of intrusive worry, suggesting that self-efficacy develops with academic experience and adjustment. Balogun and Olanrewaju (2016) focused on computer self-efficacy and anxiety in computer-based tests (CBT), examining 241 undergraduates. The study found a strong negative correlation between computer self-efficacy and CBT anxiety, with female students reporting significantly higher anxiety levels. This finding not only confirms the protective role of self-efficacy but also highlights gender disparities in technological confidence within Nigerian educational settings.

### **Statement of the Problem**

Mathematics is a very compulsory subject which all in-school adolescent are expected to understand and perform well in it. But students' performance in it have been persistently poor in senior secondary school certificate examinations. Visits to various secondary schools within the Federal Capital Territory, Abuja, and the researcher observed that many adolescents experience visible signs of distress, fear, and panic prior to and during test periods. Some students expressed feelings of dread toward examinations, while others exhibited withdrawal, crying spells, or outright refusal to write tests. School counsellors also informally reported an increase in referrals related to academic pressure and anxiety symptoms. These observations raised concerns about the test preparedness of adolescents, and prompted further inquiry into the possible underlying factors contributing to test



anxiety, including home-related influences and self-perception issues. Although studies have been conducted on factors that lead to test anxiety among adolescents, however, only relatively few have explored the combined influence of parenting styles and self-efficacy on test anxiety within the Nigerian context. Similarly, Ngwoke (2020) examined the influence of parenting on adolescents' academic stress in Enugu State.

However, the study focused only on stress, not specifically test anxiety, and ignored psychological constructs such as self-efficacy. In another study, Odeleye et al. (2022) investigated self-efficacy and its role in academic adjustment among secondary school students in Oyo State. However, the study did not account for the family or parenting context, limiting its explanatory power. Uchendu (2022) studied emotional regulation and parenting patterns among adolescents in Anambra State but excluded academic anxiety as an outcome variable. Likewise, Sharaye (2020) explored parenting styles and self-esteem among in-school adolescents in Kaduna State but did not integrate academic outcomes such as test anxiety into their framework. As a result, they fail to isolate test anxiety as a distinct and measurable psychological construct, limiting the depth of their findings. In addition, to the best of the researcher's knowledge, Abuja, being a culturally diverse and administratively significant location, has remained largely under-researched in this area. Therefore, this study seeks to fill this gap by investigating how different parenting styles and levels of self-efficacy jointly predict mathematics test anxiety among in-school adolescents in Abuja.

### **Research Questions**

The study sought to provide answers to the following research questions:

1. What is the level of self-efficacy among male and female in-school adolescents in Abuja, Nigeria?
2. What is the level of mathematics test anxiety among male and female in-school adolescents in Abuja, Nigeria?

### **Research Hypotheses**

The following null hypotheses were formulated and tested:

**H<sub>01</sub>:** Parenting styles and self-efficacy do not jointly predict mathematics test anxiety among in school adolescents in Abuja, Nigeria.

**H<sub>02</sub>:** There is no significant relationship between self-efficacy and mathematics test anxiety among in school adolescents in Abuja, Nigeria.

### **Methodology**

A descriptive research design of correlational type was adopted for this study. Correlational research design is a method used to determine the relationship among variables and provide explanatory insights based on observed data. This design was considered appropriate for the study because the data were generated from existing occurrences and inferences were made based on the observed outcomes. The population for this study comprised all 234,873 students in government secondary schools across the six area councils of the Federal Capital Territory (FCT), Abuja. There was a total of 284 government secondary schools in the FCT. The target population specifically included all Senior Secondary School II (SSS II) students in Government Senior Secondary Schools (GSS), which numbered 67 schools with a combined population of 171,595 students (FCT Secretariate, 2026). A multistage sampling procedure was employed for the study. In the first stage, a simple random sampling technique was used to select four area councils out of the six in the FCT. The selected councils were Abuja Municipal Area Council (21 schools), Bwari Area Council (11 schools), Gwagwalada Area Council (8 schools), and Kuje Area Council (7 schools). In the second stage, proportionate sampling at 40% was applied to select a total of 18 schools from the four sampled area councils. This included 8 schools from Abuja Municipal, 4 schools from Bwari, 3 schools from Gwagwalada, and 3 schools from Kuje. In the third stage, a simple random sampling technique was used to select 20 SSS II students from each of the sampled schools. This resulted in a sample of 160 students from Abuja Municipal Area Council, 80 students from Bwari Area Council, 60 students from Gwagwalada Area Council, and 60 students from Kuje Area Council, bringing the total number of respondents to 360 students. The primary instrument for data collection in this study was a structured self-developed



questionnaire titled “Parenting Styles, Self-Efficacy, and Test Anxiety Questionnaire (PSTEAQ)”. The questionnaire was designed based on an extensive review of empirical and theoretical literature related to parenting styles, self-efficacy, and test anxiety among adolescents.

The PSTEAQ was divided into four sections: A, B, C, and D. Each section addressed specific variables under investigation. Section A gathered demographic and background information of the respondents, including gender. Section B assessed the parenting styles practiced by parents or guardians of in-school adolescents. It contained 32 items representing the four major parenting styles: authoritative, authoritarian, permissive, and neglectful/uninvolved, with eight items for each subscale. Respondents indicated their level of agreement using a 4-point Likert scale (Strongly Agree, Agree, Disagree, and Strongly Disagree). Section C contained 15 items measuring the self-efficacy beliefs of adolescents. Section D comprised 15 items measuring the test anxiety of adolescents using the same 4-point Likert response format (Strongly Agree, Agree, Disagree, and Strongly Disagree). To ascertain the internal consistency of the instrument, a pilot test was conducted using 20 in-school adolescents who were not part of the main study but shared similar characteristics with the target population. Internal consistency reliability method was adopted and the pilot test data were analysed using Cronbach’s Alpha reliability coefficient of each section of the questionnaire. The ascertained reliability coefficient is 0.82 respectively which means that the questionnaire was reliable. Descriptive statistics of percentages were used to describe the demographic information of the respondents. Research Questions 1, 2, and 3 were answered using mean analysis and standard deviation. Hypothesis 1 was tested using multiple linear regression while hypotheses 2 and 3 were tested using Pearson’s Product Moment Correlation all at 0.05 level of significance.

## Results

### Research Question 1: What is the level of self-efficacy among male and female in school adolescents in Abuja, Nigeria?

To answer the research question, 15 items on self-efficacy among in-school adolescents in Abuja, Nigeria were generated and the responses were summed and subjected to percentage analysis. The minimum, maximum and range scores obtainable from the respondents were 15, 60 and 45 respectively. The range was divided into three levels (low, moderate and high) and the cut-off range scores were 15–30, 31–45 and 46–60, categorized as low, moderate and high levels of self-efficacy respectively. The result is presented in Table 1

**Table 1: Level of Self-Efficacy among Male and Female In-School Adolescent in Abuja, Nigeria**

| Levels       | Cut-off Range | Frequency  | Percentage (%) |
|--------------|---------------|------------|----------------|
| Low          | 15 – 30       | 72         | 20.0           |
| Moderate     | 31 – 45       | 206        | 57.2           |
| High         | 46 – 60       | 82         | 22.8           |
| <b>Total</b> |               | <b>360</b> | <b>100.0</b>   |

Table 1 shows the self-efficacy levels of 360 in-school adolescents in Abuja, Nigeria. The table shows that 72 adolescents (20.0%) scored low, 206 adolescents (57.2%) fall within the moderate level, while 82 adolescents (22.8%) scored high. This indicates that the majority of the adolescents possess a moderate level of self-efficacy in Abuja, Nigeria.

### Research Questions 2: What is the level of test anxiety among male and female in school adolescents in Abuja, Nigeria?

To answer the research question, 15 items on test anxiety among in-school adolescents in Abuja, Nigeria were generated and the responses were summed and subjected to percentage analysis. The minimum, maximum and range scores obtainable from the respondents were 15, 60 and 45 respectively. The range was divided into three levels (low, moderate and high) and the cut-off range scores were 15–30, 31–45 and 46–60, categorized as low, moderate and high levels of test anxiety respectively. The result is presented in Table 2.



**Table 2: Level of Test Anxiety among Male and Female In-School Adolescents in Abuja, Nigeria**

| Levels       | Cut-off Range | Frequency  | Percentage (%) |
|--------------|---------------|------------|----------------|
| Low          | 15 – 30       | 228        | 63.3           |
| Moderate     | 31 – 45       | 101        | 28.1           |
| High         | 46 – 60       | 31         | 8.6            |
| <b>Total</b> |               | <b>360</b> | <b>100.0</b>   |

Table 2 shows the test anxiety levels of 360 in-school adolescents in Abuja, Nigeria. The table shows that 228 in-school adolescents (63.3%) exhibit low test anxiety, 101 adolescents (28.1%) fall within the moderate level of test anxiety, while 31 adolescents (8.6%) experience high test anxiety. This indicates that the majority of the adolescents have low levels of test anxiety.

### Hypotheses Testing

**H<sub>01</sub>: Parenting styles and self-efficacy do not jointly predict test anxiety among in school adolescents in Abuja, Nigeria**

To test the hypothesis, responses of students that addressed parenting style, self-efficacy and text anxiety were collated on a statistical coding sheet. The set of data was subjected t multiple linear regression to know the joint relationship. The result was depicted below;

**Table 3: Model Summary of the Joint Prediction of Parenting Styles and Self Efficacy on Test Anxiety among In-School Adolescents in Abuja, Nigeria**

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate | R Square Change | F Change | df1 | df2 | Sig. Change | F |
|-------|-------|----------|-------------------|----------------------------|-----------------|----------|-----|-----|-------------|---|
| 1     | 0.176 | 0.031    | 0.025             | 4.022                      | 0.031           | 5.673    | 2   | 357 | 0.004       |   |

Table 3 presents the model summary of the multiple regression analysis examining the joint influence of parenting styles and self-efficacy on test anxiety among in-school adolescents in Abuja, Nigeria. The result shows a multiple correlation coefficient (R) of 0.176, indicating a weak combined relationship between the predictor variables (parenting styles and self-efficacy) and the dependent variable (test anxiety). The R Square value of 0.031 implies that parenting styles and self-efficacy jointly explain 3.1% of the variance in test anxiety among the adolescents. The Adjusted R Square of 0.025 indicates that when adjusted for the number of predictors in the model, the variables still account for about 2.5% of the variation in test anxiety.

**Table 4: ANOVA Showing the Significance of the Regression Model Predicting Test Anxiety among In-School Adolescents in Abuja, Nigeria**

| Model      | Sum of Squares | df  | Mean Square | F     | Sig.  |
|------------|----------------|-----|-------------|-------|-------|
| Regression | 183.503        | 2   | 91.751      | 5.673 | 0.004 |
| Residual   | 5773.872       | 357 | 16.173      |       |       |
| Total      | 5957.375       | 359 |             |       |       |

Table 4 presents the ANOVA results for the regression analysis. The regression model produced an F-value of 5.673 with a significance value of 0.004. Since the p-value (0.004) is less than the 0.05 level of significance, the regression model is statistically significant. This indicates that the combination of parenting styles and self-efficacy significantly predicts test anxiety among in-school adolescents in Abuja, Nigeria.

**Table 5: Regression Coefficients Showing the Relative Contribution of Parenting Styles and Self-Efficacy to Test Anxiety among In-School Adolescents in Abuja, Nigeria**

| Variables | B      | Std. Error | Beta | T     | Sig.  |
|-----------|--------|------------|------|-------|-------|
| Constant  | 16.501 | 2.501      |      | 6.598 | 0.000 |



|                  |       |       |       |       |       |
|------------------|-------|-------|-------|-------|-------|
| Parenting Styles | 0.024 | 0.033 | 0.039 | 0.740 | 0.160 |
| Self-Efficacy    | 0.133 | 0.043 | 0.165 | 3.121 | 0.002 |

Table 5 presents the regression coefficients showing the individual contribution of parenting styles and self-efficacy to test anxiety. The result shows that parenting styles ( $\beta = 0.039$ ,  $p = 0.160$ ) did not significantly predict test anxiety because the p-value is greater than 0.05. However, self-efficacy ( $\beta = 0.165$ ,  $p = 0.002$ ) significantly predicted test anxiety among the adolescents since the p-value is less than 0.05. This indicates that while parenting styles do not significantly influence test anxiety independently, self-efficacy makes a significant contribution to predicting test anxiety among in-school adolescents in Abuja, Nigeria.

**H<sub>02</sub>: There is no significant relationship between self-efficacy and test anxiety among in school adolescents in Abuja, Nigeria.**

**Table 6: Pearson's Product Moment Correlation of the Relationship between Self-efficacy and Test Anxiety among in-school Adolescents in Abuja, Nigeria**

| Variables     | r - cal. | p-value | Remark      |
|---------------|----------|---------|-------------|
| Self-Efficacy |          |         |             |
| Test Anxiety  | 0.171    | 0.001   | Significant |

Table 6 reveals the r-calculated value (0.171) and the p-value (0.001) for the relationship between self-efficacy and test anxiety among in-school adolescents in Abuja, Nigeria. Since the calculated p-value (0.001) is less than the 0.05 level of significance ( $0.001 < 0.05$ ), the null hypothesis was rejected. This implies that there is a significant relationship between self-efficacy and test anxiety among in-school adolescents in Abuja, Nigeria.

### Discussion of the Findings

The first finding of the study revealed that authoritative and authoritarian parenting styles were prevalent among parents of in-school adolescents in Abuja, Nigeria. This suggests that parenting practices within the context tend to reflect a blend of structured discipline and parental control alongside varying degrees of emotional support and responsiveness. In many Nigerian families, parenting is strongly influenced by socio-cultural expectations that emphasize obedience, moral upbringing, academic diligence, and respect for authority. Consequently, parents often adopt approaches that combine strict supervision with guidance and involvement in their children's educational development. The prevalence of these parenting styles may therefore as a result of a cultural orientation that prioritizes discipline and academic success while still maintaining parental engagement in adolescents' personal and academic lives. This finding is consistent with Adubale (2017) who reported that authoritarian, authoritative, and permissive parenting styles were observable among secondary school students, indicating that diverse parenting approaches coexist within Nigerian households. The finding also found that the level of self-efficacy among male and female in-school adolescents in Abuja, Nigeria was moderate. This indicates that the adolescents possessed a reasonable level of confidence in their academic abilities, although such confidence may not be sufficiently strong to ensure consistent resilience in challenging academic situations. The moderate level of self-efficacy may be explained by the developmental stage of adolescence, during which beliefs about competence are gradually shaped through academic experiences, teacher feedback, peer comparison, and parental expectations. As students navigate academic demands and assessment pressures, their confidence in their capabilities may fluctuate, resulting in moderate rather than extremely high levels of self-efficacy. This result corresponds with Lawal et al. (2017) who reported that students with stronger academic self-confidence tended to experience lower levels of test anxiety, suggesting that self-efficacy evolves through academic adjustment and experience. Likewise,

Furthermore, the finding revealed that the level of mathematics test anxiety among male and female in-school adolescents in Abuja, Nigeria was low. This suggests that most of the adolescents were relatively calm and psychologically stable when faced with test situations. A plausible explanation for this outcome is that students



may have developed adaptive coping strategies through repeated exposure to examinations within the school system. Over time, such experiences may reduce excessive worry and emotional tension associated with tests, enabling students to perceive examinations as manageable academic tasks rather than threatening situations. The finding supports Onyeizugbo (2010) and Lawal et al. (2017) who found that students with stronger academic self-beliefs experienced lower levels of test anxiety, while Balogun and Olanrewaju (2016) established a negative relationship between computer self-efficacy and anxiety during computer-based tests

The finding of the study also shows that parenting styles and self-efficacy jointly predicted mathematics test anxiety among in-school adolescents in Abuja, Nigeria. This indicates that the combined influence of family socialization practices and students' internal belief systems plays a significant role in shaping adolescents' emotional experiences during examinations. Parenting styles provide the social environment in which adolescents develop behavioural patterns, coping strategies, and academic attitudes, while self-efficacy represents the internal psychological mechanism through which students interpret and respond to academic demands. Adolescents who experience supportive parenting environments that encourage independence, guidance, and constructive feedback are more likely to develop stronger self-beliefs, which in turn help them regulate stress and manage test-related challenges effectively. This finding supports Adubale (2017), Akpunne et al. (2020), and Aniemeka et al. (2021) who demonstrated that parenting practices significantly shape adolescents' emotional wellbeing, including anxiety levels. Similarly, Onyeizugbo (2010) and Osunkwo et al. (2022) established that self-efficacy plays a significant role in predicting academic stress and anxiety among students. The result is also in line with Bandura's Social Cognitive Theory ideology, explaining that behaviour emerges from the dynamic interaction between personal factors, environmental influences, and behavioural outcomes.

Also, the finding found a significant relationship between self-efficacy and mathematics test anxiety among in-school adolescents in Abuja, Nigeria. This indicates that students' beliefs about their academic competence are closely associated with how they emotionally respond to examination situations. Adolescents who possess stronger confidence in their academic abilities are more likely to approach tests with calmness and determination, whereas those with lower confidence may perceive examinations as threatening, thereby experiencing heightened anxiety. This finding corroborates with Onyeizugbo (2010) who reported that students with higher self-efficacy experienced lower levels of test anxiety and demonstrated better academic performance. Similarly, Lawal et al. (2017) found that academic self-confidence significantly predicted reduced levels of intrusive worry and performance impairment among students, while Balogun and Olanrewaju (2016) observed a negative relationship between computer self-efficacy and anxiety in computer-based testing environments. The finding also supports Bandura's Social Cognitive Theory in that individuals' beliefs about their capabilities influence their emotional regulation, persistence, and behavioural responses to challenging situations. Students with stronger self-efficacy are therefore better able to manage academic stress and remain focused during examinations.

### **Conclusion**

The study highlights the complex interplay between family environment and individual psychological factors in shaping adolescents' academic emotional experiences. The findings underscore the importance of both parental socialization practices and students' internal belief systems in influencing how adolescents perceive and respond to academic challenges. While the family context provides the foundational environment for behavioural development and emotional regulation, students' confidence in their academic abilities plays a crucial role in determining their capacity to cope with examination-related pressures. Overall, the study reinforces the relevance of Social Cognitive Theory in explaining adolescents' academic behaviour, emphasizing that emotional outcomes such as mathematics test anxiety emerge from the dynamic interaction between environmental influences and personal cognitive factors.



### Recommendations

Based on the findings, the following recommendation were presented:

1. Parents should be encouraged through school–community programmes to adopt more authoritative parenting practices that balance discipline with emotional support to enhance adolescents’ psychological wellbeing.
2. Teachers should implement confidence-building instructional strategies, such as mastery-based learning and positive feedback, to strengthen students’ academic self-efficacy.
3. Schools should promote parent–school collaboration, where parents and teachers work together to build supportive environments that strengthen students’ confidence and reduce academic anxiety.
4. School administrators should focus on school-based interventions, such as counselling and study-skills training, to address factors within the learning environment that may influence students’ anxiety in mathematics.
5. Educational psychologists in collaboration with guidance counsellors should implement self-efficacy development programmer, including goal-setting and academic mentoring, to help students better manage examination stress.

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