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Relationship Between Anxiety, Stress And Academic Performance Of Primary School Pupils In Sokoto State, Nigeria

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ABSTRACT
The study investigated the relationships between anxiety, stress and academic performance of primary school pupils in Sokoto State, Nigeria. The study was guided by two research objectives and corresponding hypotheses. A correlational research design was adopted for the study. The population comprised 51,776 public primary school pupils, from which a sample of 373 pupils was selected for the study. Data were collected using the Beck Anxiety Inventory, Donald Stress Questionnaire, and a researcher-designed academic performance test in English Language and Mathematics. The data collected were analysed using Pearson Product-Moment Correlation. The findings revealed a weak negative and non-significant relationship between anxiety and academic performance among primary school pupils in Sokoto State ($r = -.028$, $p = .588$). The findings also revealed a weak positive but significant relationship between stress and academic performance ($r = .129$, $p = .013$). Based on the findings, it was concluded that anxiety was negatively but not significantly related to academic performance, whereas stress had a positive and significant relationship with academic performance among primary school pupils in Sokoto State. Based on the findings, it was recommended that the government and relevant education authorities should integrate appropriate stress-management strategies, such as relaxation exercises and other age-appropriate coping techniques, into primary school programmes to help pupils manage academic stress effectively and maintain acceptable levels of psychological well-being.
Keywords: Anxiety, Stress, Academic Performance

1. INTRODUCTION

Education is widely recognized as an important instrument for individual and national development. At the primary school level, pupils are expected to acquire foundational knowledge, skills, attitudes, and values that prepare them for further education and responsible participation in society. However, the extent to which pupils benefit from schooling may be influenced by several psychological, social, and environmental factors. Among these factors, anxiety and stress have become important concerns because of their possible effects on pupils' concentration, motivation, cognitive functioning, classroom participation, and academic performance. There is apparent ignorance among some parents, teachers, and school personnel regarding the extent to which pupils experience anxiety and stress. As a result, some

pupils' emotional and behavioral difficulties may be misunderstood, wrongly diagnosed, or inadequately addressed. Anxiety is a psychological and physiological state involving emotional, cognitive, physical, and behavioral responses. It is commonly associated with feelings of fear, worry, uneasiness, apprehension, and dread. Anxiety is also considered a normal response to stress and may sometimes be beneficial because it prepares an individual to respond to challenging situations. However, when anxiety becomes excessive, persistent, difficult to control, or interferes with daily functioning, it may develop into an anxiety disorder (Esperanza & Heraaendez, 2020).

Anxiety is therefore not always harmful. A certain level of anxiety may increase alertness and attention and may assist pupils in responding to academic demands. Cooper and Champlin (2020) categorized anxiety into four levels: mild, moderate, severe, and panic. Mild anxiety may be considered healthy because it can heighten an individual's perceptual awareness, attention, and readiness to learn. At this level, pupils may become more attentive and focused, thereby improving their learning and academic performance. However, as the level of anxiety increases, its effect may become negative. Moderate anxiety is characterized by a narrowing of the perceptual field, reduced concentration, selective inattention, and observable repetitive behaviours. At this level, a pupil's academic performance may depend on his or her ability to regulate anxiety and complete assigned tasks. Severe anxiety represents a higher level of anxiety that may substantially interfere with daily functioning and cause considerable distress. Panic anxiety is the most intense level and may involve extreme fear and panic attacks, which can significantly impair a pupil's ability to function effectively. Esperanza and Heraaendez (2020) observed that anxiety may be characterized by worry and apprehension and can interfere with students' ability to concentrate and process information, thereby contributing to reduced academic performance. The American Psychological Association (2013) defines anxiety as an emotion involving feelings of tension, worried thoughts, and physical changes. Individuals experiencing anxiety may have recurring concerns, avoid situations that cause worry, and experience physical symptoms such as sweating, trembling, dizziness, or rapid heartbeat. Anxiety can also affect attention and information processing because anxious individuals may become more focused on identifying potential threats and avoiding negative outcomes. Such attentional changes may make it difficult for pupils to concentrate fully on lessons, assignments, examinations, and other academic activities.

Anxiety may occur in different forms, including generalized anxiety disorder, social anxiety disorder, specific phobia, obsessive-compulsive disorder, and post-traumatic stress disorder. Generalized anxiety disorder, for example, involves persistent and excessive worry about several areas of life, including health, family, relationships, education, and other responsibilities (Legg, 2020). Social anxiety may also affect pupils because primary school children are required to interact with teachers, classmates, friends, neighbours, and other members of the school community. Fear of making mistakes, being criticized, being embarrassed or failing to meet social expectations may make some pupils uncomfortable in classroom and social situations. Such experiences can potentially affect their participation and academic activities.

Closely related to anxiety is stress. Stress is a complex phenomenon that occurs when individuals perceive that the demands placed upon them exceed their ability or resources to cope with those demands. Nadia (2023) describes stress as a challenge to an individual's internal or external balance, while Wolf (2015), as cited in Nadia (2023), views stress as a complex and subjective experience. This suggests that the same situation may produce different levels of stress in different individuals. Calloway (2019) similarly indicates that the subjective nature of stress is influenced by individuals' backgrounds and environmental experiences. Stress can therefore be understood as a psychological and physiological response that arises when individuals encounter conditions they perceive as demanding, threatening, or difficult to manage. Primary school pupils encounter several stressors in their daily lives. These may include adapting to a new school environment, separation from parents and siblings, adjustment to peer relationships, sitting for extended periods in the classroom, moving between different school activities, adapting to school routines and eating habits, completing assignments, and preparing for examinations (Sinha & Nepal, 2021). These experiences may become particularly challenging for pupils who have limited coping resources or who receive inadequate emotional and social support. Stress may be positive

or negative depending on its intensity and the individual's ability to cope with it. Moderate and manageable levels of stress may motivate pupils to prepare for academic tasks, complete assignments, and strive for improvement. In this sense, stress may function as a form of positive pressure or eustress. However, excessive or prolonged stress can have undesirable consequences. Ogunye (2022) noted that stress may arise from the pressures associated with school demands and expectations and that chronic stress can impair memory, reduce concentration, and lower motivation, all of which are important for effective learning.

Academic stress is a particular form of stress associated with educational demands. Increasing academic expectations, pressure from teachers and parents, competition among peers, examinations, assignments, and pupils' personal aspirations may contribute to increased stress and anxiety. Putwain and Symes (2021) observed that pupils in primary education may perceive academic life as stressful and demanding and may experience emotional and cognitive reactions as a result of external pressures and self-imposed expectations. Similarly, Mendaglio (2017) reported that pupils experiencing academic stress may complain of physical problems such as headaches and stomach aches, experience changes in sleeping and eating patterns, become tearful, angry, or withdrawn, avoid school-related discussions, spend excessive amounts of time on schoolwork, avoid schoolwork, or become overly self-critical.

The relationship between stress, anxiety, and learning is particularly important because pupils who are overwhelmed by psychological pressure may find it difficult to concentrate and participate effectively in classroom activities. Anxiety and stress may also manifest in behavioural changes, including withdrawal, restlessness, irritability, reduced motivation, and avoidance of academic tasks. Consequently, the presence of these psychological experiences may influence how pupils perform in tests, examinations, assignments, classroom activities, and other measures of academic achievement.

Academic performance is another important variable in the present study. Academic performance refers to the extent to which students attain expected educational outcomes, often demonstrated through marks, grades, examinations, assignments, and other forms of assessment. Narad and Abdullah (2016) define academic performance in relation to the knowledge gained by students and assessed through marks by teachers or through educational goals established for a particular period. Academic performance is important because it provides an indication of the extent to which pupils are acquiring the knowledge and skills expected at their level of education. Akinleke (2017) reported a significant relationship between students' academic performance and socio-economic development because students' acquisition of relevant knowledge and skills is reflected in their academic achievement. Narad and Abdullah (2016) further noted that the success or failure of educational institutions depends largely on the academic performance of their students and that good academic performance may contribute to improved future educational and career opportunities. In the context of primary education, academic performance is therefore influenced by more than pupils' intellectual abilities alone. Psychological conditions such as anxiety and stress may influence attention, memory, motivation, classroom participation, and the ability to complete academic tasks. Understanding the relationships between anxiety, stress, and academic performance is consequently important for teachers, parents, school administrators, educational psychologists, and policymakers. Such understanding may help schools identify pupils who are experiencing psychological difficulties and develop appropriate strategies for supporting their academic and emotional well-being.

In Sokoto State, Nigeria, where primary school pupils are exposed to diverse family, social, cultural, and educational circumstances, examining the relationships between anxiety, stress, and academic performance is particularly relevant. Establishing the extent to which anxiety and stress are associated with pupils' academic performance may provide evidence that can assist parents, teachers, and education stakeholders in creating supportive learning environments. It may also contribute to the development of appropriate interventions aimed at reducing excessive anxiety and stress and improving pupils' educational outcomes.

1.1 Statement of the Problem

Primary education provides the foundation for children's future academic development; however, pupils do not all experience the school environment in the same way. While some pupils are able to cope

effectively with academic and social demands, others may experience anxiety and stress that interfere with their ability to concentrate, participate in classroom activities, complete assignments, and perform well academically. Despite these challenges, anxiety and stress among primary school pupils may not always be recognized or appropriately addressed by parents, teachers, and school authorities.

The problem is that excessive anxiety and stress may negatively affect pupils' academic functioning. Pupils who experience persistent worry, fear, pressure, or emotional distress may have difficulty concentrating on lessons and retaining information. Anxiety may also interfere with problem-solving, critical thinking, and the effective application of knowledge. Similarly, excessive academic stress may reduce motivation, impair memory and concentration, and result in withdrawal or avoidance of school-related activities. The researchers has observed that some Primary Six pupils exhibit behaviours that may be associated with academic difficulties, including failure to complete homework, poor performance in quizzes and tests, reduced participation in classroom discussions, tiredness, tension, and difficulty maintaining concentration. Some pupils also appear to experience considerable pressure from their homes to perform well academically. Fear of disappointing parents and meeting high academic expectations may create additional anxiety and stress, particularly among pupils who already find school demands challenging. For example, a pupil who was previously performing well academically may begin to experience declining grades, reduced classroom participation, tiredness, and difficulty concentrating. Such changes may be associated with stressful circumstances outside the school environment, such as family conflict or pressure at home. When pupils are emotionally preoccupied by such experiences, they may find it difficult to focus on academic tasks and may consequently experience a decline in their academic performance. Although anxiety and stress are recognized as common human experiences, the extent to which they are related to the academic performance of primary school pupils in Sokoto State requires further empirical investigation. There is therefore a need to determine whether anxiety and stress are significantly related to the academic performance of primary school pupils and to establish the nature and direction of these relationships. It is against this background that the present study investigates the "relationships between anxiety, stress and academic performance of primary school pupils in Sokoto State, Nigeria". The findings of the study may provide useful information for teachers, parents, school administrators, educational psychologists, and policymakers in identifying and addressing anxiety- and stress-related factors that may hinder pupils' academic development.

1.2 Objectives of the study

The study was guided by the following objectives to determine:

1. The relationship between anxiety and academic performance of primary school pupils in Sokoto state.
2. The relationship between stress and academic performance of primary school pupils in Sokoto state.

1.3 Hypotheses

In order to achieve the stated objectives, the following null hypotheses were formulated and tested at 0.05 alpha level of significance:

$H0_1$: There is no significant relationship between anxiety and academic performance of primary school pupils in Sokoto state.

$H0_2$: There is no significant relationship between stress and academic performance of primary school pupils in Sokoto state.

2. METHODOLOGY

The study adopted a correlational research design to investigate the relationships between anxiety, stress, and academic performance among public primary school pupils in Sokoto State, Nigeria. A correlational research design is appropriate when a researcher seeks to determine the existence, direction, and strength of relationships between or among variables without manipulating them. According to Martins (2016), correlational research involves examining the relationships between variables to determine whether changes in one variable are associated with changes in another variable.

The design was considered appropriate for the present study because the researchers sought to determine the relationships between anxiety and academic performance and between stress and academic performance among primary school pupils. The design also enables the researchers to determine the

direction and magnitude of relationships among variables and to make predictions based on observed relationships without manipulating the study variables. Therefore, the correlational research design was considered suitable for achieving the objectives of the study and testing the formulated hypotheses. The population of the study comprised 51,776 Primary Six pupils in public primary schools across the thirteen Local Government Areas covered by the study in Sokoto State, Nigeria. The population was obtained from the Annual School Census Report (2024/2025). The population was distributed across the thirteen Local Government Areas.

A sample of 373 Primary Six pupils was selected from the population of 51,776 pupils. The sample size was determined in accordance with the Research Advisors (2006) sample-size determination table for a population of the stated magnitude. A multistage sampling procedure was adopted for the study. First, the study area was organized according to the Local Government Areas covered by the study. One public primary school was selected from each of the thirteen Local Government Areas using an appropriate random sampling procedure. Thereafter, the required number of Primary Six pupils was selected from each of the sampled schools. The sample of 373 pupils was distributed proportionately among the selected schools based on the number of Primary Six pupils in each school. This approach ensured that pupils from schools with larger Primary Six populations had a proportionately higher representation in the sample than schools with smaller populations. Thereafter, the pupils to participate in the study were selected using a simple random sampling technique.

Data for the study were collected using three instruments:

1. Beck (1961) Anxiety Inventory (BAI);
2. Donald (2018) Stress Questionnaire; and
3. Researcher-Designed Academic Performance Test in English Language and Mathematics.

The Beck Anxiety Inventory was used to assess the level of anxiety among the pupils, while the Donald Stress Questionnaire was used to measure pupils' stress levels. The researcher-designed academic performance test was used to assess pupils' academic performance in English Language and Mathematics. The researcher-designed academic performance test was developed in accordance with the relevant Primary Six curriculum content and learning objectives in English Language and Mathematics. The items were designed to assess pupils' understanding and achievement in the selected subject areas.

The instruments were subjected to content validity by experts in Educational Psychologists and Counsellors, Mathematics, and English Language in the Department of Educational Foundations, Science and Vocational Education, as well as the Department of Curriculum, Faculty of Education and Extension Services, Usmanu Danfodiyo University, Sokoto. The experts examined the instruments with particular attention to the relevance, clarity, appropriateness, coverage, and suitability of the items for Primary Six pupils. Their observations, corrections, comments, and suggestions were incorporated into the instruments before the final versions were produced and administered for the study.

A pilot test was conducted using 50 Primary Six pupils from Muhammad Model Primary School in Wamakko Local Government Area of Sokoto State. The pupils who participated in the pilot test were not included in the main study. The pilot test was conducted to determine the reliability, clarity, and suitability of the instruments before their administration to the actual respondents. The instruments were administered using a test-retest procedure at an interval of three weeks. The reliability coefficients obtained for the three instruments were 0.732, 0.771, and 0.738, respectively. These coefficients indicate that the instruments demonstrated acceptable levels of reliability for the study.

The data collected from the study were coded and analysed using descriptive and inferential statistics. Pearson Product-Moment Correlation was used to test the hypotheses formulated for the study because the study sought to determine the relationships between the independent variables and academic performance. Specifically, Pearson Product-Moment Correlation was used to determine: the relationship between anxiety and academic performance among Primary Six pupils; and the relationship between stress and academic performance among Primary Six pupils. The hypotheses were tested at the 0.05 level of significance.

3. RESULTS

$H0_1$: There is no significant relationship between anxiety and academic performance of primary school pupils in Sokoto state.

Table 1: Pearson Product Movement Correlation (r) Statistics on relationship between Anxiety and Academic Performance

Variables	N	Mean	Std Dev	*Df*	*r*-Cal	*p*-Value	Decision
Anxiety	372	45.52	3.039	370	-.028	.588	H_0 Accepted
Academic Performance	372	22.73	3.229				

Table 1 shows a negative and non-significant relationship between anxiety and academic performance among primary school pupils in Sokoto State ($r = -.028$, $p = .588$). The negative correlation coefficient indicates a very slight tendency for higher anxiety scores to be associated with lower academic performance; however, the magnitude of the relationship is extremely weak and was not statistically significant. Since the obtained p-value of .588 is greater than the 0.05 level of significance, there is insufficient evidence to reject the null hypothesis. Therefore, the null hypothesis, which states that there is no significant relationship between anxiety and academic performance among primary school pupils in Sokoto State, is hereby accepted.

$H0_2$: There is no significant relationship between stress and academic performance of primary school pupils in Sokoto state.

Table 2: Pearson Product Movement Correlation (r) Statistics on relationship between Stress and Academic Performance

Variables	N	Mean	Std Dev	*Df*	*r*-Cal	*p*-Value	Decision
Stress	372	44.14	5.004	370	.129	.013	H_0 Rejected
Academic Performance	372	22.73	3.229				

Table 2 shows a positive and statistically significant relationship between stress and academic performance among primary school pupils in Sokoto State ($r = .129$, $p = .013$). The positive correlation coefficient indicates that higher stress scores tended to be associated with higher academic performance scores, while lower stress scores tended to be associated with lower academic performance scores. However, the magnitude of the relationship was weak. Since the
obtained p-value of .013 is less than the 0.05 level of significance, there is sufficient evidence to reject the null hypothesis. Therefore, the null hypothesis, which states that there is no significant relationship between stress and academic performance among primary school pupils in Sokoto State, is hereby rejected.

3.1 DISCUSSION OF FINDINGS

The findings of research hypothesis one shows a negative and non-significant relationship between anxiety and academic performance among primary school pupils in Sokoto State, this outcome is contrary to the research of Muhammad, (2022). Who investigated the relationship between Anxiety and Academic Performance of Undergraduate University Students. Findings revealed there was a weak and negative relationship between anxiety and achievement scores of undergraduate university students, but there was a significant but weak and negative relationship between anxiety and achievement scores and co-curricular activities of undergraduate university students. Likewise, Study of Sumeera Langah et-al (2022) Exploring the Factors of Anxiety Affecting Students' Academic performance: A Study of Higher Education Institution of Larkana. Anxiety has numerous hindering factors that distract students from achieving satisfactory results in their examinations. The study aimed to explore the factors of anxiety that influenced students' grades at the higher education institution of Larkana. Findings of present study revealed that numerous factors of anxiety such as distraction, absent mind, declining motivation, feeling of fatigue, feeling of loneliness, feeling of fear or panic lead towards depression, and negatively affect students' academic achievement.

The findings of research hypothesis two shows a positive and statistically significant relationship between stress and academic performance among primary school pupils in Sokoto State, which is in line research of Musa, Muhammad, Umar and Muhammad (2019) Who investigated the relationship between personality traits of conscientiousness, agreeableness, emotional stability and stress among secondary school teachers in Gusau Educational Zone, Zamfara State, Nigeria. Is also is in agreement with research of Emmanuel, (2023). Who investigated the impact of stress on academic performance of students in the University of Cape Coast, School of Business. The findings, it was discovered that academic stress could be controlled to enhance students' performance. The study discovered that by educating students on how to manage stress, staying focus, having enough rest, exercising a lot and effective time management can help to manage stress in order to enhance students' academic performance. Further findings from the study indicated that students believe academic stress has a big effect on their performance. The findings also is in line with research of Rabiya and Sana, (2023) who study, the relationship between academic stress and academic performance of undergraduate's students from public and private universities in Lahore. This study results indicated that there was no significant correlation between academic stress and academic performance within the studied sample of 152 individuals. While a very weak negative correlation was observed.

4. CONCLUSION

Based on the findings of this study, it was concluded that negative not significant relationship was found between anxiety and academic performance of of pupil's academic performance of Sokoto state primary school., and also concluded that positive significant correlation were existed between stress and academic performance of of pupil's academic performance of Sokoto state primary school.

5. RECOMMENDATIONS

Based on the findings and conclusion of the study the following recommendations were made:

1. Government through primary Education Board should provide access to counselling services and stress management strategies, even if anxiety is not directly linked to academic performance of primary school pupils.
2. Government should integrate stress-management techniques, like mindfulness or relaxation exercises in to primary school curriculum in order minimize primary school pupils stress level within the acceptable limit.

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