



JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)

Vol. 8(2); 2026

ISSN ONLINE: 3092-9253



**Editor in-Chief
PROF. PATRICK C. IGBOJINWAEKWU**

JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)
VOL.8 (2); 2026

**JOURNAL OF
SCIENCE
EDUCATION AND
RESEARCH
(JSER) 8 (2); 2026**

JOURNAL OF SCIENCE EDUCATION AND RESEARCH (JSER)
VOL.8 (2); 2026

© (JSER)

ISSN Online: 3092-9253

Published in March, 2026.

All right reserved

No part of this journal should be reproduced, stored in a retrieval system or transmitted in any form or by any means in whole or in part without the prior written approval of the copyright owner(s) except in the internet

Printed in Nigeria in the year 2026 by:



Love Isaac Consultancy Services (Publication Unit)

No 1 Etolue Street, Ifite Awka, Anambra State, Nigeria

+234-803-549-6787, +234-803-757-7391

EDITORIAL BOARD

Editor-in-Chief

Prof. Patrick C. Igbojinwaekwu

Editors

Prof. F.A. Onwioduokit	University of Uyo, Uyo, Akwa-Ibom State, Nigeria
Prof. Bennett I. Ado	Federal University, Otuoke, Bayelsa State, Nigeria
Dr. JohnBosco O.C. Okekeokosisi	Federal College of Education (Tech) Asaba, Delta State, Nigeria
Dr. Emmanuel C. Nwigboji	Alex Ekwueme Federal University Ndufu Alike, Ebonyi State, Nigeria
Dr. Chris O. Obialor	Nnamdi Azikiwe University, Awka, Anambra State, Nigeria
Dr. Susan E. Umoru	Taraba State University
Dr. Loveline B. Ekweogu	Nnamdi Azikiwe University, Awka, Anambra State, Nigeria
Dr. Odochi I. Njoku	Federal College of Agriculture, Ishiagu, Ebonyi State, Nigeria

Consulting Editors

Prof. Abdulhamid Auwal	Federal University Kashere, Gombe State, Nigeria
Prof. Marcellinus C. Anaekwe	National Open University of Nigeria
Dr. Peter I.I. Ikokwu	Nwafor Orizu College of Education Nsugbe, Anambra State, Nigeria

EDITORIAL

Journal of Science Education and Research (JSER) is a peer-reviewed published Bimonthly. It aimed at advancing knowledge and professionalism in all aspects of educational research, including but not limited to innovations in science education, educational technology, guidance and counselling psychology, childhood studies and early years, curriculum studies, evaluation, vocational training, planning, policy, pedagogy, human kinetics, health education and so on. JSER publish different types of research outputs including monographs, field articles, brief notes, comments on published articles and book reviews.

We are grateful to the contributors and hope that our readers will enjoy reading these contributions.

Prof. Patrick C. Igbojinwaekwu
Editor-in-Chief

TABLE OF CONTENTS

Self-Concept and Academic Stress As Predictors of Basic Education Students' Test Anxiety in Basic Science in Anambra State Anachuna A. A., Okigbo E. C	1
South Sudan Conflicts: A Critical Analysis of Its Impact on Diaspora Nigerian Settlers Bieni Victor Emenike	14
Artificial Intelligence Integrated Teaching Method on Secondary School Students' Interest and Academic Achievement in Mathematics in Aba Education Zone, Abia State. Njoku, Celestine (Ph.D), Inah, Lovinah Idoko. A (Ph. D), Emeka, Standhope .I (Ph. D)	36
Influence of Secondary School Students' Engagement on Academic Achievement in Mathematics in Anambra State, Nigeria A. T. Nwamaradi, Momalife Divine Nkemakonam	52

SELF-CONCEPT AND ACADEMIC STRESS AS PREDICTORS OF BASIC EDUCATION STUDENTS' TEST ANXIETY IN BASIC SCIENCE IN ANAMBRA STATE

¹Anachuna A. A., ² Okigbo E. C

¹+2348037897293, ²+2348031983284

Department of Science Education
Faculty of Education
Nnamdi Azikiwe University Awka, Nigeria

Abstract

Self-concept and academic stress as predictors of secondary school students' test anxiety in Basic Science in Anambra State was investigated. Three research questions guided the study while three null hypotheses were tested at 0.05 level of significance. Correlational research design of a predictive type was used for the study. The population of this study comprised 14, 471 Upper Basic three (UB 3) students in the 274 public secondary schools in Anambra State for the 2025/26 academic session. The sample size for the study consisted of 800 UB 3 students for the 2025/2026 academic session obtained through simple random sampling and proportionate stratified sampling techniques. Data were collected using face-validated Self-Concept Questionnaire (SCQ), Academic Stress Questionnaire (ASQ) and Basic Science Test Anxiety Scale (BSTAS). The reliability values of SCQ, ASQ and BSTAS were ascertained using Cronbach Alpha Statistics which yielded internal consistency values of 0.79, 0.77 and 0.73 respectively. SCQ, ASQ and BSTAS were distributed by the researcher with the help of six research assistants who were Basic Science teachers who covered the schools in the three zones. Data collected were analyzed using multiple regression analysis. The findings of the study revealed that self-concept negatively and significantly predicted secondary school students' test anxiety in Basic Science in Anambra State. It was further revealed that academic stress positively and significantly predicted secondary school students' test anxiety in Basic Science in Anambra State. It was recommended among others that Ministry of Education, Basic Education Commission and professional bodies such as STAN should organize seminars and workshops for Basic Science teachers on the evolution of the best teaching strategy to boost students' self-concept and reduce academic stress. That way, students' test anxiety in Basic Science will be reduced.

Keywords: Academic Stress, Self-Concept, Test Anxiety.

Introduction

Test anxiety captures an individual's feeling of fear or worry which assails them before, during or after a test. Test anxiety captures a state of uneasiness or feeling of uncertainty regarding an oncoming or ongoing evaluation programme such as test or examination (Eremie and Ikpa, 2020). Eremie and Ikpa added that test anxiety comprises a person's cognitive reactions or internal dialogue regarding evaluative situations before, during or after evaluative tasks which center on comparing self-performance to peers; consequences of failure; low levels of confidence in performance; feeling of unpreparedness for tests, as well as loss of self-worth. In other words, test anxiety could be cognitive (worry) or affective (emotional) in nature. Test anxiety can be affected by many factors viz: lack of self-confidence, lack of motivation and stress (Abduljabbar, 2023).

In Anambra State secondary schools, Basic Science is a compulsory subject that lays a foundation for senior science subjects. Yet, many upper basic education students report high levels of fear and nervousness during examinations. Corroborating the afore-mentioned, Nwankwo and Okoli (2024) reported high test anxiety levels among upper basic education students in Anambra State. Despite curriculum reforms aimed at improving science literacy as the Basic Education level, test anxiety remains a barrier to students' academic achievement. Instructively, self-concept and academic stress could be responsible for students' test anxiety in Basic Science.

Self-concept refers to the manner in which individuals perceive or see themselves. It captures an overarching idea persons have about their physical, emotional, social and spiritual make-up (Ackerman, 2021). In other words, self-concept is the sum of students' perception about their affective, physical, social and cognitive abilities. Ghaffer and Buksh (2021) pointed out, that self-concept is a set of perceptions that individuals have about themselves, their attributes, qualities, deficiencies, capacities and values which define them. Each student has different personality traits, abilities and preferences that define them and possibly shape how they go about their examinations. This implies that an individual's disposition is a function of their personal assessment.

One's self-concept could be affected by internal, external and environmental factors. Some of the internal factors that affect self-concept include: self-esteem and self-efficacy (Bandura, 1997) while the external factors include social interactions and family dynamics. The external factors capture school environment and socio-economic status (Hassan and Surat, 2024).

Self-concept of a student could be high or low. Students with high self-concept in Basic Science has a tendency of believing in themselves while low self-concept could lead to the students having academic stress generally. According to social cognitive theory (Bandura, 1986), positive self-concept reduces anxiety.

Academic stress refers to a feeling by students when academic demands made on them exceed their coping limit. Lending credence to this assertion, Nordqvist (2017) defined academic stress as an uncomfortable feeling to which students are subjected to that is too demanding and which poses a threat to their well-being especially, when such demands exceed the personal and social resources that they are able to mobilize. Put differently, when a Basic Science student is besieged with more academic tasks than what their resources can bear or accommodate within a specified period of time, they become overwhelmed and this could lead to academic stress. Buttressing this point further, Fasoro, Oluwadare, Ojo and Oni (2019) pointed out that academic stress is inevitable when a student's resources are insufficient to cope with situational demands and academic pressures. It is therefore imperative to note that academic stress is caused by a number of in and out of school factors.

Academic workload, financial problems, competition in class, meeting assignment deadlines, examination anxiety, parental expectations and time management issues could be responsible for academic stress among Basic Science students. Akinci (2021) observed that while challenges in school environments are major sources of academic stress, academic stress at a certain level can be a huge source of motivation for prompt delivery of assignments, examination preparation as well as the handling of other academic tasks. It is equally pertinent to point out that obtaining bad grades, carrying over courses, coping with shortened length of terms, expulsion from school, switching schools, having problems with teachers and peers are vital causes of stress. Secondary school students go through overloaded activities which involve curricular and extracurricular activities that take a toll on their physical as well as emotional state. These activities are capable of destabilizing and disorganizing them to the point that they are unable to cope with their academic workload. According to transactional theory of stress and coping by Lazarus and Folkman (1984), academic stress is a key stressor in the transactional model, influencing anxiety.

Academic stress, self-concept and students' test anxiety have been subjects of extensive researches. For instance, Vahora (2025) found that self-concept and anxiety tests indicated significance. Similarly, Kayode and Lukman (2021) found that self-concept negatively

predicted undergraduate students' test anxiety. In contrast, Yui (2019) found that self-concept positively and significantly predicted test anxiety. The afore-mentioned contradiction could be traced to disparities in sample characteristics. Regarding academic stress and test anxiety, Zheng, Zhang and Ran (2023) found a significant positive correlation between academic stress and test anxiety. Similarly, Erutujiro (2021) found that academic stress had positive and significant influence on online testing anxiety. In contrast, Kaur and Kaur (2021) found a negative correlation existed between academic stress and test anxiety. While both self-concept and academic stress have been linked to test anxiety in other subjects, there is limited empirical evidence on how they individually and jointly predict test anxiety among Basic Science students in Anambra State. This is the focus of the study.

Statement of the Problem

Basic Science is a compulsory subject that lays a foundation for senior science subjects. Given this status, it is expected that students are less test-anxious to enhance their academic achievement in the subject. Yet, many upper basic education students report high levels of fear and nervousness during examinations. Despite curriculum reforms aimed at improving science literacy as the Basic Education level, test anxiety remains a barrier to students' academic achievement.

There is an urgent need to identify the causative factors of test anxiety among secondary school students in Basic Science. Instructively, many researchers have looked at test anxiety in Anambra State. However, from the available literature to the researcher, none of the researchers has looked at the joint contributions of self-concept and academic stress to test anxiety in Basic Science. It is against this backdrop that the researcher seeks to examine self-concept and academic stress as predictors of basic education students' test anxiety in Basic Science in Anambra State

Purpose of the Study

The purpose of the study was to ascertain if self-concept and academic stress are predictors of Basic Education students' test anxiety in Basic Science in Anambra State. Specifically, the study sought to ascertain if;

1. Students' test anxiety scores in Basic Science are predicted by their self-concept scores in Anambra State.
2. Students' test anxiety scores in Basic Science are predicted by their academic stress scores in Anambra State.

3. Students' test anxiety scores in Basic Science are co-predicted by their self-concept and academic stress scores in Anambra State.

Research Questions

The following research questions guided the study;

1. What is the prediction of students' test anxiety scores in Basic Science by their scores in self-concept scores in Anambra State?
2. What is the prediction of students' test anxiety scores in Basic Science by their academic stress scores in Anambra State?
3. What is the prediction of students' test anxiety scores in Basic Science by their self-concept and academic stress scores in Anambra State?

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance

1. Students' test anxiety scores in Basic Science are not significantly predicted by their scores in self-concept scores in Anambra State.
2. Students' test anxiety scores in Basic Science are not significantly predicted by their academic stress scores in Anambra State.
3. Students' test anxiety scores in Basic Science are not significantly predicted by their self-concept and academic stress scores in Anambra State.

Methods

Predictive correlation research design was utilized for the study. The population of the study consisted of 14, 471 Upper Basic three (UB 3) students in the 274 public secondary schools in Anambra State for the 2025/26 academic session. The sample size for the study was made up of 800 Upper Basic Three (UB 3) students for the 2025/2026 academic session obtained through simple random sampling and proportionate stratified sampling techniques. Simple random sampling technique was employed to obtain three education zones out of the six education zones in Anambra State. Thereafter, proportionate stratified sampling technique was employed to obtain 10% of the public schools and the Upper Basic Three (UB 3) students in the three sampled education zones to give rise to 17 schools and the sample size for the study. The choice of 10% sample size is in accordance with the recommendation of Nworgu (2015) that 10% to 80% of any given population is deemed adequate for a research work. Data were collected with the use of face-validated Self-Concept Questionnaire (SCQ), Academic Stress Questionnaire (ASQ) and Basic Science Test Anxiety Scale (BSTAS). SCQ was adopted from Academic Self-Concept Scale (ASCS) by Reynolds, Ramirez, Magrina and

Allen (1980). SCQ elicited information on students' self-concept. SCQ was constructed as a 30-item scale in a way that the respondents responded in the mode of four-point rating scale of: Strongly Agree (A), Agree (A), Disagree (D) and Strongly Disagree (SD) with numerical indices of 1, 2, 3 and 4. ASQ was adopted from Academic Expectation Stress Inventory (AESI) of Ang and Huan (2006a). AESI is a 15-item scale with a five-point rating scale of Never True (NT), Rarely True (RT), Sometimes True (ST), Often True (OT) and Almost Always True (AAT) with numerical indices of 1, 2, 3, 4, and 5 respectively. BSTAS was adapted from Spielberger (1980) Test Anxiety Inventory. BSTAS sought to obtain information on students' test anxiety. It contains 20 items, each with five-response options of Almost Never = 1, Rarely = 2, Sometimes = 3, Often = 4 and Almost Always = 5. It contains three sub-scales of worry, emotionality and total with eight, eight and four items respectively. The reliability of SCQ, ASQ and BSTAS was ascertained with the use of Cronbach alpha method. The internal consistencies of the items in SCQ, ASQ and BSTAS gave reliability coefficient values of 0.79, 0.77 and 0.73 respectively. The adequacy of this value was confirmed by the recommendation of Shrestha (2021) that the adequate threshold value for Cronbach alpha should be >0.70 . The researcher administered copies of the SCQ, ASQ and BSTAS to the participants alongside with five research assistants. The administration and subsequent retrieval of the copies of the SCQ, ASQ and BSTAS spanned three weeks. Analysis of data from research questions 1 and 2 and their corresponding hypotheses was done using simple linear regression while that of research question three and hypothesis three is multiple regression. All the hypotheses were tested at 5% level of significance with the decision rule that the null hypothesis was rejected if p-value was less than the alpha level of 0.05; otherwise the null hypothesis was not rejected.

Results

Research Question 1: What is the prediction of students' test anxiety scores in Basic Science by their scores in self-concept scores in Anambra State

Table 1: Prediction of Students' Test Anxiety Scores in Basic Science by their Scores in Self-Concept Scores

Predictor Variable	B	SE	β	T
Constant	44.491	1.566		28.410
Self-Concept	-5.722	0.630	-0.306	-9.084

The regression coefficients presented in Table 1 show that the unstandardized regression coefficient (B) of -5.722 shows that for every unit increase in self-concept, the students' test anxiety scores decreases by 5.722. The standardized regression coefficients (β) for self-concept scores is -0.306. Using the standardized beta (β), self-concept has a moderately negative prediction of test anxiety in Basic Science ($R = -.306$, $R^2 = .094$, $Adj. R^2 = .093$). Self-concept accounted for 9.4% of the variance in students' test anxiety scores.

Research Question 2: What is the prediction of students' test anxiety scores in Basic Science by their academic stress scores in Anambra State

Table 2: Regression Model for Prediction of Students' Test Anxiety Scores in Basic Science by their Scores in Self-Concept Scores

Predictor Variable	B	SE	β	T	Sig.	F
Constant	44.491	1.566		28.410	.000	
Self-Concept	-5.722	0.630	-0.306	-9.084	.000	82.523

Model statistic: $R^2 = 0.094$, $Adj. R^2 = 0.093$, $F(2, 798) = 82.523$

Note: $n = 800$. Dependent Variable: Test Anxiety. $*p < .05$.

Results in Table 2 show that the regression model is statistically significant, $F(1, 798) = 82.523$, $p < .001$. The standardised beta coefficient ($\beta = -.306$, $t = -9.084$, $p < .001$) confirms that self-concept negatively and significantly predicted test anxiety. Since the p-value is less than the 0.05 level of significance, the null hypothesis is rejected.

Research Question 3: What is the prediction of students' test anxiety scores in Basic Science by their self-concept and academic stress scores in Anambra State

Table 3: Prediction of Students' Test Anxiety Scores in Basic Science by their Scores in Academic Stress Scores

Predictor Variable	B	SE	B	T
Constant	14.212	2.338		6.080
Academic Stress	4.844	0.356	0.434	13.601

The regression coefficients presented in Table 3 show that the unstandardized regression coefficient (B) of 4.844 shows that for every unit increase in academic stress, students' test anxiety increases by 4.844. The standardized regression coefficients (β) for academic stress scores is 0.434. Using the standardized beta (β), academic stress has a moderately positive prediction of test anxiety ($R = .434$, $R^2 = .188$, $\text{Adj. } R^2 = .187$). Academic stress accounted for 18.8% of the variance in students' test anxiety which is the highest individual contribution in this block.

H0₁: Students' test anxiety scores in Basic Science are not significantly predicted by their scores in self-concept scores in Anambra State.

Table 4: Regression Model for the Prediction of Students' Test Anxiety Scores in Basic Science by their Scores in Academic Stress Scores

Predictor Variable	B	SE	B	T	Sig.	F
Constant	14.212	2.338		6.080	.000	
Academic Stress	4.844	0.356	0.434	13.601	.000	184.991

Model statistic: $R^2 = 0.434$, $\text{Adj. } R^2 = 0.188$, $F(2, 798) = 184.991$

Note: $n = 800$. Dependent Variable: Test Anxiety. $*p < .05$.

The results in Table 4 show that regression model is statistically significant, $F(1, 798) = 184.991$, $p < .001$. The standardised beta ($\beta = .434$, $t = 13.601$, $p < .001$) confirms academic stress as the strongest individual positive and significant predictor of test anxiety among all three predictors examined. The p-value is less than 0.05, so the null hypothesis is rejected.

H0₂: Students' test anxiety scores in Basic Science are not significantly predicted by their academic stress scores in Anambra State.

Table 5: Prediction of Students' Test Anxiety Scores in Basic Science by their Self-Concept and Academic Stress Scores

Predictor Variable	B	SE	B	T	R	R ²	Adj.R ²
Self-Concept	-5.719	0.561	-0.306	-10.193	0.531	0.282	0.280
Academic Stress	4.843	0.335	0.434	14.447			

Note. $n = 800$. Dependent Variable: Test Anxiety. $*p < .05$.

Results in Table 5 show that the value of R^2 adjusted is 0.282. The R^2 adjusted indicates that self-concept and academic stress contributed 28.2% of the variance in test anxiety ($R = .531$, $R^2 = .282$, $Adj. R^2 = .280$), a notable improvement over either predictor individually.

H0₃: Students' test anxiety scores in Basic Science are not significantly predicted by their self-concept and academic stress scores in Anambra State.

Table 6: Regression Model of the Prediction of Students' Test Anxiety Scores in Basic Science by their Self-Concept and Academic Stress Scores

Predictor Variable	B	SE	B	T	R	R ²	Adj.R ²	F	Sig.
Self-Concept	-5.719	0.561	-0.306	-10.193	0.531	0.282	0.280	156.368	.000
Academic Stress	4.843	0.335	0.434	14.447					

Note. $n = 800$. Dependent Variable: Test Anxiety. $*p < .05$.

Results in Table 6 show that the regression model is significant, $F(2, 797) = 156.368$, $p < .001$. Within the joint model, self-concept ($\beta = -.306$, $t = -10.193$, $p < .001$) retained its negative prediction of test anxiety while academic stress ($\beta = .434$, $t = 14.447$, $p < .001$) retained its positive prediction independently and significantly.

Discussion

The finding of the study showed that self-concept negatively and significantly predicted secondary school students' test anxiety in Basic Science. This implies that students with stronger self-concept tend to experience lower levels of test anxiety in Basic Science. Thus, a student that has self-concept in Basic Science testing situation is bound to be less test anxious in such a manner that enhances their concentration in the test. In other words, high self-concept predispose Basic Science students' to low test anxiety in a considerable manner. Collaborating this, Vahora (2025) found that self-concept and anxiety tests indicated significance at the 0.01 level. Similarly, Kayode and Lukman (2021) found that self-concept negatively predicted undergraduate students' test anxiety. This shows that across academic levels, low self-concept brings about high test anxiety. The finding of the present study is however contradicted by that of Yui (2019) who found that self-concept positively and significantly predicted test anxiety. The afore-mentioned contradiction could be traced to disparities in sample characteristics.

The finding of the study further showed that academic stress positively and significantly predicted secondary school students' test anxiety in Basic Science. This is suggestive of the fact that students with high academic stress are bound to exude high test anxiety. An academically stressed student is bound to be test anxious in Basic Science. This is rather unsurprising given that academic stress is a precursor to test anxiety. Thus, the more stressed a student is, the higher the tendency of becoming test anxious in Basic Science. In accordance with the finding of the present study, Zheng, Zhang and Ran (2023) found a significant positive correlation between academic stress and test anxiety. Similarly, Erutujiro (2021) found that academic stress had positive and significant influence on online testing anxiety. This goes to show that it has an immense positive contribution to test anxiety. In contrast to the finding of the present study, Kaur and Kaur (2021) found a negative correlation existed between academic stress and test anxiety. The foregoing contradiction could be linked to the possible variations in sample characteristics.

In addition, the finding of the study showed that self-concept and academic stress explained 28.2% of the variance in secondary school students' test anxiety in Basic Science. The joint contribution of self-concept and academic stress significantly predicted students' test anxiety in Basic Science. These suggest that much as self-concept and academic stress considerably contribute to students' test anxiety in Basic Science, other factors might further play a role. This is to the extent that a positive self-concept can reduce test anxiety as students with high self-concept tend to feel more confident. In agreement with social cognitive theory (Bandura, 1986), posited that positive self-concept reduces anxiety. More so, high academic stress levels can increase test anxiety as students feel overwhelmed. In consonance with this, Transactional Theory of Stress and Coping by Lazarus and Folkman(1984) posited that academic stress is a key stressor in the transactional model, influencing anxiety.

Conclusion

Based on the findings of the study, it was concluded that while self-concept negatively predicted secondary school students' test anxiety, academic stress positively predicted secondary school students' test anxiety in Basic Science. More so, self-concept and academic stress jointly and considerably contribute to secondary school students' test anxiety in Basic Science.

Recommendations

In line with the findings of the study, the following recommendations were made:

1. Basic science teachers should evolve pedagogical strategies to build their students' self-concept. This is with a view to reducing their students' test anxiety in Basic Science.
2. Basic science teachers should address teaching methods so as to enhance their students' self-concept and by extension, their academic achievement in Basic Science.
3. Ministry of Education, Basic Education Commission and professional bodies such as STAN should organize seminars and workshops for Basic Science teachers on the evolution of the best teaching strategy to boost students' self-concept and reduce academic stress. That way, students' test anxiety in Basic Science will be reduced.

References

- Abduljabbar, S. (2023). *The relationships between flow, mathematics self-efficacy, and mathematics anxiety among international undergraduate students in the United States*. Dissertations. 1786. <https://digitalcommons.andrews.edu/dissertations/1786>.
- Ackerman, C. E. (2021). What is self-concept theory? Retrieved from positive psychology.com on 23/12/21.
- Akinci, T. (2021). Determination of predictive relationships between problematic smartphone use, self-regulation, academic procrastination and academic stress through modelling. *International Journal of Progressive Education*, 17(1), 35-53. DOI: <https://DOI.org/10.29329/ijpe.2020.329.3>. 14 September 2021.
- Ang, R. P. & Huan, V. S. (2006a). Academic expectation stress inventory: Development, factor analysis, reliability and validity. *Educational and Psychological Measurement*, 66(1), 522-539.
- Bandura, A. (1986). Social cognitive theory. In Ramachaudran, V. S. (ed.), *Encyclopaedia of human behavior*, p. 71-81. New York: Academic Press.
- Bandura, A. (1997). *Self-Efficacy: The exercise of control*. W.H. Freeman/Times Books/Henry Holt and Co.
- Eremie, M. & Ikpa, A. I. (2020). Cognitive test anxiety and examination malpractice among senior secondary school students in River State. *International Journal of Scholarly and Educational Research in Africa*, 12(6), 48-59.
- Erutujiro, G. (2021). Influence of academic control and academic stress on online test anxiety: A structural equation modelling study. *Integrity Journal of Education and Training*, 5(3), 54-60.
- Fasoro, A. A., Oluwadare, T., Ojo, T. F. and Oni, I. O. (2019). Perceived stress and stressors among first-year undergraduate students at a private medical school in Nigeria. *Journal of Taibah University Medical Science*, 14(5), 425-430. <https://www.researchgate.net/publication/336119092>. 13 September, 2021.
- Garnezy, N. (1978). Children in poverty: Resiliency despite risk. *Psychiatry*, 56(1), 127-136.
- Ghaffer, S. & Buksh, Q. (2021). The role of self-concept in academic achievement: A review of literature. *Journal of Education and Educational Development*, 8(1), 185-205.
- Hassan, S. S. M. & Surat, S. B. (2024). Exploring influential factors shaping students' academic self-concept: A systematic literature review. *International Journal of Academic Research in Business and Social Science*, 14(8), 745-766.
- Kaur, M. & Kaur, T. (2021). Correlational analysis of academic stress with test anxiety and guided imagery. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 8(2), 59-74.

- Kayode, O. O. and Lukman, S. A. (2021). *Self-concept and emotional intelligence as correlates of test anxiety among undergraduate students in Federal University of Gusau, Nigeria*. <https://doi.org/10.5281/zenodo.7266367>.
- Lazarus, R. S. & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Nordqvist, C. (2017). *Why stress happens and how to manage it*. <https://www.medicalnewstoday.com>.
- Nwankwo, G. U. & Okoli, J. N. (2024). Test anxiety as a predictor of upper basic education students' academic achievement in Basic Science in Anambra State. *International Journal of Trend in Scientific Research and Development*, 8(2), 304-311.
- Nworgu, B.G. (2015). *Educational research: Basic issues and methodology*. Nsukka: University Trust Publishers.
- Reynolds, W. M., Ramirez, M. P., Magrina, A. & Allen, J. E. (1980). Initial development and validation of the academic self-concept scale. *Educational and Psychological Measurement*, 40(1), 1013-1016.
- Shrestha, N. (2021). Factor analysis as a tool for survey analysis. *American Journal of Applied Mathematics and Statistics*, 9(1), 4-11.
- Spielberger, T. (1980). *Test anxiety inventory*. Palo Alto, CA: Consulting Psychologist Press Inc.
- Vahora, R. N. (2025) focused on examining the self-concept and examination anxiety of Class 12 students from Gujarati-medium schools in Petlad taluka. *International Journal for Multi-Disciplinary Research*, 7(1), 1-6.
- Yui, L. M. (2019). *Relationship between self-concept, procrastination, test anxiety, self-esteem and gender among Malaysian Medical undergraduates*. Doctoral Thesis, Asian University.
- Zheng, G., Zhang, Q. & Ran, G. (2023). The association between academic stress and test anxiety in college students: The mediating role of regulatory emotional self-efficacy and the moderating role of parental expectations. *Front. Psychology*, 14(1), 1008679. doi: 10.3389/fpsyg.2023.1008679.