

Self-Concept and Academic Performance of Senior Secondary School Students in North-Central, Nigeria

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Abstract

This study investigated on influence of self-concept on academic performance of senior secondary school students in North-Central Nigeria. Four research questions and two hypotheses were formulated to guide the study. Descriptive-correlational research survey was employed. The population consisted of 785,795 students. The study sampled 396 students. The instruments used consist of both survey and test performance which were constructed by the researchers and are tested using test retest method, a reliability coefficient of Alpha level of 0.86, was found for self-concept. The data was analyzed using Pearson Product Moment Correlation statistics (r) and t -test. The result shows that there is significant relationship between self-concept and academic performance of public senior secondary school students in North-Central, Nigeria; and there is significant difference between male and female students self-concept of senior secondary schools in North-Central, Nigeria. Based on the finding the study, recommended that government at all levels should recruit more competent teachers to improving self-concept of students which will impact positively on students academic performance.

Keywords: Academic, Self-concept, gender, Performance, secondary school,

Introduction

Secondary school in Nigeria, is an important level of education that promotes values and opportunities to cooperate, collaborate, and socialize with peers of different backgrounds, identities, and experiences, in preparation for work and life as an adult. As a formal organization, the school has a bureaucratic administrative structure with established rules and regulations, aimed at providing the opportunities needed for the education and development of the learners under the leadership of the principal. Harter (2019) described education as a vital tool in the development of the learners, through the transmission of worthwhile values, skills, knowledge and planned activities that can develop the learners' potentials for the benefit of society. Education, thus, provides for the development of the citizens, and is achieved through the implementation of the necessary school curricula and education policy of the state. Goals set within a school environment by students could influence students' performance. Gidado *et al* (2025) highlighted that having strong goal orientation contribute to higher academic achievement in students.

Self-concept is also seen as the totality of the individual's thoughts and feelings (Ibrahim & Okoye, 2018). It refers to an overall evaluation of a person's life domains which has influence on individual's perception of himself or herself, which varies from situation to situation and goes through many changes with age. Self-concept gives an opportunity for one to view himself in a unique way which probably differs from how others may perceive him. Knowing the self also helps us to build our image, ability and uniqueness. Alao and Oni (2022) describes self-concept as set of attitudes, beliefs, and perception held by students about their academic skills and performance. It refers to how a person feels about himself or herself within a school or academic setting, or in relation to a student's academic progress. Furthermore, it is hierarchically organized, and multifaceted in various dimensions or component parts such as Mathematics self-concept, verbal self-concept, and school self-concept (Marsh & Craven 2017).

Academic performance is the quality and quantity of knowledge, skills, techniques and positive attitudes, behaviours and idea that students achieve or acquire. This achievement is weighed up by the marks or grade that students make in a form or education cycle. Academic performance has a great impact on a student's motivation, confidence and determination in education. It is the measurement of students' achievement across various academic subjects (Ogunleye & Musa, 2021), Teachers and education officials typically measure using classroom performance, graduation rates and result from standardized tests. He also seen academic performance of students is a key feature in education. It is considered to be the centre around which the education system revolves. Academic performance is believed to possess an amorphous nature, since it broadly incorporates various factors ranging from attaining a professional degree to the development of students in the moral sense.

Researchers in recent times have widely discussed the relationship between self-concept and academic performance of students. Valentine *et al.*, (2024) observed that students with higher self-concept performed better in Physics in Uyo, Akwa Ibom State. Umar and Aliyu (2023) found that there is a significant relationship between self-concept and academic performance among SS1 students in Kebbi State. Smith and Jones (2018) revealed that there is a positive significant correlation between self-concept and academic performance of senior secondary school students in Delta State. Gidado *et al.*, (2025) found that there is significant relationship between self-esteem and academic achievement of students in senior secondary schools in North-Central, Nigeria. Similarly, Abubakar (2019) identified that negative self-concept leads to abnormal behaviour like distress, lack of confidence, mal-adjustment and neurotic problem. Further indicates that a healthy self-concept helps in directing behaviour towards wide integration, completeness, autonomy, self-actualization and self-perfection. Okatahi and Adeyanju (2019) who revealed that there is a significant relationship among self-concept, socio-economic status and academic performance of students. They further buttress that individuals who depict positive value of themselves viz feeling of adequacy and self-worth are likely to achieve better academically than those who feel negative about themselves.

Aryana (2020) who revealed that there was no significant relationship between self-concept and students' academic performance, but when anxiety and students' academic performance. Eccles and Wigfield (2022) revealed that there is significant relationship between self-concept and academic achievement of students in senior secondary schools in Zaria Educational Zone. Nwadinigwe and Azuka-Obieke (2022) who found that female students exhibit high self-concept than male students during test/examination. This may be because they lack the necessary skills and lack control over their actions, or lacking of self-confidence. The results also show that female students perform less than their male counterpart. Onu, *et al.*, (2018) who discovered that female students who had high anxiety levels performed worse than male students who had lower self-concept. They saw less adaptive task values and a decrease in cognitive learning techniques among students who had high experienced self-concept.

Abdulwahid (2018) revealed that females displayed higher self-concept than males, the performance differences were minimal when learning environments were supportive and inclusive. Overall, the present results suggest that gender does not inherently determine the influence of self-concept on academic performance. Okeke and Sulaiman (2022) revealed that poor low-level performance of schools in certificate examinations. Further states that adolescents experience other problems, which affect their studies. These include having to repeat classes and the lack of adequate knowledge in particular subjects, especially English Language, Mathematics, the Sciences, Vocational and Technical subjects. Adeyegbe (2022) found that there is a decline in students' performance in West African Senior School Certificate Examinations in other States. The poor academic performance attributed to the inadequacy of instructional resources. In view of numerous researches pointed out and their conclusion, there is need to investigate on the influence of self-concept on academic performance in senior secondary schools will continue to generate interest among researchers and educationists especially in North-Central, Nigeria.

Statement of the Problem

Some people perceived that the declined in students, academic performance in public Senior Secondary Schools in North-central Nigeria is attributed to student's self-concept. Some student's thinks that they are not academically sound and so therefore, motivation for them to be committed to their studies was declined, thereby hampering their academic performance in internal and external examinations.

The researchers observed that reports from teachers and school administrators indicate that many students display low academic confidence, poor self-image, and limited motivation, resulting in underachievement, examination failure, and early school drop-out. Although self-concept is globally recognised as a critical psychological factor influencing academic success, it remains largely overlooked in many Nigerian schools especially in North-Central, Nigeria. Negative self-concept is often shaped by excessive anxious, poor academic work, persist longer

to difficult tasks, likely feel incompetent in academic skill with low confidence ability to learn and perform more tasks. Others deficiencies lead to weakness in skills of writing, construction of loose sentences, transliteration from the mother tongue, abuse of the basic rules of grammar, wrong spellings, wrong usage of tense and construction of verb, inability for students to use appropriately present and past tenses, wrong expressions. It is against back drop that the researcher investigates the influence of self- concept on academic performance in public senior secondary school students in North-Central, Nigeria.

Research Questions

The following research questions were raised to guide the study.

1. What is the self-concept of senior secondary school students in North-Central?
2. What is the academic performance among students of public senior secondary schools in North-Central, Nigeria?
3. What is the relationship between self-concept and academic performances of students in public senior secondary schools in North-Central, Nigeria?
4. What is the difference in male and female students self-concept and academic performances in public senior secondary schools in North-Central, Nigeria?

Hypotheses

The following null hypotheses were formulated for this study:

- H₀₁: There is no significant relationship between self-concept and academic performances of students in public senior secondary schools in North-Central, Nigeria.
- H₀₂: There is no significant difference between male and female students' self-concept and academic performance of public senior secondary school students in North-Central, Nigeria.

Methodology

Research Design

The study employed a correlational/survey design. Correlation /survey design aimed at identifying predictive relationship among two or more variables. *According to Creswell (2012), a correlational research design is a type of research design that predicts scores and explain the relationship among variables using correlational statistics test to describe and measure the degree of association (or relationship) between two or more variables or set scores. This research design is considered appropriate for this study because, this work is aimed at finding the correlation between parenting styles and academic achievement of senior secondary schools in North-Central, Nigeria.*

Population of the Study

The population of this study is the entire SS II students in public senior Secondary Schools in North-Central Nigeria. There are 685,795. SS II students (Secondary Education

Board (SEB 2023). The states include Benue, F.C.T Kogi, Kwara, Nasarawa, Niger and Plateau, out of this members or students, four Hundred and Fifty-Six Thousand, Five Hundred and Ninety Five (456,595). Were male students while Two Hundred and Twenty Nine Thousand and Two Hundred (229,200) were female students.

Sample Size and Sampling Procedure

The sample size were 396 students of senior secondary school in North – central Nigeria, determined using Krejcie and Morgan (1970) the table of sample size for specific population. A multi – stage sampling techniques was adopted for this study. Multi stage sampling techniques were divide large population into stages to make the sampling process more practical. At the first stage, researcher used simple random techniques to select eight (8) public senior secondary schools each from seven (7) State in North – Central Nigeria, making a total of Fifty Six (56) schools. Simple random sampling techniques was used in order to give every state equal chance of being select for the study. The name of the schools were written on a strip or piece of paper, fold and put in a container, shuffled and then sample was picked. At the second stage, 396 students were drawn from the fifty six schools using purposive sampling technique. To attain the target of 396 students, seven (7) copies of the questionnaire distributed in each of the fifty-six senior secondary schools in North – Central.

Instrumentation

The research instrument for this study was self-structured questionnaire. The questionnaire was titled Self-Concept on Academic Performance Questionnaire (SAPQ). Responses to the items on the questionnaire were structured using four (4) point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The data collected was analyzed using descriptive and inferential statistics. Mean scores were used to analyzed all research questions, Pearson Product Moment Correlation Coefficient (PPMCC) was used to analyzed hypothesis one while t-test was used to analyzed hypotheses two and three.

Validity and Reliability of the Instrument

To ascertain the validity of the instrument the questionnaire was presented to experts in educational measurement and evaluation, and language expert for scrutiny to ensure that the instrument measure what it is supposed to measure. The comments and suggestions made were incorporated into the instrument after which a final copy of the questionnaire was produced. The name of the validity was content and construct validity.

The reliability of the instruments was determined by conducting a pilot study with 50 respondents in two schools but outside the main study area. A test-retest method was employed to determine the reliability coefficient. Test-retest method of reliability is a statistical measurement administering the same test twice over a period of time to a group of individuals.

The first test was administered to the students, two weeks later the same test was administered to the same students. Students' responses were collated after which data collected was subjected to Pearson Product Moment Correlation Coefficient (PPMCC) which yielded reliability index of 0.86. The method used in computing the reliability coefficient was properly explained.

Method of Data Analysis

In order to facilitate the organization, analysis and interpretation of data, the data collected was analyze using descriptive and inferential statistics. Percentages was used to analyze the bio-data information of the respondents while mean scores was used to analyze the research questions. Pearson Product Moment Correlation Coefficient (PPMCC) was used to analyze hypothesis one and t-test was used to analyze hypotheses two and three.

Results

Research Question One: What is the self-concept of public senior secondary school students in North-Central, Nigeria?

Table 1: Self-concept of students of public senior secondary school

S/No.	Items	Mean	SD	Decision
1	Gets angry easily	2.58	1.04	Agree
2	I like to be alone	2.79	0.77	Agree
3	I prefer to be active all times	2.61	0.79	Agree
4	I like to tell other what to do	2.34	0.90	Disagree
5	I am easy going person	2.59	1.03	Agree
6	I make friends easily	2.00	0.94	Disagree
7	I do my homework well	2.83	1.12	Agree
8	I like myself even when other don't	2.27	0.93	Disagree
9	I feel that my parents love me	2.65	1.04	Agree
10	I act before I think	2.68	1.06	Agree
11	I hate crowds and public outings	2.73	1.65	Agree
12	I like to be alone	2.51	1.04	Agree
13	I like to tell other what to do	2.76	1.16	Agree
14	I like attending parties	2.95	1.61	Agree
15	I love to think carefully before I act	2.32	0.10	Agree
Sectional Mean/Std. Mean		2.57	1.01	Agree

As shown in Table 1, analysis of self-concept of public senior secondary school students in North-Central, Nigeria was presented. The overall sectional mean of 2.57, indicates that students exhibit self-construct through previous knowledge and experiences in learning environment. A total of twelve (12) items revealed agreement while three (3) items indicated

disagreement. Therefore, the table show that students widely exhibit different ideas of self-construct during classroom learning.

Research Question Two: What is the academic performance of senior secondary school students in Federal Capital Territory Abuja?

Table 2: Academic performance of senior secondary school students

	Minimum	Maximum	Average Score
Mathematics	23.00	54.00	60.32
English Language	5.00	65.00	59.54
Biology	48.00	90.00	60.08
Economics	17.00	86.00	52.43
Academic Performance	38.50	81.00	60.03

As shown in Table 2, academic performance of public senior secondary school students in North-Central, Nigeria was carried out. The table show a minimum score 23.00 for mathematics while the maximum score was 54.00 with an average score of 60.32. As for English Language, the table revealed a minimum score of 5.00, with a maximum of 65.00 and an average score of 59.54. As for Biology, the table revealed a minimum score of 48.00, with a maximum score of 90.00 and an average score of 60.08. As for Economics, the table revealed a minimum of 17.00, with a maximum of 86.00 and an average score of 52.43. The overall academic performance of public senior secondary school students in North-Central, Nigeria is show a minimum of 38.50, with a maximum of 81.00 and average of 60.03. Therefore, the average score of 60.03 is above 50 midpoint which indicates that overall academic performance of students is above average.

Testing of Hypotheses

The null hypotheses were tested using Pearson Product Moment Correlation Coefficient (PPCC) and t-test analysis conducted at 0.05 level of significance.

H₀₁: There is no significant relationship between self-concept and academic performance of students in senior secondary schools in North-Central, Nigeria.

Table 3: Correlational Test between Self-Concept and Academic Performance

Variables	N	$\bar{X}$	SD	r-cal	p-value	Decision
Self-Concept and Academic Performance	396	3.05	.86	.864	.000	Rejected

Correlation is significant at 0.05 level of Significance (2-tailed) PPMC

As shown in Table 3, correlational analysis between self-concept and academic performance of public senior secondary school students was presented. The table revealed a

mean of 3.05, standard deviation of 0.86 with an r value of .864. The table further revealed p -value of 0.000, with $p < 0.05$. Therefore, there is significant relationship between self-concept and academic performance of public senior secondary school students in North-Central, Nigeria.

H₀₂: There is no significant difference between male and female students self-concept and academic performance of students in senior secondary schools in North-Central, Nigeria.

Table 4: t-test Analysis on Difference between Male and Female Students Self-Concept

Gender	Number	$\bar{X}$	SD	t-value	df	Sig(2-tailed)	Decision
Male	215	2.73	0.33	0.224	394	.000	Rejected
Female	181	2.59	0.08				

As shown in Table 4, t-test analysis on difference between male and female students self-concept was presented. The table revealed a mean score of 2.73 with standard deviation of 0.33 for male students, while a mean score of 2.59 with standard deviation of 0.08 was obtained for female students. The Table further indicates a calculated t-value of 0.224 at 382 degree of freedom with the t-value of 000 ($p < 0.05$). Therefore, the null hypothesis was rejected. This implies that there is significant difference between male and female students self-concept of senior secondary schools in North-Central, Nigeria.

Discussion of Findings

The finding revealed that senior secondary school students exhibited different individual thoughts and feelings such as telling others what to do, attending parties, doing homework timely amongst others. This is supported by Umar and Aliyu (2023) found that there is a significant relationship between self-concept and academic performance among SS1 students in Kebbi State. The finding is consistent with the finding of Smith and Jones (2018) revealed that there is a positive significant correlation between self-concept and academic performance of senior secondary school students in Delta State. The finding is in line with the finding of Gidado et al., (2025) found that there is significant relationship between self-esteem and academic achievement of students in senior secondary schools in North-Central, Nigeria. The finding contradicts the finding of Abubakar (2019) identified that negative self-concept leads to abnormal behaviour like distress, lack of confidence, mal-adjustment and neurotic problem. Further indicates that a healthy self-concept helps in directing behaviour towards wide integration, completeness, autonomy, self-actualization and self-perfection.

The finding showed that the academic performance of public senior secondary school students is above average. The finding is at variance with the finding of Okeke and Sulaiman (2022) revealed that poor low-level performance of schools in certificate examinations. Further states

that adolescents experience other problems, which affect their studies. These include having to repeat classes and the lack of adequate knowledge in particular subjects, especially English Language, Mathematics, the Sciences, Vocational and Technical subjects. The finding is in disagreement with the finding of Adeyegbe (2022) found that there is a decline in students' performance in West African Senior School Certificate Examinations in other States. The poor academic performance attributed to the inadequacy of instructional resources.

The finding is contrary with the finding of Williams (2019) reported that there is no significant difference in the academic performance of students. Academic performance of male and female students were above average. The finding is in agreement with the finding of Owusu et al. (2012) reported that moral abuse and bullying prevalence of junior secondary school students is alarmingly high, creating anxiety, fear, and depression of victims. Such psychological distress reduces concentration, weakens confidence, and results in poor academic performance. They further stressed that perpetrators may also suffer disciplinary actions, suspensions, or expulsions that hinder their academic progress.

The finding revealed that there is a significant relationship between self-concept and academic performance of public senior secondary school students. This finding is in line with the finding of Okatahi and Adeyanju (2019) who revealed that there is a significant relationship among self-concept, socio-economic status and academic performance of students. They further buttress that individuals who depict positive value of themselves viz feeling of adequacy and self-worth are likely to achieve better academically than those who feel negative about themselves. The finding is in agreement with the finding of Eccles and Wigfield (2018) revealed that there is significant relationship between self-concept and academic achievement of students in senior secondary schools in Zaria Educational Zone. The finding contradicts with the finding of Aryana (2020) who revealed that there was no significant relationship between self-concept and students' academic performance, but when anxiety and students' academic performance.

On the issue of gender basis, the study revealed that there was significant difference between male and female students self-concept among senior secondary school students in North-Central, Nigeria. The results show that female students perform less than their male counterpart. The finding is in agreement with Nwadinigwe and Azuka-Obieke (2022) who found that female students exhibit high self-concept than male students during test/examination. This may be because they lack the necessary skills and lack control over their actions, or lacking of self-confidence. The results also show that female students perform less than their male counterpart. The finding further echoed Onu et al., (2018) who discovered that female students who had high anxiety levels performed worse than male students who had lower self-concept. They saw less adaptive task values and a decrease in cognitive learning techniques among students who had high experienced self-concept. The findings contradicts earlier findings by Abdulwahid (2018) revealed that females displayed higher self-concept than males, the performance differences were minimal when learning

environments were supportive and inclusive. Overall, the present results suggest that gender does not inherently determine the influence of self-concept on academic performance.

Conclusion

The study provides an insight and understanding on the correlation between self-concept and academic performance of senior secondary school students in north-Central, Nigeria based on the objectives. The study highlights the senior secondary schools exhibit self-concept which could shape and impact on their academic performance during classroom learning.

Recommendations

Based on the findings the following recommendations were made from the findings of the research.

1. Government to implement cognitive behavioral therapy or Rational emotive behavior therapy to help students develop a positive self- concept in public senior secondary schools
2. Students should comply to all school rules which are geared towards fulfilling optimum academic performances.
3. Parents should motivate their children to maintain positive academic self-concept, encourage their positive attitude towards academic activities and compliance by paying attention to all their welfare issues such as a school fees, textbooks, feeding and being involved in their school activities.
4. Government at all levels should recruit more competent teachers to improving self-concept of students which will impact positively on students academic performance.

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