

Relationship Between Self-Concept And Academic Performance Of Senior Secondary School Students In Nasarawa Local Government Area Of Nasarawa State

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Abstract

Self-concept has consistently been identified as an important psychological construct associated with students' learning outcomes, yet empirical evidence from secondary schools in North Central Nigeria remains limited. This study examined the relationship between self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State, Nigeria. Specifically, the study investigated the academic, social, and emotional dimensions of self-concept in relation to students' academic performance. The study was anchored on Marsh's Reciprocal Effects Model. A descriptive survey research design was adopted. The study population comprised 4,050 senior secondary school students, from which a sample of 346 respondents was selected using a multistage sampling procedure involving proportionate stratified and simple random sampling techniques. A letter of introduction was obtained from the Head of Department (HOD), Department of Educational Foundations, Nasarawa State University, Keffi, and presented to the relevant educational authorities and participating schools to facilitate access to respondents. Data were collected using the Self-Concept Scale (SCS), while students' academic records served as the measure of academic performance. The instrument demonstrated satisfactory internal consistency (overall Cronbach's $\alpha = .872$; academic $\alpha = .834$; social $\alpha = .812$; emotional $\alpha = .847$). Descriptive statistics (mean and standard deviation) were used to answer the research questions, while Pearson Product-Moment Correlation and Multiple Linear Regression were employed to test the hypotheses at the 0.05 level of significance. The findings indicated that students reported high levels of academic, social, and emotional self-concept, while their academic performance was moderate. The hypothesis tests revealed statistically significant positive relationships between each self-concept dimension and students' academic performance ($p < .05$). Multiple regression analysis showed that the three self-concept dimensions jointly accounted for 28.4% of the variance in academic performance ($R^2 = .284$, $F(3, 342) = 45.21$, $p < .001$), with academic self-concept making the strongest unique contribution ($\beta = .38$, $p < .001$). The study concludes that a positive self-concept is closely associated with improved academic performance among senior secondary school students. It recommends that school administrators, teachers, counsellors, and parents implement interventions that strengthen students' academic confidence, social competence, and emotional resilience to promote better educational outcomes.

Keywords: self-concept, academic self-concept, social self-concept, emotional self-concept, academic performance, secondary school students, Nigeria.

Introduction

Academic performance remains one of the most widely used indicators of educational effectiveness and human capital development worldwide. It determines students' access to higher education, employment opportunities, and future socioeconomic mobility while serving as an important benchmark for evaluating the quality of educational systems (Organisation for Economic Co-operation and Development [OECD], 2023). Despite substantial investments in educational reforms, technological innovation, curriculum development, and teacher capacity building, disparities in students' academic achievement persist across developed and developing countries. Consequently, researchers have increasingly shifted attention from structural determinants of academic achievement to psychological factors that are associated with students' motivation, learning behaviours, resilience, and overall academic success.

Among these psychological determinants, self-concept has emerged as one of the strongest correlates of academic achievement. Self-concept refers to an individual's perceptions, evaluations, and beliefs about personal abilities and competencies, developed through interactions with the social and educational environment (Shavelson et al., 1976). Unlike self-esteem, which reflects a general sense of self-worth, self-concept is multidimensional and domain-specific, comprising academic, social, emotional, and physical dimensions (Marsh & Martin, 2011). Educational psychologists argue that students who possess positive perceptions of their academic capabilities are more likely to demonstrate persistence, intrinsic motivation, effective learning strategies, and resilience when confronted with academic challenges (Marsh et al., 2019). Conversely, students with poor self-concept frequently exhibit low confidence, reduced academic engagement, avoidance of challenging tasks, and diminished educational aspirations (Huang, 2021).

The relationship between self-concept and academic performance has received considerable empirical attention over the past three decades. Numerous longitudinal and meta-analytic studies have consistently demonstrated that academic self-concept is positively associated with subsequent academic achievement, while academic success, in turn, is associated with stronger self-concept, supporting the Reciprocal Effects Model proposed by Marsh and colleagues (Marsh & Martin, 2011; Möller et al., 2020). This reciprocal relationship suggests that students' beliefs about their capabilities are not merely consequences of academic performance but are also important correlates that shape future learning outcomes. Recent evidence further indicates that students with stronger academic self-concept are more likely to employ self-regulated learning strategies, maintain higher academic motivation, and achieve superior educational outcomes across diverse educational contexts (Guo et al., 2023).

Although academic self-concept has received substantial scholarly attention, contemporary research increasingly recognises that self-concept extends beyond perceptions of academic competence. Social self-concept, which reflects students' perceptions of their interpersonal competence and peer relationships, has been shown to be associated with classroom participation, school connectedness,

collaborative learning, and overall educational adjustment (Wentzel & Muenks, 2016). Positive peer interactions are associated with students' sense of belonging and psychological safety within the school environment, thereby facilitating greater academic engagement and persistence. Similarly, emotional self-concept, defined as students' perceptions of their ability to understand, regulate, and manage emotions effectively, has become an important focus in educational psychology due to its association with coping strategies, examination anxiety, resilience, and academic motivation (MacCann et al., 2020). Students with a stronger emotional self-concept generally demonstrate greater adaptability to academic stress and are more capable of maintaining academic performance under demanding educational conditions.

Despite growing international evidence supporting the relationship between multidimensional self-concept and academic achievement, findings remain inconsistent across different cultural and educational contexts. Most existing studies have been conducted in Europe, North America, Australia, and parts of Asia, where educational systems, learning environments, and sociocultural conditions differ substantially from those found in many African countries (Marsh et al., 2019; OECD, 2023). Educational outcomes are influenced not only by students' psychological characteristics but also by contextual variables such as socioeconomic conditions, cultural expectations, parental involvement, school climate, and teacher-student relationships. Consequently, findings from developed countries cannot be assumed to generalise directly to educational settings in sub-Saharan Africa.

Within Africa, studies examining the relationship between self-concept and academic performance have increased steadily but remain relatively limited in scope and geographical coverage. Existing evidence from countries such as Ghana, Kenya, South Africa, and Nigeria generally indicates that students with stronger academic self-concepts achieve higher than their counterparts with weaker self-beliefs (Amoah et al., 2022; Mwangi & Khamasi, 2021). However, many of these studies have focused primarily on academic self-concept while paying comparatively less attention to the social and emotional dimensions of self-concept that may also be associated with educational outcomes. Furthermore, many African studies employ relatively small samples or focus on specific schools, thereby limiting the generalizability of their findings.

In Nigeria, improving students' academic performance remains a major educational priority due to persistent concerns about performance in national examinations such as the West African Senior School Certificate Examination (WASSCE) and the National Examination Council (NECO) examinations. Although numerous studies have attributed poor academic performance to inadequate instructional facilities, overcrowded classrooms, teacher shortages, socioeconomic disadvantage, and limited parental involvement, comparatively little empirical attention has been devoted to students' psychological characteristics that may be associated with learning outcomes (Federal Ministry of Education, 2022). Consequently, interventions have largely focused on improving physical

infrastructure while psychological determinants of academic success have received relatively limited consideration.

The situation appears particularly relevant in Nasarawa State, where educational authorities continue to implement reforms to improve learning outcomes in public secondary schools. Despite these interventions, variations in students' academic performance remain evident across schools within Nasarawa Local Government Area. While structural and institutional explanations have been extensively discussed, relatively little empirical evidence exists on whether students' perceptions of their academic, social, and emotional competencies are associated with the observed differences in academic achievement. Understanding these psychological dimensions is important because educational interventions that overlook students' self-perceptions may fail to address important correlates of learning and achievement.

A review of the existing literature reveals four important research gaps. First, a contextual gap exists because relatively few empirical studies have examined multidimensional self-concept among senior secondary school students in Nasarawa State, despite the region's unique educational and sociocultural characteristics. Second, an empirical gap exists because previous Nigerian studies have predominantly emphasised academic self-concept while paying less attention to the combined relationship of academic, social, and emotional self-concepts with academic performance. Third, a methodological gap is evident, as many earlier investigations relied primarily on simple correlation analyses and did not comprehensively examine the joint contribution of the different dimensions of self-concept. Finally, a practical gap exists: limited empirical evidence is available to guide educational psychologists, school counsellors, teachers, and policymakers in designing psychological interventions to improve students' academic outcomes in Nigerian secondary schools.

Addressing these gaps is important because self-concept represents a modifiable psychological construct that can be strengthened through appropriate educational interventions, counselling programmes, positive teacher feedback, mentoring initiatives, and supportive classroom environments. A clearer understanding of how academic, social, and emotional self-concept are associated with students' academic performance may therefore provide evidence-based guidance for developing comprehensive educational strategies that complement existing efforts focused on instructional quality and educational infrastructure.

Against this background, the present study investigates the relationship between academic, social, and emotional self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State, Nigeria. By examining these multidimensional aspects of self-concept within a relatively under-researched educational context, the study contributes to the growing literature on educational psychology in developing countries. It provides empirical evidence that may inform school counselling practice, educational policy, and future research aimed at improving students' academic achievement.

Objectives of the Study

The study investigated the relationship between self-concept and academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State. Specific objectives are:

1. To examine the relationship between academic self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area, Nasarawa State.
2. To assess the relationship between social self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area, Nasarawa State.
3. To determine the relationship between emotional self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area, Nasarawa State.
4. To examine the joint relationship of academic, social, and emotional self-concept with academic performance of senior secondary school students in Nasarawa Local Government Area, Nasarawa State.

Research Questions

The following research questions guided the study:

1. What is the level of academic self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
2. What is the level of social self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
3. What is the level of emotional self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
4. What is the relationship between academic self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
5. What is the relationship between social self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
6. What is the relationship between emotional self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State?
7. What is the joint relationship of academic, social, and emotional self-concept with the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State?

1.3 Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

H₀₁: There is no significant relationship between academic self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

H₀₂: There is no significant relationship between social self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

H₀3: There is no significant relationship between emotional self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

H₀4: The three dimensions of self-concept (academic, social, and emotional) do not jointly predict the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

1.4 Significance of the Study

This research holds substantial importance for multiple reasons. It addresses a critical gap in existing literature by examining the relationship between self-concept and academic performance specifically within Nasarawa Local Government Area. While numerous global and African studies have established the significance of self-concept in learning outcomes, the unique sociocultural and economic factors present in Nasarawa LGA may create distinct patterns in how students' self-perception is associated with their academic achievement that remain unexplored in current research.

The study informs the development of more holistic educational interventions in Nigeria. Current improvement strategies predominantly emphasize infrastructure development and teacher training programs, largely neglecting the crucial psychological dimensions of learning. By providing empirical evidence on the relationship between self-concept and academic performance, this research offers a foundation for integrating self-concept enhancement strategies into existing academic improvement initiatives.

The findings will provide valuable evidence to support policy decisions in education. The empirical data generated can guide policymakers in designing targeted interventions such as school counselling services, mentorship programs, and teacher training modules focused on fostering positive academic self-concept among students. Such evidence-based approaches could significantly enhance student confidence and overall academic achievement in the region.

Furthermore, this study contributes meaningfully to the global discourse in educational psychology. By investigating self-concept in an understudied Nigerian context, the research enriches cross-cultural understanding of psychological factors in education. The findings will help test the applicability of established theories in diverse settings, potentially revealing important contextual variations in how self-concept operates across different educational systems.

Ultimately, this study serves as a vital bridge in current knowledge by systematically investigating how self-concept is associated with academic performance among senior secondary students in Nasarawa LGA. The resulting findings will provide immediate practical benefits to local educators and policymakers while simultaneously contributing to broader theoretical discussions about optimizing learning outcomes through combined psychological and institutional strategies.

Literature Review

Conceptual Framework

The conceptual review examines the various scholars and how they conceptualise or define the terms used in the work.

Academic Performance

Academic performance represents a multidimensional construct that encompasses the measurable outcomes of students' learning processes within formal educational settings. In contemporary educational research, this concept has evolved beyond simple grade-based metrics to incorporate a holistic understanding of student achievement that considers cognitive, behavioral, and affective dimensions (Schneider & Preckel, 2017). Recent conceptualizations emphasize that academic performance reflects not only knowledge acquisition but also the development of critical thinking skills, problem-solving abilities, and domain-specific competencies (Pellegrino & Hilton, 2012). The most comprehensive definitions acknowledge the complex interplay between individual capabilities, instructional quality, and institutional factors that collectively shape student outcomes (OECD, 2019). The cognitive dimension of academic performance remains foundational, referring to students' demonstrated mastery of subject-specific content and skills. This aspect is typically measured through standardized test scores, course grades, and competency-based assessments. Each of these measures provides distinct insights into student learning. Standardized tests offer normative comparisons but may overlook classroom-specific learning. Course grades reflect sustained performance but can be subjective. Competency assessments capture practical application but require careful implementation. Contemporary research increasingly emphasizes the behavioral engagement components of academic performance. These include class participation, assignment completion, and learning strategies. These behavioral indicators are particularly significant in formative assessment approaches, where the process of learning is as important as the final product (Andrade, 2019). Research demonstrates that these engagement metrics often predict long-term academic success better than one-time test scores (Credé & Kuncel, 2008).

The affective-motivational aspects of academic performance have gained substantial research attention in recent years. Key components include academic resilience, goal orientation, and self-regulated learning. These factors are particularly crucial in understanding why students with similar cognitive abilities may demonstrate markedly different academic outcomes (Dweck & Yeager, 2019). Recent neuroeducational research has further established the biological underpinnings of these relationships (Immordino-Yang et al., 2019).

Contextual factors significantly influence the conceptualization and measurement of academic performance. Important considerations include cultural validity, resource equity, and instructional quality. In developing contexts like Nigeria, these factors become particularly salient, as resource constraints and cultural variations may affect both performance outcomes and their measurement (Adegoke & Oyejemi, 2019). Recent studies emphasize the need for culturally responsive assessment frameworks that account for local educational realities (Madaus et al., 2020).

The most current integrative models conceptualize academic performance as a complex system comprising cognitive abilities, metacognitive competencies, motivational drivers, environmental supports, and opportunity structures. This systems perspective (Koedinger et al., 2012) recognizes that academic performance emerges from dynamic interactions between these components, varying across different educational contexts and developmental stages (NRC, 2018).

Self-Concept

Self-concept represents a fundamental psychological construct that plays a pivotal role in adolescent development and educational outcomes (Shavelson et al., 1976). This multidimensional phenomenon encompasses an individual's self-perceptions across various domains, serving as a cognitive filter through which students interpret academic experiences and formulate expectations about their capabilities (Marsh & Craven, 2006). The conceptual framework for this study examines three primary dimensions of self-concept that are particularly relevant to academic performance in secondary education contexts.

Models of Self-Concept

The study of self-concept has been significantly enriched by various theoretical models that provide insight into how individuals, particularly students, perceive themselves and how these perceptions are associated with academic outcomes. One of the foundational models is Shavelson's Multidimensional Hierarchical Model (1976), which conceptualizes self-concept as organized in a hierarchical structure. At the top lies a general self-concept, which branches into academic and non-academic dimensions. Academic self-concept further subdivides into subject-specific domains such as mathematics and language arts, while non-academic self-concept includes social, emotional, and physical aspects.

Building on this, Marsh introduced the Internal/External Frame of Reference Model (1986), which explores how students form academic self-concepts through two key comparison processes: internal comparisons across different subjects within themselves and external comparisons with peers. This model explains why students' self-concepts in subjects like math and verbal domains can be negatively correlated, even if their actual achievements in both areas are positively related.

Furthering this work, the Reciprocal Effects Model (Marsh & Craven, 2006) posits a two-way relationship between self-concept and academic achievement. It argues that not only does prior achievement influence self-concept, but a strong self-concept also boosts future academic performance. Numerous longitudinal studies support this reciprocal causation across cultures, reinforcing the idea that enhancing a student's self-concept can lead to lasting academic improvement.

The Big-Fish-Little-Pond Effect (BFLPE), proposed by Marsh (1987), adds a contextual dimension by showing that students of the same ability tend to have lower academic self-concepts in high-achieving environments and higher self-concepts in less competitive ones. This effect, observed globally, highlights the powerful role of the social and academic context in shaping self-beliefs.

Self-Discrepancy Theory by Higgins (1987) introduces a psychological perspective by identifying three self-domains: the actual self (who one is), the ideal self (who one wants to be), and the ought self (who one believes they should be). Discrepancies between these domains—especially between the actual and ideal selves—can cause emotional distress, which may negatively affect academic performance.

Möller and Marsh's Dimensional Comparison Theory (2013) offers a more detailed look at how students compare their abilities across domains. It identifies four comparison types: social (with others), temporal (with past self), dimensional (across different subjects), and criterion-based (against fixed standards). Together, these models show that self-concept is shaped not only by academic results but by how students interpret and compare these results across various dimensions.

Concept of Academic Self-Concept

Academic self-concept has been widely defined by scholars as the self-perception and evaluative judgment individuals hold about their own abilities within an academic setting. Shavelson, Hubner, and Stanton (1976) describe academic self-concept as an individual's perception of themselves in the academic domain, formed through experiences and interpretations of the learning environment, and shaped by feedback from significant others. Marsh and Shavelson (1985) further refine the definition by explaining that academic self-concept is multidimensional and subject-specific, meaning that a learner's self-perception in one subject area, such as mathematics, may differ from that in another subject, such as reading or writing. Byrne (1996) emphasizes that academic self-concept represents the self-perceptions students hold about their academic abilities, which in turn influence, and are influenced by, their academic performance. Marsh and Martin (2011) extend this perspective by asserting that academic self-concept is both a cause and a consequence of academic achievement, functioning through reciprocal feedback processes.

Concept of Social Self-Concept

Social self-concept has been defined by scholars as the perception individuals hold about their ability to interact effectively and establish relationships with others. Shavelson, Hubner, and Stanton (1976) describe it as a domain of self-concept concerned with one's perceived competence in social situations and relationships. Marsh, Relich, and Smith (1983) define it as an individual's self-perceived capacity to form friendships, participate in group activities, and gain social acceptance within peer networks. Fleming and Courtney (1984) further highlight that social self-concept encompasses self-perceptions regarding one's popularity, likeability, and ability to communicate, cooperate, and resolve conflicts in interpersonal settings. Byrne (1996) adds that social self-concept is shaped through repeated social interactions, feedback from others, and social comparison processes, making it dynamic and responsive to the quality of relationships and the social environment.

Concept of Emotional Self-Concept

Emotional self-concept is defined as an individual's perception of their ability to understand, express, and regulate their emotions effectively. Shavelson, Hubner, and Stanton (1976) refer to it as the aspect

of self-concept concerned with the awareness and evaluation of one's emotional states and responses. Marsh, Craven, and Debus (1999) describe it as self-perceptions regarding the ability to cope with emotional challenges, maintain emotional balance, and respond adaptively to stressful situations. Schneider, Ackerman, and Kanfer (1996) emphasize that emotional self-concept involves beliefs about one's emotional intelligence, including skills such as empathy, self-control, and emotional resilience. Byrne (1996) notes that emotional self-concept is developed through personal experiences, social interactions, and feedback about one's emotional expressions, and it plays a critical role in psychological wellbeing, interpersonal relationships, and coping strategies.

Empirical Review

Empirical studies across diverse educational contexts consistently demonstrate a strong and significant relationship between self-concept and academic performance. Globally, academic self-concept (ASC) is widely recognized as a robust correlate of student achievement. A meta-analysis synthesizing 68 studies reported an average correlation of $r = 0.43$ between ASC and academic grades, with stronger associations observed in mathematics ($r = 0.47$) compared to verbal domains ($r = 0.39$) (Marsh & Martin, 2011). Longitudinal research conducted in Australia and Germany further validates the Reciprocal Effects Model, showing that prior academic self-concept significantly predicts later academic achievement, with regression coefficients ranging from $\beta = 0.19$ to 0.34 —and that academic achievement, in turn, positively affects subsequent ASC (Marsh et al., 2005; Trautwein et al., 2006).

Academic Self-Concept

Empirical research consistently demonstrates that academic self-concept (ASC) is positively associated with objective academic achievement, with subject-specific self-concepts showing stronger correlations with corresponding subject achievement than global academic self-concept (Marsh & Martin, 2011; Marsh & Shavelson, 1985). Longitudinal evidence supports the reciprocal effects model, indicating that prior ASC predicts later achievement and prior achievement predicts later ASC, with correlation estimates typically in the small-to-moderate range (Marsh & Martin, 2011; Seaton, Parker, Marsh, Craven, & Yeung, 2014). Meta-analytic findings on the internal/external frame of reference (I/E) model reveal that students' achievements in different subjects differentially shape subject-specific ASCs through both internal comparisons (comparing strengths across subjects) and external comparisons (comparing oneself to peers) (Marsh, Kuyper, Morin, Parker, & Seaton, 2014). Moderators such as age, classroom composition, and feedback climate have been found to influence the strength and direction of ASC–achievement relationships (Marsh & Martin, 2011).

Social Self-Concept

Studies have shown that social self-concept—students' perceptions of their social competence, popularity, and peer acceptance—is closely related to indicators of peer functioning such as sociometric popularity, perceived peer support, and friendship quality (Frost, Masten, & Coatsworth, 1998; Marsh, Relich, & Smith, 1983). Empirical evidence indicates that higher social self-concept is associated with

greater peer acceptance and perceived social support, whereas low social self-concept is linked to peer victimization and social withdrawal (Hymel, Rubin, Rowden, & LeMare, 1990). Longitudinal findings suggest that peer rejection predicts declines in social self-concept, while positive peer experiences foster improvements (Boivin & Hymel, 1997; van den Berg & Cillessen, 2015). Reciprocal relationships have also been observed, where social self-concept predicts later peer functioning outcomes (Gest, Rulison, Davidson, & Welsh, 2008).

Emotional Self-Concept

Empirical research on emotional self-concept—often operationalized as emotional self-efficacy—shows that it is positively related to emotion regulation strategies, psychological well-being, and resilience (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003; Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012). Individuals with higher emotional self-concept report greater use of adaptive emotion regulation strategies such as cognitive reappraisal and lower levels of maladaptive responses like rumination (Gómez-Baya, Mendoza, Paino, & de Matos, 2017). Longitudinal findings indicate that emotional self-concept predicts lower risk of internalizing symptoms such as anxiety and depression over time (Caprara et al., 2008). Empirical evidence further shows that emotional self-concept mediates the relationship between social-emotional learning programs and mental health outcomes (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

Theoretical Review

The theoretical foundations of this study rest upon three established psychological frameworks that collectively explain the complex relationship between self-concept and academic achievement.

Self-Determination Theory (Deci & Ryan, 1985, 2000) establishes that students' self-concepts emerge from the satisfaction of three fundamental psychological needs. The need for competence drives students to develop academic self-concepts through ongoing mastery experiences and evaluative feedback in learning environments. The autonomy need explains how students form more stable and positive self-concepts when they perceive their educational engagement as self-directed rather than externally controlled. The relatedness need demonstrates how positive interactions with teachers and peers contribute to self-concept development by providing emotional support and behavioral modeling.

Expectancy-Value Theory (Eccles & Wigfield, 1983, 2020) elucidates the motivational pathways through which self-concepts influence academic performance. Students' self-concepts about their capabilities directly shape their expectations for success across different academic domains, with meta-analytic evidence showing consistent moderate-to-strong correlations. The theory's value components - including attainment value, intrinsic interest, utility perceptions, and cost assessments - collectively mediate how self-concepts translate into achievement-related choices and sustained effort.

Marsh's Reciprocal Effects Model (1990, 2006) provides the most comprehensive framework for understanding the bidirectional relationship between self-concept and academic achievement. The model demonstrates through longitudinal evidence that self-concept and achievement mutually

influence each other over time through self-enhancement and skill-development effects. Its domain specificity principle explains how students develop distinct self-concepts across different academic subjects, while the internal/external frame of reference mechanism clarifies the comparative processes underlying these domain-specific self-assessments.

These theoretical perspectives collectively establish an integrated framework for understanding self-concept's role in academic achievement. Self-Determination Theory explains the foundational needs supporting self-concept formation, Expectancy-Value Theory clarifies the motivational pathways, and the Reciprocal Effects Model demonstrates the dynamic, mutually reinforcing nature of the relationship. Together, they suggest that educational interventions should simultaneously address psychological need satisfaction, value enhancement, and mastery experiences to effectively improve both self-concepts and academic outcomes.

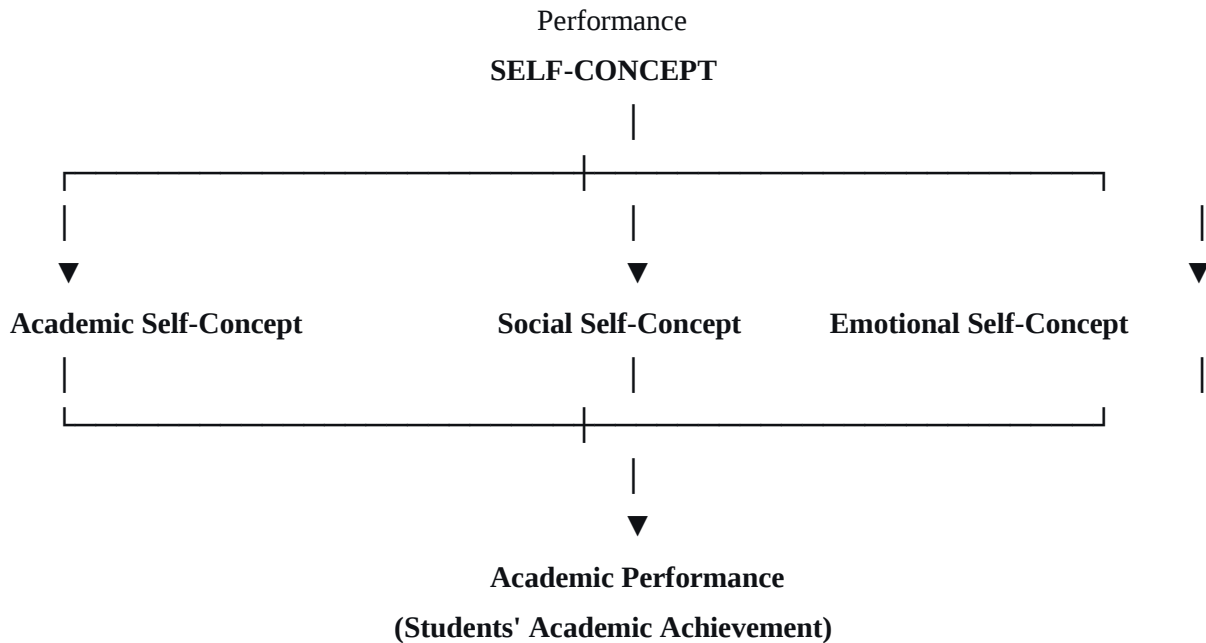
Conceptual Framework

A conceptual framework provides a graphical and theoretical representation of the relationships among the variables investigated in a study. It translates theoretical assumptions into an analytical model that guides the formulation of research questions and hypotheses, as well as data collection and analysis. In quantitative research, the conceptual framework serves as a blueprint for explaining how the independent variables are expected to be associated with the dependent variable based on existing theory and empirical evidence.

The present study conceptualises self-concept as a multidimensional construct comprising academic, social, and emotional self-concepts. These dimensions constitute the independent variables, while academic performance represents the dependent variable. The framework is grounded in Marsh's Reciprocal Effects Model (REM), which posits that students' perceptions of their abilities are associated with their educational behaviours and outcomes, while successful academic experiences further reinforce positive self-perceptions.

Within this framework, academic self-concept reflects students' beliefs regarding their academic competence and ability to perform successfully in school-related tasks. Social self-concept represents students' perceptions of their ability to establish and maintain positive interpersonal relationships within the school environment. Emotional self-concept reflects students' confidence in their ability to regulate emotions, cope with academic stress, and maintain psychological stability during learning activities. Collectively, these dimensions are expected to be associated with students' academic performance by enhancing motivation, classroom engagement, persistence, resilience, and effective learning behaviours.

Figure 2.1: Conceptual Framework Showing the Relationship Between Self-Concept and Academic



Source: Developed by the Researchers (2024), based on Marsh's Reciprocal Effects Model (1990).

The conceptual framework proposes that each dimension of self-concept is associated independently and collectively with students' academic performance. Students who possess a positive academic self-concept are expected to exhibit greater confidence in their academic abilities, stronger motivation to learn, greater persistence, and a greater willingness to undertake challenging academic tasks. These characteristics are anticipated to be associated with improved academic achievement.

Similarly, students with positive social self-concept are expected to develop stronger interpersonal relationships with teachers and peers, participate more actively in classroom discussions, engage effectively in collaborative learning, and experience a greater sense of belonging within the school environment. These positive social experiences are expected to enhance learning opportunities and ultimately be associated with improved academic performance.

Furthermore, students who possess positive emotional self-concept are expected to regulate examination anxiety, cope effectively with academic stress, recover more quickly from setbacks, and maintain emotional stability throughout the learning process. Such emotional competence is anticipated to strengthen students' resilience and sustain consistent academic engagement, thereby contributing positively to academic achievement.

The framework further assumes that although each dimension of self-concept is associated distinctly with academic performance, the three dimensions operate in a complementary manner. Students who simultaneously possess positive academic, social, and emotional self-concepts are expected to demonstrate higher academic achievement than students with deficiencies in one or more of these dimensions. Consequently, the framework provides a comprehensive explanation of how

multidimensional self-concept is associated with students' educational outcomes in senior secondary schools within the Nasarawa Local Government Area of Nasarawa State.

Methodology

This chapter presents the methods and procedures that were used in the study. The chapter describes the Research Design, Population, Sample and Sampling Techniques, Instrumentation, Validation of the Instrument, Reliability of the Instrument, Techniques for Data Analysis and Justification of the Methods.

Research Design

This study employed a descriptive survey design, which aims to provide an accurate account of a specific situation at a given point in time. In this approach, data is collected and analyzed from a sample that is representative of the larger population, allowing researchers to make inferences about trends, attitudes, and opinions within that population. According to Nworgu (2016), the descriptive survey design is particularly effective for generating a quantitative or numeric description of such characteristics. The choice of this design aligns with Knussan's (2014) recommendation that surveys are most suitable when a study seeks to gather respondents' opinions about a particular issue or relationship using questionnaires. Similarly, Emaikwu (2015) emphasized that a descriptive design is often the most practical approach when the goal is to assess the present state of affairs regarding variables that may change over time, especially in studies involving large groups. However, it is acknowledged that this design can establish associations but cannot determine causal relationships.

Population of the Study

The study population comprised all Senior Secondary School (SSS) students across public schools in Nasarawa Local Government Area, Nasarawa State. According to official records from the Nasarawa State Ministry of Education (2023/2024 academic session), this included a total population of 4,050 students distributed across SS1, SS2, and SS3 classes in four public secondary schools. The population consisted of both male and female students aged 14-19 years, representing the critical developmental stage where self-concept formation significantly impacts academic outcomes (Erikson, 1968; Marsh, 1992).

Table 3.1: Population of the Study

S/No	Name of Institution	No of Students
1	Government Secondary School, Nasarawa	1,250
2	Government Science Secondary School, Nasarawa	980
3	Unity Secondary School, Nasarawa	1,120
4	Community Secondary School, Nasarawa	700
	Total	4,050

Source: Nasarawa LGA Education Authority (2024)

Sample and Sampling Techniques

A representative sample of 346 students was selected for the study. The sample size was determined using Taro Yamane's formula:

$$n = N / (1 + Ne^2)$$

Where:

- N = total population (4,050)
- e = margin of error (0.05)
- $n = 4,050 / (1 + 4,050 \times 0.0025) = 4,050 / 11.125 = 364$

To account for an anticipated 5% non-response rate, 383 questionnaires were distributed. A total of 346 usable questionnaires were returned and analysed, yielding a response rate of 90.3%.

The study employed a multi-stage sampling procedure:

First Stage: All four public senior secondary schools in Nasarawa Local Government Area with complete SS I–SS III streams and verifiable academic records were included. This constituted a census of eligible public schools in the area.

Second Stage: Proportionate stratified sampling was used to allocate the sample across the four schools in proportion to their student populations, as shown below:

Table 3.2: Sample Size Distribution

S/No	Name of Institution	Population	Sample Size
1	Government Secondary School, Nasarawa	1,250	107
2	Government Science Secondary School, Nasarawa	980	84
3	Unity Secondary School, Nasarawa	1,120	96
4	Community Secondary School, Nasarawa	700	59
	Total	4,050	346

Source: Researcher's Computation (2024)

Final Stage: Simple random sampling using ballot papers was implemented within selected classes. Each eligible student drew a folded paper marked "Yes" or "No" from a container until the required sample size per stratum was achieved. This method ensured every student had equal selection probability while maintaining the predetermined stratification ratios (Creswell, 2014).

Instrument for Data Collection

The study employed two primary data collection instruments to comprehensively assess the research variables.

The first instrument was a structured questionnaire titled the Self-Concept Scale (SCS), which was adapted from Marsh's widely validated Self-Description Questionnaire II. This 15-item instrument measured three distinct dimensions of self-concept: academic (5 items), social (5 items), and emotional (5 items). Each item utilized a four-point Likert scale ranging from Strongly Agree (4) to Strongly Disagree (1).

Sample items:

- Academic: "I am confident I can understand difficult concepts taught in class."
- Social: "I find it easy to make new friends among my classmates."
- Emotional: "I can control my anxiety during examinations."

Possible score ranges:

- Each subscale: 5–20
- Overall self-concept: 15–60

The second instrument was an Academic Performance Proforma designed to systematically collect students' terminal examination scores in core subjects (Mathematics, English, and Integrated Science). Academic performance was measured using students' terminal examination scores obtained from official school academic records.

Validation of the Instrument

The research instruments underwent rigorous validation processes to ensure their appropriateness for the study context. The SCS questionnaire was subjected to expert review by three professors specializing in educational psychology and measurement from Nigerian universities. These experts evaluated the instrument's content validity by assessing item relevance, clarity, and theoretical alignment with the construct of self-concept. They also examined the instrument's construct validity and cultural appropriateness for Nigerian secondary school students. Based on their recommendations, certain items were reworded for better comprehension, and some response options were simplified to match the educational level of respondents. The validation process yielded a Content Validity Index of 0.85, which exceeds the standard threshold of 0.70 for instrument acceptability in educational research.

Reliability of the Instrument

The reliability of the research instruments was established through comprehensive pilot testing conducted with 50 students from non-participating schools in a neighboring local government area. The pilot study assessed the internal consistency of the SCS using Cronbach's alpha coefficient, which produced strong reliability indices:

Table 3.3: Reliability Coefficients

Subscale	Number of Items	Cronbach's α
Academic Self-Concept	5	.834
Social Self-Concept	5	.812
Emotional Self-Concept	5	.847
Overall Scale	15	.872

These reliability indices surpassed the minimum threshold of 0.70 recommended for psychological measurement instruments, confirming that the tools were sufficiently consistent for use in the main study.

Procedure for Data Collection

Approval to conduct the study was obtained through a letter of introduction issued by the Head of Department (HOD), Department of Educational Foundations, Akwa Ibom State University, Ikot

Akpaden. This letter was addressed to the Nasarawa Local Government Education Authority and the principals of the participating schools, formally introducing the researcher and requesting permission to collect data from senior secondary school students in the selected schools.

Upon receipt of the letter of introduction, the Nasarawa Local Government Education Authority granted permission for the study to be conducted in the four selected public secondary schools. The principals of the participating schools were then formally approached, and the purpose of the study was explained to them. They subsequently granted access to the students and provided the relevant academic records needed for the study.

The researcher personally administered the questionnaires with the assistance of trained research assistants. Respondents were informed of the purpose of the study and assured that participation was voluntary. Completed questionnaires were retrieved immediately after completion to minimise non-response and ensure a high response rate. Academic performance data were extracted from official school terminal examination records with the permission of the school principals.

Method of Data Analysis

The collected data were coded and analysed using the Statistical Package for the Social Sciences (SPSS), Version 25.0.

Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarise respondents' characteristics and to answer research questions i–iii.

Decision rules for interpreting self-concept levels:

Because no established norm exists for this researcher-developed scale, a midpoint split was used to interpret the self-concept subscale means. With a possible range of 5–20 (theoretical midpoint = 12.5), scores were categorised as follows:

- Low: 5.00–9.99 (below midpoint)
- Moderate: 10.00–14.99 (around midpoint)
- High: 15.00–20.00 (above midpoint)

For academic performance (possible range 0–100), the following conventional benchmarks were used:

- Low: 0–39
- Moderate: 40–59
- High: 60–100

These benchmarks align with common grading practices in Nigerian secondary schools, where scores below 40 are typically considered failing or low, 40–59 represent a pass or moderate performance, and 60 and above represent credit-level or high performance.

Inferential statistics:

- Pearson Product-Moment Correlation was used to test hypotheses 1–3 (bivariate relationships between each self-concept dimension and academic performance).

- Multiple Linear Regression was used to test hypothesis 4 (joint prediction of academic performance by the three self-concept dimensions).

Before conducting regression analysis, the following assumptions were verified:

- Normality: Shapiro-Wilk test ($p > .05$ for all variables)
- Linearity: Scatterplots showed linear relationships
- Homoscedasticity: Breusch-Pagan test ($p > .05$)
- Multicollinearity: VIF values < 5
- Independence of residuals: Durbin-Watson statistic within acceptable range (1.5–2.5)

Effect sizes: Cohen's guidelines were used to interpret r (.10 = small, .30 = medium, .50 = large) and R^2 .

Confidence intervals: 95% CIs are reported for all correlation and regression coefficients.

Ethical Considerations

Ethical principles guiding educational research were strictly observed throughout the study.

Institutional approval: A letter of introduction was obtained from the Head of Department (HOD), Department of Educational Foundations, Nasarawa State University, Keffi, introducing the researcher to the Nasarawa Local Government Education Authority and the principals of the participating schools. This letter served as formal institutional authorisation for the researcher to collect data from the selected schools. Upon presentation of the letter of introduction from the HOD, permission was obtained from the Nasarawa Local Government Education Authority and the principals of the participating schools.

The majority of SS I–SS III students are under 18 years of age, written informed consent was obtained from parents/guardians through the schools' Parents-Teachers Associations. In addition, written assent was obtained from all student participants after explaining the purpose and voluntary nature of the study in age-appropriate language.

Participation was voluntary, and respondents were free to withdraw from the study at any stage without penalty.

Participants were assured that the information provided would be treated with strict confidentiality and used solely for academic purposes. No identifying information was collected.

Limitations of the Study

The following limitations should be considered when interpreting the findings:

1. **Cross-sectional design:** The study employed a cross-sectional descriptive survey, which can establish associations but cannot determine causal direction or reciprocal effects over time. Longitudinal or experimental designs would be needed to establish causality.
2. **Self-report measures:** Self-concept data were collected through self-report questionnaires, which may be subject to social desirability bias.
3. **Generalizability:** The findings are based on four public secondary schools in one Local Government Area and may not be generalizable to all secondary schools in Nigeria.

4. **Academic performance measure:** Terminal examination scores may vary in standardization across schools.

Despite these limitations, the study provides valuable context-specific evidence on the relationship between self-concept and academic performance in Nasarawa State.

Results and Discussion

This chapter presents the data analysis, interpretation, and discussion of findings based on the research questions and hypotheses.

Descriptive Statistics

Research Question 1: What is the level of academic self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?

Table 4.1: Descriptive Statistics for Academic Self-Concept (N = 346)

Variable	Possible Range	Observed Range	M	SD	Interpretation
Academic Self-Concept	5–20	12–20	19.45	2.32	High

Decision rule: Low = 5.00–9.99; Moderate = 10.00–14.99; High = 15.00–20.00.

Source: Field Survey, 2024.

Table 4.1 shows that the mean score for academic self-concept was 19.45 (SD = 2.32) on a possible range of 5–20. This falls within the "High" range (15.00–20.00), indicating that the respondents generally reported a high level of academic self-concept. This suggests that the students perceived themselves as academically capable and confident in their ability to perform well in school-related activities.

Research Question 2: What is the level of social self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?

Table 4.2: Descriptive Statistics for Social Self-Concept (N = 346)

Variable	Possible Range	Observed Range	M	SD	Interpretation
Social Self-Concept	5–20	11–20	16.73	2.59	High

Note: Decision rule: Low = 5.00–9.99; Moderate = 10.00–14.99; High = 15.00–20.00.

Source: Field Survey, 2024.

Table 4.2 shows that the mean score for social self-concept was 16.73 (SD = 2.59) on a possible range of 5–20. This falls within the "High" range, indicating that the respondents generally demonstrated a high level of social self-concept. This suggests that the students perceived themselves as socially accepted, capable of interacting positively with their peers, and comfortable participating in school-related social activities.

Research Question 3: What is the level of emotional self-concept among senior secondary school students in Nasarawa Local Government Area of Nasarawa State?

Table 4.3: Descriptive Statistics for Emotional Self-Concept (N = 346)

Variable	Possible Range	Observed Range	M	SD	Interpretation
Emotional Self-Concept	5–20	12–20	18.33	2.46	High

Decision rule: Low = 5.00–9.99; Moderate = 10.00–14.99; High = 15.00–20.00.

Source: Field Survey, 2024.

Table 4.3 shows that the mean score for emotional self-concept was 18.33 (SD = 2.46) on a possible range of 5–20. This falls within the "High" range, indicating that the respondents generally exhibited a high level of emotional self-concept. This finding suggests that the students perceived themselves as capable of managing their emotions, coping with academic challenges, and maintaining positive emotional well-being within the school environment.

Academic Performance:

Table 4.4: Descriptive Statistics for Academic Performance (N = 346)

Variable	Possible Range	Observed Range	M	SD	Interpretation
Academic Performance	0–100	35–58	42.82	3.25	Moderate

Decision rule: Low = 0–39; Moderate = 40–59; High = 60–100.

Source: Field Survey, 2024.

Table 4.4 shows that the mean score for academic performance was 42.82 (SD = 3.25) on a possible range of 0–100. This falls within the "Moderate" range (40–59), indicating that the respondents demonstrated a moderate level of academic performance.

Table 4.5: Intercorrelations Among Study Variables (N = 346)

Variable	1	2	3	4
1. Academic Self-Concept	—			
2. Social Self-Concept	.41	—		
3. Emotional Self-Concept	.38	.35	—	
4. Academic Performance	.46	.32	.39	—

$p < .01$ (two-tailed).

Source: Field Survey, 2024.

Table 4.5 presents the intercorrelations among the study variables. The correlations among the three self-concept dimensions ranged from .35 to .41, indicating that the dimensions are related but distinct. All three self-concept dimensions were positively correlated with academic performance, with academic self-concept showing the strongest correlation ($r = .46$, $p < .01$), followed by emotional self-concept ($r = .39$, $p < .01$) and social self-concept ($r = .32$, $p < .01$).

4.2 Hypothesis Testing

Hypothesis One: There is no significant relationship between academic self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

Table 4.6: Pearson Correlation Between Academic Self-Concept and Academic Performance (N = 346)

Variables	M	SD	r	p	95% CI	Decision
Academic Self-Concept	19.45	2.32	.462	< .001	[.374, .542]	Reject H ₀
Academic Performance	42.82	3.25				

$\alpha = .05$ (two-tailed). Effect size: medium-to-large.

Source: Field Survey, 2024.

Table 4.6 shows a statistically significant positive correlation between academic self-concept and academic performance, $r(344) = .462$, $p < .001$, 95% CI [.374, .542]. The null hypothesis is therefore rejected. The effect size is medium-to-large according to Cohen's guidelines. This indicates that students with higher academic self-concept tend to achieve better academic performance.

Hypothesis Two: There is no significant relationship between social self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

Table 4.7: Pearson Correlation Between Social Self-Concept and Academic Performance (N = 346)

Variables	M	SD	r	p	95% CI	Decision
Social Self-Concept	16.73	2.59	.318	< .001	[.222, .408]	Reject H ₀
Academic Performance	42.82	3.25				

$\alpha = .05$ (two-tailed). Effect size: medium.

Source: Field Survey, 2024.

Table 4.7 shows a statistically significant positive correlation between social self-concept and academic performance, $r(344) = .318$, $p < .001$, 95% CI [.222, .408]. The null hypothesis is therefore rejected. The effect size is medium. This indicates that students with higher social self-concept tend to achieve better academic performance.

Hypothesis Three: There is no significant relationship between emotional self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

Table 4.8: Pearson Correlation Between Emotional Self-Concept and Academic Performance (N = 346)

Variables	M	SD	r	p	95% CI	Decision
Emotional Self-Concept	18.33	2.46	.387	< .001	[.294, .473]	Reject H ₀
Academic Performance	42.82	3.25				

$\alpha = .05$ (two-tailed). Effect size: medium.

Source: Field Survey, 2024.

Table 4.8 shows a statistically significant positive correlation between emotional self-concept and academic performance, $r(344) = .387$, $p < .001$, 95% CI [.294, .473]. The null hypothesis is therefore rejected. The effect size is medium. This indicates that students with higher emotional self-concept tend to achieve better academic performance.

Hypothesis Four: The three dimensions of self-concept (academic, social, and emotional) do not jointly predict the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State.

Table 4.9: Multiple Linear Regression Predicting Academic Performance from Self-Concept Dimensions (N = 346)

Predictor	B	SE B	β	t	p	95% CI for B
(Constant)	21.847	2.134		10.24	< .001	[17.65, 26.04]
Academic Self-Concept	0.534	0.072	.38	7.42	< .001	[0.392, 0.676]
Social Self-Concept	0.198	0.061	.16	3.25	.001	[0.078, 0.318]
Emotional Self-Concept	0.247	0.066	.19	3.74	< .001	[0.117, 0.377]

Model Summary: $R^2 = .284$, Adjusted $R^2 = .278$, $F(3, 342) = 45.21$, $p < .001$, Durbin-Watson = 1.98.

Note: Assumptions verified: normality (Shapiro-Wilk $p > .05$), linearity (scatterplots), homoscedasticity (Breusch-Pagan $p > .05$), multicollinearity ($VIF < 5$).

Source: Field Survey, 2024.

Table 4.9 shows that the three self-concept dimensions jointly predict academic performance, $R^2 = .284$, $F(3, 342) = 45.21$, $p < .001$. The model explains 28.4% of the variance in academic performance. All three predictors made statistically significant unique contributions:

- Academic self-concept: $\beta = .38$, $t = 7.42$, $p < .001$, 95% CI [0.392, 0.676]
- Social self-concept: $\beta = .16$, $t = 3.25$, $p = .001$, 95% CI [0.078, 0.318]
- Emotional self-concept: $\beta = .19$, $t = 3.74$, $p < .001$, 95% CI [0.117, 0.377]

Academic self-concept made the strongest unique contribution, followed by emotional self-concept and then social self-concept. The null hypothesis is therefore rejected.

Discussion of Findings

The purpose of this study was to examine the relationship between self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State. Specifically, the study examined three dimensions of self-concept—academic, social, and emotional—and their association with students' academic performance.

The study found a statistically significant positive relationship between academic self-concept and academic performance ($r = .462$, $p < .001$), with academic self-concept making the strongest unique contribution in the regression model ($\beta = .38$, $p < .001$). This finding indicates that students with positive perceptions of their academic abilities tend to demonstrate better academic performance. Students who believe in their academic competence are more likely to engage actively in learning tasks, persist when confronted with difficulties, and employ effective learning strategies. This finding is consistent with Marsh's Reciprocal Effects Model (REM), which proposes that academic self-concept and academic achievement are reciprocally related over time. According to the model, positive academic experiences strengthen students' academic self-concept, which in turn is associated with greater motivation, persistence, and engagement in learning activities (Marsh & Martin, 2011). However, because the

present study employed a cross-sectional design, the direction of the relationship cannot be determined. The observed association is consistent with the REM proposition that the two constructs are positively related, but longitudinal data would be required to establish reciprocal effects. The finding corroborates previous empirical studies. Marsh and O'Mara (2008) found that academic self-concept contributes to students' educational achievement across different educational levels. Similarly, Guay et al. (2003) reported that academic self-concept and academic achievement are reciprocally related over time. Valentine et al. (2004), in their meta-analysis, concluded that students with stronger academic self-beliefs consistently achieve higher academic outcomes than those with weaker academic self-perceptions. More recent studies (Arens et al., 2023; Huang, 2022) continue to support these conclusions. The finding implies that schools should deliberately promote students' academic confidence through effective instructional practices, continuous formative assessment, academic mentoring, and constructive feedback. Guidance counsellors should also design interventions to strengthen students' beliefs in their academic capabilities, particularly among learners with low academic confidence.

Similarly, the study found a statistically significant positive relationship between social self-concept and academic performance ($r = .318$, $p < .001$), and social self-concept made a significant unique contribution in the regression model ($\beta = .16$, $p = .001$). This finding indicates that students who perceive themselves as socially competent and accepted within the school environment tend to demonstrate better academic performance. Social competence may be associated with students' sense of belonging, increased classroom participation, and opportunities for collaborative learning experiences that support academic success. This finding aligns with the theoretical proposition that positive self-perceptions in related domains are associated with students' overall educational adjustment. Although Marsh's REM primarily focuses on academic self-concept, it acknowledges that self-concept is multidimensional and that social dimensions may support academic outcomes indirectly by fostering a supportive learning environment. The finding agrees with Wentzel (1998), who established that supportive peer relationships and positive teacher-student interactions are associated with students' academic motivation and classroom engagement. Similarly, Juvonen (2006) found that students who experience positive peer acceptance generally perform better academically than students who experience social isolation. More recently, Liu et al. (2021) reported that positive peer relationships are associated with students' academic engagement by increasing collaborative learning, classroom participation, and emotional support among learners. The educational implication is that schools should create inclusive learning environments that encourage teamwork, peer mentoring, cooperative learning strategies, and healthy interpersonal relationships. Teachers should intentionally promote respectful classroom interactions and discourage behaviours such as bullying, discrimination, and social exclusion that may undermine students' social self-concept and academic engagement.

Furthermore, the study found a statistically significant positive relationship between emotional self-concept and academic performance ($r = .387, p < .001$), and emotional self-concept made a significant unique contribution in the regression model ($\beta = .19, p < .001$). This finding suggests that students who perceive themselves as emotionally stable and able to regulate their emotions tend to cope more effectively with academic stress, examination anxiety, and other school-related challenges. Emotional stability enables learners to remain focused, motivated, and resilient despite academic setbacks. This finding is consistent with Pekrun's (2006) Control-Value Theory of Achievement Emotions, which explains that students' emotional experiences significantly influence learning processes, motivation, cognitive engagement, and academic achievement. Similarly, Zeidner (1998) demonstrated that poor emotional regulation, particularly test anxiety, adversely affects students' concentration and academic performance. Recent empirical evidence also supports this conclusion (Mega et al., 2021; Oriol et al., 2023). The finding highlights the importance of integrating social and emotional learning programmes into secondary school education. School counsellors should provide emotional support services, stress management programmes, and resilience-building interventions to help students manage academic pressure effectively. Teachers should likewise create emotionally supportive classroom environments where students feel psychologically safe expressing themselves, asking questions, and learning from mistakes.

The multiple regression analysis showed that the three self-concept dimensions jointly accounted for 28.4% of the variance in academic performance ($R^2 = .284, F(3, 342) = 45.21, p < .001$). This finding supports the multidimensional nature of self-concept and indicates that academic, social, and emotional self-concepts together provide a meaningful explanation of variations in students' academic performance. Academic self-concept emerged as the strongest predictor, which is consistent with the REM's emphasis on academic self-concept as the most direct psychological correlate of academic achievement. The findings indicate that the academic, social, and emotional dimensions of self-concept are important psychological characteristics associated with students' academic performance. The results support the multidimensional nature of self-concept proposed by Marsh's Reciprocal Effects Model, which emphasises that students' self-perceptions develop through continuous interaction between personal experiences and educational outcomes. Students who possess positive academic beliefs, healthy interpersonal relationships, and effective emotional regulation are better positioned to participate actively in learning, persist during academic challenges, and achieve improved educational outcomes. Although instructional quality, socioeconomic conditions, parental involvement, and school resources remain important determinants of academic achievement, the present findings demonstrate that strengthening students' self-concept represents an equally important strategy for improving educational performance. Consequently, educational stakeholders should adopt holistic interventions that address both students' cognitive development and their psychological well-being. The present study also contributes to the limited body of empirical literature on self-concept and academic performance

within the Nigerian educational context. While previous international studies have consistently demonstrated positive associations between self-concept and academic achievement, evidence from North Central Nigeria remains relatively limited. The findings therefore provide context-specific evidence that may assist policymakers, school administrators, teachers, and counsellors in developing interventions to improve students' academic outcomes by enhancing the development of self-concept.

Summary of the Study

This study examined the relationship between self-concept and the academic performance of senior secondary school students in Nasarawa Local Government Area of Nasarawa State. The study was motivated by growing concerns regarding the declining academic performance of secondary school students and the need to understand the psychological factors that may be associated with educational success. Specifically, the study investigated three dimensions of self-concept: academic, social, and emotional.

The study was anchored in Marsh's Reciprocal Effects Model (REM), which explains how individuals' self-perceptions are associated with behaviour, motivation, learning, and academic achievement.

A descriptive survey research design was adopted for the study. The population comprised 4,050 senior secondary school students in four public secondary schools in Nasarawa Local Government Area during the 2023/2024 academic session. A sample of 346 students was selected using a multistage sampling procedure involving proportionate stratified and simple random sampling techniques. A letter of introduction was obtained from the Head of Department (HOD), Department of Educational Foundations, Nasarawa State University, Keffi, and presented to the relevant educational authorities and participating schools to facilitate access to respondents. Data were collected using the Self-Concept Scale (SCS), while students' academic performance was obtained from their academic records. The instrument demonstrated satisfactory psychometric properties, with an overall Cronbach's alpha reliability coefficient of 0.872 (academic $\alpha = .834$; social $\alpha = .812$; emotional $\alpha = .847$).

Seven research questions guided the study, while four null hypotheses were tested at the 0.05 level of significance. Descriptive statistics, including mean and standard deviation, were used to answer the research questions, while Pearson correlation and multiple regression were employed to test the hypotheses.

The findings revealed that students generally exhibited high levels of academic, social, and emotional self-concept, while their academic performance was moderate. The hypothesis tests indicated statistically significant positive relationships between academic self-concept and academic performance, social self-concept and academic performance, and emotional self-concept and academic performance among senior secondary school students in Nasarawa Local Government Area. The multiple regression analysis showed that the three self-concept dimensions jointly accounted for 28.4% of the variance in academic performance, with academic self-concept making the strongest unique

contribution. These findings underscore the importance of students' psychological self-perceptions in relation to their educational experiences and academic outcomes.

Conclusion

Based on the findings of this study, it is concluded that self-concept is significantly associated with students' academic performance. The study demonstrated that academic, social, and emotional self-concept dimensions are positively correlated with academic performance. Academic self-concept showed the strongest relationship with academic performance.

Because the study employed a cross-sectional design, it cannot establish causal relationships or reciprocal effects over time. The findings are consistent with the propositions of Marsh's Reciprocal Effects Model, which suggests that positive self-beliefs and academic achievement are reciprocally related. Academic success may strengthen students' self-concept, while positive self-concept may be associated with greater academic engagement and achievement. Longitudinal research would be needed to establish the direction of these relationships.

The study contributes to the growing body of evidence that educational success is associated not only with cognitive ability and instructional quality but also with students' psychological well-being and self-perceptions. Schools that deliberately promote positive self-concept are therefore likely to support students who are academically motivated, emotionally resilient, socially competent, and capable of achieving sustained academic success.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

1. School administrators should develop and implement programmes that strengthen students' academic self-concept through academic mentoring, recognition of achievement, positive reinforcement, and learner-centred instructional practices that build students' confidence in their academic abilities.
2. Teachers should adopt supportive teaching strategies that encourage active classroom participation, provide constructive feedback, and create inclusive learning environments that promote positive academic and social self-perceptions among students.
3. School counsellors should organise regular counselling programmes, self-development workshops, and psychological support services aimed at improving students' self-confidence, emotional regulation, resilience, and interpersonal skills.
4. Parents and guardians should provide consistent emotional support, encouragement, and positive home learning environments that reinforce children's confidence in their abilities and promote healthy emotional development.
5. Educational policymakers should integrate self-concept development, social-emotional learning, and psychological well-being into secondary school curricula and educational policies to support students' holistic development.

6. School management should strengthen peer mentoring programmes, extracurricular activities, and collaborative learning opportunities that foster healthy peer relationships and enhance students' social self-concept.
7. Government and educational stakeholders should provide continuous professional development for teachers and school counsellors on strategies for identifying and supporting students experiencing low self-concept, emotional difficulties, or social adjustment challenges.
8. Researchers should conduct further studies using longitudinal designs to examine the reciprocal relationships among self-concept dimensions and academic performance over time. Additionally, experimental or quasi-experimental studies are needed to evaluate the effectiveness of self-concept interventions in improving academic outcomes across different educational levels, geographical regions, and school types in Nigeria.

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