

School Connectedness and Students' Academic Self-Concept in Public Secondary Schools in Nairobi County, Kenya

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ABSTRACT

Adolescence is a critical period in which learners develop their self-understanding and beliefs about their academic abilities. In Kenya, public secondary schools play a central role in shaping how students perceive their competence, worth, and potential. School connectedness—the sense of belonging, peer support, and teacher encouragement—has been highlighted as one of the strongest protective and motivational factors for students. Despite this, many students continue to struggle with low academic self-concept, raising concerns about the extent to which the school environment fosters positive learning identities.

This study investigated the influence of school connectedness on students' academic self-concept in public secondary schools in Nairobi County, Kenya. The study was anchored on Bronfenbrenner's Ecological Systems Theory (EST), which explains how different dimensions of the school environment influence learners' developmental and behavioral outcomes. A correlational research design was adopted to determine the relationship between school connectedness and students' academic self-concept. The target population included class teachers and students from selected public secondary schools in Nairobi County. From this population, the study sampled students and class teachers using stratified and simple random sampling techniques. Data were collected using questionnaires and interviews, with pilot testing undertaken to ensure validity and reliability of the instruments.

Quantitative data were analyzed using descriptive statistics (mean, frequencies, and percentages) and inferential statistics, specifically Pearson correlation and regression analysis, at a significance level of 0.05. Qualitative data from interviews and open-ended responses were subjected to thematic content analysis. The findings revealed a positive and significant correlation between school connectedness and students' academic self-concept ($r = .461$, $p < 0.01$). Regression results further demonstrated that dimensions of connectedness, particularly teacher support and peer relationships, significantly predicted students' academic self-concept.

The study concludes that school connectedness is instrumental in shaping students' academic self-perceptions in Nairobi County. Strengthening teacher-student relationships, fostering positive peer networks, and cultivating a strong sense of belonging are recommended as key strategies to improve students' academic self-concept.

Keywords: School Connectedness; Academic Self-Concept; Public Secondary School Students; Nairobi County, Kenya

INTRODUCTION

The school environment, hereinafter also referred to as ecology, could have lasting effects on students' academic self-understanding and learning behaviors. Since students spend a considerable amount of their developmental years in school, the kinds of relationships and interactions they experience are likely to shape their views about themselves and their abilities. Indeed, studies have shown that teacher encouragement (Cortina & Fazel, 2015) and peer support (Welsh & Little, 2018) have profound effects on both immediate learning outcomes and long-term academic self-concept. In this regard, school connectedness—which encompasses teacher support, peer relationships, and a sense of belonging—plays a central role in determining how positively or negatively students view their academic competence. This realization underscores the

importance of focusing on school-based psychosocial factors such as connectedness to enhance learners' academic self-beliefs. The present study thus set out to investigate the influence of school connectedness on students' academic self-concept in public secondary schools in Nairobi County, Kenya.

School connectedness has been documented as a pivotal factor in shaping adolescent outcomes (Goodman-Scott et al., 2018; Pei-Boon et al., 2020; Welsh & Little, 2018; Williams et al., 2020; Resnick et al., 1997; McNeely & Falci, 2004). Resnick et al. (1997), in their seminal study, established that connectedness is one of the strongest protective factors for adolescent health and well-being. McNeely and Falci (2004) similarly found that teacher support and school belonging were powerful predictors of academic motivation and self-confidence. In Kenya, where academic achievement is often linked to future career prospects and socio-economic mobility, students' academic self-concept becomes particularly critical. A strong academic self-concept motivates learners to set higher goals, persist in challenging tasks, and maintain resilience in the face of setbacks. Conversely, a weak academic self-concept may undermine students' confidence, leading to disengagement and poor performance.

Locally, research has shown that peer and teacher relationships play a vital role in students' psychosocial and academic development. Arudo and Okeyo (2008), in their study of secondary schools, highlighted how peer support structures can positively influence students' self-perceptions. Ambayo and Ngumi (2016) found that counselling interventions, while mainly associated with discipline and behavior, also had implications for students' academic outcomes. These findings suggest that although discipline management is often prioritized in Kenyan schools, the psychosocial dimensions of school life, particularly connectedness, may hold equally important implications for students' academic self-concept. However, most existing studies have either generalized connectedness as a broad factor or focused on behavioural outcomes such as discipline, leaving a gap in understanding its direct relationship with academic self-concept in the Kenyan context.

From the preceding discourse, it is evident that school connectedness influences how students view themselves as learners. These effects are either reinforced or undermined by the level of support from teachers, the inclusivity of peer relationships, and the extent to which students feel they belong in the school environment. Yet, documented studies have not sufficiently assessed the relationship between these dimensions of connectedness and students' academic self-concept in Nairobi County. This creates a knowledge gap in understanding the specific contributions of connectedness to academic self-perceptions, particularly in a context where educational attainment is a key developmental milestone. The current study sought to fill this gap.

Statement of the Problem

Academic self-concept has been recognized as a critical determinant of students' educational trajectories. Learners with positive academic self-concepts tend to perform better, persist longer in learning tasks, and develop stronger aspirations for higher education. Conversely, students with low academic self-concept are more likely to disengage, underperform, or drop out. In Kenya, despite significant investment in improving access to education, concerns persist regarding students' self-beliefs and academic motivation, particularly in public secondary schools in Nairobi County.

The Ministry of Education (GOK, 2016) has emphasized the importance of psychosocial interventions such as guidance and counselling, mentorship, and supportive school environments to complement academic instruction. Nevertheless, evidence shows that many students continue to struggle with low confidence and poor academic self-concept. Reports from Nairobi County schools have highlighted cases where students feel alienated, unsupported, or disconnected, which negatively impacts their academic identity. This calls to question the extent to which school connectedness, as an environmental factor, contributes to shaping students' academic self-concept.

Existing literature has addressed the role of connectedness in behavioural outcomes such as discipline (Warui, 2018; Ndaita, 2016) and in general well-being (Resnick et al., 1997). However, the relative contribution of school connectedness to academic self-concept in Nairobi County remains scantily studied, creating an empirical gap. Without addressing this gap, making empirically informed recommendations on how to

strengthen students' academic identities may remain elusive. This study was therefore timely in its focus on the specific relationship between school connectedness and students' academic self-concept in Nairobi County.

Objectives of the Study

The objective of the study was:

- To investigate the influence of school connectedness on students' academic self-concept in public secondary schools in Nairobi County, Kenya.

Hypothesis

- **H0₂:** There is no statistically significant relationship between school connectedness and students' academic self-concept in public secondary schools in Nairobi County, Kenya.

LITERATURE REVIEW

School Connectedness and Academic Self-Concept

Goodman-Scott, Betters-Bubon, and Donohue (2018) examined how comprehensive school counseling programs, when aligned with Positive Behavioral Interventions and Supports (PBIS), fostered positive student outcomes. Their findings established that school-based interventions which emphasized connectedness helped improve students' academic confidence and promoted a supportive climate. This resonates with the current study, which investigates the extent to which connectedness in Kenyan schools contributes to shaping academic self-concept.

Pei-Boon, Marzuki, Jaafar, Chin-Siang, and Nee-Nee (2020) assessed counseling self-efficacy in Malaysian schools. Although their study was more focused on counseling practices, it revealed that student support systems, including peer and teacher guidance, enhanced learners' self-perceptions of competence. This suggests that connectedness, both at the peer and teacher level, contributes significantly to the development of students' academic self-concept. The present study draws from this evidence in analyzing how similar school support structures in Nairobi County schools influence learners' academic beliefs.

Welsh and Little (2018) carried out a comprehensive review of school discipline approaches and disparities in student outcomes. While the focus was on behavioral discipline, the study emphasized the central role of school climate—of which connectedness is a key component—in shaping both academic and personal development. Their conclusion that connectedness is a protective factor against negative outcomes links directly to this study, which is interested in how such connectedness fosters positive academic self-concept.

Resnick et al. (1997) conducted a landmark study on adolescent health using the National Longitudinal Study on Adolescent Health in the U.S. They demonstrated that school connectedness was one of the strongest protective factors for adolescent well-being, extending to academic and social domains. This finding is echoed in McNeely and Falci (2004), who examined how school connectedness predicted academic motivation and confidence. Both studies establish a foundational argument for why connectedness matters in adolescent academic development, offering theoretical support for the Kenyan context.

Locally, Arudo and Okeyo (2008) examined peer counseling experiences in selected Kenyan secondary schools and found that peer support mechanisms contributed to improved student adjustment and confidence. While the focus was primarily on behavior, these findings imply that peer connectedness can also impact academic self-concept by reinforcing positive beliefs about abilities. Ambayo and Ngumi (2016) similarly highlighted that although counseling primarily influenced discipline, it also had indirect implications for students' academic self-perceptions. This suggests a bidirectional relationship between connectedness and students' broader developmental outcomes.

Warui (2018), focusing on guidance and counseling in Kiambu County, emphasized the importance of psychosocial interventions in managing behavior. However, his findings also indicated that connectedness

indirectly influenced students' academic outcomes. This observation strengthens the case for considering connectedness not only in the behavioral domain but also in the academic self-concept space.

Internationally, Chireshe (2013) studied peer counseling in Zimbabwean secondary schools and observed that supportive peer networks contributed positively to students' confidence, including academic-related beliefs. This finding mirrors the Kenyan context, where peer dynamics significantly shape how learners perceive themselves within the school ecology.

Academic Self-Concept and School Ecology

Academic self-concept refers to students' self-perceptions regarding their academic abilities and competence (Shavelson et al., 1976). It is widely recognized as a predictor of academic achievement, motivation, and persistence. Feldman (2003) argues that academic self-concept is influenced not only by individual factors but also by contextual environments, such as the school. This aligns with Bronfenbrenner's (1979, 1993) Ecological Systems Theory, which positions the school as a microsystem where daily interactions significantly shape self-beliefs.

Research shows that positive teacher-student relationships enhance academic self-concept. For instance, Cortina and Fazel (2015) reported that supportive teacher interactions strengthened students' self-confidence and engagement in learning. Similarly, Knäuper, Carrière, and Shapiro (2016) highlighted that students' perceptions of support and inclusion vary across age groups, influencing the way they construct academic identities. These findings suggest that in Kenya, where classrooms are diverse in age and background, fostering school connectedness may be particularly important for sustaining positive academic self-concept.

Goyder, Warriner, and Miller (2002) showed that more educated and socially supported students were more likely to maintain positive self-concepts and actively engage in learning. This suggests that in contexts where disparities exist, such as Nairobi's public schools, connectedness can bridge gaps by offering psychosocial reinforcement.

Theoretical Framework

This study is based on the Ecological Systems Theory (EST) as advanced by Bronfenbrenner (1979, 1993), which explains how environmental systems influence human development. According to EST, a student's academic self-concept is not shaped in isolation but is a product of multiple layers of interaction.

Microsystem: Includes immediate settings such as the classroom, peers, and teachers. Here, supportive teacher-student interactions and peer relationships directly reinforce or undermine students' academic self-concept.

Mesosystem: Captures linkages between multiple settings such as home and school. Parental involvement combined with supportive teacher practices strengthens students' confidence in academic pursuits.

Exosystem: Refers to environments that indirectly influence the learner, such as parental workplaces or community programs. Policies promoting school-community ties can indirectly bolster students' academic self-beliefs.

Macrosystem: Comprises cultural values and societal expectations. In Kenya, where academic success is culturally valued as a pathway to opportunity, societal pressures amplify the role of school connectedness in shaping academic self-concept.

Chronosystem: Represents the influence of time and transitions. For adolescents, transitions across school levels and developmental stages affect how connectedness impacts academic self-concept.

The power of EST lies not merely in identifying these distinct ecological levels, but in understanding how they interact dynamically to shape developmental outcomes. Bronfenbrenner pointed out that human development is based on increasingly complex two way interactions between the individual and their immediate environments, and that these interactions in turn are mediated by interrelationship between settings

(Bronfenbrenner & Morris, 2006). Academic self-concept, in the framework of the given study, is not a phenomenon formed in a vacuum of a single level of ecology, but rather a combination of different mechanisms.

The home/school level of interaction at the interface of the microsystem and mesosystem illustrates the influence of ecological relationships on developmental results. To give an example, a student who is consistently encouraged by teachers (microsystem) and is, at the same time, exposed to the interaction with parents and the support of the family in terms of academic performance (mesosystem connection) will tend to have a better academic self-concept in comparison to a student who is supported by only one system. The synergistic effect is reinforced when teachers and parents converse well on the progress of a student and the school values which are reinforced at home by parents makes the student increase his belief in his/her academic capabilities. On the other hand, lack of connection between home and school, like parents being inactive, or teachers being unable to communicate with families, can undermine the effect of school connectedness on self-concept.

Interaction between the microsystem and the macrosystem indicates the influence of values and demands in the culture towards the meaning and effects of school relationships. With educational accomplishment in Kenya being built as a principal source of socio-economic advancement and household pride, the macrosystem intensifies the psychological importance of teacher endorsement and peer acceptance on the microsystem scale. The weight of a microsystem interaction between a teacher and a student is particularly large when a teacher compliments the academic achievement of the former; this is perceived within the framework of macrosystem that emphasizes success in education to a great extent. The student feels supported by the teacher not only on the personal level, but also as the support of their potential to achieve culturally meaningful goals. This cultural background is why school connectedness would be especially strong in influencing academic self-concept in Nairobi County than in an environment where education has some other cultural implications.

Moreover, the impact exosystem has on microsystem connections proves how the indirect factors affect the everyday experience of students. Take the case of a student whose the parent has a job in an informal sector (exosystem factor) which has long hours. Such a parent might not be able to be at school meetings or offer home-work supervision, which indirectly influences the student in his or her sense of connectedness and self-concept. Nevertheless, in case the school enacts community outreach initiatives or other flexible parent engagement strategies (exosystem intervention), this may enhance the tie between the home-school mesosystem and, therefore, improve the student experience of belonging and academic confidence. As such, national education policies requiring the provision of guidance and counseling programs (exosystem) establish structural factors that facilitate facilitative teacher-student relationships at the microsystem level.

These interactions are endowed with time by the chronosystem. The needs of the students according to developmental requirements vary as they move to Form Four, and the significance of various ecological factors might also vary. Young adolescents at secondary school can become very reliant on the teacher support given to them as they negotiate the new setting, and the older adolescents can become more and more reliant on peer relationships and internalized self belief. Also, the time issue of history- learners in the Nairobi schools in the post-pandemic times perceive connectedness differently as compared to the past generations of learners as COVID-19 upheavals changed teacher student and peer interaction patterns. The dynamics of these chronosystems can be used to explain differences in the impact of connectedness on self-concept in different cohorts and developmental stages.

Such ecological interactions indicate that any intervention for enhancement of the academic self-concept should be systemic, as opposed to being isolated. Microsystem (teacher support) will best be supported with strategies of parent engagement (mesosystem), culturally responsive pedagogy that recognizes the values of students macrosystem, and supportive policies of education (exosystem). This integrated knowledge was used to inform the current study research on the role of various aspects of school connectedness such as teacher support, peer relationships, and belonging in influencing the academic self-concept of students.

The EST framework is particularly relevant because it situates school connectedness within the broader ecology of adolescent development. This means that strengthening teacher support, fostering peer

relationships, and creating inclusive school climates are not isolated interventions but part of a systemic approach to building positive academic self-concept. Critics of EST, such as Feldman (2003), argue that its reliance on continuous presence within an ecology may overlook mobility and change, especially in urban contexts like Nairobi where students may frequently transfer schools. However, its holistic view makes it suitable for analyzing the relationship between school connectedness and academic self-concept in this study.

RESEARCH METHODOLOGY

Research Design

This study was based on the correlational research design. A correlational design aims at describing the strength and direction of the relationship between variables without manipulating them (Best & Kahn, 2006). In this study, the independent variable was school connectedness, while the dependent variable was students' academic self-concept. The design was suitable because it allowed the researcher to examine naturally occurring relationships between these variables. According to Cooper and Schindler (2003), correlational designs are appropriate in observational studies where the researcher does not manipulate or control the study environment. Since school connectedness arises organically within the school ecology through teacher-student relationships, peer dynamics, and belongingness, this design enabled a clear assessment of how these factors influence students' self-concept. Furthermore, the design facilitated the testing of hypotheses using inferential statistics such as correlation and regression analysis.

However, it is important to acknowledge the inherent limitations of this design. Although correlational research is a good study design that determines both the magnitude and the direction of the relationships among variables, it does not allow making causal conclusions (Creswell, 2014). As the result of this research suggests, the high level of the correlation between school connectedness and academic self-concept is used to show that the two variables are interdependent, yet it does not necessarily prove that connectedness leads to improvements in self-concept. It might be a two-way relationship, that is, students with stronger academic self-concept also might think that the school environment is more supportive and connected. Alternatively, both connectedness and self-concept might be both affected by third variables which are not measured or assessed in this study like personality traits or family background. Experimental or longitudinal designs would also be required in order to determine causality, and by tracking how connectedness change over time, a parallel change in academic self-concept would be observed. However, the correlational designs are useful in finding meaningful associations to which a further study should be conducted and in informing the initial intervention measures. The results of this study therefore offer a high level of empirical evidence that might be used in interpreting the relationship between school connectedness and academic self concept in the Nairobi County though the causal issues would need further research design.

Location of the Study

The study was conducted in public secondary schools in Nairobi County, Kenya. Nairobi County, the capital of Kenya, is urban and cosmopolitan, with a population of over 4.3 million according to the 2019 Kenya Population and Housing Census (KNBS, 2019). The county comprises 11 sub-counties, including Westlands, Lang'ata, Embakasi, Dagoretti, Kamukunji, Starehe, Makadara, Kasarani, and Roysambu. Nairobi was chosen for this study because it represents a unique urban schooling environment where students come from diverse socio-economic, ethnic, and cultural backgrounds. This diversity provides a rich context for examining how school connectedness influences academic self-concept. Furthermore, Nairobi schools are under pressure from large class sizes, competition, and social inequalities, all of which make the study of psychosocial variables such as connectedness particularly important.

Target Population

Mugenda and Mugenda (2008) define the population as the aggregate of all cases that conform to designated specifications. The target population for this study included public secondary school students and class teachers in Nairobi County.

According to data from the Nairobi County Education Office (2022), there were:

- 306 public secondary schools
- 6,437 teachers
- 132,023 students

This population was deemed adequate for drawing a representative sample for the study.

Sampling Technique and Sample Size

Sampling was carried out to select a representative group from the population. The study used stratified random sampling to ensure that the sample reflected gender, type of school (day, boarding, and mixed), and sub-county distribution. Within each stratum, simple random sampling was applied to select specific participants.

The sample size was calculated using Yamane's (1967) formula:

$$n = N / (1 + N * e^2)$$

Where:

- n = sample size
- N = target population
- e = margin of error (assumed 0.05 for students; 0.1 for teachers)

Applying the formula:

- For students ($N = 132,023$, $e = 0.05$): $n = 132,023 / (1 + 132,023 \times 0.0025) \approx 398$ students
- For teachers ($N = 6,437$, $e = 0.1$): $n = 6,437 / (1 + 6,437 \times 0.01) \approx 97$ teachers

Table 1 Sample Size

Category	Population	Sample	Sampling Procedure
Teachers	6,437	97	Yamane (1967) formula
Students	132,023	398	Yamane (1967) formula
Total	138,766	526	

Research Instruments

Data was collected using questionnaires, interview guides, and document analysis checklists.

- Students' questionnaires included sections on demographic information, school connectedness (teacher support, peer relationships, sense of belonging), and academic self-concept. The self-concept section was adapted from validated academic self-concept scales (Shavelson et al., 1976).
- Teachers' questionnaires assessed perceptions of connectedness and its impact on students' learning confidence.

Pilot Testing of Research Instruments

A pilot study was conducted in 10 schools (not included in the main study) to test the clarity, validity, and reliability of the instruments.

Reliability

Reliability was established using Cronbach's Alpha (α). A coefficient value above 0.7 was considered acceptable (Malhotra, 2004). The following results were obtained:

- School connectedness scale: $\alpha = 0.81$
- Academic self-concept scale: $\alpha = 0.84$
- Teachers' interview: $\alpha = 0.79$

These values indicated high internal consistency.

Validity

Validity was ensured through content validation by experts and supervisors. Instruments were also aligned with constructs identified in previous research (Resnick et al., 1997; McNeely & Falci, 2004). Ambiguous items were revised following the pilot.

Data Collection Procedures

Before data collection, approval was sought from the University Graduate School and a research permit was obtained from the National Commission for Science, Technology and Innovation (NACOSTI). Consent was also obtained from the Nairobi County Director of Education and participating schools.

The researcher visited sampled schools and administered questionnaires with the help of research assistants. Student questionnaires were administered in classrooms, while teacher interviews were conducted in staffrooms. COVID-19 safety protocols were observed, including social distancing, mask-wearing, and sanitization. Data collection took four weeks.

Data Analysis and Presentation

Data was prepared and analyzed using SPSS (Statistical Package for the Social Sciences) Version 25.

- Descriptive statistics (means, standard deviations, frequencies, and percentages) summarized demographic data and responses on connectedness and self-concept.
- Inferential statistics tested hypotheses:
 - *Pearson correlation analysis* established the relationship between school connectedness and academic self-concept.
 - *Multiple regression analysis* tested the predictive power of connectedness dimensions (teacher support, peer relationships, sense of belonging) on academic self-concept.
- Qualitative data from interviews was coded and analyzed thematically to support quantitative findings.

Findings were presented in tables, figures, and narrative summaries, with interpretation linked to existing literature and the Ecological Systems Theory (Bronfenbrenner, 1979; 1993).

FINDINGS

Demographic Characteristics of Participants

The study first sought to describe the demographic characteristics of the respondents to provide background context. A total of 510 respondents were targeted, comprising class teachers and students. Out of these, 482 participated, yielding a response rate of 94.5%, which was considered adequate for analysis according to Mugenda and Mugenda (2008).

Table 3 Response Rate

Category	Sample	Responded	Response Rate
Teachers	100	100	100.0%
Students	380	352	92.6%
Total	510	482	94.5%

Source: Field Data (2023)

The high response rate minimized the risk of non-response bias, thereby strengthening the reliability of the data. Among students, 45.7% were male and 54.3% female, indicating that both genders were well represented. A majority of the students were between 16–17 years, largely in Form Three and Form Four, levels at which learners are more academically experienced and preparing for final national examinations. These cohorts are critical for such research because they reflect learners at the peak of secondary education, where academic self-concept plays a pivotal role in determining achievement and future aspirations.

Teachers were also fairly distributed by gender, with 41% male and 59% female. In terms of qualifications, 49.4% held Bachelor's degrees, while others had Master's (28.9%), Diplomas (12%), and PhDs (6%). This suggested that respondents were academically competent and professionally equipped to assess the psychosocial climate in their schools. Teachers' length of service also indicated considerable experience, with many reporting over 10 years in the profession, thus providing informed perspectives.

Together, these demographics implied that the study had engaged respondents with sufficient experience, gender balance, and institutional diversity to provide robust insights into the relationship between school connectedness and academic self-concept.

School Connectedness

School connectedness was conceptualized in three main dimensions: teacher support, peer relationships, and sense of belonging. Respondents indicated their levels of agreement with various items representing these dimensions.

Table 4 Descriptive Statistics for School Connectedness Indicators

Indicator	N	Min	Max	Mean	Std. Dev.
Teachers care about my success	352	1.00	5.00	3.98	1.14
My peers encourage me to do well	352	1.00	5.00	3.85	1.21
I feel like I belong in this school	352	1.00	5.00	3.91	1.09
Teachers treat me with respect	352	1.00	5.00	4.02	1.16
Peers respect my opinions	352	1.00	5.00	3.77	1.22

Source: Field Data (2023)

The results showed generally positive perceptions of connectedness, with mean scores between 3.77 and 4.02. The highest score was for “teachers treat me with respect” (M = 4.02), followed by “teachers care about my success” (M = 3.98). This finding underscores the crucial role of teacher-student relationships in fostering connectedness. The relatively lower mean for “peers respect my opinions” (M = 3.77) suggests that peer relationships, while supportive, may not always be consistently affirming across schools.

Qualitative data supported these results. Students often emphasized the emotional reassurance they received from teachers and peers:

“When teachers recognize my efforts, I feel like I can achieve more academically. It gives me confidence to try harder.” (Respondent 6, Nairobi County, July 2023)

Teachers also recognized that peer encouragement mattered greatly in shaping learners’ outlook:

“Study groups, debates, and teamwork build a sense of belonging. Students who are encouraged by their peers tend to develop stronger self-belief.” (Teacher respondent, Nairobi County, July 2023)

This triangulation of quantitative and qualitative data reinforces that school connectedness was a visible and influential phenomenon in the schools studied.

Academic Self-Concept

The next objective was to establish the levels of students’ **academic self-concept**, measured through indicators such as confidence in ability, persistence, and self-perceived competence.

Table 5 Descriptive Statistics for Academic Self-Concept Indicators

Indicator	N	Min	Max	Mean	Std. Dev.
I am confident in my academic abilities	352	1.00	5.00	3.88	1.15
I believe I can succeed in difficult subjects	352	1.00	5.00	3.79	1.20
I see myself as a good student	352	1.00	5.00	3.95	1.13
I feel motivated to achieve high grades	352	1.00	5.00	4.01	1.10
I have as much ability as my classmates	352	1.00	5.00	3.83	1.17

Source: Field Data (2023)

The results suggest that students generally held a positive academic self-concept. The highest mean score was for “I feel motivated to achieve high grades” (M = 4.01), reflecting strong performance aspirations. By contrast, “I believe I can succeed in difficult subjects” scored slightly lower (M = 3.79), highlighting that some learners struggle with confidence in more challenging academic areas.

These findings highlight a nuanced reality: while Nairobi students demonstrate high motivation and see themselves as capable learners, their confidence tends to waver when faced with academic difficulties. This underscores the importance of supportive environments in reinforcing learners’ academic self-concept.

Qualitative data reinforced this interpretation. Students explained that teacher recognition and peer support enhanced their academic confidence:

“When my friends and teachers believe in me, I feel capable even in subjects I find hard. It changes how I see myself.” (Respondent 12, Nairobi County, July 2023)

Thus, the data illustrates that academic self-concept is deeply intertwined with the quality of connectedness within schools.

Relationship between School Connectedness and Academic Self-Concept

Correlation Analysis

Pearson correlation analysis was conducted to test the study hypothesis.

Table 6 Correlation between School Connectedness and Students’ Academic Self-Concept

Variables	Academic Self-Concept
School Connectedness	.461**

Note. $p < 0.01$ (2-tailed).

The findings revealed a positive and statistically significant correlation between school connectedness and academic self-concept ($r = .461$, $p < 0.01$). This means that higher levels of connectedness were associated with stronger academic self-concept.

These results echo global findings. Resnick et al. (1997) argued that connectedness is one of the strongest protective factors for adolescent well-being, while McNeely and Falci (2004) found that connectedness predicted academic motivation and self-confidence. The Nairobi County data thus aligns with international evidence, showing that supportive schools nurture students' academic self-beliefs.

Regression Analysis

A multiple regression model was used to examine the predictive power of the three connectedness dimensions.

Table 7 Regression Model Predicting Students' Academic Self-Concept from Connectedness Dimensions

Predictor	β	p-value
Teacher Support	.327	< .01
Peer Relationships	.211	< .05
Sense of Belonging	.184	< .05
R^2	.312	
F	22.63	< .001

Source: Field Data (2023)

The model was statistically significant ($F = 22.63$, $p < 0.001$), with $R^2 = 0.312$, meaning connectedness explained 31.2% of the variance in academic self-concept. Teacher support emerged as the strongest predictor ($\beta = .327$), followed by peer relationships ($\beta = .211$) and sense of belonging ($\beta = .184$).

This suggests that while all three dimensions matter, teacher support is the cornerstone of academic self-concept in Nairobi County. The strong influence of peer relationships and belonging also confirms that self-concept is socially constructed within the school ecology.

Qualitative Reinforcement

The qualitative findings powerfully reinforced the statistical evidence. Students consistently emphasized the value of encouragement and recognition from teachers:

“When teachers and friends encourage me, I feel proud and want to do better. But when I feel left out, I start doubting myself.” (Respondent 6, Nairobi County, July 2023)

Teachers also highlighted the influence of peer support:

“Some students form study groups where they encourage each other. This peer connectedness helps improve how they view themselves academically.” (Teacher respondent, Nairobi County, July 2023)

These accounts confirm that academic self-concept is relationally constructed—through recognition, encouragement, and inclusion.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The purpose of this study was to investigate the influence of **school connectedness** on **students' academic self-concept** in public secondary schools in Nairobi County. The findings strongly demonstrate that connectedness—manifested through teacher support, peer relationships, and sense of belonging—is significantly associated with students' academic self-perceptions.

First, the study established that students generally perceived their schools as supportive environments. Teachers were consistently identified as caring and respectful, with students reporting that such support enhanced their confidence in academic ability. This confirms the view of Cortina and Fazel (2015), who argue that positive teacher-student relationships are fundamental to shaping student outcomes. The study therefore concludes that teacher support emerges as the strongest predictor of academic self-concept among the dimensions examined.

Second, the study found that peer relationships also matter greatly. Peers who encourage one another, participate in study groups, and share learning strategies create a social context where academic motivation is reinforced. This finding aligns with Welsh and Little (2018), who emphasize that peer dynamics within school settings play a pivotal role in shaping academic self-beliefs and long-term educational outcomes.

Third, the sense of belonging emerged as a meaningful predictor of self-concept. Students who felt included in their schools and recognized as valuable members of their learning communities demonstrated higher levels of academic self-belief. This echoes Bronfenbrenner's ecological systems theory (1979), which posits that students' development is profoundly influenced by the quality of their immediate environment. Belonging, in this sense, becomes a psychological anchor that grounds academic resilience.

Fourth, correlation analysis revealed a **positive and statistically significant relationship** between school connectedness and academic self-concept ($r = .461$, $p < 0.01$). This suggests that higher levels of perceived connectedness to teachers, peers, and the broader school environment are associated with stronger academic identities.

Finally, regression results indicated that connectedness accounted for 31.2% of the variance in students' academic self-concept, underscoring its explanatory power. Teacher support ($\beta = .327$) was the strongest predictor, followed by peer relationships ($\beta = .211$) and sense of belonging ($\beta = .184$). Taken together, the study concludes that school connectedness is not peripheral but central to building students' academic self-concept in Nairobi County.

In sum, the study demonstrates that teacher-student relationships, peer dynamics, and climates of belonging are significantly related to how students perceive themselves academically, suggesting that interventions targeting these factors may enhance academic self-concept. Given that self-concept is closely linked to achievement and persistence, these findings underscore the need to strengthen connectedness as a strategic educational priority.

Recommendations

Based on the above conclusions, the following recommendations are proposed for policy, practice, and further research:

1. Strengthen Teacher Support Systems
 - Teachers should be trained and encouraged to adopt learner-centered approaches that emphasize respect, encouragement, and recognition.
 - Professional development programs should highlight the psychological dimensions of learning, including the impact of supportive teacher-student relationships on academic self-concept.
2. Promote Positive Peer Interactions
 - Schools should create structures that facilitate peer collaboration, such as study clubs, peer mentorship programs, and group projects.
 - Anti-bullying policies should be enforced to minimize peer conflict and ensure that peer interactions remain affirming rather than destructive.
3. Foster a Sense of Belonging
 - School administrators should deliberately cultivate inclusive environments by celebrating diversity, promoting student participation in decision-making, and recognizing achievements at all levels.
 - Activities such as cultural days, student councils, and life skills programs can help students feel valued and included.

4. Policy-Level Recommendations

- The Ministry of Education should integrate school connectedness indicators into quality assurance frameworks for secondary schools.
- Guidelines should be issued for incorporating psychosocial support into routine teaching and learning, ensuring that schools actively monitor connectedness alongside academic outcomes.

5. Areas for Further Research

- Future studies could explore the mediating role of gender, socioeconomic status, and type of school (day vs. boarding) in the relationship between connectedness and academic self-concept.
- Longitudinal designs could assess how connectedness influences academic self-concept and performance over time, offering insights into long-term developmental trajectories.

By implementing these recommendations, stakeholders can create educational environments that not only improve academic performance but also enhance students' self-belief, resilience, and long-term success.

LIMITATIONS OF THE STUDY

While this study provides valuable empirical evidence regarding the relationship between school connectedness and academic self-concept, several limitations warrant acknowledgment. First, the correlational cross-sectional design, which is suitable to make associations, does not allow making unconditional causal conclusions. The large correlation ($r = .461$, $p < 0.01$) shows that connectedness and self-concept are correlated, but is not sufficient to indicate which is the cause and which is the effect, or whether the relationship is two way. Temporal precedence and causality would require longitudinal research to follow changes over a period of time. Second, the authors failed to provide a systematic investigation of the potential of the socio-economic status, cultural background, or type of school (day versus boarding) to moderate the relationship between connectedness and academic self-concept. Considering that the Nairobi County has a rather high socio-economic diversity, connectedness might not act in a uniform way under these conditions, and students with lower socio-economic statuses might gain more in school. Third, the empirical test, despite being based on the Ecological Systems Theory of Bronfenbrenner, put more emphasis on the microsystem aspects but did not explicitly test the interaction between ecological levels, including the effects of teacher support that may differ based on home-school relationships. Fourth, there can be a bias of social desirability due to the use of self-report measures. Lastly, the results are limited to urban Nairobi County in public secondary schools and might not be applicable in rural settings, as well as in schools that are privately run. Regardless of these shortcomings, the purity of sampling, validated measures and mixed-methodology of the study are sufficient to offer the solid evidence of the significance of school connectedness in the development of academic self-concept.

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