

The Relationship Between Self-Esteem and Academic Achievement Among High School Students: The Influence of Family, Peers, and School Environment

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Abstract: This study investigates the relationship between self-esteem and academic achievement among high school students. Given the critical role that adolescence plays in shaping identity and self-worth, the research explores how different dimensions of self-esteem—school-related, peer-related, and family-related—relate to students' academic performance. The study also examines variations in self-esteem based on gender and academic specialization. A mixed-method approach is employed to ensure accurate data collection and analysis. The findings aim to inform educators and psychologists about the key psychological variables influencing student success.

Keywords: self-esteem, academic achievement, adolescence, secondary education, gender differences

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Introduction

Human development is deeply influenced by the surrounding environment, which plays a critical role in shaping individual personality—whether positively or negatively. Each society is characterized by unique historical features, values, and social norms that regulate behavior and affect lifestyles. Among these environments, the school plays a fundamental role in shaping personality through structured educational experiences grounded in pedagogical principles that promote interaction and influence.

Educational institutions are vital in nurturing learners by providing quality instruction under appropriate conditions. They focus on supporting student success and addressing obstacles that may hinder academic performance. These efforts are often the result of psychological and educational research that seeks to understand key variables contributing to personality development, such as self-esteem and academic achievement.

In recent years, the concept of self-esteem has attracted considerable attention from researchers in psychology and educational sciences. This is due to its close link with primary social influences such as family, peers, and school. Maslow, for example, placed the need for self-esteem near the top of his hierarchy of needs, emphasizing its role in identity formation and psychological well-being.

Adolescence is considered a critical developmental stage in which individuals experience internal conflicts between their self-perceptions and how they believe others perceive them. During this period, high school students begin to explore their capabilities, form their self-concept, and strive for academic success as a way of asserting their identity. This pursuit of achievement often involves self-assessment and comparison with peers, leading to the emergence of a persistent drive to answer fundamental questions such as: “Who am I?” and “Who do I want to become?”

Academic achievement, therefore, becomes a key indicator of progress and personal validation during adolescence. As a result, it has become a topic of great interest among educators, psychologists, and parents alike. The school and family environments collaborate to foster conditions that maximize student achievement and personal growth.

This context justifies the need to investigate the relationship between self-esteem and academic achievement among secondary school students

Problem Statement

One of the most prominent topics in educational and psychological research is the impact of self-esteem on student outcomes, particularly among high school students. The educational process is a systematic endeavor aimed at helping learners acquire knowledge, skills, and values through well-defined inputs, processing mechanisms, and outputs. The cognitive inputs involve psychological processes such as comprehension, interpretation, and the connection of new information with prior knowledge, ultimately producing capable learners.

To ensure optimal learning outcomes, it is essential to provide not only academic but also psychological support, with self-esteem being one of the key indicators of psychological well-being. At the secondary level, self-esteem plays a central role in shaping students' behavior, motivation, and academic efforts.

Consequently, psychologists have regarded self-esteem as a fundamental component of personality theories due to its significant influence on individual behavior. For high school students, this developmental period involves preparing for important academic transitions. Their level of self-esteem, shaped by personal experiences and social interactions, is closely associated with concepts such as:

- Self-reliance
- Perceived competence

- Goal achievement
- Self-confidence

Experiences of success or failure significantly impact a student's self-concept and self-worth. Thus, academic achievement can both influence and be influenced by the level of self-esteem.

Research Questions

Research Question:

What is the nature of the relationship between self-esteem and academic achievement among high school students?

Is there a relationship between school-related self-esteem and academic achievement?

Is there a relationship between peer-related self-esteem and academic achievement?

Is there a relationship between family-related self-esteem and academic achievement?

Are there statistically significant differences in average self-esteem levels based on gender (male vs. female)?

Are there statistically significant differences in average self-esteem levels based on academic specialization (science vs. literature)?

3. Research Hypotheses

There is a statistically significant relationship between self-esteem and academic achievement among high school students.

There is a statistically significant relationship between school-related self-esteem and academic achievement among high school students.

There is a statistically significant relationship between peer-related self-esteem and academic achievement among high school students.

There is a statistically significant relationship between family-related self-esteem and academic achievement among high school students.

There are statistically significant differences in the mean of self-esteem scores among high school students based on gender (male, female).

There are statistically significant differences in the mean of self-esteem scores among high school students based on academic stream (science, Art).

4.1 Objectives of the Study

This study seeks to achieve the following objectives:

1. To analyze the relationship between self-esteem and academic achievement among high school students, with a focus on understanding how variations in self-esteem levels may correspond to differences in academic performance.

2. To determine the predictive value of self-esteem in relation to academic achievement, assessing the extent to which students' academic outcomes can be forecasted based on their self-perceived self-worth.

3. To explore the dynamic interaction between self-esteem and academic achievement, considering both direct and indirect influences that may emerge in the educational context.

4. To inform the development of counseling and intervention programs grounded in academic guidance frameworks, with the aim of enhancing students' self-esteem and thereby supporting improved academic outcomes.

In addition to these aims, the study is motivated by the recognition that self-esteem constitutes a foundational psychological construct essential for fostering well-adjusted, resilient individuals. Enhancing self-esteem not only contributes to personal academic

success but also plays a role in shaping more constructive, cohesive, and achievement-oriented school communities.

5.1 Significance of the Study

This study contributes to enriching the existing scientific knowledge on the relationship between self-esteem and academic achievement among high school students by focusing on adolescence as a critical stage in psychological and cognitive development. It highlights the role of self-esteem as a psychological factor that influences students' academic trajectories during this pivotal period.

The study also aims to provide data-driven recommendations that can be utilized to improve educational programs, particularly by integrating psychological variables such as self-esteem into educational intervention plans aimed at enhancing academic performance.

Furthermore, the study serves as a foundation for developing targeted guidance interventions that address the psychological and educational needs of high school students. By exploring common challenges faced by students through descriptive and applied research methodologies, the study proposes practical strategies to address these difficulties.

Overall, this study seeks to assist educational institutions in Algeria in understanding the psychological and academic factors that affect students, enabling them to design pedagogical strategies grounded in empirical data and responsive to learners' needs.

Literature Review

Self-esteem is one of the fundamental psychological constructs that has garnered extensive attention in the fields of educational and developmental psychology due to its direct and indirect influence on individual behavior, motivation levels, and academic achievement. It is defined as an individual's self-evaluation—the degree to which one feels satisfied with oneself and confident in one's abilities and potential (Rosenberg, 1965).

Psychological and educational studies have consistently demonstrated that self-esteem is a significant predictor of psychological, social, and academic adjustment. It is positively associated with learners' academic success and achievement. Individuals with high levels of self-esteem tend to exhibit greater confidence in their academic abilities and adopt more positive attitudes toward school, which are reflected in their academic performance. In a study conducted by Marsh (1990) on the relationship between self-esteem and academic achievement, academic self-esteem was found to be a crucial mediating variable explaining students' school performance, particularly when supported by a positive educational environment. Similarly, Huang (2011) reported a statistically significant, moderate correlation between global self-esteem and academic achievement, highlighting that this relationship may be influenced by other factors such as gender, level of ambition, and intrinsic motivation.

Other studies have focused on specific dimensions of self-esteem, such as school-related, familial, or social self-esteem. For instance, Hare (1985) found that students with higher levels of school-related self-esteem showed greater engagement in classroom activities and achieved higher academic results compared to their peers with lower self-esteem. A cross-sectional study conducted by Mirzaei-Alavijeh et. Al (2018) at Kermanshah University of Medical Sciences (KUMS). The findings revealed that medical (MD) students reported significantly higher levels of self-esteem compared to their peers ($p < 0.017$). Furthermore, a strong association was observed between the mother's education level and the student's self-esteem ($p < 0.001$), suggesting a potential familial influence on students' psychological well-being. Notably, a moderate but statistically significant

positive correlation was found between self-esteem and academic achievement ($r = 0.292$), underscoring the role of self-perception in students' academic outcomes.

Operational Definitions:

1. Self-esteem :

Self-esteem refers to the individual's self-evaluation based on their responses to the items of the Hare Self-Esteem Scale. This scale measures the extent to which individuals perceive themselves positively or negatively in various domains of life (e.g., family, peers, school). The operationalization is achieved through the total score obtained on the Self-Esteem Scale developed by Bruce R. Hare, with higher scores indicating higher levels of self-esteem.

2. School-Related Self-Esteem:

The degree to which an individual evaluates themselves positively or negatively in relation to their school environment (e.g., academic competence, relationship with teachers, attitude toward school).

Operationally defined as the score obtained on the school-related items of the Hare Self-Esteem Scale. Higher scores indicate a higher level of self-esteem in the school domain.

3. Peer-Related Self-Esteem:

The degree to which an individual perceives acceptance, approval, and value among their peers or friends.

Operationally defined as the score on the peer-related items of the Self-Esteem Scale developed by Bruce R. Hare. Higher scores reflect a stronger sense of self-worth derived from peer interactions.

4. Family- Related Self-Esteem:

The extent to which an individual feels loved, valued, and supported by family members. Operationally defined as the score obtained from family-related items on the Hare Self-Esteem Scale. Higher scores denote a more positive self-concept in the family context.

5. Academic Achievement :

Academic achievement is operationally defined as the average of the students' final grades obtained at the end of the first semester of the 2023–2024 academic year, as recorded in official school transcripts. This numerical value reflects the students' performance across core academic subjects and is used as an objective indicator of their academic success.

Theoretical Framework

Self-Esteem

Self-esteem refers to an individual's overall subjective evaluation of their own worth (Rosenberg, 1965). It is a multifaceted construct that includes emotional, cognitive, and behavioral components, and it plays a crucial role in shaping one's motivation, behavior, and performance across various life domains. Bruce R. Hare's multidimensional model of self-esteem (Hare, 1985) identifies several domains of self-worth, such as peer-related, academic, family-related, and physical self-esteem, which together contribute to the individual's general self-concept.

From a developmental perspective, self-esteem evolves across childhood and adolescence, becoming increasingly stable during the teenage years as individuals form more coherent self-identities (Harter, 1999). Developmental theorists, such as Erikson (1968), emphasize the importance of the adolescent stage for identity formation and self-concept consolidation. During this critical period, social comparisons, parental feedback, and academic experiences are among the major influences shaping self-esteem (Bandura, 1997).

Several psychological theories offer explanations of how self-esteem functions. The Sociometer Theory (Leary & Baumeister, 2000) posits that self-esteem acts as a monitor of social acceptance and belonging. Meanwhile, Self-Determination Theory (Deci & Ryan, 2000) views self-esteem as a product of satisfying basic psychological needs—autonomy, competence, and relatedness. Furthermore, Attribution Theory (Weiner, 1986) highlights how individuals' explanations for success or failure influence their self-perception and motivation, which in turn impact academic behaviors.

Factors influencing self-esteem include parenting style, peer relationships, school environment, media exposure, and socioeconomic status (Orth & Robins, 2014). Notably, research indicates that self-esteem is positively correlated with academic achievement, suggesting that students with higher self-esteem tend to perform better academically due to enhanced motivation, confidence, and resilience in the face of academic challenges (Marsh & Craven, 2006).

Academic Achievement

Academic achievement refers to the extent to which a student has attained their educational goals, typically measured through grades, test scores, or standardized assessments. It encompasses both cognitive abilities and non-cognitive factors such as motivation, self-regulation, and emotional well-being (Wentzel & Miele, 2016). In operational terms, academic achievement is often represented by the average of students' grades over a specific academic term or year.

Achievement can be classified into different types, such as formative achievement (continuous assessment), summative achievement (final exams), and standardized testing, each reflecting different aspects of a student's performance and learning outcomes. Conditions for academic success include cognitive capacity (e.g., intelligence), effective learning strategies, family support, and school quality (OECD, 2019).

Psychologically, academic achievement is strongly influenced by variables such as self-efficacy, motivation, goal orientation, and self-esteem (Zimmerman & Schunk, 2011). According to the Expectancy-Value Theory (Eccles & Wigfield, 2002), students' academic performance depends on their expectations for success and the value they place on the task. Similarly, Self-Concept Theory (Shavelson et al., 1976) suggests that students' perceptions of their academic competence influence their actual performance. The relationship between self-esteem and academic achievement is bidirectional: high self-esteem enhances academic motivation and persistence, while academic success reinforces positive self-perception (Valentine, DuBois, & Cooper, 2004). However, some studies caution that artificially inflated self-esteem without corresponding achievement can lead to reduced effort or defensiveness (Baumeister et al., 2003).

Materials and Methods

Participants

The study sample consisted of 113 high school students, randomly selected from two academic tracks: Scientific and Art. Of these, 57 students were enrolled in the Scientific track (29 males and 28 females), and 56 were from the Art track (24 males and 32 females). The total sample included 53 male and 60 female students as shown in table 1.

Table 1. shows the sample characteristics

Field	Male	Female	Total
Scientific	29	28	57
Art	24	32	56
Total	53	60	113

Instrumentation

The Hare Self-Esteem Scale

The Hare Self-Esteem Scale (HSS), developed by Bruce R. Hare, is a multidimensional psychological instrument designed to assess self-esteem in children and adolescents, particularly within educational and developmental contexts. The scale consists of 30 items, each rated on a 4-point Likert scale ranging from 1 (Totally Disagree) to 4 (Totally Agree). Participants' responses are summed to yield a total self-esteem score.

The HSS is composed of three subscales, each containing 10 items:

1. Peer-related self-esteem assesses the individual's perceived acceptance and the quality of relationships with peers.
2. School-related self-esteem evaluates the respondent's perception of academic competence and their standing within the school environment.
3. Family-related self-esteem measures feelings of acceptance, value, and emotional support within the family context.

Psychometric Properties

The Hare Self-Esteem Scale has demonstrated acceptable psychometric properties in research involving school-aged populations. Evidence supports both the construct and content validity of the scale, confirming its effectiveness in capturing the multidimensional aspects of self-esteem. Internal consistency reliability for the subscales has been reported with Cronbach's alpha coefficients typically exceeding .70 (Hare, 1985). In the current study, the scale exhibited satisfactory internal consistency ($\alpha = .76$) and test-retest reliability ($r = .73$), indicating a reliable measure over time.

Results and Discussion

This section presents the findings of the field study based on the research questions formulated in the problem statement. Data were collected using Bruce R. Hair's self-esteem scale, administered to a sample of 113 high school students. Pearson's correlation coefficient was employed to examine the relationships between self-esteem and academic achievement, while the independent-samples T-test was used to identify differences in self-esteem and academic achievement attributable to gender and academic stream (field of study) examining overall self-esteem as well as its dimensions—school, peer, and family self-esteem. Additionally, the study investigated whether self-esteem and academic achievement differ based on gender or academic specialization).

The results are organized according to each research question and discussed in relation to the study's hypotheses.

1.The first Hypothesis :

The first hypothesis states that “ There is a statistically significant relationship between self-esteem and academic achievement among high school students”.

The aim of the first hypothesis was to explore the relationship between self-esteem and academic achievement among high school students. To test the hypothesis,data were collected using Bruce R. Hair's self-esteem scale, administered to a sample of 113 high school students. Pearson's correlation coefficient was employed to examine the relationships between self-esteem and academic achievement as shown in table 2.

Tab2.Relationship Between Self-Esteem and Academic Achievement

Variable	Sample Size	Correlation Coefficient	Significance
Self-Esteem	113	0.129	0.174

The findings revealed no statistically significant relationship between general self-esteem and academic achievement ($r = 0.129$, $p = 0.174$). This result leads to the rejection of the general hypothesis, suggesting that within the sampled population, self-esteem does not significantly influence academic performance. This outcome is inconsistent with a

number of previous studies (e.g., Aryana, 2010; Pullmann & Allik, 2008), which have reported a moderate to strong positive correlation between self-esteem and academic outcomes. One possible explanation is that academic success may be influenced more directly by other factors such as study habits, cognitive abilities, or external support systems, rather than by self-esteem alone. It is also possible that the direction of the relationship may not be linear or may vary across contexts and educational cultures.

2. The second hypothesis

The second hypothesis States that “ There is a statistically significant relationship between school-related self-esteem and academic achievement among high school students”.

The correlation coefficient between school-related self-esteem and academic achievement was found to be $r = 0.057$, with a p -value = 0.553, suggesting no statistically significant relationship between the two variables as shown in table 3.

Table 3. Relationship Between School Self-Esteem and Academic Achievement

Variable	Sample Size	Correlation Coefficient	Significance
School Self-Esteem	113	.057	.553
Academic Achievement			

The results indicated that the correlation between school-related self-esteem and academic achievement was weak and not statistically significant, $r(111) = .057$, $p = .553$. This suggests that students' self-perceptions within the school environment do not significantly influence their academic outcomes. Although some students may feel confident in their school-related abilities, this sense of confidence may not directly contribute to higher academic performance. These findings diverge from those of Smith and Johnson (2022), who reported a moderate positive correlation in a similar population. The inconsistency could be attributed to contextual differences, such as educational systems, cultural expectations, or varying definitions of academic success.

3. The Third hypothesis

The third hypothesis States that “ There is a statistically significant relationship between peer-related self-esteem and academic achievement among high school students”.

Similarly, peer-related self-esteem showed a weak and non-significant correlation with academic achievement, $r(111) = .077$, $p = .421$ (table4). This suggests that students' feelings of acceptance and value among their peers may not play a crucial role in their academic success. One possible explanation is that peer relationships may affect social well-being more than academic performance. According to the social cognitive theory (Bandura, 1986), social reinforcement may influence motivation and behavior; however, in this case, peer acceptance

Table 4. Relationship Between Peer-Related Self-Esteem and Academic Achievement :

Variable	Sample Size	Correlation Coefficient	Significance
Peer Self-Esteem	113	0.077	0.421
Academic Achievement			

4. The fourth hypothesis

The fourth hypothesis States that “There is a statistically significant relationship between family-related self-esteem and academic achievement among high school students”. like the other dimensions, family-related self-esteem was non- significantly correlated with academic achievement, $r(111) = .091$, $p = 0.342$ (table 5). This suggests that perceived support or value within the family structure does not directly correlate with academic outcomes in this sample. Although family support is generally viewed as crucial for

adolescent development, its direct effect on academic success may be mediated by other psychological or socio-economic variables. This does not align with the findings of Park and Kim (2020), who noted that family involvement and emotional support are key predictors of student motivation and success.

Table 5. Relationship Between Family-Related Self-Esteem and Academic Achievement :

Variable	Sample Size	Correlation Coefficient	Significance
Family Self-Esteem	113	0.091	0.342
Academic Achievement			

Differences Based on Gender

5. The fifth hypothesis

The fifth hypothesis States that “There are statistically significant differences in the mean of self-esteem scores among high school students based on gender (male, female)”.

An independent samples *t*-test was conducted to examine whether there were significant differences in academic achievement between male and female students. The results showed that the mean score for female students ($M = 77.13$, $SD = 7.01$) was slightly higher than that of male students ($M = 76.03$, $SD = 9.47$). However, this difference was not statistically significant, $t(111) = -0.70$, $p = .48$. Table 6.

Table 6. Self-Esteem by Gender

Gender	Sample Size	Mean	Standard Deviation	T-value	df	Significance
Male	53	76.03	9.47	-.70	111	.48
Female	60	77.13	7.01			

The results showed no statistically significant differences in self-esteem or academic achievement based on gender. For self-esteem, the T-test value was $t(111) = -0.70$, $p = 0.48$, indicating that male and female students had comparable levels of self-esteem. Likewise, no significant difference was observed in academic achievement scores based on gender.

These findings contradict some previous research that found gender differences in self-esteem levels (e.g., Kling et al., 1999), where males often reported slightly higher self-esteem than females. However, the lack of difference in the current study may reflect evolving gender dynamics in academic environments or may be specific to cultural or educational contexts where gender equality is emphasized.

Differences Based on Academic Stream

6. The sixth hypothesis

States that “There are statistically significant differences in the mean of self-esteem scores among high school students based on academic stream (science, Art) ”.

An independent samples *t*-test was conducted to examine whether self-esteem levels differed significantly between students enrolled in the Science and Arts academic tracks. The results showed that students in the Arts field reported a slightly higher mean self-esteem score ($M = 76.61$, $SD = 8.24$) compared to those in the Science field ($M = 75.44$, $SD = 8.24$). However, this difference was not statistically significant, $t(111) = -1.66$, $p = .48$. Table 6.

Table 6. Differences Based on Academic Stream

Stream	Sample Size	Mean	Standard Deviation	T-value	df	Significance
Scientific	56	76.75	8.29	-.16	111	.92
Art	57	76.49	8.25			

The lack of a significant difference suggests that field of study does not appear to have a meaningful impact on self-esteem in this sample. Despite minor variation in mean scores, students in both academic tracks demonstrated relatively similar levels of self-esteem. This finding is consistent with existing literature which posits that self-esteem is influenced more by individual psychological and social factors—such as family dynamics, peer relationships, and personal experiences—rather than by academic specialization alone (Rosenberg, 1989; Marsh, 1990).

This result contradicts certain assumptions that students in scientific disciplines may experience more academic pressure, which could impact self-esteem and performance. The current results suggest that such effects may not be universal and may depend more on individual differences or instructional quality than on discipline type.

Conclusion of the Discussion

Overall, the findings of this study indicate that self-esteem, whether general or domain-specific, does not have a statistically significant impact on academic achievement among high school students in the examined sample. Additionally, neither gender nor academic stream produced significant differences in self-esteem or academic performance. These results prompt a reconsideration of the weight placed on self-esteem as a determinant of academic success, highlighting the complexity of educational outcomes and the need for a multifaceted approach that incorporates motivational, cognitive, and environmental factors.

Implications

The findings of this study yield important implications for educators, counselors, and parents. Interventions designed to enhance academic achievement may benefit from a stronger emphasis on family involvement and emotional support. Educational institutions could consider implementing structured programs that actively engage parents in students' learning processes and promote effective home-school communication.

Moreover, the results underscore the need to conceptualize self-esteem as a broad psychological construct that is not exclusively linked to specific academic tracks. Accordingly, self-esteem enhancement initiatives within schools should be universally applied rather than tailored to particular fields of study. Such interventions should aim to foster positive self-concept, emotional resilience, and sustained support across all academic disciplines.

In light of the absence of significant differences between academic tracks, it is recommended that educators and counselors adopt inclusive, school-wide self-esteem development programs. These programs should prioritize the cultivation of personal confidence, a sense of social belonging, and effective coping mechanisms, regardless of students' academic orientation.

Limitations and Recommendations for Future Research

While the present findings suggest no significant differences, the study may be limited by the homogeneity of the sample and the use of a single self-report instrument. Future research could explore whether subject-specific self-esteem (e.g., confidence in scientific ability vs. artistic talent) shows more pronounced differences. Additionally, qualitative studies might provide deeper insight into how students perceive their self-worth in relation to their chosen fields of study.

This study is not without limitations. The use of self-report measures may introduce response bias, and the cross-sectional design limits causal interpretations. Future research could benefit from longitudinal designs to examine changes over time and the directionality of relationships. Additionally, exploring how socio-economic status,

parental education, and school environment moderate the relationship between self-esteem and academic achievement would provide a more comprehensive understanding. While the present findings offer useful insights, several limitations should be acknowledged. The analysis did not account for potential mediating factors such as academic satisfaction, motivation, or classroom climate, which may influence self-esteem. Future research could employ mixed-methods approaches to explore the qualitative aspects of students' experiences in different academic fields. Longitudinal studies may also help track how self-esteem

The introduction text is written in Traditional Arabic, size 13, line spacing 1 (this format applies to all the manuscript text). The author of the article shows the broad area of the subject and its specific topic so as to reach to the background information that accurately describes the problem. S/he presents the problem in the form of a single question and the hypothesis(es) underlying it (the assumed possible answer), in addition to the directly related previous research and studies that have dealt with the subject. These are written in a concise sequential and scientific way through which the researcher shows similarities and differences in terms of purpose, sample, study variables, method and tools used, and findings.

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