

# *The Mediating Role of Academic Motivation in the Relationship Between Self-Worth and Academic Aspirations Among High School Students in Zanjan*

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**Abstract\_** This study aimed to investigate the mediating role of academic motivation in the relationship between self-worth and academic aspirations among high school students in Zanjan. The research employed a cross-sectional correlational design. The statistical population consisted of all second-grade high school students in Zanjan during the 2021–2022 academic year, from which 530 students were selected using a cluster random sampling method. The research utilized the Academic Aspirations Scale (Hassani et al., 2014), the Self-Worth Scale (Schwartz, 2004), and the Academic Motivation Scale (Harter, 1981). Data analysis was performed using SPSS-V23 and PLS software, and structural equation modeling (SEM) was employed to test the research hypotheses. The findings indicated that the proposed model had a good fit. The results showed that the direct effect of self-worth on academic aspirations among high school students in Zanjan was significant ( $p < 0.05$ ), while its direct effects on academic motivation and self-differentiation were not significant ( $p > 0.05$ ). Additionally, the direct effect of academic motivation on academic aspirations was significant ( $p < 0.05$ ). However, the indirect effect of self-worth on academic aspirations through academic motivation was not significant ( $p > 0.05$ ).

**Index term\_** Academic aspirations, self-worth, academic motivation

## I. INTRODUCTION

Given that education is essential for promoting equal life opportunities in society, it has become one of the key indicators of social progress in today's world. Accordingly, developing countries strive to create equal opportunities for access to high-quality education systems. The functions of

education include general education, vocational training, integration of values, discovery and expansion of new knowledge, and the application of science and knowledge to solve social problems and improve the quality of life in society. All strategies aimed at universalizing education share a fundamental goal: providing equal access to quality education for all [1]. Educational opportunity equality serves as a mechanism that fosters the development of creative thinking and enables individuals to cultivate their capabilities equally. It also allows individuals from lower socioeconomic backgrounds to achieve social mobility through education. Achieving this goal first requires addressing barriers to individual progress in society [2].

Since adolescents act based on their aspirations, these aspirations are considered a strong driving force for their progress and success. Academic aspirations do not develop in isolation but are influenced by multiple factors. Students with different individual and family backgrounds exhibit varying academic aspirations, which in turn lead to differences in academic achievement and success. To understand students' aspirations, the factors influencing them must first be identified. By recognizing these factors and their impact on students' academic success, the education system can work toward reducing educational inequalities and ensuring equal opportunities for all students [3]. Academic aspirations represent an individual's conscious effort to understand their skills, tendencies, values, opportunities, limitations, choices, and achievements [4]. They also involve recognizing one's goals and setting a plan to achieve them [5]. These aspirations reflect a developmental process over time, shaped by personal

needs, motivations, and desires in various activities that society perceives as leading to financial and social rewards [6].

Several factors contribute to the acceptance, proper coping mechanisms, and reduced distress in students, one of which is having well-defined personal values. Personal values play a crucial role in shaping students' academic aspirations, as they are broad psychological constructs that influence motivational behaviors and individual well-being [7]. They are also defined as the ideal qualities of behavior, providing organization and coherence in life and guiding goal-directed behaviors [8]. Over the past decade, Schwartz's value theory has been empirically validated, offering a structured framework for understanding personal values. Research findings suggest that self-worth can serve as a mechanism for reducing students' psychological and social vulnerabilities while enhancing their adaptability [9]. Additionally, Kano, Martin, Gaines, and Berben (2018) found that self-worth promotes adherence to personal rules, enhances motivation, reduces maladaptive behaviors, and mitigates students' psychological and social challenges. Similarly, Winkler (2021) demonstrated that self-worth contributes to increased academic success, improved learning orientations, and greater engagement in educational activities.

Academic motivation is one of the fundamental requirements for learning. It directs and intensifies behavior while helping learners maintain persistence in their efforts. Essentially, motivation energizes the learner [10]. It is considered a core construct in the learning process [11]. Gutierrez, Fox, and Kondili [12] argued that motivation drives individuals toward achieving specific goals. Turner [13] emphasized that academic motivation is shaped by an individual's learned beliefs about their self-worth, abilities, and potential, as well as their goals, expectations for success or failure, and the emotional responses derived from self-evaluation. Pekrun (2006) defined academic motivation as a comprehensive tendency to assess one's performance against the highest standards, strive for excellence, and derive satisfaction from achievement. Research indicates that individuals with different levels of academic motivation adopt significantly different approaches to life [14]. Similarly, a study by McBrain and Savage (2021) showed that students with higher academic motivation are more engaged in activities, complete more assignments, and achieve greater academic success.

Since a significant portion of educational activities take place within schools, schools play a crucial role as a social institution in shaping students' academic aspirations. To effectively fulfill this role, schools must function as dynamic and well-structured organizations [15]. Therefore, the present study aims to develop a causal model of academic aspirations based on self-worth, considering the mediating role of academic motivation among high school students.



Figure 1. Conceptual Model of the Study

## II. METHOD

The present study employed a descriptive-correlational research design using structural equation modeling (SEM) for data collection. The statistical population consisted of all second-year high school students (both male and female) in Zanjan during the 2021-2022 academic year. Regarding sample size in correlational research using SEM, various perspectives exist, but there is a general agreement that SEM, like factor analysis, is a statistical technique that requires a large sample size (Tabachnick & Fidell, 2001). Boomsma (1983, cited in Tabachnick & Fidell, 2001) suggested that a sample size of approximately 200 participants is sufficient for model fit. Based on the expected effect size, the distribution of measured variables, and statistical power considerations, at least 10 participants per estimated parameter were deemed sufficient, provided that the estimated effect size was large and the measured variables followed a normal distribution (Tabachnick & Fidell, 2001). Therefore, considering the number of estimated parameters in the model, the minimum required sample size for this study was 350 students. However, to account for potential attrition, 530 students were selected as the study sample.

A multi-stage cluster random sampling method was employed. First, two districts (Districts 1 and 2) were randomly selected from the high schools in Zanjan. Then, two schools were randomly chosen from each district. Subsequently, four classes from each selected school were randomly selected, and the questionnaires were distributed among the students in these classes. It is noteworthy that, given the public health conditions in the country due to the COVID-19 pandemic, the researcher used active student groups on virtual learning platforms (created for online classes) to distribute the questionnaires. After explaining the research objectives, the questionnaires were sent to these groups. All student information remained confidential.

The research instruments included three questionnaires. The **Academic Aspirations Questionnaire** developed by Hassani et al. (2014) consists of 15 items measuring academic aspirations, background factors (parental socioeconomic status, gender, and age), environmental factors (teacher support, parental encouragement, and school atmosphere), and personal factors (attitudes toward school, peer influence, and self-perception). The model evaluated in this study included three latent variables: (1) background factors, (2) personal factors, and (3) environmental factors. The Persian version of this scale uses a five-point Likert scale (1 = strongly agree to 5 = strongly disagree). In Hassani et al.'s (2014) study, each latent variable was measured using five indicators with the highest factor loadings. The standardized

factor loadings ranged from 0.20 to 0.77 for background factors, 0.20 to 0.62 for personal factors, and 0.46 to 0.62 for environmental factors. The reliability of the questionnaire components was reported as follows: background factors ( $\alpha = 0.79$ ), personal factors ( $\alpha = 0.82$ ), environmental factors ( $\alpha = 0.75$ ), and academic aspirations ( $\alpha = 0.89$ ), indicating acceptable reliability.

The **Contingencies of Self-Worth Scale (CSWS)** developed by Crocker, Luhtanen, Cooper, and Bouvrette (2003) was used to assess self-worth. It consists of 35 items rated on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree), measuring an individual's sense of value and importance. The scale includes seven subscales: family support, competition, physical appearance, divine love, academic competence, virtue, and approval from others. The reversed items in the questionnaire are 4, 6, 10, 13, 15, 23, and 30. The overall reliability of the scale was reported as 0.82 in a sample of 1,345 participants, with test-retest reliability over three months at 0.75. The reliability of the seven subscales ranged from 0.82 to 0.96. The scale demonstrated significant correlations with social desirability ( $r = 0.32$ ), Rosenberg's self-esteem scale ( $r = 0.34$ ), and collective self-esteem ( $r = 0.37$ ), confirming its validity. In Zaki's (2012) study, the overall reliability of the questionnaire using Cronbach's alpha was 0.799, with reliability coefficients of 0.706 for male and 0.835 for female students.

The **Academic Motivation Scale** developed by Harter (1981) was used to assess students' academic motivation. This standardized 33-item scale evaluates academic motivation using a Likert-type format, with responses ranging from 1 (never) to 5 (almost always). The original scale included dichotomous items representing intrinsic and extrinsic motivation, but it was modified to allow for a more nuanced measurement. Harter (1981) reported split-half reliability coefficients ranging from 0.54 to 0.84 and test-retest reliability coefficients over nine months ranging from 0.48 to 0.63. The validity and reliability of this scale were confirmed in a study conducted by Bahrani and Latifian (2009) among Iranian high school students.

For data analysis, SPSS v23 and PLS software were used. Structural equation modeling (SEM) was employed to test the research hypotheses.

### III. FINDING

This section presents the minimum, maximum, mean, and standard deviation for the study variables, including self-worth, academic motivation, and academic aspirations.

Table 1. Descriptive Statistics of Study Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Family Support	5	35	21.415	5.837
Competition	6	35	21.762	6.052

Physical Appearance	5	35	20.719	5.963
Divine Love	5	35	22.421	6.194
Academic Competence	6	35	21.606	6.365
Virtue and Piety	5	35	20.983	5.841
Approval from Others	6	35	21.198	5.665
Overall Self-Worth	43	245	150.104	38.116
Academic Aspirations	18	75	59.577	9.289

The mean and standard deviation of self-worth and its dimensions in the study sample are presented in Table 1. Based on the scoring method of the measurement tools, students' self-worth is at a moderate level, their academic motivation is also at a moderate level, while their academic aspirations are at a desirable level.

Table 2. Spearman Correlation Matrix of Study Variables

Variable	1	2	3
1. Self-Worth	1		
2. Academic Motivation	0.055	1	
3. Academic Aspirations	0.26 ( $p < 0.01$ )	0.26 ( $p < 0.01$ )	1

Spearman's correlation coefficients presented in Table 2 indicate a positive and significant relationship between self-worth, academic motivation, and academic aspirations among students ( $p < 0.01$ ).

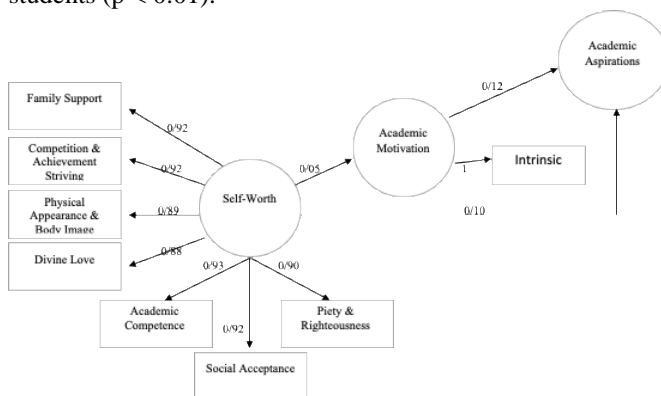


Figure 2. Fitted Model in the Standardized Coefficients State

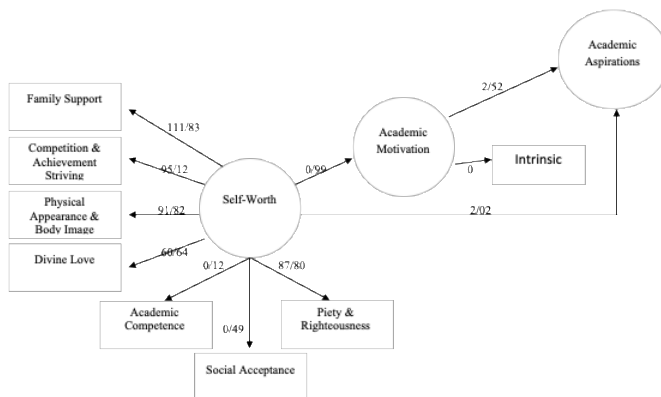


Figure 3. Fitted Model in the T-Values State



Table 3. Beta Coefficients and Bootstrap (T) Values for Direct and Indirect Effects

Pathway	$\beta$	T	P
Direct Effects			
Self-Worth $\rightarrow$ Academic Aspirations	-0.10	2.029	0.043
Self-Worth $\rightarrow$ Academic Motivation	0.054	0.998	0.319
Academic Motivation $\rightarrow$ Academic Aspirations	0.123	2.52	0.012
Indirect Effects			
Self-Worth $\rightarrow$ Academic Motivation $\rightarrow$ Academic Aspirations	0.007	0.856	0.392

As seen in Table 3, seven direct pathways and two indirect pathways were significant.

Table 4. Direct Effect of Self-Worth on Academic Motivation

Direct Effect	$\beta$	T	P
Self-Worth $\rightarrow$ Academic Motivation	0.054	0.998	0.319

According to Table 4, the direct effect of self-worth on academic motivation is not significant ( $p > 0.05$ ). This means that self-worth does not significantly predict academic motivation among high school students in Zanjan. Therefore, the null hypothesis is accepted, and the research hypothesis is rejected.

Table 5. Direct Effect of Self-Worth on Academic Aspirations

Direct Effect	$\beta$	T	P
Self-Worth $\rightarrow$ Academic Aspirations	-0.10	2.029	0.043

As shown in Table 5, the direct effect of self-worth on academic aspirations is significant ( $p < 0.05$ ). This suggests that self-worth positively explains the variance in students' academic aspirations. Therefore, the null hypothesis is rejected, and the research hypothesis is confirmed.

Table 6. Direct Effect of Academic Motivation on Academic Aspirations

Direct Effect	$\beta$	T	P
Academic Motivation $\rightarrow$ Academic Aspirations	0.123	2.52	0.012

As seen in Table 6, the direct effect of academic motivation on academic aspirations is significant ( $p < 0.05$ ). This means that academic motivation positively influences students' academic aspirations. Therefore, the null hypothesis is rejected, and the research hypothesis is confirmed.

Table 7. Indirect Effect of Self-Worth on Academic Aspirations through Academic Motivation

Indirect Effect	$\beta$	T	P
Self-Worth $\rightarrow$ Academic Motivation $\rightarrow$ Academic Aspirations	0.007	0.856	0.392

As seen in Table 7, the indirect effect of self-worth on academic aspirations through academic motivation is not significant ( $p > 0.05$ ). This indicates that academic motivation does not play a mediating role in the relationship between self-worth and academic aspirations. Therefore, the null hypothesis is accepted, and the research hypothesis is rejected.

#### IV. DISCUSSION AND CONCLUSION

The present study aimed to investigate the mediating role of academic motivation in the relationship between self-esteem and academic aspirations among high school students in

Zanjan. The results showed that the direct effect of self-esteem on academic motivation was not significant. This sentence indicates that, based on the obtained results, the direct effect of self-esteem on academic motivation and self-differentiation of high school students in Zanjan was not significant. In other words, based on the collected data, it was shown that self-esteem, as perceived by students, does not have a significant impact on their academic motivation. Therefore, with further explanation, it can be better understood that this sentence means that self-esteem alone cannot guarantee an increase in students' academic motivation. However, this result is specific to high school students in Zanjan and cannot be generalized to other students, schools, or cities.

The results revealed that the direct effect of self-esteem on academic aspirations was significant, meaning that self-esteem positively explained the variance in students' academic aspirations. The findings of this study are consistent with those of Fahad et al. [16] and Jiang et al. [17]. Self-esteem can enhance academic aspirations, leading to greater academic success and personal satisfaction. When students feel that their academic aspirations are meaningful and valuable, they are more likely to exert greater effort and achieve their best performance. Furthermore, self-esteem helps students face challenges and obstacles along their educational journey and enables them to reach a stronger position.

Additionally, in explaining the findings, it can be stated that self-esteem is considered one of the indicators of psychological adaptation and social functioning. Self-esteem may act as a mechanism for reducing psychological and social harm to students and enhancing their adaptation to school. Students with proper academic aspirations are characterized by autonomy, self-reliance, and a comprehensive study plan. They also have a positive belief in their educational stages. Such students tend to focus more on their abilities than their shortcomings and cope well with stressful life situations. Fahad et al. (2021) showed that students with low self-esteem are more likely to engage in risky behaviors such as substance abuse and bullying. Jiang et al. (2018) also found that self-esteem is related to avoiding risky behaviors and adopting health-related habits. Self-esteem leads to social adaptation and reduces social-psychological maladjustment and harm in adolescents. Self-esteem is a mechanism that explains and understands the ethical-social foundation and social behavior of individuals. Adolescents with high self-esteem experience better quality friendships, lower anxiety levels, and higher confidence [18]. Furthermore, studies have confirmed the bidirectional relationship between self-esteem and self-perception. In other words, when self-esteem or self-worth decreases, feelings of weakness and incapacity emerge. Self-esteem improves overall health, self-regulation, motivation, reduces depression, and corrects social behavior, thereby manifesting

its effects in various aspects of personal, familial, educational, and social life.

The results also indicated that the direct effect of academic motivation on academic aspirations was significant, meaning that academic motivation positively explained the variance in students' academic aspirations. The findings are consistent with those of Sabour Esmaili et al. [19], Fathi [20], Ahmadi [21], and Barabari & Arvin [2]. Academic motivation refers to the degree of enthusiasm and commitment a person has to achieve their academic aspirations. When a person has a strong motivation to study, they show their best efforts in pursuing their academic goals and work hard. Academic motivation can include various factors such as interest, goals, hope, interest in learning, and intrinsic motivation. These positive factors can encourage an individual to study, attend university, perform well in their studies, and eventually achieve their academic aspirations. On the other hand, a lack of academic motivation can lead to reduced effort, lack of focus, and diminished academic performance. When an individual has low motivation to study, they feel that further effort is pointless, leading to academic disengagement.

These findings align with research by Fiter [22], Hamzeh et al. [23], and Nouhi et al. [24], which showed that strengthening progress motivation in students leads to an increase in academic aspirations. The results of these studies indicate that visualizing fundamental needs and predicting the achievement of these goals significantly increases students' motivation to engage more in the present. Research indicates that high-achieving learners are often self-regulated; they set specific learning goals and regularly evaluate their progress toward those goals. Additionally, students with high academic motivation have a strong drive to achieve upward mobility, resilience in facing moderately difficult tasks, and a willingness to apply renewed effort on unfinished tasks. They also show dynamic time perception, future orientation, attention to competence criteria, and make deliberate choices in selecting friends or collaborators. These traits, even to a moderate degree, increase individual effort to achieve success and academic aspirations.

Therefore, the results of the present study are also important from an educational perspective. As is known, one of the objectives of education is to cultivate students who possess healthy and constructive relationships, high academic motivation, and an attention to participating in social activities, enabling them to become useful citizens for themselves and society. Hence, these goals cannot be fully achieved unless the necessary educational conditions are provided. If a healthy social-psychological atmosphere is not created in schools and classrooms, and students do not experience such an environment during their academic years, it would be unrealistic to expect well-adjusted individuals and a healthy society. Therefore, families, school members, teachers, and other related social institutions must continuously strive to educate students with high academic

motivation and good social adaptation, so that we can create a healthy and thriving society—one in which individuals grow and reach their full potential, fulfilling the ultimate purpose of creation.

Finally, the results indicated that the indirect effect of self-esteem on academic aspirations through academic motivation was not significant. This means that academic motivation does not act as a mediator in the relationship between academic success and academic aspirations. The findings of the eighth hypothesis of the present study contradict those of Rezaei [25], Keramali[7], Ahmadi [21], and Moieni Kia & Bakhshandeh Pileh Rood [15], which showed that there is a positive and significant relationship between academic aspirations, academic motivation, and academic success. To explain this result, one might consider Harter's (1981) theory of motivation being a consequence. According to this theory, academic motivation cannot be a mediator or cause but is instead a reflection of how life unfolds—it is the outcome of how things are progressing. Motivation is influenced by both success and failure. What needs to be improved is not just motivation but also our skills for dealing with life (Seligman, 1994, as cited in Rio, 2018). In other words, in the relationship between good performance and motivation, good performance is the cause, while motivation is merely the consequence. Motivation is essentially a scorecard or a report card on how things are going (Helmick & Aken, as cited in Rio, 2018). Therefore, motivation can be considered a consequence rather than a cause, which helps explain the results.

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