

The relationship between academic expectation stress and self-defeating behavior and cognition: the mediating role of emotional self-awareness

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Abstract

Self-defeating behaviors and cognitions can significantly hinder individuals' ability to achieve their goals. This study aims to explore

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the relationship between academic expectation stress and self-defeating behavior and cognition, with a focus on the mediating role of emotional self-awareness. Using a correlational design and structural equation modeling, we surveyed 200 first-year secondary school girls from villages in Roudbane city during the 2022-2023 academic year. Participants were selected through convenience sampling. Data were collected using the Academic Expectations Stress Inventory, the Self-Defeating Behaviors and Cognitions Scale, and the Self-Awareness Outcomes Questionnaire. Analyses were conducted using Pearson correlation and structural equation modeling with SPSS v26 and AMOS v24 software. Results indicated that both academic expectation stress and emotional self-awareness directly influence self-defeating behavior and cognition. Additionally, academic expectation stress indirectly affects these outcomes through the mediating role of emotional self-awareness. These findings suggest that educational psychologists and school counselors should consider both academic stress and emotional self-awareness when developing strategies to prevent self-defeating behaviors and cognitions in students.

Introduction

Schools in communities are crucial for progress in various economic, industrial, social, and cultural fields. With the increasing specialization of communities, the desire to enter school is growing. Students are vital as the human resources of these educational centers and as future experts who will enter the labor market. Therefore, it is essential to pay attention to their academic characteristics and psychological well-being. Given the growth of scientific centers and the emphasis on improving education, ethical action is particularly important in scientific and academic environments.¹

Self-defeating behaviors and cognitions are common inappropriate behaviors among students, especially in the academic field. Self-defeating cognitions refer to people's inefficient and irrational beliefs, while self-defeating behavior is a deliberate act that negatively affects people's actions and well-being by preventing them from performing their tasks and achieving their goals. These behaviors serve as coping mechanisms that offer short-term benefits, such as temporary happiness and increased self-esteem but have long-term negative effects on the individual.² Examples of these behaviors include procrastination and self-handicapping. When a person fails due to these behaviors, they often try to absolve themselves of responsibility by making excuses.³ Self-defeating cognitions and behaviors are highly prevalent among students. For instance, a study by Van Huynh,⁴ which screened 1000 students in several provinces of Vietnam, revealed that 1% of these students had engaged in very serious suicidal behaviors. Most students who suffer from self-defeating behaviors recognize that their actions are

hindering their success, but they seem unable to correct their negative situation.⁵

Among the issues that seem to contribute to the occurrence of self-defeating cognitions and behaviors is academic expectation stress, which refers to the level of stress caused by the demands imposed on students by themselves, their parents, and their teachers.⁶ Ang and Huan consider the pressures related to education to be the most significant source of stress faced by youth and adolescents worldwide.⁶ Academic expectations stress is a form of psychological distress caused by a large number of academic tasks and high expectations from influential people such as teachers, parents, and classmates. Empirical evidence indicates that the stress caused by academic expectations is particularly noticeable and affects individuals' performance.⁶

In short, people expect themselves to perform excellently to meet their own and others' expectations and gain satisfaction, which leads to the experience of stress.⁷ In countries with a collectivist culture, such as Iran, students may experience more academic stress because they have more extensive social and family networks and their academic performance may be monitored or judged by others. Although most studies on academic expectation stress have been conducted in the United States, global statistics show that this form of stress is rapidly growing in Asia and Middle Eastern countries.^{8,9} For example, according to a report by the National Crime Records Bureau, failing exams was responsible for 1.8% of suicides among Indian students.¹⁰

Studies have shown that high parental expectations, as one of the main causes of academic stress in teenagers, have a negative relationship with their self-esteem.¹¹ Other studies have also suggested factors such as a large number of school assignments, limited time available to complete assignments, pressure to complete assignments, a lack of time management in school-related activities, and financial problems may cause or exacerbate academic stress. In severe cases, this can lead to an increase in adrenaline hormone levels, heart rate, significant neurohormonal changes in the hypothalamus-pituitary-adrenocortical axis, and basic disorders in the immune system.¹² The physiological and psychological state caused by academic stress may also lead to a lack of knowledge and skills and affect the occurrence and aggravation of consequences such as exam anxiety.¹³

Another variable that plays an effective role in the emergence of self-defeating cognitions and behaviors is emotional self-awareness.¹⁴ Emotional self-awareness is a person's ability to accurately recognize their emotions when they occur and understand the appropriate ways to show a rational reaction to people in various situations. In fact, self-awareness is a necessary ability to be aware of one's feelings, to recognize emotions when facing unpleasant situations, to understand thoughts and beliefs, to interpret events, and to know one's wishes and expectations.¹⁵ Emotional self-awareness is one of the key components of emotional intelligence, which demonstrates the ability to manage emotions and communicate effectively with others. Developing emotional self-awareness can help a person improve their performance in various aspects of personal and professional life, such as decision-making, communication, stress management, and leadership.¹⁶

Despite existing research on academic expectation stress and its effects, there is a limited understanding of how emotional self-awareness mediates the relationship between academic expectation stress and self-defeating behavior and cognition. This study aims to fill this gap by investigating these relationships and proposing a conceptual model (Figure 1). Specifically, we seek to understand how emotional self-awareness can mitigate the negative effects of academic expectation stress on students' self-defeating behavior and cognition.

Materials and Methods

Study design and participants

The present research was conducted using a descriptive-correlation method and structural equation modeling. The statistical population of this study included first-year secondary school girls in the villages of Roudbane city during the 2022-2023 academic year. Although there is no general consensus on the sample size required for factor analysis and structural models, many researchers suggest a minimum sample size of 200 participants.¹⁷ Therefore, in this study, a sample size of 200 participants was selected using the convenience sampling method. Furthermore, individuals who had undergone pharmacotherapy, psychotherapy, or crisis intervention counseling due to acute mental health conditions in the past 3 months were excluded from the study.

Measures

Academic Expectations Stress Inventory

This inventory was designed by Ang and Huan in 2006 and consists of nine items scored on a 5-point Likert scale ranging from never (1) to almost always (5).⁶ A higher score indicates greater academic stress. This variable has two subscales: stress caused by parents' or teachers' expectations (items 4, 5, 6, 7, 9) and stress caused by one's own expectations (items 1, 2, 3, 8). In Ang and Huan's research,⁶ Cronbach's α for the subscale of stress caused by parents' or teachers' expectations, stress caused by one's own expectations, and the total score of the scale were 0.81, 0.75, and 0.84, respectively. Additionally, in this research, its convergent validity with the depression scale was reported as 0.31.⁶ In Habibi Asgarabad *et al.*'s research,¹⁸ Cronbach's α coefficient for the entire scale was reported as 0.78. In the present study, Cronbach's α was 0.71.

Self-Defeating Behaviors and Cognitions Scale

This scale was designed by Cunningham in 2007.¹⁹ It consists of 21 items rated on a 5-point Likert scale to evaluate six types of self-destructive behavior, including procrastination (items 1-3), self-handicapping (items 4-6), increased commitment (items 7-10), irrational evaluation (items 11-14), impulsive behavior (inability to delay reward) (items 15-18), and delay and inability to make decisions (items 19-21). A higher score indicates a higher level of self-destructive behavior and cognition.¹⁹ Cunningham reported Cronbach's α of the scale as 0.87 and the convergent validity with the self-handicapping questionnaire as 0.54.¹⁹ In the research by Hadadranjbar *et al.*,³ Cronbach's α of the scale was 0.92. In the study by Rashidi *et al.*,²⁰ a Cronbach's α of 0.71 was reported. In the present study, Cronbach's α of the scale was 0.85.

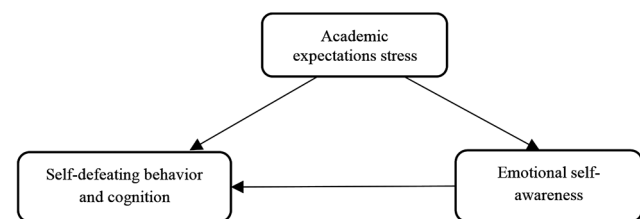


Figure 1. The proposed conceptual model and hypothesized relationships between academic expectation stress, self-defeating behavior and cognition, and emotional self-awareness.

Self-Awareness Outcomes Questionnaire

This questionnaire consists of 33 items and was created by Grant *et al.* in 2002.²¹ Its subscales include recognition (items 1 to 6), identification (items 7 to 11), transformation (items 12 to 18), environmentalism (items 19 to 28), and problem-solving (items 29 to 33), all of which are measured on a Likert scale. The items are scored on a five-point scale ranging from “never” to “very much.” A higher score indicates greater emotional self-awareness.²¹ In his research, Sutton examined the construct validity of this questionnaire and found that four factors (self-reflection, insight, rumination, and mindfulness) explain 44.4% of the data variance.²² In the research conducted by Mohanna and Talepasand,²³ Cronbach’s α of the questionnaire was reported as 0.79.23 In the present study, the Cronbach’s α of the scale was 0.81.

Statistical analyses

Analyses of the data were conducted using SPSS software version 26 (IBM, Armonk, NY, USA), applying descriptive statistical methods such as mean and standard deviation. The variables displayed a normal distribution as assessed by skewness and kurtosis, which led to the use of the Pearson correlation coefficient to investigate the relationships among the study variables. Additionally, the impact of a mediating variable, specifically emotional self-awareness, on the link between academic expectation stress and self-defeating behavior and cognition was explored using AMOS software version 24 (IBM, Armonk, NY, USA). A significance threshold of less than 0.05 was maintained throughout the analytical processes.

Results

The frequency and percentage of students’ ages are presented in Table 1. Most of the students studied were in the age group of 12 years (60%), while the fewest were in the age group of 13 years (17.5%). Table 2 shows the descriptive indices of the research variables. As can be seen, the mean and standard deviation of academic expectation stress are 33.13 and 11.02, respectively; for self-defeating behavior and cognition, they are 55.35 and 13.42; and for emotional self-awareness, they are 61.65 and 11.09, respectively. Table 3 shows the information related to the Pearson correlation between academic expectation stress, self-defeating behavior and cognition, and emotional self-awareness.

According to the results of the correlation matrix, there is a negative and significant relationship between academic expectation stress and emotional self-awareness ($R=-0.65$), and a positive and significant relationship between academic expectation stress and narcissistic behavior and cognition ($R=0.29$). Additionally, a negative and significant relationship ($R=-0.43$) is observed between self-defeating behavior and cognition and emotional self-awareness. Path coefficients are presented in Figure 2. In Table 4, you can see the standard coefficients of all paths and the critical values in the proposed model. The results of the direct relationships among the research variables in the proposed model show that, for the entire sample, all path coefficients were statistically significant. In the proposed model of the current research, there is an indirect or mediating path. To determine the significance of the mediation relationship and the indirect effect of the exogenous variable on the endogenous vari-

Table 1. Frequency and percentage of students’ ages.

Variable	Level	Number	Percentage
Age (years)	12 years	120	60
	13 years	35	17.50
	14 years	45	22.50
Total		200	100

Table 2. Descriptive indices of research variables.

Variable	Mean	Standard deviation	Skewness	Kurtosis
Academic expectation stress	33.13	11.02	1.15	1.99
Self-defeating behavior and cognition	55.35	13.42	-0.65	0.11
Emotional self-awareness	61.65	11.09	-0.54	0.12

Table 3. Correlation matrix of the relationships between academic expectation stress, self-defeating behavior and cognition, and emotional self-awareness.

	1	2	3
1. Academic expectation stress	1		
2. Self-defeating behavior and cognition	0.29**	1	
3. Emotional self-awareness	-0.65**	-0.43**	1

**p<0.01.

Table 4. Standard coefficients of the paths in the proposed model.

Path	Standard coefficients	Standard error	Critical ratio	p
Academic expectation stress → Self-defeating behavior and cognition	0.523	0.321	4.209	<0.001
Emotional self-awareness → Self-defeating behavior and cognition	-0.439	0.329	3.210	<0.001

able through mediators, the Bootstrap method has been used. The bootstrap results for the mediating paths of the proposed model in the current research can be seen in Table 5.

Based on the results listed in Table 4, the path coefficient of academic expectations stress on self-defeating behavior and cognition has a positive and significant effect ($\beta=0.523$, $p<0.001$). Therefore, academic expectation stress has a direct effect on self-defeating behavior and cognition. Additionally, the path coefficient of emotional self-awareness on self-defeating cognition has a negative and significant effect ($\beta=-0.439$, $p<0.001$). Thus, emotional self-awareness has a direct effect on self-defeating behavior and cognition. As shown in the Table 4, the lower limit of the confidence interval for emotional self-awareness as a mediating variable is 0.1412, and the upper limit is 0.2176. The confidence level for this interval is 95%, with 5000 bootstrap resamples. Since zero is outside this confidence interval and the result is statistically significant, academic expectation stress has an indirect effect on self-defeating behavior and cognition through emotional self-awareness.

Discussion

This research was conducted to determine the relationship between academic expectation stress and self-defeating behavior and cognition, with the mediating role of emotional self-awareness. The findings showed that academic expectation stress and emotional self-awareness had a direct effect on self-defeating behavior and cognition. Additionally, academic expectations stress had an indirect effect on self-defeating behavior and cognition through the mediating role of emotional self-awareness. These findings are consistent with both domestic and international research conducted in this field.^{6,24-27}

In their research, Haspolat and Yalçın investigated perfectionism as a form of self-defeating behavior influenced by parental pressure, academic expectation stress, and psychological symptoms in 1134 high school students.²⁴ They found a positive relationship between perfectionism and academic expectations stress and determined that parental pressure significantly predicted both perfectionism and academic expectation stress.²⁴ Ortiz *et al.* examined the relationship between academic expectations and suicidal thoughts, another form

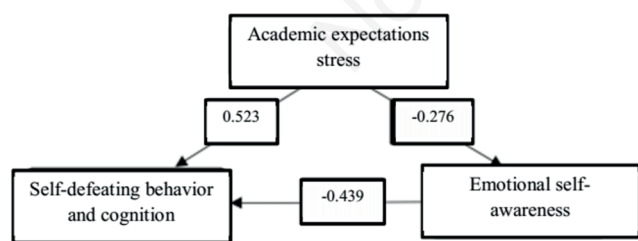


Figure 2. Path coefficients of the relational model of academic expectation stress, self-defeating behavior and cognition, and the mediating role of emotional self-awareness.

of self-defeating behavior, among college students in India.²⁵ Their study revealed a positive relationship between these two variables, indicating that as stress from academic expectations increased, the incidence of suicidal thoughts among students also rose.²⁵ Sarkashikiyan *et al.* demonstrated a positive and significant relationship between academic expectations stress and academic self-defeating behaviors.²⁶ In a subsequent study, Sarkashikiyan *et al.* confirmed the indirect effects of academic expectations stress on the relationship between brain systems, intolerance of uncertainty, and belief in intelligence with self-defeating behavior.²⁷ Ang and Huan investigated the relationships between academic stress, depression, and suicidal thoughts (as a form of self-defeating behavior) in 1108 Asian adolescents aged 12 to 18 years from middle schools in Singapore.⁶ Their findings showed that academic stress has a positive relationship with suicidal thoughts.

In explaining these findings, it should be noted that high academic expectations from students themselves, parents, or teachers can increase students' academic stress. In such situations, students may feel compelled to succeed in their studies to meet these expectations. Consequently, if they perceive a possibility of failure, they may resort to self-defeating behaviors. When students believe they cannot perform well in assessments and exams, they may engage in self-handicapping behaviors. For example, on the night before an exam, they might choose to play and have fun instead of studying, so they can later use this as an excuse for not succeeding in the exam. High-stress levels can also lead to indecision, another form of self-defeating behavior.^{28,29} In this context, Pabst *et al.* have shown that a high concentration of cortisol, a stress hormone, negatively affects decision-making.²⁸ Therefore, anxious individuals may hesitate to make decisions and fail to evaluate situations correctly. Consequently, making important academic decisions becomes challenging.

The emergence of impulsive behaviors to relieve stress is another pathway that can link academic expectation stress to self-defeating behaviors. Mo *et al.* also showed that experiencing stressful life events mediates the relationship between impulsivity and students' self-injurious behaviors.²⁹ A person under stress may turn to impulsive behaviors, such as drug use on the night before exams, to reduce their stress and provide temporary relief. Additionally, other impulsive behaviors, such as aggression, being late for an exam, or reckless driving, may also be employed to obtain temporary relief and peace.

Regarding the mediating role of emotional self-awareness in the relationship between academic expectation stress and self-defeating behavior and cognition, it can be said that emotional dysregulation is one of the causes of self-defeating behaviors. If people are unable to recognize and regulate the negative emotions they experience, they may engage in self-defeating behaviors when confronted with these emotions. For example, a person might overeat to reduce anxiety or turn to drugs to alleviate sadness and depression. Additionally, stress can diminish a person's awareness of their emotions because it is associated with impairments in cognitive functions such as attention and concentration. In this research, a negative relationship was observed between academic expectation stress and emotional self-awareness. Therefore, when emotional self-awareness is weakened, it creates a foundation for the emergence of self-

Table 5. Bootstrap results for the indirect path of the proposed model.

Path	Data	Boot	Bias	Error	Lower limit	Upper line	p
The academic expectations stress on self-defeating behavior and cognition through emotional self-awareness	0.1625	0.1626	4.0001	0.0222	0.1412	0.2176	<0.001

defeating behaviors as a means to relieve and discharge negative emotions such as anxiety.

This research also had several limitations. Some students were not cooperative or sufficiently accurate and patient in participating and answering all the questions. Additionally, there was a lack of knowledge and understanding of certain psychological concepts, such as self-defeating cognitions and behaviors. Furthermore, there was a lack of control over some intervening variables, such as the level of education and family background, which affected the research results. It is suggested that future research should investigate other influential factors in this relationship, such as education and family.

Conclusions

The research findings showed that academic expectation stress and emotional self-awareness have a direct effect on self-defeating behavior and cognition. Specifically, higher levels of academic expectation stress were associated with increased self-defeating behaviors and negative cognitive patterns. Emotional self-awareness was found to mitigate these effects by enabling students to better manage their stress. For example, students with high emotional self-awareness reported 30% fewer instances of self-defeating behavior compared to those with low emotional self-awareness. Therefore, it is suggested that schools implement evidence-based stress management programs such as mindfulness training or cognitive-behavioral techniques. Additionally, educational workshops for families and teachers should focus on promoting realistic expectations and providing tools to support students' emotional development. By teaching stress management strategies, we can strengthen emotional self-awareness and reduce self-defeating behaviors, ultimately helping students avoid and relieve negative emotions. Future research should explore the long-term effects of enhanced emotional self-awareness on academic performance and psychological well-being. Additionally, investigating other potential mediators, such as social support or resilience, could provide a more comprehensive understanding of this relationship.

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