

Structural Relationships between Academic Procrastination and Quality of School Life with the Mediating Role of Difficulty in Emotional Regulation

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Abstract

Background: Quality of school life is defined as the overall student satisfaction with their experiences of school activities. This study is aimed at investigating the structural relationships between academic procrastination and quality of school life with the mediating role of difficulty in emotional regulation.

Methods: This correlational study adopts the structural equations method. The statistical population consists of 4734 female high school students in the city of Kerman, in 2018-2019. A sample of 353 subjects was selected through Cochran's formula using the random cluster sampling method. To collect data, Ainley and Burke's Quality of School Life Scale, Solomon and Rothblum's Procrastination Assessment Scale for Students (PASS) and Graz and Roemer's Difficulty in Emotion Regulation Scale (DERS) were used. The validity and reliability of the questionnaires was confirmed through factor analysis and Cronbach's alpha, respectively. Research data were analyzed through inferential statistics. SEM and confirmatory factor analysis were applied using SPSS and AMOS.

Results: The results showed that the variable of academic procrastination has a negative and significant effect on the quality of the students' school life with a negative coefficient ($\beta = -0.722$) and a significance equal to 0.000. Academic procrastination has a significant and direct effect on the difficulty of emotional regulation according to the positive coefficient ($\beta = 0.528$), and a significance equal to 0.000.

Conclusion: According to the results, the variable of academic procrastination has a negative and significant effect on the quality of school life among the students. The academic procrastination variable has a significant and direct effect on the difficulty of emotional regulation.

Key Words: Academic procrastination, Difficulty in emotional regulation, Quality of school life, Students.

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1- INTRODUCTION

The growth and development of any society depends on its educational system. The school is one of the organizations which have a special sensitivity in all societies. This sensitivity is mostly due to the fact that its internal operations are exposed to public view and public judgment, so the course of change and social progress necessitates the need for education (1). According to the World Health Organization, one understands one's life situation according to culture and value systems and its relationship with goals, expectations, interests, standards and life experiences. Thus, the quality of life has a broad definition that affects a person's physical health, mental state, independence, social relationships and personal beliefs (2).

The term quality of life is inherently ambiguous because it can refer to both one's personal experience of life and the living conditions in which one finds oneself. Therefore, the concept of quality of life is very subjective (3). The specific conditions of different environments can affect the people's quality of life. School is one of the most important environments where the adolescent generation spends most of its time. Therefore, the quality of school life is one of the most important dimensions of quality of life, by which the students' education and life are seriously affected (4). Due to the importance of the quality of life of children and adolescents in school, the World Health Organization has recently raised the need for countries to improve school behavior and increase student health in the form of quality of life in school. One of the goals of the school health program presented by this organization is to create a healthy school environment in order to respect the dignity of students, their health and well-being, as well as to provide multiple opportunities to facilitate their success and progress (5). Quality of life in school is an important

part of the overall quality of life of the students and arises from the interaction of students, family and school (6). Quality of school life is also a structure that is defined as the well-being and general satisfaction of students from positive and negative experiences that are rooted in in-school activities (7). These experiences constitute the general perception of the student of his / her level of well-being, well-being and overall satisfaction with life within the school and indicate the level of satisfaction with his / her daily life at school (8).

One of the factors that play an important role in the daily life of students in general and in the quality of life in school in particular is academic procrastination. There are many types of procrastination, but the most common is academic procrastination. Academic procrastination is an irrational tendency to procrastinate in starting or completing a homework assignment that learners do not have enough motivation to do despite their intention to do academic work on time. As a result, they fail to complete the tasks within the desired and expected time frame (9). Studies indicate a high prevalence of procrastination in different groups, especially young people and adolescents. Procrastination with an estimated 91% has a high prevalence among different levels of education. In addition, some other studies have reported a prevalence of chronic procrastination up to 23%. Students, in terms of average education, also show significant procrastination, which accounts for one third of their daily activities, and it seems that these percentages are increasing day by day (10). The negative consequences of procrastination in educational settings are also reported in a range of low academic performance, lower grades and inactive participation in classes and discussions, low satisfaction with academic performance and failure, and even higher general anxiety. The tendency to postpone

the assignments is not only negatively related to academic achievement but also negatively related to the quality of school life (11). Research shows that academic procrastination is to some extent mediated by the relationship between satisfaction with school life and school attachment (12). Other studies show that academic procrastination has a significant negative correlation with academic adjustment, quality of school life, and grade point average (13).

Difficulty in emotional regulation is another issue that can affect the students' quality of school life. One of the topics that have attracted a lot of experimental and theoretical efforts over the past two decades is the issue of emotions and the role that emotion and emotional regulation play in individual behaviors. Despite the positive and constructive role of emotions in students' lives, there is another dimension to emotions that is the destructive aspect of them. In fact, the emotions can become problematic and traumatic when they are expressed in the wrong style, occur in a disproportionate context, are very intense, and affect a person's life for a long time (14). Entering school has its own tensions; like failures, conflicts, pressures and changes. Some students experience psychological problems after entering school that affect their quality of school life and lead to some psychological disturbances. Familiarity with students' emotional regulation guides can reduce some of the anxiety, depression, and other emotional issues; Because it increases academic motivation and, consequently, has significant effects on self-esteem, and this condition promotes mental health among students and increases the quality of school life. In general, the students who experience short-term emotions use better coping strategies (15). The results show that emotion regulation strategies are associated with reducing negative emotions and emotional events; and

focusing on positive emotion regulation strategies enhances people's understanding of emotion management (16). Research shows that the quality of life decreases with increasing difficulty in emotional regulation, or in other words, the quality of life increases with increasing emotion regulation skills (17). The aim of this study was to investigate the effect of academic procrastination on the quality of school life with regard to the mediating role of the difficulty in emotional regulation in female students in schools of Kerman, Iran.

1-1. Research hypotheses

- a) The variable of academic procrastination has an effect on the quality of school life due to the mediating role of difficulty in emotional regulation.
- b) The variable of academic procrastination has an effect on the difficulty of emotional regulation of female high school students in Kerman.

2- MATERIALS AND METHODS

The present study is a descriptive correlational study which applies the method of structural equations and investigates the effect of academic procrastination on the quality of school life with regard to the mediating role of the difficulty in emotional regulation among the female students in Kerman. The statistical population of the present study consists of 4734 female students of public secondary schools in the first district of Kerman city in the 2018-2019 academic year. Using the Cochran's formula and random cluster sampling method, 353 individuals were selected as the sample of the study; and then a questionnaire was given to them.

2-1. Instruments

Three questionnaires were used to collect data.

- a) **Academic procrastination questionnaire (PASS):** This scale,

developed by Solomon and Rothblum, has 27 items that examine three components. These components are: 1- Preparation for the exam (items 1 to 6), 2- Preparation for homework (items 9 to 17) and 3- Preparation for writing the article (items 20 to 25). The response to the items can range from "rarely (score 1), to sometimes (score 2), often (score 3) and always (score 4). Regarding the reliability of the academic procrastination questionnaire, Ali Mard reported a coefficient of 0.84 using the internal consistency. To determine the validity of the scale, he used the correlation of the total score of the scale with each of the questions in which all correlation coefficients were significant at the level of $P < 0.01$ (18). In the present study, confirmatory factor analysis was used to evaluate the validity and reliability of this scale. The indices obtained from confirmatory factor analysis in the present study (RMSEA = 0.000; CMIN / DF = 0.595; GFI = 0.999; AGFI = 0.993; and CFI = 1.0) indicate the appropriate fit of the model with the data. Cronbach's alpha for this questionnaire was 0.71 which confirms its reliability.

b) The Quality of School Life Questionnaire: The scale is developed by Ainley and Burke (1999). It includes 39 items exploring 7 factors of public satisfaction, Negative emotions, Relationship with teacher, opportunity, progress, adventure and social cohesion. The scoring is on a Likert scale. Questions 5, 14, 18, 28 and 37 are scored in reverse. A convergent validity of this questionnaire has been previously estimated and confirmed by examining its correlation with the general self-efficacy questionnaires and the adolescent adjustment scale (19). In the present study, confirmatory factor analysis was used to evaluate the validity of this scale. The indices obtained from the confirmatory factor analysis in the present study (RMSEA = 0.000, CMIN / DF = 0.739,

GFI = 0.998, AGFI = 0.983, and CFI = 0.99) indicate the appropriate fit of the model with the data. Its reliability was also confirmed by a Cronbach's alpha coefficient of 0.89.

c) Emotional regulation difficulty questionnaire (DERS): This scale was developed in 2001 by Gratz and Roemer with 36 items. It consists of 6 sub-scales including: 1. Rejection, 2. Difficulty with engaging in purposeful behaviors (goals), 3. Difficulty in controlling impulse, 4. Lack of emotional awareness, 5. Limited access to emotion regulation strategies, and 6. Lack of emotional clarity. The responses are in a likert scale ranging from almost never: 1, to rarely: 2, sometimes: 3, often: 4, almost always: 5. Items 7, 6, 2, 1, 8, 10, 17, 20, 22, 24 and 34 are scored in reverse. Higher scores mean more difficulty in emotional regulation. The overall score of the scale is calculated by the sum of the scores of all questions and there are also 6 scores related to the subscales. Analysis of the results showed that the items have a high internal consistency ($\alpha = 0.93$). Factor analysis showed the existence of 6 factors: rejection of emotional responses, difficulty in performing purposeful behaviors, difficulty in controlling impulse, lack of emotional awareness, limited access to emotion regulation strategies, lack of emotional clarity (16). In the present study, confirmatory factor analysis and Cronbach's alpha were used to evaluate the validity and reliability of this scale. The indices obtained from the confirmatory factor analysis in the present study (RMSEA = 0.020, CMIN / DF = 1.141, GFI = 0.998, AGFI = 0.978 and CFI = 0.99) indicate the appropriate fit of the model with the data; and its reliability was confirmed by a Cronbach's alpha coefficient of 0.840.

2-2. Data collection

To collect information, the researchers, in coordination with the educational

organization and school principals of the selected schools, distributed the questionnaires to collect the data among the students and collected them upon completion.

2-3. Ethical considerations

All participants responded to the survey with satisfaction and were assured about the confidentiality of their personal information. It was not necessary to write the name and surname and participation in the study was optional. This research is taken from the dissertation of Dr. Fatemeh Mehrabifar with the tracking code of 162346079.

2-4. Data analysis

To analyze the data, descriptive statistical indices of mean, standard deviation, and frequency and inferential tests of linear regression, Structural Equation Modeling (SEM), and confirmatory factor analysis (CFA) were performed in Amos 25 and SPSS 25 softwares. Values less than 0.05 were considered statistically significant.

3. RESULTS

The variable of academic procrastination has an effect on the quality of school life due to the mediating role of difficulty in emotional regulation.

In the first step, the data were examined for the underlying assumptions of the structural equation model. For this purpose, the assumptions of structural equations such as the missing data, outliers, normality, and multicollinearity were checked and the assumptions of analysis were observed. In addition, variables enjoyed an interval scale. To evaluate the validity and adequacy of the data, the KMO index was used. The values of this index for the data of this study were found to be 0.853 for the emotion regulation difficulty questionnaire, 0.791 for the academic procrastination questionnaire and 0.859 for the questionnaire of the quality of life at school. This index is in the range of zero to one, and the closer the value of this index is to one, the more suitable the sample size data are for factor analysis. The Bartlett test was also used to examine the correlation matrix. The significance of Bartlett test for all three questionnaires, as shown in **Table 1**, is less than the significance level of 0.05, and so it is confirmed that the correlation matrix is not uniform, and as a result, it can be stated that the items are sufficiently correlated. Also, the subscription value of all items is above 0.30 and the rest of the standard items are in the range of -3 to 3.

Table-1: KMO and Bartlett test statistic values

Test questionnaire	KMO	Bartlett		
difficulty in emotional regulation	0.853	3987.536= χ^2	630= df	Sig=0.000
academic procrastination	0.791	2127.204= χ^2	351= df	Sig=0.000
Quality of School Life	0.859	5478.709= χ^2	741= df	Sig=0.000

Moreover, before evaluating the proposed structural model, it is necessary to examine the significance of factor loadings on different items and their related variables; so that we can assure the suitability of the measurement models and the acceptability of the items in measuring and predicting

their relevant variables. This was done using confirmatory factor analysis (CFA) technique and 25 AMOS softwares. Due to the fact that in the fitted CFA model, the regression weight (factor loadings) of all variables, in predicting the components had a significant difference with zero, at

the confidence level of 0.99, none of the components were excluded from the analysis. The significance level is considered as <0.05 for all components.

SEM was used to study the proposed model regarding the effect of academic procrastination on the quality of school life with the mediating role of emotional regulation difficulty. In SEM, after fitting

the desired model, good fit criteria should be evaluated.

The statistics obtained in **Table 2** and **Fig. 1** (RMSEA = 0.055, CMIN / DF = 2.058, RMR = 0.040, GFI = 0.943, AGFI = 0.907, CFI = 0.960, NFI = 0.926, TLI = 0.942, and IFI = 0.960) indicate that the model has a favorable and acceptable fit.

Table-2: Fit of the proposed model with the data based on the fit indicators

Indicator	Reported value	Acceptable amount	Index result
Root Mean Squared Error of Approximation (RMSEA)	0.055	≤ 0.08	The model is approved.
Normed Chi-Square (CMIN/DF)	2.058	≤ 3	The model is approved.
Root Mean Squared Error (RMR)	0.040	≤ 0.05	The model is approved.
Goodness of Fit Index (GFI)	0.943	≥ 0.9	The model is approved.
Adjusted Goodness of Fit Index (AGFI)	0.907	≥ 0.9	The model is approved.
Comparative Fit Index (CFI)	0.960	≥ 0.9	The model is approved.
Normed Fit Index (NFI)	0.926	≥ 0.9	The model is approved.
Tucker-Lewis Index (TLI)	0.942	≥ 0.9	The model is approved.
Incremental Fit Index (IFI)	0.960	≥ 0.9	The model is approved.

According to the fitted structural equation model, academic procrastination has significant effects on the difficulty in emotional regulation (0.000, $\alpha=0.05$) and the quality of school life (0.000, $\alpha=0.05$). Therefore, at this level, the assumption of no effect is rejected and as a result, the effect of academic procrastination on the

difficulty in emotional regulation is found to be significant and direct with a positive coefficient ($\beta=0.528$). The effect of academic procrastination on the quality of school life, due to its negative coefficient ($\beta=-0.722$), is significant and inverse; and has the strongest effect (**Table 3**).

Table-3: The direct effect of research variables on structural equations

Results relationships	Standard coefficient	Test statistics	P-value	Test result
Academic procrastination and difficulty in emotional regulation	0.528	6.261	0.000	It has a positive and significant effect
Academic procrastination and quality of school life	0.722-	7.133-	0.000	It has a negative and significant effect

The second hypothesis of the study dealt with the indirect effects of academic procrastination on students' quality of school life through the difficulty of emotional regulation. To examine this

causal relationship, the bootstrapping method was applied showing that the standardized parameter coefficient is $\beta = 0.037$ and is significant for 0.209 and Greater than the significant level of 0.05.

Therefore, at this level, the assumption of ineffectiveness is not rejected, and as a result, academic procrastination has no significant effect on students' quality of school life through the difficulty of emotional regulation (Table 4). As

observed in the model, academic procrastination has neither a significant direct, nor an indirect negative effect (through the difficulty of emotional regulation) on the students' quality of school life.

Table-4: Measuring the indirect effect of academic procrastination on quality of school life through the difficulty of emotional regulation by the Bootstrapping method

Parameter routes	Nonstandard estimate	Standard estimate	Lower limit	Upper limit	P-value
Academic procrastination on the quality of school life through the difficulty of emotional regulation	0.083	0.037	0.029-	0.248	0.209

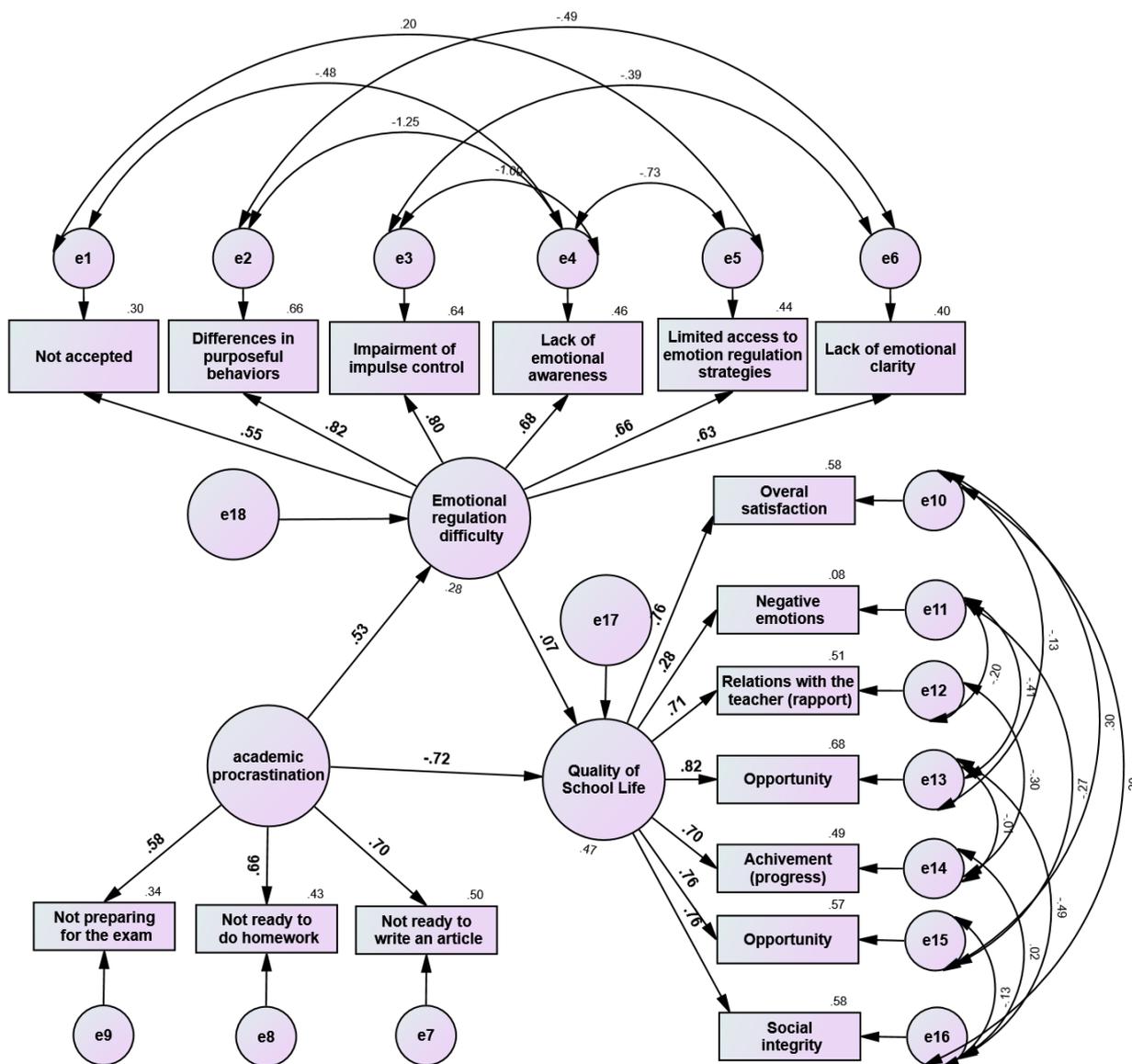


Fig. 1: Structural equation model (Structural model and measurement models)

4- DISCUSSION

The main purpose of this study was to investigate the effect of academic procrastination on the quality of school life due to the mediating role of emotional regulation difficulty in female students in Kerman schools. The results show that there is a significant negative relationship between academic procrastination and the students' quality of school life. That is, as the rate of academic procrastination increases, so does the quality of students' school life, which is consistent with the findings of Akhlaghi et al. They have reported that academic procrastination has a significant negative correlation with academic adjustment and quality of life in school. Moon and Illingworth also state that academic procrastination is negatively related to academic achievement and quality of school life (11).

Academic procrastination can be defined as the predominant and constant tendency of learners to postpone academic activities, which is almost always accompanied by anxiety. A good example of this is the delay in studying the lessons until the night of the exam. The existence of this procrastination among students leads to adverse consequences such as academic failure (20). Therefore, they resort to strategies such as indulgence and illness, absenteeism from exams, excuses, and self-disability, and as a result of the poor results they achieve, their self-esteem decreases, and they feel defeated, incapacitated, and depressed (18).

Other effects of procrastination include its negative effect on students' motivation. Because motivation is a very important factor in predicting success, it can be said that academic procrastination prevents people from achieving educational goals. Procrastination or delay in starting a homework within the expected time frame are highly influential in the achievement of the optimal Success in doing homework (21).

Procrastinators have a poor ability to set goals for successfully completing the tasks, and have difficulty in accurate estimation of the time required for completing the tasks. Procrastinators have symptoms such as time-wasting, feeling overwhelmed with responsibilities, Inability to achieve important life goals, doing things too fast in the last minutes, daydreaming and wishing instead of doing things, and not having a continuous plan for life. Procrastination causes restlessness at night and poor sleep, high levels of stress and fear, falling behind due to the lack of time or improper completion of tasks. Procrastination is an irrational tendency to procrastinate in starting or completing an assignment that the learner doesn't have enough motivation to do in spite of his/her intention to do academic work on time; thus, s/he fails to complete the homework in a timely manner (11).

Negligent behavior is associated with failure to do homework, rejecting the good thoughts of others, feeling guilty after a good event, and choosing self-debilitating circumstances. Procrastination until the night of the exam, forces the student to study the lessons on the night of the exam with anxiety, and this anxiety can lead to academic failure and as a result, the feeling of Inadequacy and Incompetence. Therefore, the student's academic confidence is seriously damaged. Moreover, procrastination has negative cognitive and emotional consequences (22).

According to the above, the quality of school life mainly deals with the students' satisfaction with their daily life at school; and students' general feelings of happiness, comfort, well-being and well-being in school are also components of quality of school life. So, the positive and negative experiences gained in school affect their overall perception of the school and can provide multiple opportunities to facilitate their success and development (7).

Therefore, when the students procrastinate and fail in their homework and activities, their satisfaction with school life decreases; and this justifies the findings of the present study.

The results of the present study show that there is a positive relationship between academic procrastination and difficulty in emotional regulation. That is, as the scores of academic procrastination increase, the scores of difficulty in emotional regulation increase, which indicates a direct relationship between the two variables. The studies by Ghasemi et al. (23) and Zarei et al. (24) also confirm this finding. Procrastinators are afraid of failure, suffer from low self-esteem and self-efficacy, are pessimistic about the future, and suffer from emotional regulation problems. Their minds are full of judgmental and negative thoughts that hinder their constructive activity and lead to procrastination. These thoughts, which have a reactive, judgmental and critical aspect, make the individual not motivated to do his homework, although he knows that he has to take steps for achieving goals and success; and generally procrastinators are not motivated to progress, to fail and to start. They suffer from academic procrastination, since they are afraid and not willing to face difficult tasks (23).

Students who have difficulty in regulating emotions cannot reduce their negative emotions well. According to some researchers, people who have difficulty in regulating emotions use procrastination as a strategy to regulate their negative emotions, because the use of procrastination causes the person to temporarily move away from negative emotions and experience a better feeling, which justifies the findings of the present study.

4-1. Limitations of the study

Conducting this study is associated with challenges and limitations, such as the

limited scope of implementation only in the urban areas of Kerman, a city of Iran, and in the public schools. Additionally, the few numbers of previous studies in the field, the poor cooperation of some school officials and conducting research in only one gender are among the limitations of this study.

5- CONCLUSION

The results showed that the variable of academic procrastination has a negative and significant effect on the quality of school life of students and the variable of academic procrastination has a significant and direct effect on the difficulty of emotional regulation. Therefore, it is suggested that the awareness of teachers and students and their parents about this variable be increased and that those involved in education have a comprehensive, broad and open view to understand and solve the problems of students' academic procrastination. Given that studies focusing on gender differences in the field of educational studies have always been in the focus of researchers, it is suggested that the causes of academic procrastination in both sexes be studied comparatively.

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7- CONFLICT OF INTEREST

None.

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