

Investigating the mediating role of academic self-handicapping in the relationship between academic maladjustment and academic procrastination among students

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ABSTRACT

The aim of current research was to investigate the attitude of elementary school teachers in Zahedan towards the opportunities and challenges that the corona virus has created for virtual education in schools by using a series of mix exploratory research. The purpose of this study was to Investigating the mediating role of academic self-disability in the relationship between academic disagreement and students' academic procrastination. The research method was descriptive-correlation (Structural Equation Modeling). The statistical population of the study was all undergraduate students of Islamic Azad University, Khash unit in the academic with a volume of 1359 people 300 students were studied by random sampling method on Krejcie and Morgan table. To collect information, three questionnaires were used: Academic disagreement Questionnaire (adapted from Hamili, Ahmadi, Mousavi & Ghafourian, 2015), Academic Self-Empowerment Questionnaire (Jones & Rodlett, 1982) and Academic Procrastination Questionnaire (Solomon & Roth Bloom, 1984). The face validity of the questionnaires was confirmed by jor. Cronbachs alpha coefficient was used to determine the reliability of the questionnaires. The values of which were for academiv incompatibility 0/971, academic procrastination 0/896, and academic self-disability 0/911. For data analysis the Pearson correlation coefficient, structural equation modeling were used by SPSS and Lisrel software. Findings showed that academic disagreement has a direct and indirect effect with the mediating role of students' academic self-disability on students' academic procrastination.

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Introduction

Academic procrastination manifests itself as intentional delay in completing study-related tasks such as reading, writing essays, and studying for exams. Academic procrastination is an irrational tendency to postpone starting or completing an assignment, which learners, despite intending to complete an academic activity at a specific time, do not have sufficient motivation to do, and as a result, fail to complete assignments within the desired and expected time frame ([Tamnaeifar & Mansouri-Nik, 2013](#)). Two types of procrastination in completing academic assignments are observed among students. One type is purposeful, planned, and thoughtful procrastination. For example, when students have to complete many assignments at the same time, they prioritize some important assignments. The other type is irrational, self-defeating, and harmful procrastination, which is known as academic procrastination ([Granchel et al, 2013](#)). Regarding the prevalence of academic procrastination, Onogbazi and Jiao (2000) concluded that African American students showed procrastination in writing assignments, studying for exams, and postponing homework to the weekend. [Day et al \(2000\)](#) concluded in a study that 50% of procrastination is problematic and persistent. [O'Brien \(2002\)](#) showed in a study that between 80 and 95% of students engage in some form of procrastination and 50% of them are always procrastinating in completing assignments and learning course materials. The findings of [Savari \(2012\)](#) also showed that the prevalence of academic procrastination in the student population of Payam Noor University of Ahvaz is 17.2% (17.8% in male students and 17.03% in female students). The findings also show that there is no statistically significant difference between the prevalence of the aforementioned variable in female and male students. Given the prevalence of academic procrastination among students, it is necessary to identify the factors that influence it. In this study, the role of academic maladjustment and academic self-handicapping is addressed. Academic adaptability refers to the ability of learners to adapt to the conditions and requirements of education and the roles that school, as a social institution, places on them ([Petos, 2006](#)). Many learners become anxious when dealing with academic, social, personal, and lifestyle challenges, to the point that they find a great need to adapt to academic habits and expectations even to go to a higher grade ([Hughes, 2012](#)). Each country has a unique education system, therefore, it is not expected that all educational issues (lectures, assignments, exams, and other requirements) will be the same. For example, in some countries, the award of a degree may depend only on a final exam or essay ([Chang et al, 2015](#)). Therefore, academic adaptability includes the comprehensive ability to adapt to the conditions and requirements of education and the roles that the educational center as a social institution places before them. If an individual is unable to do this, he is considered non-adaptive. Lack of adaptability leads him to drop out or drop out of education, therefore, in order to achieve academic progress and proper performance and prevent drop out and drop out, it is very important to examine and focus on academic adaptability ([Azizinejad, 2016](#)). One of the consequences of academic non-adaptiveness can be academic self-handicapping, which in turn can affect academic procrastination. Self-handicapping is any action or context that allows an individual to attribute failure to external factors and success to internal factors (for the purpose of gaining credit) (Berglas & Jones, 1987). Covington (1992) has played a major role in explaining academic self-handicapping. His self-esteem theory states that students' goals in trying in class are to maintain a positive self-image and avoid being labeled as stupid. One way that students can avoid being labeled as stupid is to use academic self-handicapping strategies. Universities and classrooms provide a suitable environment for the use of self-handicapping behavior. In such educational environments, students are constantly faced with tasks and situations that expose their abilities and intelligence to judgment. The mechanism of self-defeating behavior includes behaviors such as isolation, prejudice, lack of planning, setting high and low goals, not asking for help from others, and academic self-defeating. By engaging in these behaviors, students have a better excuse for poor performance than incompetence ([Hassanvandi et al, 2016](#)).

Therefore, it can be said that students are the chosen human resources and the builders of the country's future, and their academic success is one of the basic goals of the educational program. Academic success is equivalent to academic progress and means the success of students in completing courses of a specific academic level or success in learning the course material, and its opposite is academic failure, which is one

of the problems and problems of the system. Through academic success, students can achieve a position where they can use their maximum internal and external strength to achieve the goals of higher education and obtain the necessary conditions for a successful social life. Conversely, failure in education leads to

many personal and social problems and deviations from achieving goals in the educational system (Lewis et al, 2014). Many students feel lonely and isolated upon entering the university environment and separating from their families. On the other hand, encountering different personality types in the professional and dormitory environment, inadequate welfare facilities, economic shortages, reduced support resources and family supervision expose them to psychological and social harm. The presence of other risks such as disinterest and dissatisfaction with the field of study and profession also increases the likelihood of academic failure, dropout, and high-risk social behaviors, and are among the things that exacerbate psychological problems. When such challenges are considered negative, they will have a detrimental effect on the motivation, academic performance, and psychological well-being of learners. In other words, while attending university brings pleasant experiences for many students, for some other students, academic assignments such as tests, essays, presentations, etc. will lead to academic procrastination in students (Mehdizadeh et al, 2018). Therefore, it is necessary to identify the factors affecting academic procrastination in order to design and implement programs to reduce academic procrastination of students by recognizing those factors. The researcher, as a student, has found that academic procrastination is one of the problems of most students during their studies, which leads to the predominant tendency of students to delay their academic activities and goals and affects their academic performance. In this study, the researcher seeks to investigate the effect of academic maladjustment on academic procrastination of students with the mediating variable role of academic self-disabling. In reviewing the research background, the researcher has found that such a study has not been conducted so far, and therefore the research can be useful for senior managers of universities and higher education institutions. Therefore, the main question of the research is whether academic maladjustment has a positive and significant effect on academic procrastination of students at the Islamic Azad University, Khash Branch, through the mediation of academic self-disabling.

Method

Sample and Sampling Method

The present study is applied in terms of purpose and, considering the main purpose of this study, it is descriptive-correlational by using the structural equation modeling model. The statistical population of the study is all students of Islamic Azad University, Khash Branch, 1359 people (736 boys and 623 girls). 300 students (162 boys and 138 girls) were selected as a sample using simple random sampling method and based on the Krejci and Morgan table.

Tools Used

Academic Maladjustment Questionnaire

adapted from Hamili, Ahmadi, Mousavi, and Ghafourian (2015), has 40 items and 4 dimensions including maladjustment with the university and field of study (items 1 to 10), social maladjustment (items 11 to 20), emotional maladjustment (items 21 to 30), and aimlessness and lack of planning (items 31 to 40).

Academic Self-Disability Questionnaire

was designed by Jones and Rodlett in 1982. This questionnaire consists of 23 items and three components: negative mood (items 4, 7, 8, 9, 13, 15, 19, 20, 23), lack of effort (items 3, 5, 6, 10, 17, 21, 22), and excuse-making (items 1, 2, 11, 12, 14, 16, 18), which indicate the extent to which learners use self-handicapping strategies. All items in the self-handicapping questionnaire were on a 5-point scale.

Academic Procrastination Questionnaire

was developed by Solomon and Roth-Bloom in 1984 and named it the Academic Procrastination Scale. This scale was first used in Iran by Dehghani (2008). This scale has 27 items that examine 3 components: the first component: preparing for exams (items 1 to 8), the second component: preparing for homework (items 9 to 19), and the third component: preparing for the end of the semester (items 20 to 27). Content validity was used to determine the validity of the instrument.

Procedure

In this regard, the questionnaire was approved by the professors of the Department of Management and Educational Planning of the Islamic Azad Universities of Zahedan and the University of Sistan and Baluchestan, and it was ensured that the questionnaire measures the same characteristic that the researcher intended and has the necessary validity. Cronbach's alpha coefficient was used to determine reliability, and its value for the variables of academic procrastination was 0.89, academic self-handicapping was 0.91, and academic maladjustment was 0.97, indicating very good reliability. After collecting data, the research questions were analyzed using SPSS and LISREL software.

Results

The statistical description of the research variables is shown in Table 1

Table 1. Descriptive indices of the research variables

Variable	Maximum	Minimum	Mean	Standard Deviation	Skewness	Kurtosis
Academic maladjustment	1/04	5	46/28	4/06	-0/710	1/201
Academic neglect	2/22	5	32/32	4/09	-0/249	-0/661
Self-handicapping	2/80	40/793	54/14	3/82	0/227	-0/543

The absolute value of skewness and kurtosis of the variables should not be more than 2 and 2, respectively. According to the findings in Table 1, the absolute value of skewness and kurtosis of all variables is proportional to the desired standard. Therefore, the assumption of causal modeling, namely univariate normality, is valid. Also, before designing the structural equation model, the hypothesis of the relationship between the research variables was examined through the Pearson correlation coefficient test, the findings of which are reported in Table 2.

Table 2. Correlation coefficients between research variables

Variable	Academic maladjustment		Academic neglect		Self-handicapping	
	R	p-value	R	p-value	R	p-value
Academic maladjustment	1	0/001	0/562	0/001	0/461	0/001
Academic neglect	0/573	0/001	1	0/001	0/559	0/001
Self-handicapping	0/523	0/001	0/559	0/001	1	0/001

Based on the findings in Table 2, the correlation coefficients of academic maladjustment with academic procrastination and self-handicapping were 0.562 and 0.461, respectively, and the correlation coefficients between academic procrastination with academic maladjustment and academic self-handicapping were 0.573 and 0.559, respectively, all of which were positive and significant. Considering the relationship between the research variables, the structural equation model was designed. Also, before examining the research hypotheses, the model was fitted. The model fit measure is used to determine the relationship between the manifest variables and the latent variables (Table 3).

Table 3. Fit indices of the theoretical research model

Value obtained in the real model	Index Name
0/91	Goodness of fit Index
0/041	Root Mean Square Residual
0/093	Comparative Fit Index
0/048	Root mean square of the estimation error

The researchers used fit indices including goodness of fit index (GFI) and comparative fit index (CFI) with values greater than 0.9 indicating a good fit of the model, root mean square error of approximation index (RSEMA) with values less than 0.08 and standardized root mean square residual index (SRMR) with values less than 0.05 indicating a good fit of the model. The fitting results were found to be appropriate according to the standards set out in Table 3.

To analyze the hypotheses, the theoretical model developed for each hypothesis must first be processed to determine to what extent the collected data supports the theoretical model. Quantitative model fit indices (CFI, GFI and RSEMA) were used to answer this question. If the general indicators were acceptable or, in other words, the theoretical model was confirmed, then we can look at the relationships within the model, which are the reciprocal relationships of the regression coefficient (effect coefficient) related to the hypothesis and the factor loadings related to each item. Figure 1 shows all the relationships between the latent variables and the factor loadings of each item.

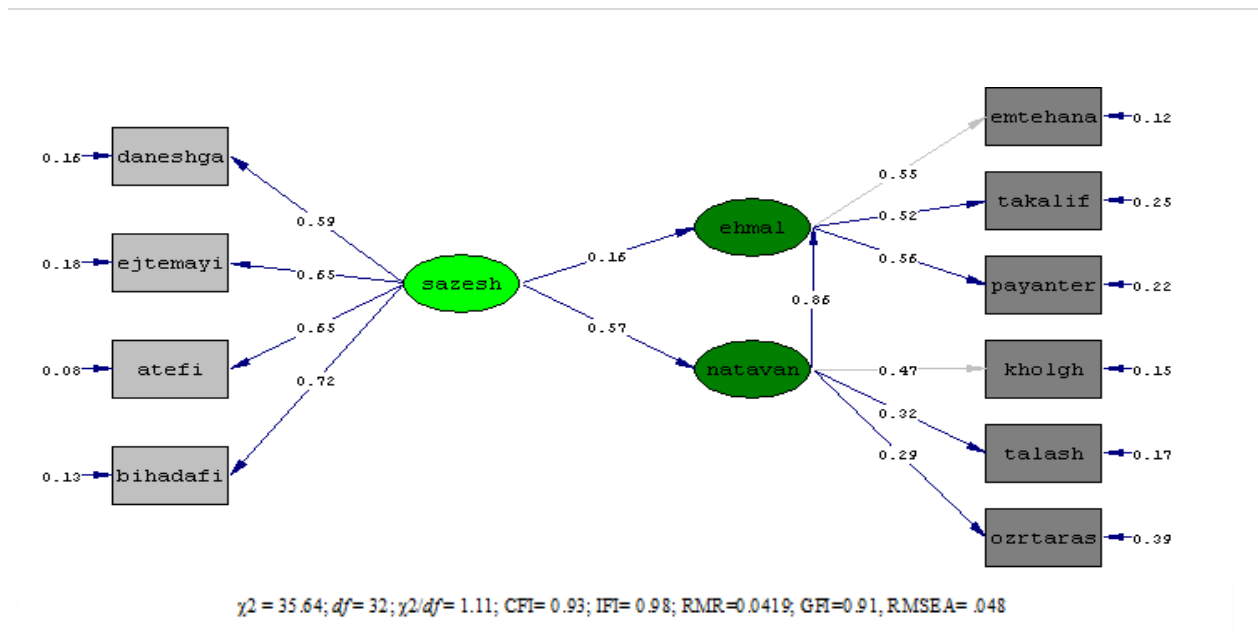


Figure 1. Standard path coefficient values from structural equation modeling

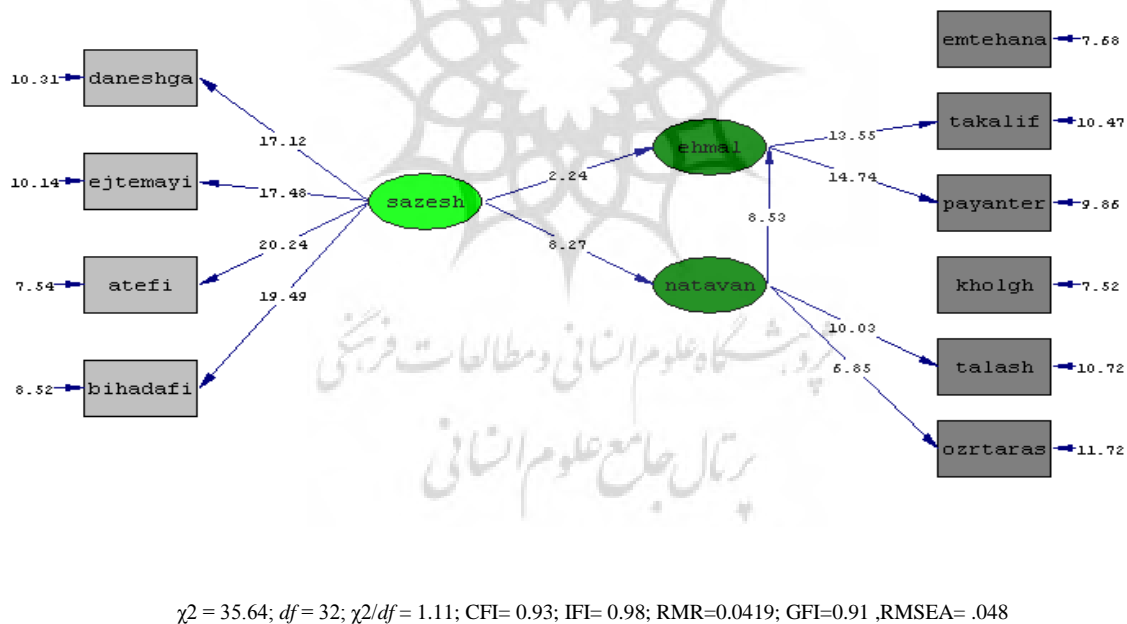


Figure 2. Significant values from structural equation modeling

Table 4. Direct, indirect, total, and explained variance effects of variables

Effect	Effect Direct	Indirect effect	Total effect	R ²
Academic maladjustment on academic procrastination	0/16**	0/33**	0/49**	0/315
Academic self-handicapping on academic procrastination	0/86**		0/86**	0/434
Academic maladjustment on academic self-handicapping	0/57**		0/57**	0/212

** Significance at the 0.01 level

Based on the findings from Table 4, Figures 1 and 2, the β coefficient of academic maladjustment on academic procrastination is 0.16. Considering that the obtained T value is 27.8 and is greater than the standard value of 1.96, it can be accepted that academic maladjustment has a positive and significant effect on academic procrastination. Also, the β coefficient of academic maladjustment on academic self-handicapping is 0.57. Considering that the obtained T value is 24.2 and is greater than the standard value of 1.96, it can be accepted that academic maladjustment has a positive and significant effect on academic self-handicapping. The β coefficient of academic self-handicapping on academic procrastination is 0.86. Given that the obtained T value is equal to 8.53 and is greater than the standard value of 1.96, it can be accepted that academic self-handicapping has a positive and significant effect on academic procrastination. The β coefficient value of academic maladjustment on academic procrastination mediated by self-handicapping is 0.49. Given that the obtained T value is equal to 10.77 and is greater than the standard value of 1.96, it can be accepted that academic maladjustment has a positive and significant effect on academic procrastination mediated by self-handicapping.

Discussion & Conclusion

This study aimed to investigate the mediating role of academic self-handicapping in the relationship between academic procrastination and academic failure adjustment of students at the Islamic Azad University of Khash. The findings indicated that academic failure adjustment of students has a direct effect on their academic procrastination, academic failure adjustment has a direct effect on students' academic self-handicapping, academic self-handicapping also has a direct effect on students' academic procrastination, and academic self-handicapping also has a mediating role in the relationship between failure adjustment and academic procrastination. In explaining these findings, it can be said that a self-defeating individual resorts to active or overt self-destructive efforts such as not studying before an exam, which results in academic failure or instilling a sense of insecurity in the individual's self-esteem. The individual will always feel that he will face obstacles in completing his homework, and as a result, he will resort to academic procrastination behaviors such as wasting time or postponing work, dodging, not asking for help when needed, not taking risks, avoiding, and withdrawing from challenges. An individual uses self-defeating and academic procrastination strategies when he feels that trying to deal with a problem in which success is not guaranteed is useless, so he prefers to disrupt his situation in order to have at least an excuse for his failure. A study of the theoretical foundations shows that there is no relevant background that has examined the two-to-two relationship between the research variables. Of course, two related studies were found in the relationship between academic procrastination and self-handicapping. Therefore, it can be said that the findings of this study were in line with the following studies. Azarbadkan and Asghari Ebrahimabad's (2018) study titled Predicting Academic Procrastination Based on Self-Handicapping and Stress Due to Academic Expectations in Students and Foroutan Bagha, Kavoosian, and Pasha Sharifi's (2018) study titled The Effectiveness of Procrastination Reduction Training on Reducing Academic Self-Handicapping and Academic Engagement of Students and Wang's (2013), Steele, and Klingsick's (2007)

study titled *The Nature of Procrastination: A Meta-Analytical and Theoretical Study of the Five-Dimensional Self-Regulation Failure* are in line. Academic self-handicapping has a positive and significant effect on students' academic procrastination. Also, Henn and Groschett (2020) conducted a study titled *The Effects of Decision-Making and Academic Procrastination on the Feelings of Senior English Students Towards Academic Procrastination*. The results showed that the more students postpone their decision-making, the more procrastination they will exhibit in academic and school matters. Li, Gao, and Zhou (2020) conducted a study titled *The Mediating Effect of Academic Self-Efficacy on the Relationship Between Smartphone Addiction and Academic Procrastination in Taiwanese Students*. The results showed that there is a positive and significant relationship between smartphone addiction and academic procrastination. Academic self-efficacy can also reduce the relationship between smartphone addiction and academic procrastination. Gui, Yin, Wang, Nai, and Wang (2019) conducted a study titled *The Relationship Between Emotional Intelligence and Academic Procrastination among Nursing Graduate Students at a Chinese University*. The results showed that there is a significant negative relationship between emotional intelligence and academic procrastination in nursing graduate students, which means that the higher the emotional intelligence of students, the lower their academic procrastination. Liran and Miller (2019) conducted a study titled *The Role of Psychological Capital in Academic Adjustment among Haifa University Students*. The findings showed that there is a positive and significant relationship between psychological capital and academic adjustment of students, meaning that the higher the psychological capital, the higher the academic adjustment in university. Montgomery, Greig, Summers, Pernik-Duka, Hoffman, and Begley (2019) conducted a study titled *Intrapersonal Variables Associated with Academic Adjustment in US College Students*. The results showed that motivation has a significant predictive power of academic adjustment and the predictor variables examined (alcohol use, procrastination, perfectionism, perceived stress level, and coping style) explain a significant amount of additional variance above motivation. Given the significant effect of academic maladjustment on academic procrastination and the proof of the mediating role of academic self-disability, it is suggested that university officials design and implement a workshop to familiarize students with academic procrastination and the factors affecting it so that students can understand their procrastination and become familiar with its irreparable and negative consequences in the academic field, and in addition to the etiology of procrastination, they can also recognize the situations of procrastination. They can recognize their irrational beliefs in the field of procrastination and challenge them. Also, this workshop should try to create the necessary motivations for obtaining positive outcomes in students. Efforts should be made to motivate students to learn and to succeed in completing assignments by using learning techniques and correcting negative self-concepts at the time of failure and correcting self-disabling beliefs. It is also suggested to students who have suffered from academic procrastination, prioritizing tasks: a strategy for combating laziness and procrastination. Prioritizing in life is a way to achieve long-term and short-term goals. Tasks can be divided into four areas: urgent and important, urgent and unimportant, non-urgent and important and non-urgent and unimportant (such as playing a computer game, checking your mobile phone, useless commuting). A procrastinator engages in non-urgent and unimportant tasks to escape long-term goals that keep him away from immediate pleasure. Setting short-term goals: In addition to long-term goals, you should set short-term and achievable goals for yourself. Short-term goals increase your motivation to move. If your deadline for completing the task is too far away, you should divide the task into small steps and set deadlines for each.

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Acknowledgements and Reference heading should be left justified, bold, with the first letter capitalized but have no numbers. Text below continues as normal.

References

- Abdi Zarrin, S., & Gracia, E. (2020). Prediction of Academic Procrastination by Fear of Failure and Self-Regulation. *Educational Sciences: Theory and Practice*, 20(3), 34-43. <http://dx.doi.org/10.12738/jestp.2020.3.003>
- Azarbadkan F, Asghari Ibrahim Abad MJ. (2018.) The Prediction of Academic Procrastination on Self-handicapping and Academic Expectations Stress, *Scientific Quarterly of New Educational Thoughts*, 14(3), 99-116. <https://doi.org/10.22051/jontoe.2018.20585.2232>
- Azizinejad B. (2016.) The role of school social support in student student adjustment: with the effect of school satisfaction, students' hope and self-efficacy. *Research in school and virtual learning*, 4(13), 57-68. <https://dor.isc.ac/dor/20.1001.1.23456523.1395.4.13.5.1>
- Chang T F, Han E J, Lee J S, & Qin D B .(2015). Korean American adolescent ethnic-identity pride and psychological adjustment: Moderating effects of parental support and school environment. *Asian American Journal of Psychology*, 6(2), 190. <http://dx.doi.org/10.1037/aap0000016>
- Day, V., Mensink, D., & Sullivan, M. (2000). Patterns of academic procrastination. *Journal of College Reading & Learning*. 30(2), 20-134. <http://dx.doi.org/10.1080/10790195.2000.10850090>
- Foroutan Bagha P, Kavousian J, Pasha Sharifi H. (2018).The efficiency of Procrastination Reduction Training on Lowering Self-Handicapping and Enhancing Academic Engagement among University Students. *Middle Eastern Journal of Disability Studies*, 8(23), 13-23 URL: <http://jdisabilstud.org/article-1-1133-fa.html>
- Grunschel, C., Patrzek, J., & Frie, S. (2013). Exploring different types of academic delayers: A latent profile analysis. *Learning and Individual Differences*. 23(1), 225-233. <http://dx.doi.org/10.1016/j.lindif.2012.09.014>
- Guo M, Yin X, Wang C, Nie L, & Wang G. (2019). Emotional intelligence a academic procrastination among junior college nursing students. *Journal of Advanced Nursing*. 75(11), 2710- 2718. <https://doi.org/10.1111/jan.14101>
- Hassanvandi S, Nooripour R, Soheilzadeh S, Siafi P, Hosseinian S, Jamshidi M A. (2016). Pattern of Causal Relationships of Academic Self-handicapping of Students . *Education Strategies in Medical Sciences*, 9(4), 266-276. URL: <http://edcbmj.ir/article-1-1009-fa.html>
- Hen, M., & Goroshit, M. (2020). The effects of decisional and academic procrastination on students' feelings toward academic procrastination. *Current Psychology*. 39(2), 556-563. <https://psycnet.apa.org/doi/10.1007/s12144-017-9777-3>
- Hughes, J. N. (2012). Teacher-student relationships and school adjustment: Progress and remaining challenges. *Attachment & Human Development*. 14(3), 319-327. <https://psycnet.apa.org/doi/10.1080/14616734.2012.672288>
- Lewis, S. M., Giddens, J. F., Tashiro, J., Sullins, E., & Long, G. (2014). *Medical-surgical nursing: assessment and management of clinical problems*: Elsevier Health Sciences.
- Li, L., Gao H, & Xu, Y. (2020). The Mediating and Buffering Effect of Academic Self-Efficacy on the Relationship between Smartphone Addiction and Academic Procrastination. *Computers & Education*, 159(2020), 112-137. <http://dx.doi.org/10.1016/j.compedu.2020.104001>
- Liran, B., H, & Miller, P. (2019). The Role of Psychological Capital in Academic Adjustment among University Students. *Journal of Happiness Studies*, 20(1), 51-65. <https://link.springer.com/article/10.1007/s10902-017-9933-3>
- Mehdizadeh I, Rajaepoor S, Hoveida R, Salmabadi M, 2018. The Role of academic self-efficacy and academic self-handicapping in academic Procrastination. *Education Strategies in Medical Sciences*. 11(3), 105-110. URL: <http://edcbmj.ir/article-1-1285-fa.html>.
- Montgomery, S., Gregg, DH., Somers, Ch., Pernice-Duca, F., Hoffman, A., & Beeghly, M. (2019). Intrapersonal variables associated with academic adjustment in United States college students. *Current Psychology*. 38(1), 40-49. <https://link.springer.com/article/10.1007/s12144-016-9533-0>

- O'Brien, W.K. (2002). Applying the transtheoretical model to academic procrastination. *Dissertation Abstracts International. Section B: The Sciences and Engineering*. 62(11), 53-59. <https://www.semanticscholar.org/paper/Applying-the-transtheoretical-model-to-academic-O'Brien/c357147aab93cf4aaa38dd3729a396f8ce3a3c54>
- Onwuegbuzie, A., J., & Jiao, Q. J. (2000). *I will Go to the library later: The relationship between Academic procrastination & library Anxiety*. College & Research libraries. <https://crl.acrl.org/index.php/crl/article/view/15341>
- Pettus, K. R. (2006). *The relationship of parental monitoring to community college student adjustment and achievement: Differences by gender, ethnicity, parental education level and student residence*. Carolina University.
- Savari, M.(2012). An investigation of the prevalence of academic procrastination among male and female students of Ahwaz Payame Noor University, *Social Cognition*, 1(1), 62-68. https://sc.journals.pnu.ac.ir/article_304.html
- Steel, P., & Klingsieck, K. (2015). Procrastination. *The International Encyclopedia of the Social & Behavioral Sciences*, 19, 73-78. <https://www.redalyc.org/journal/798/79860419007/79860419007.pdf>
- Tamnaeifar, M R., & Mansouri Nik, A. (2013). Explain academic procrastination based on personality traits, perfectionism and life satisfaction of students. *Iranian Higher education*. 5(4), 165-185. <http://ihej.ir/article-1-590-fa.html>
- Wang, J. (2013). Active and passive procrastination of university students enrolled in writing courses delivery models. Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science Pennsylvania State Universi



