



# DECISIONAL PROCRASTINATION: PREVALENCE AMONG STUDENTS AND RELATIONSHIP WITH EMOTIONAL INTELLIGENCE AND BIG FIVE-FACTOR MODEL OF PERSONALITY

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## ABSTRACT

Studies indicate that approximately 80-95% of university students are involved in procrastination. The previous studies show that decisional procrastination may lead to poor academic performance, experience of unwilling emotions like self-feeling of being shameful and guilty, depression, negative health behaviors such as delay in addressing health problems, and one way for Plagiarism. The present study was aimed at investigation of the decisional procrastination prevalence among the students of universities of Tehran, and its relationship with emotional intelligence and big five-factor model of personality. The students of public and Islamic Azad universities in Tehran made up the statistical population of this research. This study used multistage cluster sampling method as a subsidiary to simple random sampling and 400 students were selected. Participant in the study completed the Decision Problem (DP) scale, Bar-On emotional intelligence test and NEO Five Factor Inventory. To analyze the data, SPSS (13th version) software was used. The highest percentage of decisional procrastination is observed in the moderate category (45%) and then in the mild category (31%). 22.3% of students showed severe decisional procrastination and 1.7% of students showed very severe decisional procrastination. A negative and significant relationship was seen between the total score of emotional intelligence and decisional procrastination ( $P < 0.001$ ). A negative and significant relationship was seen between the total score of emotional intelligence and neuroticism. There was a positive and significant relationship between the total score of emotional intelligence and Extraversion, agreeableness and conscientiousness in people with severe and very severe decisional procrastination. It appears necessary for planning more serious health programs because procrastination leading to physical and psychological consequences for students.

**KEYWORDS:** *Decisional procrastination, Emotional intelligence, Five-factor model of personality*

## INTRODUCTION

Procrastination is a common problem. Hammer and Ferrari found out in their research that more than 20% of adults experience procrastination in their daily activities, while the problematic procrastination among the undergraduate students is estimated as at least 70-95% out of which nearly

20-30% are involved in it chronically and severely<sup>1</sup>. Estimates indicate that approximately 80-95% of university students are involved in procrastination. Based on the former studies, there are two basic types of procrastination: behavioral procrastination, which is a delay in completing main and sub-tasks, and decisional procrastination, as an intentional delay in decision making in certain time periods<sup>2</sup>.

The previous studies show that decisional procrastination may lead to poor academic performance, experience of unwilling emotions like self-feeling of being shameful and guilty, depression, negative health behaviors such as delay in addressing health problems, and one way for Plagiarism<sup>3</sup>. Investigations have shown that procrastination is associated with negative physical health consequences and problematic video-game playing<sup>4</sup>. Specifically, it has been demonstrated that procrastinators tend to engage in fewer healthy behaviors such as exercise and healthy eating and that the poor health experienced by procrastinators may be due in part to their tendency to delay seeking care for their health problems<sup>5</sup>. The health-related behaviors are other evidences in proving procrastination to be harmful. A research by Sirois which aimed at investigating the relationship between procrastination, and health-related behaviors showed that there is a negative relationship between procrastination and intention of doing health-related behaviors, and this poor intention is made only by health-especial self-efficacy. The results indicated that procrastination associates with high stress, serious health problems, poor health conducts and medical and dental care<sup>6</sup>. A research was carried out by Stead, Shanahan, and Neufeld with the aim of investigation of the relationships between procrastination, stress and mental health. Their hypothesis was that high procrastination, and stress is associated with poor mental health and poor mental health seeking<sup>7</sup>. A number of studies have been accomplished in Iran as well on the relationship between procrastination and other psychological variables and their predictors. For example, the results of a study by Mirzaei which was carried out based on a cross-sectional research on 365 undergraduate and graduate students of the University of Tehran revealed a significant relationship between procrastination and variables of public self-efficacy, emotional regulation, perfectionism and concerns, and could predict them<sup>8</sup>. Another study, also, by Vaferi which was carried out on 480 university students to examine the relationship between psychopathology and procrastination went to show that there is a significant relationship between procrastination and symptoms of obsessive-compulsive disorder (OCD), depression and phobia<sup>9</sup>. Researches on emotional intelligence demonstrate that emotional intelligence and regulation are a key and efficient element in life events such as educational and occupational successes, interpersonal relationships, and health-

related adapted functions. Some researchers believe procrastination is a defect in self-regulation, i.e. disability of controlling thoughts and emotions in line with the self's standards. Former studies have shown that people who enjoy a high self-regulation are able to manage well their time; however, a number of researches in this connection reveal that procrastination is not only a failure in time management, it is, but a complicated process comprised of emotional, cognitive and behavioral factors<sup>10</sup>. The results of a research by Deniz and Aydogan indicated that there is a high positive correlation among university students between procrastination and dimensions of emotional intelligence such as adaptation and styles of coping with stress. This study showed also that there is a negative correlation between emotional intelligence skills and educational procrastination<sup>11</sup>. According to the results of a research by Marcantonio, Kalliopi, and Ana, alexithymia has an inverse correlation with emotional intelligence. People who suffer from alexithymia have difficulty in recognition, detection, processing and regulation of emotions and are not able to distinct internal emotions and bodily emotions due to internal defects. Given the cognitive and emotional defects, it is assumed that alexithymia may be associated with health indicators like depression, anxiety, and anger in general, and with physical and medical problems, in particular<sup>12</sup>. Dubey, Pandey, and Mishra indicated in a study that more cases of unhealthy behaviors such as drug and medicine abuse, alcoholism and gambling have been reported in people of higher alexithymia more than others. Furthermore, alexithymia has a relationship with anxiety, major depression, aggression, pain disorders, and sexual abnormalities<sup>13</sup>. The results of a study by Pychyl, Thibodeau, and Blunt revealed that the students indicated more procrastination in stressful and unpleasant conditions and also, when they faced with more difficult assignments; the study also demonstrated that when the above mentioned students were satisfied more with their assignments, they involved more in the activity and showed less procrastination<sup>14</sup>. Procrastination is linked to the big five-factor model of personality proposed by Costa and McCrae. In this model, neuroticism and conscientiousness are strongly linked to procrastination. The procrastination literature suggests that neuroticism is positively correlated with procrastination. Johnson and Bloom find that neuroticism is a significant predictor of procrastination among university students. They

showed that the impulsive nature of extraversion increases procrastination<sup>15</sup>. Furthermore, conscientiousness has a strong negative relationship with decisional procrastination<sup>16</sup>. Despite the fact that there has been a lot of research on procrastination and emotional intelligence, little work has been carried out to explore the prevalence of decisional procrastination among Iranian students, and it's the relationship between decisional procrastination and emotional intelligence and big five-factor model of personality.

## MATERIAL AND METHODS

The present study was aimed at investigation of the decisional procrastination prevalence among the students of universities of Tehran, and its relationship with emotional intelligence and big five-factor model of personality. The students of public and Islamic Azad universities in Tehran studying in the academic year of 2013-2014 (based on the Iranian educational calendar) made up the statistical population of this research. This study used multistage cluster sampling method as a subsidiary to simple random sampling. In this connection, first a number of universities in Tehran were chosen as a cluster in which several disciplines were selected randomly. The process went in a way that first, seven universities were selected out of the total 13 ones in Tehran via cluster sampling; then, five faculties among the selected universities were chosen using random sampling in which 400 students were selected as samples given the size of the population. The data collection method in this research used only questionnaires, in such a way that following random selection of the faculties and after obtaining approval of the legal authorities of the respective universities, the students, who were interested in participating in the study completed the Decision Problem (DP) scale, Bar-On emotional intelligence test and NEO Five Factor Inventory under supervision of researchers and trained individuals. For this purpose, in addition to a brief explanation, the students were asked to study the written consent form of the research and then take part if they are interested in. All questionnaires at the end were examined by the researcher or a trained colleague to ensure they are completed. In the event of any unanswered question, the questionnaire was returned to being completed using the required remarks. A total of 400 test packages were

examined finally, when all questionnaires were completed. Ethical considerations were considered.

### *Questionnaires*

#### *Decision Problem (DP) scale*

This scale has five self-report items and was prepared by Mann to assess delayed decision making. The items on this scale are scored by Likert method using five options in which the higher score represents higher level of delay. The previous studies have shown the reliability and validity of this scale<sup>17</sup>. In Iran, Hosseini and Khayer investigated the reliability of this test using internal consistency method and obtained the Alpha coefficient of 0.78. The validity of this scale was examined as well using the factor analysis method and investigation of main elements. The results of their research indicated a general factor in the whole scale which predicted 56.03% of the total variance. Also, the KMO coefficient (sampling adequacy index) and Sphericity test (correlation matrix adequacy index) unveiled sufficient evidence to corroborate the validity of the structure<sup>18</sup>.

#### *Bar-On emotional intelligence test*

This test with 117 questions and 15 scales was carried out by Bar-On, assessing 15 components of emotional intelligence, including emotional self-awareness, self-expression, self-esteem, self-actualization, independence, empathy, social responsibility, interpersonal relationships, realism, flexibility, problem solving, stress tolerance, impulse control, optimism and happiness. Likert method was used as the scale for this five-part questionnaire. This test was normalized in Iran in terms of validity by Samouyee; the 117-item questionnaire was reduced to 90 questions in which a direct and significant relationship was observed between the mean score for each of the scales and the mean total score of the test. The reliability of this test was reported as 0.93 for the total test using a calculation of Cronbach's Alpha coefficient<sup>19</sup>.

#### *NEO Five Factor Inventory*

The Short Form of the NEO Five Factor Inventory is a 60-item instrument measuring five dimensions of the normal personality: neuroticism, extraversion, openness, agreeableness and conscientiousness. 28 Respondents indicate their degree of agreement with each item on a 5-point Likert-type scale. In this study, the authorized Persian translation of the NEO Five Factor Inventory<sup>29</sup> was used to collect personal data of the

sample. Standardization of the NEO Five Factor Inventory was accomplished using a group of students of universities of humanity science in Tehran. Alpha estimates for Persian version were 0.79, 0.76, 0.78, 0.54 and 0.61 for neuroticism, extraversion, openness, agreeableness and conscientiousness respectively<sup>20</sup>.

## RESULTS

The decisional procrastination distribution is shown in tables 1, following calculation of the mean and standard deviation for decisional procrastination in the whole sample group which were 12.71 and 3.92, respectively. According to the results of the table and figure presented here, the highest percentage of decisional procrastination is observed in the moderate category (45%) and then in the mild category (31%). Briefly speaking, the decisional procrastination of moderate and higher among the students is approximately 69% (Table 1).

**Table 1**  
*Categorization of decision-making procrastination based on the mean and standard deviation of the whole sample group (n=400)*

Category	Score Range	Number	%	Cumulative Frequency
Mild	5-10	124	31	31
Moderate	11-15	180	45	76
Severe	16-20	89	22.3	98.3
Very Severe	21-25	7	1.7	100

**Table 2**  
*Pearson correlation between dimensions of emotional intelligence and decisional procrastination*

Variables	Emotional intelligence	Decisional procrastination	Significant level
Problem solving		-0.36	0.001
Happiness		-0.31	0.001
Independence		-0.40	0.001
Stress tolerance		-0.45	0.001
Self-actualization		-0.52	0.001
Emotional self-awareness		-0.39	0.001
Realism		-0.48	0.001
Interpersonal relationships		-0.22	0.001
Optimism		-0.41	0.001
Self-esteem		-0.41	0.001
Impulse control		-0.23	0.001
Flexibility		-0.34	0.001
Social responsibility		-0.08	0.012
Empathy		-0.02	0.027
Self-expression		-0.36	0.001
Total score		-0.53	0.001

The Pearson correlation coefficient was used to investigate the relationship between dimensions of emotional intelligence and decisional procrastination between which the results indicated a negative and significant relationship. In other words, an increase in the score of emotional intelligence causes the decisional procrastination to reduce. A negative and significant relationship was seen as well between the total score of emotional intelligence and decisional procrastination (Table 2). Furthermore, the Pearson correlation coefficient

was used to investigate the relationship between emotional intelligence and decisional procrastination between big five-factor model of personality in people with severe and very severe procrastination. A negative and significant relationship was seen between the total score of emotional intelligence and neuroticism. There was a positive and significant relationship between the total score of emotional intelligence and Extraversion, agreeableness and conscientiousness (Table 3).

**Table 3**  
*Pearson correlation between dimensions of emotional intelligence and Big Five Personality Traits*

Variables intelligence	Emotional	Neuroticism	Extraversion	Openness experience	to Agreeableness	Conscientiousness
Problem solving		-0/30**	0/30**	0/10	0/34**	0/31**
Happiness		-0/67**	0/79**	-0/05	0/22*	0/38**
Independence		-0/49**	0/36**	0/25*	0/01	0/21*
Stress tolerance		-0/65**	0/39**	0/07	0/21*	0/37**
Self-actualization		-0/57**	0/48**	0/004	0/32**	0/50**
Emotional self-awareness		-0/46**	0/42**	0/11	0/25*	0/30**
Realism		-0/42**	0/22**	-0/17	0/26*	0/19
Interpersonal relationships		-0/25**	0/52**	0/06	0/21**	0/16
Optimism		-0/57**	0/54**	0/09	0/14	0/34**
Self-esteem		-0/64**	0/47**	0/04	0/14	0/40**
Impulse control		-0/29**	0/02	0/02	0/43**	0/16
Flexibility		-0/39**	0/19	0/09	0/35**	0/23*
Social responsibility		0/19	0/06	0/05	0/13	0/19
Empathy		-0/05	0/24*	0/09	0/20*	0/09
Self-expression		-0/45**	0/36**	0/08	0/009	0/25*
Total score		-0/73**	0/64**	0/09	0/38**	0/48**

\*significant level in <0.05    \*\* significant level in <0.01

## DISCUSSIONS AND CONCLUSION

The findings of this study are consistent with those of the researches by Rebetez, Rochat and Van der <sup>21</sup>, Sirois and Kitner [22], Zhu and Leung [23] and Dubey, Pandey, and Mishra <sup>13,21-23</sup>. Rebetez, Rochat and Van der found out in a study that the high educational procrastination is associated with alexithymia and also inability in expressing feelings and emotions <sup>21</sup>. Reiff, Hatzes, Bramel, and Gibbon indicated in a study that the students who suffer from alexithymia obtain lower scores in emotional intelligence and are involved in educational procrastination more than the students who are able to manage well their emotions. Emotional intelligence is the ability to assess, regulate, and utilize emotions and have been found to be associated with academic self-efficacy and a variety of better outcomes, including academic performance<sup>24</sup>. Zhu and Leung found out in his research that there is a positive and significant relationship between educational procrastination and academic burnout and alexithymia<sup>23</sup>. According to Lazarus and Folkman's Transactional Model of Stress and Coping, coping is defined as cognitive and behavioral efforts that are constantly changing to master, tolerate or reduce a specific stressor appraised as exceeding one's available resources and abilities <sup>25</sup>. Procrastination is a

dysfunctional strategy for coping in the face of stressful situations and a kind of avoidance coping style that temporarily helps people to keep away from negative emotions. Procrastination is a tool to adjust the negative emotions which may be reinforced soon. In other words, people prefer the smaller and available bonuses rather than the great, but inaccessible ones<sup>26</sup>. We would expect the development of emotional intelligence dimensions such as problem solving, stress tolerance and impulse control to improve emotional intelligence, contributing to lower neuroticism and higher extraversion, agreeableness, and conscientiousness in people with procrastination. The implication of this research is planning more serious health programs because procrastination leading to physical and psychological consequences for students.

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## REFERENCES

1. Hammer, Corey A., and Joseph R. Ferrari. Differential incidence of procrastination between blue and white-collar workers. *Current Psychology*, 2002; 21(4): 333-338.
2. Bańka, Augustyn, and Aleksander Hauziński. Decisional procrastination of school-to-work transition: Personality correlates of career indecision. *Polish Psychological Bulletin*, 2015; 46(1): 34-44.
3. Ngo, Minh Ngoc. Eliminating Plagiarism in Programming Courses through Assessment Design. *International Journal of Information and Education Technology*, 2016; 6(11): 873.
4. Forrest, Cameron J., Daniel L. King, and Paul H. Delfabbro. The measurement of maladaptive cognitions underlying problematic video-game playing among adults. *Computers in Human Behavior*, 2016; 55: 399-405.
5. Kim, Kyung Ryung, and Eun Hee Seo. The relationship between procrastination and academic performance: A meta-analysis. *Personality and Individual Differences*, 2015; 82: 26-33.
6. Sirois, Fuschia M. "I'll look after my health, later": A replication and extension of the procrastination–health model with community-dwelling adults. *Personality and Individual Differences*, 2007; 43(1):15-26.
7. Stead, Rebecca, Matthew J. Shanahan, and Richard WJ Neufeld. "I'll go to therapy, eventually": Procrastination, stress and mental health. *Personality and Individual Differences*, 2010; 49(3):175-180.
8. Mirzaei, M., Gharraee, B., Birashk B. The Role of Positive and Negative Perfectionism, Self-Efficacy, Worry and Emotion Regulation in Predicting Behavioral and Decisional Procrastination. *Iranian Journal of Psychiatry and Clinical Psychology*, 2013; 19(3): 230-240.
9. Vaferi, M. The Relationship between psychopathology and procrastination in the Islamic Azad University. MA thesis. Islamic Azad University. Tehran branch.
10. Rebetez, Marie My Lien, Lucien Rochat, and Martial Van der Linden. "Cognitive, emotional, and motivational factors related to procrastination: A cluster analytic approach." *Personality and Individual Differences*, 2015; 76: 1-6.
11. Deniz M, Tras Z, Aydogan D. An investigation of academic procrastination, locus of control, and emotional intelligence. *Educational Sciences*, 2009;9:623-32.
12. Marcantonio S, Kalliopi H, Ana N. Metacognition, emotion, and procrastination. *J Cognit Psychotherap*, 2006;20:319-26.
13. Dubey, A., R. Pandey, and K. Mishra. Role of emotion regulation difficulties and positive/negative affectivity in explaining alexithymia-health relationship: an overview. *Indian Journal of Social Science Researches*, 2010; 7(1): 20-31.
14. Pychyl, Timothy A., et al. Five days of emotion: An experience sampling study of undergraduate student procrastination. *Journal of social Behavior and personality*, 2000; 15 (5):239.
15. Johnson, Judith L., and A. Michael Bloom. An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences*, 1995; 18(1): 127-133.
16. Karatas, Hakan. Correlation among Academic Procrastination, Personality Traits, and Academic Achievement. *ANTHROPOLOGIST*, 2015; 20(1-2): 243-255.
17. Spada, Marcantonio M., Kalliopi Hiou, and Ana V. Nikcevic. Metacognitions, emotions, and procrastination. *Journal of Cognitive Psychotherapy*, 2006; 20(3): 319-326.
18. Hosseini, F., Khayyer, M. Prediction of procrastination behavior and decision-making with respect to metacognitive beliefs among students. *Iranian Journal of Psychiatry and Clinical Psychology*, 2010; 15(3): 265-273.
19. Samouyee, R. Translation and standardization of the EQ. Sina Research Institute of Behavioral Sciences 2003.
20. Kiamehr J. Standardization of the short form of NEO-FFI-R and investigation of factorial structure (confirmatory analysis) among the humanities' students of Tehran University. Dissertation, University of Allame Tabatabai, 2003.
21. Rebetez, Marie My Lien, Lucien Rochat, and Martial Van der Linden. Cognitive, emotional, and motivational factors related to procrastination: A cluster analytic approach.

- Personality and Individual Differences, 2015; 76: 1-6.
22. Sirois, Fuschia M., and Ryan Kitner. Less Adaptive or More Maladaptive? A Meta-analytic Investigation of Procrastination and Coping. *European Journal of Personality*, 2015; 29(4): 433-444.
  23. Zhu, Yan, and Frederick KS Leung. Motivation and achievement: Is there an East Asian model?. *International Journal of Science and Mathematics Education*, 2011; 9(5): 1189-1212.
  24. Reiff, Henry B., Nanette M. Hatzes, Michael H. Bramel, and Thomas Gibbon. The relation of LD and gender with emotional intelligence in college students. *Journal of Learning Disabilities*, 2001; 34(1): 66-78.
  25. Lazarus, Richard S., and Susan Folkman. Transactional theory and research on emotions and coping. *European Journal of personality*, 1987; 1(3): 141-169.
  26. Steel, Piers. The nature of procrastination: a meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological bulletin*, 2007; 133(1):65