PREVALENCE OF ACADEMIC PROCRASTINATION BEHAVIOR AMONG PRE-SERVICE TEACHERS, AND ITS RELATIONSHIP WITH DEMOGRAPHICS AND INDIVIDUAL PREFERENCES

(AKADEMIK ERTELEME DAVRANIŞININ ÖĞRETMEN ADAYLARI ARASINDAKİ YAYĞINLIĞI, DEMOGRAFİK ÖZELLİKLERİ VE BİREYSEL TERCİHLERLE İLİŞKİSİ)

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ABSTRACT
The aim of this study is to investigate the prevalence of academic procrastination behavior among pre-service teachers, and its relationship with demographics and individual preferences. The participants were 580 students who were studying in different major fields at the Faculty of Education in Pamukkale University. The age range varied from 19 to 28. In this study, Aitken’s Procrastination Inventory and Personal Information Sheet were used to gather data. The analysis showed that 23 % of pre-service teachers exhibited procrastination behavior at a high level. Other findings indicated that procrastination behavior significantly differed by gender, time preferences for studying courses and exams, and was negatively related to academic achievement. Implications of the findings are discussed and some suggestions are made for the educator and counselors.

Keywords: procrastination, gender, academic achievement, and time preferences for studying course and exams

ÖZ

Anahtar Sözcükler: erteleme, cinsiyet, akademik başarı, ders ve sınavlara çalışmın için tercih edilen zaman dilimi.

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Procrastination is defined as a behavior in which an individual leaves a feasible, important deed planned beforehand to another time without any sensible reason (Grecco, 1984). Although procrastination behavior is a common phenomenon and an unfavorable feature, it does not seem easy to define it in an agreeable manner in the literature. When all the definitions are compared, it is commonly seen that the definition includes actions and behaviors that affect the fruitfulness of the individual in a negative way.

This complex issue is studied under five different subtitles as follows; 1- General Procrastination, 2- Academic Procrastination, 3- Decision-making Procrastination, 4- Neurotic Procrastination, 5- Non-obsessional or Non-functional Procrastination. While general and academic procrastination is related to the avoidance of task, the other procrastination behaviors seem to be connected with decision making. Procrastination behavior in general is described as the difficulties that an individual has in performing daily tasks due to incapability to organize time and management effectively (Ferrari, 1995). Solomon and Rothblum (1984) define academic procrastination behavior as doing homework, preparing for exams or doing the term papers assigned at the end of the term at the last minute. Decision making procrastination is illustrated as the incapability of making proper decisions about different experiences (Effert and Ferrari, 1989). Neurotic procrastination behavior is represented as a tendency towards procrastination decisions about important matters in the individual’s life (Ellis and Knaus, 1977). Non-obsessional and functional procrastination behavior is depicted as procrastination in making behavioral decisions (Ferrari, 1991). These five types of procrastination behaviors negatively affect the individual’s management of internal and interrelationships with people. Much as the first two types are considered harmless, sometimes they may cause an individual to feel desperate and inefficient in the course of dealing with his environment (Milgram, Mey-Tal and Levison, 1998). The reasons for procrastination behaviors are detailed in the literature. When studies on the reasons for procrastination behaviors are taken into consideration, the most significant reason includes the individual’s inefficiency in time management. Another reason for procrastination behaviors is shown as the difficulty of concentration or the feeling of weak responsibility. The third reason is the anxiety and fear of being unsuccessful in a person’s actions owing to negative perceptions. Moreover, other reasons are unrealistic expectations that the individual sets for himself and performance, improper cognitive ascription, and the tendency to become faultless (Ferrari, 1992; McCown and coll., 1987; Solomon and Rothblum, 1984).

Procrastination behavior may commonly be seen in academic and daily life. It is reported that procrastination behavior is prevailing considerably, as
the researches on the prevalence of the behavior for students show. For example, Ellis and Knaus (1977) report that approximately 95% of university students, Solomon and Rothblum (1984) report 46% of university students, and Potts (1987) report nearly 75% of university students perceive themselves as having procrastination behavior. In other parallel studies, it is suggested that the majority of students show persistent and invariable procrastination behaviors (Day, Mensink, and O’ Sullivan, 2000; Haycock, 1993; Onwuegbuzie, 2000). The results of these studies are significant in that they indicate procrastination behavior is relatively common among university students.

A review of procrastination literature revealed that procrastination is related to poor academic performance (Beswick, Rothblum, and Mann, 1988; Çakıcı, 2003; Fritzsche, Young, and Hickson, 2003; Orpen, 1998; Tice and Baumeister, 1997; Tuckman, 2002), slipping off the lesson (Semb, Glick and Spencer, 1979; Rothblum, Solomon and Murakami, 1986), depression (Sadller and Sacks, 1993), unpunctuality, difficulty in following instructions (Lay, 1986; Rothblum, Solomon, and Murakami, 1986; Solomon and Rothblum, 1984), low effort for success (Sadller and Bulley, 1999), weak self-efficiency (Haycock, McCarthy, and Skay, 1998), weak self-esteem (Effert, and Ferrari, 1989; Ferrari, 1994), low capacity (Milgram, Marshevsky, and Sadeh, 1995), anxiety (Ferrari, 1991; Milgram and Toubiana, 1999), inadequate motivation (Seneçal, Koestner, and Vallerand, 1995), modes of thinking and decision making (Balkis, 2006) perfectionism (Sadller and Sacks, 1993), low consciousness level (Johnson and Bloom, 1995; Lay and Brokenshire, 1997; Schouwenburg and Lay, 1995) and neuroticism (Beswick, Rothblum and Mann, 1988; Johnson and Bloom, 1995; Lee, Kelly, and Edwards, 2006; Milgram, Batori, and Mowrer, 1993; Lay, 1992; Schouwenburg and Lay, 1995; Watson, 2001). When all the studies above are considered, it is concluded that procrastination behaviors are a common problem among university students and an influential factor on their personalities, psychological well being, and academic achievement.

It is known that studies on the relationships of procrastination behavior with personal differences are plentiful, whereas analyses on the relationships of procrastination behavior with demographic variations are insufficient in the literature. One of the objectives of this study is to fill in this missing part of the literature. When the studies on the relationship of procrastination behavior with demographic variables are analyzed, it is suggested that procrastination behavior is negatively related to age difference, the level of the procrastination behavior decreases as the age goes up (Gülebağlan, 2003; O’Donoghue and Rabin, 1999). As the studies on the relationship of procrastination behavior with gender are taken into consideration, it is found that the results of their relationships are different. A number of studies indicate that procrastination behavior does not differentiate according to the gender difference (Çakıcı,
2003; Ferrari, 1991; Haycock, McCarty, and Skay, 1998; Hess, Sherman, and Goodman, 2000; Johnson and Bloom, 1995; Solomon and Rothblum, 1984; Watson, 2001), other studies represent that it is more commonly seen in female students (Dolye and Paludi, 1998, Washington, 2004 ); on the other hand, another group of studies report that it is frequently seen in male students (Balkıs, 2006; Balkıs, Duru, Duru and Buluş, 2007; Gülebağlan, 2003; Prohaska, Morrill, Atiles and Perez, 2000; Senecal, Koestner and Vallenard, 1995). When the studies above are assessed in their entirety, it is noticed that a number of new studies which can explain the relationship of procrastination behavior with the age and gender difference are required.

It is known that studies on academic procrastination-demographic differences are insufficient in the literature; likewise, studies on the relationship of the period of time for exams and lessons with academic procrastination are few (Ferrari et al., 1997; Sherman and Goodman, 2000; Solomon and Rothblum, 1984). The common findings of these studies show that the habit of studying lessons in the late hours and at the last minute are related to procrastination behavior. When it is considered that academic procrastination behavior is related to not leaving deeds to the last minute and studying regularly, it may be expected that students who leave their academic tasks to the last day and last hour tend to procrastination more.

Within the frame of procrastination behaviors and the developmental guidance perspective, it is thought that an individual may need psychological support to carry out vocational, instructional and psychosocial development. Moreover, from the preventive guidance perspective, an individual being negatively affected in their academic achievement and well-being may need guidance. Consequently, it is considered that we need to comprehend the quality of procrastination behavior thought to be a common phenomenon in the general and academic population. Therefore, the aim of this study is to investigate various demographic features and personal choices within the frame of prevalence of procrastination behavior among prospective teachers.

METHOD

Participants
The illustration of the study was set through the random sample method. The sample included 329 female and 251 male volunteer students who study in different major fields at the Faculty of Education in Pamukkale University. The age range varied from 19 to 28 ($M = 22.32$).

Measures
In this study, Aitken Procrastination Inventory and Personal Information Sheet were used to gather data.
Prevalence of academic procrastination behavior among pre-service teachers, and its relationship with demographics and individual preferences

Aitken Procrastination Inventory (API)

The scale was designed by Aitken (1982) to measure the tendency of students to procrastination in their academic tasks. The scale with one dimension, consisting of 16 items, is a 5-point one. Participants indicate the extent to which they believe in statements such as “If I had an important project to do, I’d get started on it as quickly as possible”. The statements are rated on a 5-point Likert scale with response options of false, mostly false, sometimes false/sometimes true, mostly true, and true. Aitken (1982) reports adequate internal consistency of the measure with a coefficient alpha of .82. High scores indicate that the students have a high level of procrastination behavior. Balkis (2006) adapted the scale into Turkish. Balkis (2006) reported that the internal consistency coefficient for the API was α = .89 and four weeks test-retest reliability correlation for the API was .87. The results of analysis showed that the scale had one factor, accounting for 38.38 % of the common variance (eigenvalue = 6.14).

Demographic Information Sheet

The demographic data of the participants was gathered via the information sheet. In the form, questions for the prospective teachers include their gender, age, the period of time they prefer for exams and lessons, and their academic achievement.

Procedure

Students were approached during classes and invited to participate in the study by anonymously completing a questionnaire booklet containing the Aitken Procrastination Inventory described above as well as a short demographics measure. The completion lasted approximately 10-15 minutes. For analysis of the data, SPSS 15 program was used. Coefficient of Pearson Correlation was utilized to set the relationships between variations; t test and one-way ANOVA were also used to test whether the dependent variation differentiated with respect to independent variations. Furthermore, first multiple and then hierarchical regression analysis was used to test the effect of independent variations on the dependent variation. In the research, the meaningfulness level was set as minimum 0.05, and other meaningfulness levels were indicated as (0.01 and 0.001).

FINDINGS

The Prevalence of Procrastination

In order to determine the prevalence of the behavior among prospective teachers, the method that was used for other studies in the literature was followed (Beck, Koons and Milgrim, 2001; Brownlow and Reasinger, 2000; Potts, 1987; Schouwenburg, 1992; Solomon and Rothblum, 1984). In this
process, the arithmetic average of total scores of prospective teachers in the procrastination inventory and standard deviation were measured; the groups that were one standard deviation above and below the average were appointed as the groups representing low and high levels of procrastination behavior. In the assessment process, it was concluded that 23 % of prospective teachers had high, and 27 % of them had an average level of procrastination behavior.

**Procrastination - Gender**

In order to examine gender difference on academic procrastination, an independent sample t test was performed. The analysis indicated that the average of procrastination behavior scores for male prospective teachers (\( \bar{x} = 39.39, s_s = 10.94 \)) is higher than the average of scores for female prospective teachers (\( \bar{x} = 35.02, s_s = 10.59 \)) and this difference is meaningful at \( p<.001 \) level. In other words, the male prospective teachers have a higher level of tendency to procrastination than the female participants.

**Procrastination - Age**

Correlation analysis was implemented to test the relation between procrastination behavior and age. The results of the correlation analysis indicate that there is a negatively meaningful correlation at the level of \( r (580) = -0.09, p<.05 \) between the procrastination behavior and age of prospective teachers. That is to say, as the age goes up, the level of procrastination behavior decreases.

**Procrastination - Time Period Preferred to Study Lessons**

One way ANOVA analysis was used to test whether procrastination behavior differentiates with respect to the time period variation of studying for lessons. The results indicate that procrastination behavior differs according to the time period of studying lessons [F (4,575) = 6.783, \( p<.01 \)]. In order to determine the source for this difference, Tukey test analysis was applied. The results indicate that this difference is due to the fact that the average of scores for the students who prefer to study after 24:00 is higher than (\( \bar{x} = 41.09, s_s = 12.82 \)) the average of scores for those who prefer to study early in the morning (\( \bar{x} = 34.48, s_s = 10.62 \)), at noon (\( \bar{x} = 32.95, s_s = 8.15 \)) and in the evening (\( \bar{x} = 36.01, s_s = 10.73 \)).

**Procrastination - Time Period Preferred to Study for Exams**

One way ANOVA analysis was implemented to test whether procrastination behavior changes according to the time period preferred to study for exams. The results indicate that procrastination behavior changes according to the time period preferred to study for the exams [F (4,575) = 29.237, \( p<.01 \)]. In order to determine the source for this difference, Tukey test
analysis was applied and the results of the analysis show that the difference is due to the fact that the average of scores for the prospective teachers who prefer to study for exams on the night before exams ($\bar{x} = 44.07, \text{ss} = 11.77$) and who prefer to study a week before the exams ($\bar{x} = 36.20, \text{ss} = 9.55$) are higher than the average of scores for those who prefer to study up to the very day ($\bar{x} = 28.27, \text{ss} = 8.93$) and two weeks before the exams ($\bar{x} = 31.89, \text{ss} = 9.40$).

**Procrastination - Academic Achievement**

In order to test the relationship between procrastination behavior and academic achievement, correlation analysis was done. In the academic achievement assessment process, the average of grades reported by prospective teachers was used. The results of correlation analysis reveal that there is a negatively meaningful correlation at the level of $r (580) = -0.280, p<.01$ between procrastination and the academic achievement of prospective teachers. Specifically, as procrastination increases, academic achievement decreases.

Table 1. Hierarchical Regression Analysis for Variables Predicting Academic Procrastination

<table>
<thead>
<tr>
<th>Variables</th>
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<th>p</th>
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<tbody>
<tr>
<td>Model 1</td>
<td>4.882</td>
<td>.635</td>
<td>.388</td>
<td>7.690</td>
<td>.000</td>
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<td>TPSE</td>
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<td>Model 2</td>
<td>4.507</td>
<td>.621</td>
<td>.358</td>
<td>7.263</td>
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<tr>
<td>TPSE</td>
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<tr>
<td>AA</td>
<td>-6.204</td>
<td>1.309</td>
<td>-0.234</td>
<td>-4.739</td>
<td>.000</td>
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<td>Model 3</td>
<td>4.429</td>
<td>.616</td>
<td>.352</td>
<td>7.195</td>
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<td>TPSE</td>
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<tr>
<td>AA</td>
<td>-5.365</td>
<td>1.334</td>
<td>-0.202</td>
<td>-4.021</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>2.774</td>
<td>1.033</td>
<td>0.134</td>
<td>2.685</td>
<td>.008</td>
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<td>Model 4</td>
<td>4.323</td>
<td>.611</td>
<td>.343</td>
<td>7.071</td>
<td>.000</td>
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<tr>
<td>TPSE</td>
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<tr>
<td>AA</td>
<td>-4.965</td>
<td>1.331</td>
<td>-0.187</td>
<td>-3.731</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>3.000</td>
<td>1.028</td>
<td>0.145</td>
<td>2.919</td>
<td>.004</td>
</tr>
<tr>
<td>Age</td>
<td>-0.611</td>
<td>0.231</td>
<td>-0.128</td>
<td>-2.643</td>
<td>.009</td>
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<tr>
<td>R = .487</td>
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<td>$R^2 = .237$</td>
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<td>P = .001</td>
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</table>

Note: TPSE, Time Preferences for Studying Exams; AA = Academic Achievement

**The Effect of Psychosocial Variables on Procrastination**

In order to test the effect of demographic features and personal choices on procrastination, hierarchical regression analysis was applied and the data gained is shown in Table 1. Hierarchical regression analysis was preferred to
check the effect of each variable on procrastination behavior variance. Therefore, multiple regression was first used and then hierarchical regression was applied by the way of meaningful correlations and beta influence. In multiple regression, the time period variable for studying the lessons was not assessed since there seemed no correlation. The results of the analysis indicate that the effects of age, gender, and the time period on procrastination behavior variance are significant (F (4-575) = 25.718, p<.001. All the variables can explain nearly 23.7 % of procrastination behavior variance. When analyzing the effect size of the variables on procrastination variance, it is seen that f² is .32. In other words, the effects of variables on procrastination variance are at medium level.

CONCLUSION, DISCUSSION and SUGGESTIONS

This research examined the prevalence of academic procrastination behavior; the relationship of procrastination behavior with age, gender, academic success and personal choices, and the level of effects of these variables on procrastination behavior. As a result of the research, it can be stated that 23 % and 27 % of the prospective teachers have high and medium levels of procrastination behavior, respectively. These results suggest that nearly half of university students have different levels of difficulties in academic procrastination behavior. Our research results are consistent with Solomon and Rothblum’s (1984) research results.

Another finding of the research is that procrastination behavior differs in respect of gender variation and that the level of procrastination behavior for male prospective teachers is greater than that of female prospective teachers. The gender differences concerning procrastination behavior are considerably difficult to envisage (Steel, 2004). When studying the literature on this issue, it can be seen that the findings of the studies on the procrastination behavior-gender relation are inconsistent with each other. While some of the studies emphasize that procrastination behavior does not change according to gender (Watson, 2001; Hess, Sherman, and Goodman, 2000; Haycock, McCarty, and Skay, 1998; Ferrari, 1991; Johnson and Bloom, 1995; Effert and Ferrari, 1989; Rothblum, Solomon, and Murakabi, 1986; Solomon and Rothblum, 1984), other studies state procrastination behavior is seen more in female students (Dolye and Paludi, 1998, Washington, 2004 ); and other studies claim procrastination behavior is seen more in male students (Balkıs, 2006; Balkıs, Duru, Duru and Buluş, 2007; Prohaska, Morrill, Atiles and Perez, 2000; Senecal, Koestner and Vallenard,1995).

Considering the findings above, together with the findings of this study, it can be stated that we need more studies on gender-procrastination behavior. It is likely that this difference stems from the gender roles rather
than gender. The studies on gender differences in Turkish culture stress that girls and boys go through different socialization stages (Çakır and Aydı̇n, 2005; Hortaçsu, Oral and Yasak-Gültekin, 1990; Kağıtçıbaşi, 2000; Kağıtçıbaşi and Sunar, 1992; Karakitapoglu-Aygün, 2004; Karakitapoglu-Aygün and İmamoğlu, 2004). In traditional terms, the girls go through socialization stages that are appropriate for care practice and relation tendency roles. On the other hand, as Karakitapoglu-Aygün and İmamoğlu emphasize, (2004) it is observed that after the 1990’s, changes in traditional gender roles occurred under the influence of social, cultural and economic developments. Girls tend to adopt roles for success and motivation, as well as traditional care practices. The motivation for success in girls increases together with the level of education. For instance, the study of Özgüngör (2006) indicates that female prospective teachers have greater motivation for learning and achievement than the male ones, and the females also enter the lessons with less grade anxiety than the male prospective teachers. Carrying out tasks and responsibilities on time as a function of success inclination and motivation may decrease the procrastination behavior of the girls. Moreover, it is apparent that we need new studies in order to check the validity of these statements.

The results of the analysis about the procrastination behavior-age relationship demonstrate that procrastination behavior is negatively correlated with age. That is to say, as age increases, academic procrastination behavior decreases. This result is parallel with other studies in this field (Gülebağlan, 2003; O’Donoghue and Rabin, 1999). This finding seems meaningful seeing that an individual, who is highly conscious of his responsibilities as he grows up, may evaluate himself and his environment more sensibly. On the other hand, the effect size of correlation between two variables was low (r²=.008). This result showed that we need new studies regarding the relationship of procrastination behavior with age.

Another significant finding of the research is the difference in the prospective teachers’ level of procrastination behavior with respect to the time period they prefer to study for lessons and exams. The findings suggest that the level of procrastination for prospective teachers who prefer to study for exams at late hours and just before the exams is higher than that of prospective teachers who choose to study at early hours regularly and systematically. Hess, Sherman and Goodman (2000) report in their study on the effect of preferring to study in the late hours and neurotic characteristic features on academic procrastination behavior that choosing to study late hours and neurotic characteristic feature can only illuminate 28 % of academic procrastination behavior. Also, the results of the analysis indicate that the neurotic characteristic feature functions as a mediator variable in the relationship of studying late hours with procrastination behavior. In other words, the correlation between studying at late hours and procrastination
behavior gets stronger as neurotic personality features increases. Besides, it is evident that not all of the students who prefer to study late hours have neurotic personality features; and neurotic personality features are only one of the mediate variables. It is also apparent that other mediate variables play a part in the correlation between studying late hours and procrastination behavior. In another study on this issue, Ferrari and his colleagues (1997) found out that individuals who tend towards procrastination prefer to study in the late hours and that there is a meaningful correlation between procrastination behavior and the number of activities done in the late hours. Solomon and Rothblum (1984) stated that there is a negative correlation between academic procrastination behavior and guiding oneself to study regularly. Considering the studies in this field as a whole, it can be inferred that the habits of studying late hours and the day before the exams are related to procrastination behavior. In this correlation, characteristic features, management of time, structuring skills, and self-awareness play important roles. The findings gained from this research are collateral with other findings of the studies in this field.

The analysis also indicates that procrastination behavior is negatively correlated with academic achievement. In the literature, a great number of studies affirm our finding (Beswick, Rothblum, and Mann, 1988; Çakıcı, 2003; Fritzsche, Young, and Hickson, 2003; Orpen, 1998; Tice and Baumeister, 1997; Tuckman, 2002). Similarly, the study of Fritzsche, Young and Hickson (2003) claims that the correlation between academic procrastination behavior and low academic achievement is higher in lessons involving a great number of assignments. The fundamental requirements for academic achievement can be given as skills including organization of time, determination of aims and priorities for tasks, fulfillment of duties in due time, and the habit of studying systematically. In contrast, studying under the pressure of time and at late hours may trigger insomnia and then sleeplessness may bring about concentration difficulties and weak academic performance. The studies regarding the issue in this field indicate that procrastination behavior is related with weak academic performance, (Beswick, Rothblum, and Mann, 1988; Çakıcı, 2003; Fritzsche, Young, and Hickson, 2003; Orpen, 1998; Tice and Baumeister, 1997; Tuckman, 2002), unpunctuality, difficulty in following instructions (Lay, 1986; Rothblum, Solomon, and Murakami, 1986; Solomon and Rothblum, 1984), low effort for success (Saddler and Buley, 1999), weak self-efficiency (Haycock, McCarthy, and Skay, 1998), and inadequate motivation (Sénéchal, Koestner, and Vallerand, 1995). Our finding is consistent with the findings of other studies in the field.

The latest regression analysis results reveal that the period of time preferred to study for exams, academic achievement, gender and age variations can explain 23.7 % of the total variance for procrastination.

In brief, the procrastination behavior in prospective teachers acquires a different character with respect to gender and the period of time preferred to
study for exams. Also, procrastination behavior is negatively related with academic achievement. Within the frame of these findings, it is noticed that there are male prospective teachers who prefer to study their lessons at late hours, study for exams the night before and have low academic achievement when considering the demographic features and personal choices of prospective teachers who have a high level of procrastination behavior.

With regard to the results of the research, suggestions are given below:

1- In the course of education, studies aimed at establishing the prevalence of procrastination behavior among students and the fundamental reasons for academic procrastination behavior may contribute greatly to understanding the nature of the problem and thus developing strategies to deal with it.

2- Another striking point in procrastination behavior is that procrastination is related to acquiring the skills and habits of self-arrangement and effective time organization. On this point, tasks aimed to instill in students the skills of self-arrangement and time management may serve to decrease procrastination behavior from primary to high education. Therefore, it is thought that organizing group work which aims to equip students with the skills and habits of effective time management, planned studying, and sensible expectations for academic work and problem solving will be beneficial in decreasing the level of procrastination tendency in students.

3- Although demographic and characteristic features are focused on in the study, it is apparent that we need more studies which will search for personal and environmental factors and common effects of the variables concerning these two factors for the purpose of understanding procrastination behavior better, considering that procrastination behavior is multi-faceted. Consequently, new studies may lead to a way of displaying a general framework and apprehending the nature of procrastination behavior better.

4- Finally, more studies on samples both inside and outside the university context will contribute to increasing the extent of generalization and validity for the findings in the literature.

REFERENCES


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and its relationship with demographics and individual preferences


