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## The Relationship Between Academic Procrastination Behaviors Of Secondary School Students, Learning Styles And Parenting Behaviors\*

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### Abstract

The study aims to reveal the relationship between academic procrastination behavior and learning styles of the students and parents' child-raising behaviors of parents. The research has a quantitative design and is in correlational survey model. The study group of the study consists of 358 parents and their secondary school students. "Academic Procrastination", "Alabama Parenting Questionnaire" and "Learning Styles for Elementary School Students" scales were used as data collection tools. The findings show that the procrastination behaviors of secondary school 5<sup>th</sup> grade students are lower than 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade students. It is also observed that there is a relationship between academic procrastination behaviors of students and some sub-dimensions of parental behaviors. It can be stated that 6% of the total variance of students' academic procrastination behavior is explained by poor parental follow-up behaviors. In the literature, data regarding parenting style were mostly obtained from how teenagers perceive their parents. Researchers who want to study in this field may reach the teenagers' parents directly. They may also conduct studies that examine the effects of different learning styles and personality traits on procrastination behaviors at other educational levels.

**Keywords:** Academic procrastination, learning styles, parental behaviors, secondary school education

### Introduction

The ability of the individual to have the knowledge and skills necessary for the social and individual development, which is also called competences of the present age, is closely related to his / her awareness of the responsibility of learning. Learning responsibility is a concept that cannot be limited only with the initiation and execution of the instructional tasks. This responsibility is a state of consciousness. It covers a wide range from providing objective to learning motivation to internal reflections and evaluations related to instructional task. In recent years, having responsibility of learning, which is also associated with concepts such as self-regulation and self-learning, has gained a more technical dimension as a process. It is possible to talk about many factors that affect whether a student takes responsibility, or not along with the factors affecting the reason why the student does not take responsibility for their own learning. One of the factors that affect not taking responsibility is the "procrastination" behavior, which we can also describe as a common negative student behavior and its reflection on instructional processes which is called "academic procrastination". Solomon and Rothblum (1984), who have important studies and scales on academic procrastination, stated that academic procrastination behavior, which is a particular type of general procrastination, is a delay for certain reasons such as preparing for an exam, preparing term paper, administrative tasks related to the school, and participation duty. Academic procrastination is a complex interaction of affective, cognitive and behavioral elements, which includes much more than insufficient time management and inadequate working skills (Ferrari, 1991; Solomon & Rothblum, 1984). In the literature, there are studies investigating the reasons for academic procrastination, interventions that can be done to prevent them and their relationship with different variables. The vast majority of research in Turkey is concerning the relationship between academic procrastination, some variables and demographic characteristics (Ayyıldız & Dilmaç 2016; Çelik & Odacı, 2015; Çeri, Çavuşoğlu & Gürol, 2015; Pala, Akyıldız & Bağcı, 2011; Yeşil & Şahan, 2012) and predictors as well as reasons (Ekinci & Gökler, 2017, Oran, 2016; Özer & Altun, 2011). Some of these studies were conducted on higher education students and some on teenagers. The researches present a negative correlation between self-esteem (Aydoğan & Özbay, 2012, Çelik & Odacı, 2015; Ferrari, 1994;); metacognitive strategies and metacognitive awareness (Bedel, 2017; Kandemir, 2014; Wong, 2012); self-regulation (Çıkrıkçı, 2016; Park & Sperling, 2012; Uzun-Özer, 2009); perfectionism

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levels (Akkaya, 2007; Seo, 2008), which are cognitive characteristics, and academic procrastination. A positive correlation is found between irrational beliefs (Çelik & Odacı, 2015); fear of performance failure (Uzun Özer, 2009); burnout (Balkis, 2013); and hopelessness (Yıldız & Yıldız, 2016), which are psychological characteristics, and academic procrastination.

Ferrari (1991) thought that procrastination behaviors might be related to some personality traits of the individual differences (self-confidence, social anxiety, verbal intelligence, abstract intelligence, being knowledge-centered and dispersed, etc.) and he examined the characteristics of individuals with and without procrastination behaviors. The studies revealing that the relationship between academic procrastination and personality traits of individual differences (Baltacı, 2017; Doğan, Kürüm & Kazak, 2017) are also found in Turkey. For example, in the study of Baltacı (2017), it was revealed that personality traits can explain 42% of procrastination behavior alone. One of the concepts related to learning in which the personality characteristics of the individual may be reflected is learning styles. The idea of learning styles derives from the idea that personality traits of the individuals existing in real life, perceiving and structuring stimuli in different ways, interacting with their environment in different ways, and reflecting and considering similar situations in the teaching-learning process. Learning styles are generally accepted in the literature as preferences and individual characteristics that reveal how individuals perceive, interact with, and react to the learning environment in the teaching-learning process (Aşkar & Akkaoyunlu, 1993; Şimşek, 2004). In the study of Çakır, Akça, Kodaz and Tulgarer (2014), the relationship between academic procrastination and learning styles was examined and it was concluded that some learning styles were positively and negatively related. In the research, learning styles have been determined as inactive style, dependent style, competitive style and participant style. According to the findings obtained in the research, while there is a positive relationship between academic procrastination and inactive style, there are negative relationships with other learning styles.

Due to the characteristics of the education system, Turkey shows a structure in which students engage in intensive academic studies in the teaching-learning process, where the assigned work is predominant and homework is given at almost all ages and levels. Assignments which requires student to work hard and intensive tests put students into pressure and also the need for hard work is constantly reminded by teachers and parents. The suitability of these intensive academic studies to the interest, wish and needs of the students and their beliefs in achieving these studies may affect academic procrastination behaviors. Learners with different learning styles may perceive the process according to their structural characteristics and show different levels of academic procrastination. It can be said that this situation can also be effective in shaping the child-raising behaviors of parents. In such a learning process and education system, parents' pressure and over-controlled attitude or flexible behaviors towards the hard work of their children may affect their academic procrastination behavior in different ways. In other words, the structure of the education system in Turkey may affect parental attitudes towards the childrens' learning process and also these attitudes could be reflected to the learners in various ways. It is frequently mentioned in the literature that the parents' attitudes and behaviors of their children have positive and negative effects on the behaviors of children. Çekiç, Türk, Buğa and Hamamcı (2018) revealed in their literature review that parents' attitudes and behaviors in raising children are effective in the emergence and continuation of negativities such as aggressive behaviors of children, emotional problems, shyness, attention disorder, tendency to crime, physical violence, theft, damage to the goods, hurting animals, getting into a fight, peer bullying and lying, fears with behavioral problems, toilet training problems, etc. On the other hand, parents' attitudes also have positive effects such as ensuring their children's development into individuals who are entrepreneur, venturesome, have strong self-perception and whose academic success, self-confidence and general ability level are higher (Gök, 2010; Kuru Örgün, 2000). Erdoğan and Uçukoğlu (2011) stated that different classifications have been made in the literature on parental attitudes and these classification efforts started back in the 1950s. They show the love-centered and object-oriented parental attitudes made by Sears in 1957 and the authoritarian-democratic and permissive parental attitudes which are mostly used in literature and manifested by Baumrid in the 1970s as important examples of these classifications (Erdoğan & Uçukoğlu, 2011). In the literature, it is seen that parental attitudes have an impact on children's academic procrastination behaviors (Milgram & Toubiana, 1999; Pychyl, Coplan & Reid, 2002). Milgram and Toubiana (1999) have assessed parental involvement in terms of their participation in their children's academic assignments/studies in the dimensions of pressure, review, supervision, assistance, encouragement, reward, punishment and personal example. They have grouped these involvements as activities that require high or low time and energy. A negative correlation was found out between mothers' involvement in their children's schoolwork and their academic procrastination behaviors. However, no difference has been found between the influences of the mothers' involvement in activities that demands high or low investment of time and energy and children's academic procrastination behaviors. Pychyl, Coplan and Reid (2002) have studied parental involvement as authoritarian, authoritative and permissive parenting. While no correlation was found between authoritarian mothers and children's academic procrastination, a positive correlation was found between

paternal authoritarian parenting and academic procrastination. A negative correlation was found between maternal authoritative parenting and academic procrastination, but no correlation was found between paternal authoritative parenting and academic procrastination. There is no significant correlation between academic procrastination and maternal and paternal permissive parenting. Factors such as high family expectation, coercive effects or having a democratic family attitude have effects on learners' procrastination behaviors. Among the factors related to family, there are also studies that put the parenting style to the first place among the factors related to academic procrastination (Zakeri, Esfahani & Razmjooe, 2013).

From this point of view, learning styles and parental attitudes are factors affecting the affective, cognitive and academic characteristics of students. Among these academic characteristics, there are also studies showing that academic procrastination is affected by some affective and cognitive characteristics of students. In the literature, it is seen that the participants of the studies revealing the correlation between academic procrastination and parenting styles are mostly high school or university level students (Manasnehi, Bataineh & Al-Zaubi, 2016; Sulaiman & Hassan, 2019; Toprakyan, 2016; Yatgin, 2014; Zakeri, Esfahani & Rasmjooe, 2013). It can be said that the studies conducted for secondary school students are not quantitatively sufficient. In their studies, Qing-Song, Meng-Xi and Si (2017) researched the academic procrastination behaviors and parenting styles of Chinese secondary school students. In the literature, there are many studies stated that the effects of the parenting styles may change according to the cultural contexts (Sümer, Aktürk & Helvacı, 2010; Şanlı & Öztürk, 2015). Özzorlu and İnankaya (2019) studied the academic procrastination behaviors of secondary school students in Turkey and parental attitudes. In their studies, they evaluated parental attitudes in democratic/authoritarian dimensions and determined parents' attitudes according to the students' views. When the studies in the literature were analysed, another attracting point is that parental attitudes were mostly studied in authoritarian and democratic or authoritarian, authoritative and permissive dimensions, which are the most known classifications. In revealing the correlation between academic procrastination and parenting styles, it is thought that carrying out studies that deal with parental attitudes in different dimensions and determine these attitudes according to parents' views will contribute to the field. In the literature, it is seen that researches that investigate the correlation between students' learning styles and academic procrastination behaviors are very limited (Çakır, Kodaz & Tulgarer, 2014). In the literature, there is also no research examining the relationship between these three variables together: academic procrastination of learners, learning styles and parental behaviors. Clear conclusions and measures on avoiding academic procrastination, whose consequences may go as far as being expelled (Knaus, 1998), are still not fully known in the literature. This makes it more important to investigate the relationship between academic procrastination and different variables. Based on these necessities and importance, the general purpose of this study is to reveal the relationship between academic procrastination behavior, learning styles and child-raising behaviors of parents. For this general purpose, following questions were tried to be answered:

1. What is the level of academic procrastination behavior of secondary school students?
2. Do academic procrastination behaviors of secondary school students differ according to their gender, grade level, financial status and education level of their families?
3. Do the academic procrastination behaviors of secondary school students differ according to their learning styles?
4. Is there a meaningful relationship between academic procrastination behaviors of secondary school students and child-raising behaviors of parents?
5. Do the child-raising behaviors of parents of secondary school students predict their academic procrastination behavior?

## Method

### Research Design

This research employs correlational survey model. In this study, the relationship between learning styles, family involvement levels and academic procrastination behaviors of secondary school students at different grade levels were tried to be determined. The predictive role of child-raising behaviors of parents on students' academic procrastination behaviors is also investigated.

### Participants

The target population of the study consists of 973.589 students studying in secondary schools in Istanbul during 2018-2019 academic year and their parents. Due to the impossibility of reaching all students and parents, sampling has been used. In the determination of sampling, "convenience sampling" method was used. Because of gathering the research data from two different groups by matching meticulously, collecting it via face-to-face interviews becomes much more important. Accordingly, this method has been used in the research, taking into

account the high number of school districts in the city where the research will be carried out. With this method, the researcher aimed to save time and cost by identifying volunteer participants that are easily accessible and suitable for the research. In order to increase diversity in convenient sampling, the researcher determined the participants from schools in different districts of Istanbul. Based on the literature, considering the sizes of the theoretical sampling that can be determined for different sized universes (Anderson, 1990 akt. Balcı, 2013; Cohen, Manion & Morrison, 2000 akt. Erkuş 2005), it was decided that 384 participants, with error rate of 5%, would be sufficient to represent a universe of 100.000 people. The researcher considered 400 students and 400 parents as sampling, but 358 students and parents participated in the research. The study group of the study consists of 358 parents and their secondary school students studying in three secondary schools in Küçükçekmece, Bakırköy and Bahçelievler districts of İstanbul in the second term of 2018-2019 academic year. In this context, the research as two different study groups. 246 of secondary school students were male (68.7%) and 112 were female (31.3%). In the study group, it can be said that the distribution of secondary school students according to class levels is close to each other. 79 (22.1%) of these students were in the fifth grade; 94 (26.3%) were in the sixth grade; 101 (28.2%) were in seventh grade and 84 (23.5%) were in eighth grade. More than half of the parents (55.6%) are primary school graduates. 39 (10.9%) parents are literate; 31 (% 7) parents are university graduates. The number of parents who are high school graduates is 89 (24.9%). The financial status of the majority of the parents (77.4%) is moderate. 61 (17.0%) of the parents have high financial status; 20 of them (5.6%) is low.

### Research Instruments and Procedures

Personal information form and three scales were used as data collection tools. The personal information form contains four questions about the gender and class of the student, the educational level and financial status of the parent. Alabama Parenting Questionnaire was developed by Frikck (1991) and it was adapted by Çekic, Türk, Buğa and Hamamcı (2018). There are 35 items in the scale that measure parenting behaviors and child-raising behaviors of parents are examined in five different areas. Academic Procrastination Scale developed by Çakıcı (2003) was used in order to determine the academic procrastination behaviors of the students. Academic Procrastination Scale consists of 26 statements, including the tasks that the students are responsible for doing in their learning lives. The scale was developed for high school and university students. An adaptation study of the scale for the secondary school students was done and scale factor structure was tested with the confirmatory factor analysis (CFA) by Korkmaz (2008). As a result of the analysis,  $\chi^2 = 737.14$ ,  $p < .001$ ;  $\chi^2/sd = 4.3$ ; GFI = .86; CFI = .93; IFI = .93; RMSEA = .09 values were calculated. When fit indices were evaluated, it could be concluded that the scale could be acceptable in this form. Finally, in order to determine the learning styles of the students, the Learning Styles Scale for Elementary School Students (AÖS-İ), which was developed by Otrar, Gülten and Özkan (2012) was used. The original scale is consisted of 36 items and the development studies of the scale were carried out with 4<sup>th</sup> and 5<sup>th</sup> grade students. CFA was performed to assess the construct validity of the scale for secondary school students. Because their t-values are not significant, four items were excluded from the analysis. As a result of the analysis,  $\chi^2 = 1101.03$ ,  $p < .001$ ;  $\chi^2/sd = 2.4$ ; AGFI = .85; NNFI = .80; RMSEA = .063; SRMR = .07 values were calculated. When the fit indices obtained as a result of the confirmatory factor analysis performed for the learning style scale were evaluated according to the literature, it could be said that the NNFI fit index did not correspond to good fit (Sümer, 2000). However, it was not enough to look at a single fit index as a result of DFA; decision must be made considering the other fit indices. Munro (2005) and Şimşek (2007) also state that the fit indices are very diverse and there is no consensus on which of these fit indices will be accepted as standard (cited in Çapık, 2014). When other values obtained as a result of DFA are examined,  $\chi^2 / sd$  and SRMR values indicated good fit (Brown, 2006; Bryne, 1998); RMSEA (Sümer, 2000) and AGFI (Joreskog & Sorbom, 1993; Schermelleh-Engel & Moosbrugger, 2003) values were in acceptable value ranges. When fit indices were evaluated as a whole, it could be concluded that the scale consisted of 32 items can be used to determine secondary school students' learning styles.

In this study, internal consistency coefficients for each scale and the distinction of the scales with the data obtained from 27% upper and lower groups were examined. The academic procrastination scale was one-dimensional and the internal consistency coefficient calculated for the scale was found to be .90. In the Alabama Parenting Questionnaire, the internal consistency coefficient for the total was .72; the reliability coefficients of child care, positive parenting, poor parental follow-up, inconsistent discipline and punishment with beating were .78, .75, .80, .46 and .64, respectively. When the values obtained were compared with the internal consistency coefficients of the original adapted scale, the reliability coefficients for the inconsistent disciplinary and beating punishment subscales of the scale were low in both analyzes. Çekiç et al. (2018), who carried out the adaptation study of the scale, stated that this value obtained regarding the negative sub-dimensions of the scale was similar to the results of the studies conducted in different cultures and stated this as a limitation of the scale. Therefore, two items (12<sup>th</sup> and 38<sup>th</sup> item), which were found to reduce the internal consistency coefficient further from the inconsistent disciplinary and beating punishment subscales, were not considered in the reliability analyzes of the

scale. The internal consistency coefficient obtained for the learning styles scale, which is another scale used in the research, was .80 for the whole scale, whereas, was found to be .61, .55, .55 and .57 respectively for the auditory, visual, kinesthetic and tactile subscales. Internal consistency coefficients are low. In the reliability analysis of the learning styles scale, two items (12<sup>th</sup> and 15<sup>th</sup> items), which were observed to further reduce the reliability of each subscale, were not included in the calculations in order to increase the validity. Şeker and Gençdoğan (2014) state that Cronbach's alpha value is dependent on the items in the scale and that the number of items being less than 10 may lead to low value of Cronbach's alpha coefficient. Similarly, Akbulut (2010), states that internal consistency is a value affected by the number of items. In the scales used in this study, the subscales with low internal consistency coefficients were sub-dimensions with fewer than 10 items. According to the literature (Cohen, Manion & Morrison, 2007), it can be said that academic procrastination and learning styles were strongly fairly consistent; Alabama Parenting Questionnaire can be said to be adequately consistent. Akbulut (2010) states that Cronbach's alpha value of .60 and above can be considered as *quite reliable* internal consistency value. When considered in this context, it can be stated that the majority of the internal consistency coefficients obtained for the sub-dimensions of the scales are quite reliable. When data on the differentiation of the scales were analysed, there is a significant difference between lower and upper groups in the analysis of academic procrastination, Alabama Parenting Questionnaire and learning styles scales on the basis of lower and upper groups ( $p < .001$ ). Based on these statistical results, it can be said that the data obtained from the measurement tools are distinctive. The fact that the internal consistency coefficients and discriminative values were within the limits foreseen in the literature was interpreted as the valid and reliable for the data obtained from the scales. The data were collected with the help of the class guidance teachers of the related classes. Firstly, it was emphasized that participation in the study group was voluntary, that the findings would be used only within the scope of scientific studies and that the measurement tool would be applied only in accordance with their approvals. During the markings, they warned the students and their parents to reflect their thoughts, not to leave any items blank and not to rush.

### Data Analysis

The data obtained from the student and parent scales were entered into SPSS 25.0 and the data were checked with the standardized Z-scores for the presence of outliers. The normality tests of the scores of the students and their parents from the scales and different variables are given in Table 1.

Table 1. Normality Tests of the Students and Their Parents' Scores

Variables	Label	N	Kurtosis	Skewness	Z	P
Mean values of the Academic Procrastination Scale (Student)	-	358	-0.51	-0.11	0.114	.200*
Mean values of the Alabama Parenting Questionnaire (Student)	-	358	-0.25	0.15	0.113	.200*
Mean values of the Alabama Parenting Questionnaire (Parent)	-	358	1.48	0.22	0.131	.200*
Gender	Female	246	-0.14	-0.32	0.076	.132*
	Male	112	-0.59	-0.01	0.052	.200*
Grade	5 <sup>th</sup> Grade	79	-0.50	0.22	0.091	.169*
	6 <sup>th</sup> Grade	94	-0.11	-0.11	0.084	.099*
	7 <sup>th</sup> Grade	101	-0.70	-0.03	0.061	.200*
	8 <sup>th</sup> Grade	84	0.00	-0.39	0.112	.011
Financial status of the parent	Low	20	-0.52	-0.31	0.142	.200*
	Moderate	277	-0.55	-0.10	0.045	.200*
	High	61	-0.28	-0.05	0.085	.200*
Educational background of the parent	Literate	39	-0.54	-0.10	0.076	.200*
	Primary school graduate	199	-0.47	-0.02	0.039	.200*
	High school graduate	89	-0.56	-0.31	0.077	.200*
	University graduate	31	-0.44	-0.44	0.173	.019

\* $p > .05$  follows a normal distribution

As seen in Table 1, according to literature (Demir, Saatçioğlu & İmrol, 2016), it was observed that the scores of the students and their parents from the general scales and different variables correspond with the values that meet the normality criterion. Parametric test statistics were used to analyze the data. Percentage, frequency and mean of descriptive statistics; Kolmogorov-Smirnov Z and Levene F tests for the tests on normality and homogeneity of variances, independent samples t-test and ANOVA analysis for analyzing the determinants of independent variables over dependent variables and correlation and regression analyzes were used to determine relationships and prediction strength.

## Findings

To determine the academic procrastination behavior levels of secondary school students, score ranges obtained from academic procrastination scale were used. Levels and score ranges to be considered for comments and procrastination behavior levels of secondary school students are as follows. The high scores of the scale were interpreted to indicate that secondary school students showed procrastination behavior at a high rate.

### Levels and ranges

- 1.00 - 1.80 “very low level of procrastination”
- 1.81 - 2.60 “low level procrastination”
- 2.61 - 3.40 “moderate procrastination”
- 3.41 - 4.20 “high level procrastination”
- 4.21 - 5.00 “very high level of procrastination”

Academic procrastination levels of secondary school students according to the specified level and score ranges are shown in Table 2.

Table 2. Academic Procrastination Levels of Students According to Some Personal and Parents' Characteristics

Variable	Label	$\bar{X}$	S	Level
Gender	Female	2.76	0.60	Moderate
	Male	2.64	0.67	Moderate
Grade	5 <sup>th</sup> Grade	2.36	0.70	Low
	6 <sup>th</sup> Grade	2.67	0.57	Moderate
	7 <sup>th</sup> Grade	2.68	0.61	Moderate
	8 <sup>th</sup> Grade	2.98	0.60	Moderate
Financial status of the parent	Low	2.64	0.77	Moderate
	Moderate	2.68	0.65	Moderate
	High	2.67	0.60	Moderate
Educational background of the parent	Literate	2.59	0.63	Low
	Primary school graduate	2.69	0.65	Moderate
	High school graduate	2.72	0.68	Moderate
	University graduate	2.61	0.56	Moderate
Total		2.68	0.65	Moderate

As shown in Table 2, academic procrastination behaviors of secondary school students are moderate. When analyzed by gender, although both genders are moderate, it can be said that female students show more procrastination than male students. According to Table 2, although it is low in 5<sup>th</sup> grade in terms of grade levels, it is possible to say that there is moderate academic procrastination behavior at other grade levels. According to the parents' financial status and their educational level, students' average academic procrastination behavior is moderate.

Academic procrastination behaviors of secondary school students were found to be moderate and it was examined whether these behaviors differed according to some variables. Table 3 shows whether the procrastination behaviors of secondary school students change according to gender.

Table 3. Data on Whether Academic Procrastination Behavior Changes According to Gender

Group	n	$\bar{X}$	S	sd	t	P>
Female	112	2.76	0.66			
Male	246	2.64	0.60	356	1.66	0.096

\* p<0.05

When the data related to Table 3 are interpreted, academic procrastination behaviors of students do not differ significantly according to gender ( $p > .05$ ). The homogeneity of the variances was tested first to determine whether the academic procrastination behaviors of the students changed according to the grade level. When the homogeneity of variances was tested, significance value (.172) and Levene value (1.675) show that the condition of the equivalence of variances in the distribution is met. Table 4 shows the results of the ANOVA test and the results of the post-hoc Scheffe test, which was conducted to determine the source of these differences

Table 4. Comparison of Academic Procrastination Behavior Levels of Students According to Grade Level

Variable	Label	N	$\bar{X}$	S	F	p	Significant Difference
Grade Level	5th Grade	79	2.36	0.70	13.346	.000*	1-2, 1-3, 1-4, 2-4, 3-4
	6th Grade	94	2.67	0.57			
	7th Grade	101	2.68	0.61			
	8th Grade	84	2.98	0.60			

\*  $p < 0.05$

As can be seen in Table 4, it can be said that academic procrastination behaviors of middle school students show a significant difference according to their grade levels [ $F_{(2,245)}=13.346$ ;  $p < 0.05$ ;  $\eta^2 = 0.102$ ]. Among Post Hoc tests, Scheffe results were examined in order to determine the source of the variance. According to this, it was concluded that there was a difference between the academic procrastination behaviors of the 5<sup>th</sup> grade students and the academic procrastination behaviors of the 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade secondary school students not in favour of the 5<sup>th</sup> graders. In other words, 5<sup>th</sup> grade students tend to show academic procrastination behavior significantly lower than 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grades. Besides, there was a difference between the academic procrastination behaviors of 8<sup>th</sup> grade students and the average academic procrastination behaviors of 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> grade secondary school students in favor of 8<sup>th</sup> grade students. In other words, average 8<sup>th</sup> grade students' tendency to show academic procrastination behavior is higher than the other grade levels and 8<sup>th</sup> grade students' tendency to show academic procrastination behavior is significantly higher than the students at other grade levels. When the effect value was examined, it was seen that the grade levels of the students had a moderate effect ( $\eta^2 = 0.102$ ) on their academic procrastination behavior (Cohen, 1988). It was examined whether the academic procrastination behaviors of secondary school students differ according to some characteristics of their parents. When the homogeneity of variances was tested, significance value (.406) and Levene value (.904) show that the condition of the equivalence of variances in the distribution is met. Table 5 shows the results of the ANOVA test.

Table 5. Students' Academic Procrastination Behavior Levels According to Their Parents' Financial Status

Variable	Label	N	$\bar{X}$	S	F	P	Significant Difference
Parents' economic status	High	61	2.64	0.77	.043	.958	-
	Moderate	277	2.68	0.65			
	Low	20	2.67	0.60			

\*  $p < 0.05$

As shown in Table 5, academic procrastination behaviors of students do not show a significant difference according to their families' financial status ( $p > .05$ ). The homogeneity of the variances was tested to determine whether the academic procrastination behaviors of the students changed according to the educational level of their parents. When the homogeneity of variances was tested, significance value (.468) and Levene value (.848) show that the condition of the equivalence of variances in the distribution is met. Table 6 shows the results of the ANOVA test.

Table 6. Students' Academic Procrastination Behavior Levels According to Their Parents' Educational Level

Variable	Label	N	$\bar{X}$	S	F	p	Significant Difference
Parents' educational levels	Literate	39	2.59	0.63	.435	.728	-
	Primary school graduate	199	2.69	0.65			
	High school graduate	89	2.72	0.68			
	University graduate	31	2.61	0.56			

\*  $p < 0.05$

As can be seen in Table 6, academic procrastination behaviors of students do not show a significant difference according to the educational level of their families ( $p > .05$ ).

Another question to be answered in the study is whether students have a meaningful relationship between academic procrastination behaviors and their learning styles. Total score is obtained by multiplying the number of items by 5 and it can be determined which learning style the individuals falls in by dividing this number to the total number of items. In the evaluation of these results, triple groupings are used as low, medium and high. The standard deviation value was taken as the basis of  $\pm 1$  in the determination of the groups because of the high mean values in the groupings related to all learning styles. However, it should be kept in mind that each learner may be dominant for more than one learning style. When this was the case, in order to make categorical classification in the research, the learning style whose mean was higher in the research was taken into consideration.

In order to determine whether the academic procrastination behaviors of the students changed according to their learning styles, the homogeneity of the variances was tested. When the homogeneity of variances was tested, significance value (.238) and Levene value (1.417) show that the condition of the equivalence of variances in the distribution is met. Table 7 shows the results of the ANOVA test.

Table 7. Students' Academic Procrastination Behavior Levels According to Their Learning Styles

Variable	Label	N	$\bar{X}$	S	F	p	Significant Difference
Learning styles	Auditory	63	2.70	0.64	.593	.620	-
	Visual	55	2.76	0.71			
	Kinesthetic	97	2.69	0.60			
	Tactile	143	2.63	0.66			

\*  $p < 0.05$

As shown in Table 7, academic procrastination behaviors of students do not show a significant difference according to their learning styles ( $p > .05$ ;  $\eta^2 = 0.005$ ).

Theoretically, students' academic procrastination behaviors and child-raising behaviors of parents are different concepts. Parents with negative child-raising behaviors are expected to show more academic procrastination behavior of their children. The findings are as indicated in Table 8.

Table 8. The Relationship Between Students' Academic Procrastination and Child-raising Behaviors of Parents

Variables	$\bar{X}$	Academic procrastination	Parental behaviors
Academic procrastination	2.68	-	.018
Parental behaviors	2.77	.018	-
Sub-dimension 1 (child care)	3.84	-.159**	.465**
Sub-dimension 2 (positive parenting)	4.18	-.188**	.554**
Sub-dimension 3 (poor parent follow-up)	1.69	.225**	.330**
Sub-dimension 4 (inconsistent discipline)	2.65	.068	.640**
Sub-dimension 5 (punishment with beating)	1.47	.092	.508**

\*Correlation value is significant at .01 level.

\*\* Correlation value is significant at .001 level.

As seen in Table 8, there was no significant relationship between academic procrastination and parental behaviors, but there was a negative correlation between academic procrastination behaviors of students and some positive parental behaviors; and a positive correlation with some sub-dimensions of negative parental behaviors. When the values in the table were interpreted according to literature (Cohen, 1988), the students' academic procrastination behaviors and their parents' behaviors related to their children were "low" ( $r = -.159$ );

it can also be said that there is a “low” level of ( $r = -.188$ ) relationship between academic procrastination behaviors and positive parenting behaviors of parents. There is also a “low” level of ( $r = .225$ ) relationship between academic procrastination and poor parent follow-up.

Since the academic procrastination behaviors of the students did not show a significant relationship with child-raising behaviors of parents, but there was a significant relationship with the sub-dimensions of parental behaviors, multiple regression analysis was performed. Multiple regression analysis was used to determine whether the sub-dimensions of parent child rearing behaviors predict students' academic procrastination behaviors. In the multiple-regression analysis, after the normality tests, the realization status of homoscedasticity was examined. In order to identify whether there is a multicollinearity problem, correlation, tolerance and variance inflation factors among independent variables were examined. It was seen that correlation among independent variables was low. In addition to this, based on the fact that VIF value for each independent variable is below 2.5, the obtained values were interpreted as not having multicollinearity problem (Allison, 1999; Orhunbilge, 2002). The results are shown in Table 9.

Table 9. Regression Analysis on Child-raising Behaviors of Parents Predicting Students' Academic Procrastination Behaviors

Variable	$\beta$	Std. Error <sub>B</sub>	Beta	T	p	Multiple r	Partial R
Constant	2.985	.292		10.230	.000		
Child care	-.036	.069	-.034	-.514	.608	-.027	-.026
Positive parenting	-.111	.066	-.112	-1.682	.093	-.089	-.086
Poor parental follow-up	.176	.053	.180	3.308	.001	.173	.170
R= .259	$R^2=.059$ F= 8,468		p= .000				

The variables of positive parenting, poor parental follow-up, inconsistent discipline and punishment with beating, which are the sub-dimensions child-raising behaviors of parent, give a meaningful relationship ( $R = .259$ ) with students' academic procrastination behavior. In other words, the ANOVA analysis ( $F = 8.468$ ;  $p < .01$ ) showed that the model was successful as it was seen in Table 9. When the t-test results regarding the significance of regression coefficients are examined, it is seen that only poor parent follow-up is an important predictor on academic procrastination behavior. Other variables have no significant effect. It can be stated that approximately 6 % of the total variance of students' academic procrastination behavior is explained by poor parental follow-up behavior.

### Discussion, Conclusion and Recommendations

In this study, whether the academic procrastination levels of secondary school students and these academic procrastination levels show a significant difference in terms of some variables (gender, education level, parent financial status and education level, learning style) has been investigated. In addition, the relationship between academic procrastination behavior and parents' approaches to child-raising was also examined. At this point, which child-raising approach predicts academic procrastination behavior has been investigated.

According to the findings of the study, the academic procrastination behavior of the students at the secondary school level is generally “moderate”. This procrastination behavior did not show a significant difference in terms of gender, but it was found that female learners showed a slightly more procrastination behavior than men. In his study on secondary school students, Rawlins (1995) found that the incidence of procrastination behavior did not create a significant difference between genders. Pychyl, Coplan, and Reid (2001) reviewed the studies on academic procrastination and reported that they found different research findings on procrastination and gender relationship in the literature. In most of the studies examined, it was found that procrastination behavior did not show a significant difference between genders. This result seems to coincide with the findings of the study. Another result of the literature review is that women learners are more concerned about procrastination behavior than men because they are more anxious. Kaur and Rani (2019) found that the level of academic procrastination among secondary school students was moderate and that the procrastination level did not show a significant difference according to gender. Despite not very frequently, the findings revealed that male students had more procrastination behaviors than females. In the literature, it is observed that the level of procrastination behaviors differ between the genders (Gröpel & Steel, 2008; Gürültü & Deniz, 2017; Kürkçü, 2017; Steel, 2007; Steel & Ferrari, 2013; Toprakyan, 2016), and it is stated that male students have more procrastination behaviors than women. Another contradictory finding is related to the level of procrastination behavior as the age increases. Findings related to this variable revealed different results. These findings do not match the findings of the study. In the study of Kürkçü (2017), it was found that 5<sup>th</sup> and 6<sup>th</sup> grade students

showed more procrastination behavior; this difference has reached a significant level between 6<sup>th</sup> grade students and other classes.

The study found that academic procrastination did not differ significantly according to learning styles. Although no significant difference was observed, it was observed that learners with kinesthetic / tactile learning styles showed more procrastination behavior. Considering that traditional teaching methods are widely used in our country, it is understandable that these students apply more to procrastination behavior. In performing instructional tasks such as reading, test solving, and summarizing, “postponing” may be a frequently used situation in students with this learning style. In the literature review of these two variables (procrastination and learning styles), especially in the national literature, it is noteworthy that there is a lack of studies (Babadoğan, 2010; Çakır, Akça, Kodaz & Tulgarer, 2014). Çakır, Akca, Kodaz and Tulgarer (2014)'s study on high school students' relationship between procrastination level and students' learning styles were examined and significant relationships were determined according to styles in different directions and levels. In their study, Ferrari, Parker, and Ware (1992) examined the relationship between academic procrastination behaviors and undergraduate learning styles of undergraduate students and found no significant and strong relationship. Elmer (2001) examined whether the procrastination levels of the students changed according to learning styles using Kolb learning styles scale and observed significant differences in the procrastination levels of male students. Male students with active and concrete experience learning style showed significant procrastination behavior with students with other learning styles. This result seems to coincide with the result of the study, because learners with an active and concrete experience learning style prefer experiences based on practice and activity, and may have a procrastinative attitude towards traditional instructional works.

In the study, no significant difference was found between the socio-economic level of the parents and the level of education and procrastination behaviors of the students. Although it does not make a significant difference, it has been observed that parents of children with low education level have less procrastination behavior. This may be due to the more sensitive attitude and manner of such families towards school tasks. These families can sometimes be coercive for their children to continue their learning lives continuously and successfully. Rosario, Costa, Nunez, Gonzales - Pieanda, Solano and Valle (2009) conducted a study on procrastination behavior with 11-17 age group students and reached a conclusion that the frequency of procrastination behavior decreases as the education level of the parents increases. This finding does not match the results of the study. It is seen that increasing educational level of parents in different cultures has a decreasing effect on procrastination behavior. Yatgın (2014) investigated whether the socio-economic level of the families affected the procrastination behaviors of the students and did not reach a significant difference. A similar result was observed by Kandemir (2010). These findings seem to support the findings of the study.

In this study, a positive but not high level relationship was observed between parent type and academic procrastination. The highest correlation was the positive relationship between poor parental follow-up and procrastination. Based on this result, it can be said that procrastination behavior increases as parental follow-up decreases. On the other hand, positive parenting and caring for the child were the types of parents in which procrastination behavior showed negative relationships. It can be said that as these parenting behaviors increase, a decrease in academic procrastination behavior is observed. Positive and low-level relationships were observed in parental behaviors based on inconsistent discipline and punishment. In their study using multiple regression analysis, Pychly, Coplan and Reid (2002) found significant relationships between parenting style and academic procrastination. In particular, it has been revealed that father-authoritarian parenting style has direct effects on female students. A similar finding was also found by Ferrari and Olivetti (1994). It has been found that authoritarian father tendency may be decisive on some procrastination behaviors up to 10%. Pychly, Coplan and Reid (2002) classified the parental effect as direct and indirect effects. For example, the accepting and participatory parenting style and the parenting style, which are considered strict and control-oriented are more related to children who tend to be independent, self-assertive, make friends with their peers and cooperate with parents. In this context, in this study, the following two could also be described as *direct* relationships: as child care and positive parenting style increases, procrastination decreases, and as poor parental follow-up increases, procrastination increases. Indirect relationships were defined as low self-perception, depression, state-related anxiety and self-concept. Mortazanajad, Mostafafi and Vahedi (2009) are among the researchers investigating the relationship between parental styles and academic procrastination behavior. The researchers concluded that warm and constructive family behaviors were negatively related to academic procrastination. This finding seems to support the findings of the study. However, they also stated that simple parental behavior (providing silence, supportive working environment, etc.) contributed to prevent procrastination. Reynolds (2015) found similar findings in his thesis, which investigated the factors affecting academic procrastination. It was concluded that there was a positive relationship between the students who have external focus of control and the procrastination behaviors of their children with authoritarian parent style.

Consequently, studies in the literature examining the relationship between parenting style and academic procrastination have generally reached similar results. In addition, there are different results in the literature regarding procrastination and gender. Generally, data on parenting style in the literature were mostly obtained from how teenagers perceive their parents. In addition to the perceived parental styles of teenagers, researchers who want to study in this field shall reach the teenagers' parents directly and collect their data first hand and enrich their studies. They may also conduct studies that examine the effect of different learning styles and personality traits on procrastination behavior.

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