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Testing of a model on the school burnout among high school students and exploring the model's prediction level of grade retention

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Abstract

In this study, a model on the high school students' school burnout was tested, and the model's prediction of retained and promoted students was investigated. The school burnout model, in this sense, included the variables of grade point average (GPA), school burnout, perceived social support, stress, perfectionism, academic procrastination, and fear of failure. The data were collected from 1068 high school students. Causal relationships among variables tested via path analysis. Then, a quadratic discriminant analysis was conducted to investigate the extent to which school burnout, perceived social support from family and the teachers, stress, maladaptive perfectionism, academic procrastination tendency, and fear of failure variables discriminated the grade retained and promoted students. The variables that were strong in discrimination of the groups were GPA, perceived social support from family, fear of failure, maladaptive perfectionism, social support from teachers, respectively. These variables classified 90.6% of the 340 students and 65.5% of the whole group (1068 students) correctly. In other words, the discriminant model mainly classified retained and promoted students correctly. The findings are discussed with specific respect to theoretical approaches, research findings, and culture. Based on the findings, tracked school system, psychoeducation programs that prevent school burnout were suggested in line with the students' learning rate.

Keywords: School burnout, grade retention, academic achievement

1. Introduction

Recent studies have focused on grade retention and school dropout in secondary school. In particular, being the previous stage of school dropout, grade retention is a vital educational matter and plays an important role in all fields of educational sciences, especially in terms of educational psychology and school psychology. Grade retention refers to the academic failure of students and students' repetition of the same grade if they cannot attend school for ten days without an excuse and for 45 days with or without

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an excuse (MoNE, 2013). Thus, it can be said that both failure in classes and absenteeism cause grade retention, which result in school dropout (Duncan, 2007; Manacorda, 2012).

The literature advocates that studies on grade retention are mostly survey works. Yet, in this study, it was aimed to predict grade repetition by considering psychosocial variables that affect grade retention and school burnout. Grade retention is related to variables school burnout (May et al., 2014), social support (Jaggers et al., 2012), perfectionism (Frost et al., 1990), stress (Sisiwe, 2012), fear of failure (Välijärvi & Sahlberg, 2012), academic procrastination (Rosário et al., 2013) and academic success.

The concept of burnout has recently been taken into consideration within the context of school and student burnout (Aypay, 2011; 2012; Çam et al., 2014; Çapri et al., 2011; Parker & Salmela-Aro 2011; Salmela-Aro et al., 2009; Stoeber et al., 2011). Salmela-Aro, who examines especially school burnout, likens school burnout to burnout in the workplace. According to the researchers, just like in work burnout, schools should be considered as the workplaces where students perform their professions. In this context, students under the pressure of academic achievement are exhausted by these pressures. The three-dimensional burnout model (emotional exhaustion, depersonalization, and personal accomplishment) proposed by Maslach and Jackson (1981) was adapted to the school environment by these researchers. Thus, school burnout is expressed as the exhaustion of the student from increasing demands of the school, the indifferent and cynical behaviors towards the school, and the feeling of inadequacy (Salmela-Aro et al., 2009).

Burnout was also discussed and explained as a special type of stress in the early years. Therefore, stress and burnout are two related concepts. Particularly, burnout and stress can also be observed due to the increasing demands of the school (Salmela-Aro et al., 2009). Stress is a state of tension arising from threatening and coercing of the physical and mental limits of the organism (Baltaş & Baltaş, 1989). The observed stress and school burnout because of increasing demands can decrease with the social support perceived by the student. Especially, perceived social support decreases emotional exhaustion and depersonalization (Pyhältö et al., 2011). Perceived social support against stress and school burnout also functions as a buffer. In other words, social support has a protective function against school burnout and stress. This situation was observed in the studies and explanations related to the topic (Çam et al., 2014; Jacobs & Dodd, 2003; Salmela-Aro et al., 2009). There are many stressful life events in the lives of people. Also, the perfectionism level of people is a factor triggering stress. Kaschka et al. (2011) state that perfectionism is also associated with burnout. In parallel with this view, Farber (2000) states that individuals who are prone to burnout act with a perfectionist perspective. The theoretical explanations made towards university students indicate that students consider success as the main way to be appreciated and therefore set perfectionist goals for themselves (Zhang et al., 2007). However, studies show that

perfectionism is not directly related to burnout and it predicts burnout through the stress variable (Çam et al., 2014; Zhang et al., 2007).

Another feature related to perfectionism is the tendency of procrastination, which is defined as leaving the tasks at the last minute (Schowenbourg, 1995), discomfort due to the tension created by the last-minute tasks (Solomon & Rothblom, 1984), or the contradiction between one's current behavior and goals (Lay, 1994). Procrastinators leave their jobs to the last minute if there is no obligation. Burka and Yuen (1983) state that people's irrational beliefs underlie the tendency of procrastination. If individuals believe that they will fail in a task, they postpone it instead of commencing work and confirming this prophecy. They take the easy way out by not performing the task.

Perfectionism, which is one of the characteristics associated with procrastination, is considered in two categories as adaptive and maladaptive. Individuals who exhibit harmonious perfectionism set high standards and rely on their ability to achieve these standards. Therefore, they struggle to achieve these standards. However, maladaptive perfectionist individuals do not make an effort to achieve unrealistic high expectations set by themselves or the environment. Individuals who fail to do this feel disappointed (Burka & Yuen, 1983). Individuals with procrastination personalities are perfectionists and experience fear of failure (Lay & Silverman, 1996). When encountering a difficult task, people avoid it so that their self-worth is not damaged and thus postpones the task. In other words, they delay their duties because of fear of failure (Burka & Yuen, 1983; Rice et al., 2012). People may fail as a result of postponing their duties. However, fear of failure is a mediating variable in explaining the procrastination behaviors of individuals (Balkıs & Duru, 2012; Krause & Freund, 2014). As Goos et al. (2013) state, fear of failure is also a situation that can be observed as a result of grade retention. Based on this, it can be said that both procrastination and fear of failure are related to grade retention.

1.1. Turkish Context

In Turkey, grade retention is clearly identified by legal regulations. Accordingly, the same regulation advocates that students must repeat the grade if they do not attend school for 45 days with or without an excuse. Failure is another factor for repeating the class. Also, if a student's grade point average (GPA) is below 50, the student falls back to the grade (MoNE, 2013). In the Turkish education system, grade retention is most common in 9th grade and 75% of students repeat 9th grade (Öğülmüş et al., 2013). This grade causes students to experience a transition between educational stages. In other words, students experience a transition from secondary school to high school after completing 8th grade. However, such educational transitions contain stress, such as encountering a more advanced program, entering into a wider and challenging environment, and starting interpersonal relationships in new social settings (Lee & Ip 2003; Neild et al., 2008).

1.2. Importance of Study

Although literature abounds in studies on grade retention and school burnout, they are mostly descriptive studies (Öğülmüş et al., 2013; Sezer, 2007). In Turkey, studies on burnout were mainly conducted with employees, and studies on school burnout were carried out with university students. However, psychological counseling and guidance services in Turkey are common in secondary education. Therefore, testing a school burnout model for high school students and especially for the 9th grade, in which intensive grade retention and school dropout are experienced, may be useful in terms of understanding the problem.

Considering grade retention, research focused on the demographic characteristics and the reason for grade retention (Öğülmüş et al., 2013; Sezer, 2007) as well as academic motivation (Bedel, 2013). There is only a master's thesis in which self-esteem, subjective well-being, academic burnout levels, locus of control, and educational stress levels of the students who did and did not repeat a grade were examined (Okumuşoğlu, 2015). Unlike these studies, the current research investigated different and more variables that might be related to grade retention. This situation is important in terms of its contribution to the literature.

School burnout related studies, conducted with high school students in Turkey, examined the relationship between school burnout and motivation to participate in class (Aypay & Eryılmaz, 2011a); subjective well-being (Aypay & Eryılmaz, 2011b); scale development for high school students (Aypay, 2012); social support (Kutsal & Bilge, 2012); demographic variables (Seçer & Gençdoğan, 2012); study habits, school engagement and academic achievement (Bilge et al., 2014); the tendency of academic procrastination, and learning styles (Çakır et al., 2014); academic achievement, grade level, and attendance to class (Aypay & Sever, 2015); self-efficacy and subjective vitality (Sarıçam, 2015); peer bullying and parental monitoring (Aypay et al., 2016); self-esteem and self-regulation (Kapıkıran et al., 2016). In these studies, how school burnout differed according to demographic variables was analyzed via comparision tests while its relationship with other variables was analyzed by correlational methods. However, unlike the aforementioned studies, the relationships between the variables discussed in this study were examined in a causal relationship context. In other words, the causal relationships between the variables were examined by path analysis. In addition, this study gathered the variables in other studies and examined the relationship among these variables as well as the relationship between these variables and school burnout. Also, the current study delved into not only the level of these relationships among repeaters and others but also it examined to what extent the variables differentiated repeaters and others. The absence of a similar study with high school students in Turkey is another case that contributes to the importance of the study.

Grade retention is an important educational problem in the field of educational sciences; thus, it vital to examine it and identify its implications especially in the field of school psychology. Besides, it becomes necessary to investigate school burnout since it is more widespread among students due to the growing demands of the school, family, and teachers. Thanks to the current study, both possible psychosocial variables leading to grade retention were identified and a model of school burnout was examined. With this study, it will be possible to prepare psycho-education programs or group counseling sessions to prevent both grade retention and school burnout. Specifically, identifying the most powerful predictor variable(s) may contribute to the main theme of future interventions.

Based on the aforementioned literature, it can be said that the concepts of perceived social support, perfectionism, stress, fear of failure, school burnout, and academic achievement are related to each other and grade retention. Therefore, testing the school burnout model in high school students and to what extent the variables in this model classify repeaters and others are among the research problem of this study. Within the framework, the hypothesis model below was tested. It includes information about the purpose, significance, conceptual – theoretical framework, and study in general.

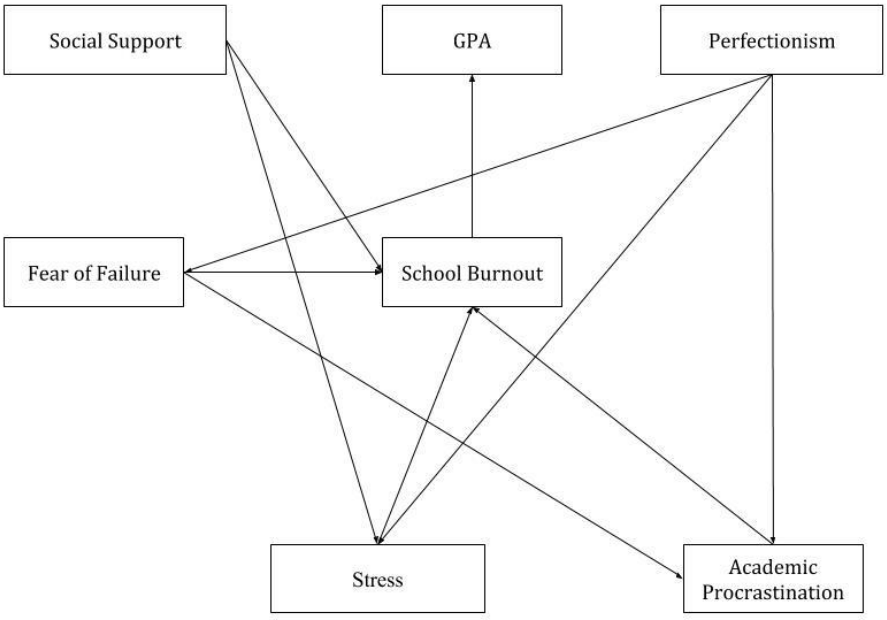


Figure 1. Tested hypothesis model

2. Method

2.1. Study Group

The study group consisted of 1068 high school students attending Anatolian high schools in Turkey/ Ankara, during the second semester of the 2015-2016 academic year. There were 397 (37.2%) females and 671 (62.8%) males. The average of age was (M= 15.75; SD= .56). The students were divided into three groups: (1) 9th-grade repeaters (n= 356), (2) students studying in the 9th grade for the first time (n= 340), and (3) students who completed the 9th grade and studying in the 10th grade (n= 372). Table 1 shows the demographic statistics of the three groups.

Table 1. Characteristics of study group

Groups	Female n (%)	Male n (%)	Total n	Age / Mean (SD)	GPA Range	GPA / Mean (SD)
9. Grades	138 (35.9)	218 (64.1)	356	15.19 (.33)	48-96	75.99 (8.64)
Retention	122 (35.9)	218 (64.1)	340	16.12 (.33)	35-76.66	51.95 (7.65)
10. Grades	137 (36.8)	235 (63.2)	372	16.69 (.26)	47-95	74.14 (8.79)
Total	397	671	1068	15.75 (.56)	35-96	

2.2. Data Collection Tools

2.2.1. School burnout inventory (SBI)

We adapted the School Burnout Inventory (SBI), developed by Salmela-Aro et al. (2009) to determine the school burnout levels of individuals between the ages of 10-16. SBI consisted of three sub-dimensions (exhaustion at school, cynicism toward the meaning of school, sense of inadequacy at school) and nine 6-point Likert type items that were compatible with the theoretical structure of burnout. High scores indicate high school burnout among students while low scores indicate low school burnout. The Cronbach's alpha internal consistency coefficient calculated for the original form was calculated as .88 for the whole scale and it ranges between .67 to .80 for subscales. Unlike the original language form, the Turkish form of SBI has a single dimension and the goodness of fit values of the model obtained from DFA was found as x^2/df= 1.78, RMSEA= .066, GFI= .94, AGFI= .91, CFI= .97, NFI= .94, NNFI= .96, IFI= .97. Cronbach's alpha internal consistency coefficient was calculated as .83.

2.2.2. The performance failure appraisal inventory (PFAI)

In order to measure students' fear of failure levels, we adapted the Performance Failure Appraisal Inventory (PFAI), developed by Conroy et al. (2002), to Turkish culture. PFAI consists of 25 items and five sub-dimensions including Fear of Experiencing Shame and Embarrassment, Fear of Devaluing One's Self-Estimate, Fear of Having an Uncertain Future, Fear of Important Others Losing Interest, and Fear of Upsetting Important Others. Cronbach alpha internal consistency coefficients were calculated as .80, .74, .80, .81 and .78, respectively. The scoring of the inventory was between -2 (100% disagree) and +2 (100% agree). The response grades of the Turkish form were changed according to expert opinions five Likert types (100% disagree (1) and 100% agree (5)) The Turkish form of PFAI has acceptable fit indexes (x^2/df = 3.33, RMSEA= .079, GFI= .83, AGFI= .80, CFI= .96, NFI= .95, NNFI= .96, IFI= .96.) and Cronbach's alpha internal consistency coefficients (.94 for the whole PFAI, .88, .71, .80, .90 and .81 for sub-dimensions, respectively).

2.2.3. Perceived social support scale-revised (PSSS-R)

PSSS-R developed by Yıldırım (1997) and revised by Yıldırım (2004) was used to determine the perceived social support levels of the participants. The scale consists of three sub-dimensions (Family, Friends, and Teachers) and 50 items. Cronbach's alpha internal consistency coefficients were 0.93 for the whole scale and .94, .91, .93 for subdimensions, respectively. The high score of the scale indicates a high level of social support. Cronbach's alpha internal consistency coefficients ranged from .93 to .86 in the present study. The construct validity of the scale was re-tested with CFA and the fit indexes for PSSS-R were x^2/df = 3.38, RMSEA= .047, GFI= .87, AGFI= .86, CFI= .96, NFI= .95, NNFI= .96, IFI= .97.

2.2.4. Aitken academic procrastination inventory (AAPI)

We used AAPI developed by Aitken (1982) to determine the academic procrastination of the participants. The original form of the scale is a one-dimensional and has 5-point Likert-type 19 items. Higher scores indicate that individuals tend towards procrastination. The reliability and internal consistency coefficient of the original version was calculated as .82. The scale was adapted to Turkish by Balkıs (2006). In the current study, Cronbach's alpha internal consistency coefficient was .86 for the whole scale and CFA showed that fit indexes were x^2/df = 10, RMSEA= .092, GFI= .87, AGFI= .83, CFI= .92, NFI= .92, NNFI= .91, IFI= .92.

2.2.5. Academic expectations stress inventory (AESI)

AESI was developed to measure the stress resulting from students' inability to meet their own expectations and the expectations of those considered important, such as teachers and families. AESI consisted of 9 items and two sub-dimensions: Expectations of

Parents/Teachers and Expectations of Self. The internal consistency coefficient was calculated as .89 for the whole scale while .85 and .84 for sub-dimensions, respectively (Ang and Huan 2006). The Turkish form of AESI has the same construct as the original form (Kelecioğlu and Bilge, 2009). In addition, the internal consistency coefficients of the Turkish adaptation were .81 for the whole scale, .81 for expectations of parents and teachers, and .65 for expectations of self. In the current study, Cronbach's alpha internal consistency coefficient was noted as .81 for the whole scale, but .79 and .64 for sub-dimension, respectively. After CFA procedure, the fit indexes were found as x^2/df = 15.84, RMSEA= .012, GFI= .91, AGFI= .84, CFI= .91, NFI= .92, NNFI= .88, IFI= .91.

2.2.6. Frost multidimensional perfectionism scale (FMPS)

FMPS was developed by Frost et al. (1990) in order to determine students' tendency of perfectionism. The Turkish form of FMPS has a six-dimensional construct (Kağan, 2011). Cronbach's alpha internal consistency coefficient was found to be .91 on the whole scale but vary between .64 and .94 for sub-dimensions. Frost et al. (1990) and some other researchers suggested not to include Personal Standards and Organization sub-dimension into total score because they reflect adaptive perfectionism (Bieling et al., 2004; Chang, 2012; Di Schiena et al., 2012; Harris et al., 2008; Weiner & Carton, 2012). Therefore, in the present study, these dimensions were not included in the analysis in order to determine students' levels of maladaptive perfectionism. In this study, Cronbach's alpha internal consistency coefficient was noted as .88, but .82 for Concern over Mistakes, .71 for Personal Standards, .75 for Parental Expectations, .69 for Parental Criticism, .64 for Doubts about Actions, and .93 for Organization. After CFA procedure fit indexes were calculated: x^2/df = 7.01, RMSEA= .075, GFI= .81, AGFI= .78, CFI= .89, NFI= .87, NNFI= .88, IFI= .89.

2.3. Data Collection

Ethical approval was obtained from Ankara University Ethics Committee before the data collection process. Following the permission of the Provincial Directorate of National Education, the scales were applied by the researcher. Participating in the research was purely voluntary; therefore, participants were informed about the purpose of the study and asked to sign the Informed Consent Form. The data collection took approximately 40 minutes. During the data collection process, attention was paid to the disruption of instruction, and the data were collected in the presence of a teacher or an administrator.

2.4. Data Analysis

Descriptive analysis (mean, standard deviation, percentage, and frequency analysis), normality analysis (kurtosis and skewness values), Pearson Moments Product Correlation analysis, path analysis, and discriminant analysis were used. Path analysis

was used to determine the causality relationship between the variables in the school burnout model while discriminant analysis was utilized to detect to what extent the variables used in the model differentiated repeaters and others.

However, there were some prerequisites for using both path analysis and discriminant analysis. These prerequisites were: the data set has a normal distribution, the variance/covariance matrices of the data set are equal, and there is no multicollinearity between the variables in the data set. For these conditions, the required analyzes (kurtosis and skewness values and Box's M value) were performed. Box's M value was not significant in this study. Thus, quadratic discriminant analysis was used. Correlation and quadratic discriminant analyzes were performed via SPSS (Statistical Package for Social Sciences) whereas LISREL (Linear Structural Relationships) was applied for path analysis.

3. Results

3.1. Preliminary Analysis

As a preliminary analysis, the descriptive statistical analyzes were presented in Table 2.

Table 2. Descriptive statistics related to GPA and scores obtained from measurement tools

Variables	Groups	N	M	SD	Min.	Max.	Skewness	Kurtosis
GPA	9. Grades	356	76.00	8.64	48.00	96.00	-.383	.359
	Retention	340	51.95	7.37	35.00	76.66	.952	.925
	10. Grades	372	74.14	8.79	47.00	95.00	-.181	-.075
	Total	1068	67.70	13.62	35.00	96.00	-.254	-.995
School Burnout	9. Grades	356	27.35	6.75	11.00	45.00	.085	-.584
	Retention	340	27.94	6.79	9.00	44.00	-.263	-.238
	10. Grades	372	28.10	6.95	11.00	45.00	-.115	-.570
	Total	1068	27.80	6.83	9.00	45.00	-.094	-.496
Family Support	9. Grades	356	53.08	6.31	23.00	60.00	-1.638	3.498
	Retention	340	49.13	7.94	20.00	60.00	-.918	.612
	10. Grades	372	51.57	7.04	23.00	60.00	-1.202	1.557
	Total	1068	51.30	7.29	20.00	60.00	-1.225	1.527
Friend Support	9. Grades	356	32.95	4.99	15.00	39.00	-.837	.234
	Retention	340	34.15	4.52	14.00	39.00	-1.285	1.823
	10. Grades	372	33.66	4.54	17.00	39.00	-.977	.487
	Total	1068	33.58	4.71	14.00	39.00	-1.020	.726
Teacher Support	9. Grades	356	38.99	8.15	17.00	51.00	-.493	-.636
	Retention	340	35.31	8.96	17.00	51.00	-.209	-.819
	10. Grades	372	37.17	8.06	17.00	51.00	-.303	-.536
	Total	1068	37.18	8.51	17.00	51.00	-.350	-.672

Stress	9. Grades	356	32.94	6.73	12.00	45.00	-.436	-.359
	Retention	340	33.80	6.66	12.00	45.00	-.493	.109
	10. Grades	372	32.74	6.68	11.00	45.00	-.362	-.231
	Total	1068	33.14	6.70	11.00	45.00	-.425	-.189
Adaptive Perfectionism	9. Grades	356	43.83	8.39	19.00	63.00	-.302	-.195
	Retention	340	45.47	8.54	16.00	64.00	-.549	.604
	10. Grades	372	44.66	8.30	20.00	64.00	-.275	-.329
	Total	1068	44.64	8.42	16.00	64.00	-.368	-.012
Maladaptive Perfectionism	9. Grades	356	62.13	14.52	28.00	99.00	.208	-.343
	Retention	340	68.54	13.41	27.00	109.00	.162	.234
	10. Grades	372	63.23	14.42	31.00	103.00	.241	-.295
	Total	1068	64.55	14.39	27.00	109.00	.163	-.205
Academic Procrastination	9. Grades	356	42.49	11.10	17.00	80.00	.249	-.024
	Retention	340	41.64	10.91	16.00	76.00	.223	.318
	10. Grades	372	42.18	11.05	16.00	74.00	.246	-.198
	Total	1068	42.11	11.02	16.00	80.00	.240	.010
Fear of Failure	9. Grades	356	71.31	18.64	31.00	119.00	.240	-.547
	Retention	340	80.18	19.90	27.00	125.00	-.130	-.119
	10. Grades	372	71.11	19.30	27.00	123.00	.334	-.054
	Total	1068	74.06	19.71	27.00	125.00	.168	-.351

As seen in Table 2, the repeaters had the lowest mean scores of the GPA, family support and teacher support. On the other hand, the repeaters had the highest mean scores of maladaptive perfectionism and fear of failure. Before the path analysis, Pearson correlation coefficients were also presented in Table 3.

Table 3. Pearson correlation matrix for the relationships between variables (n = 1068)

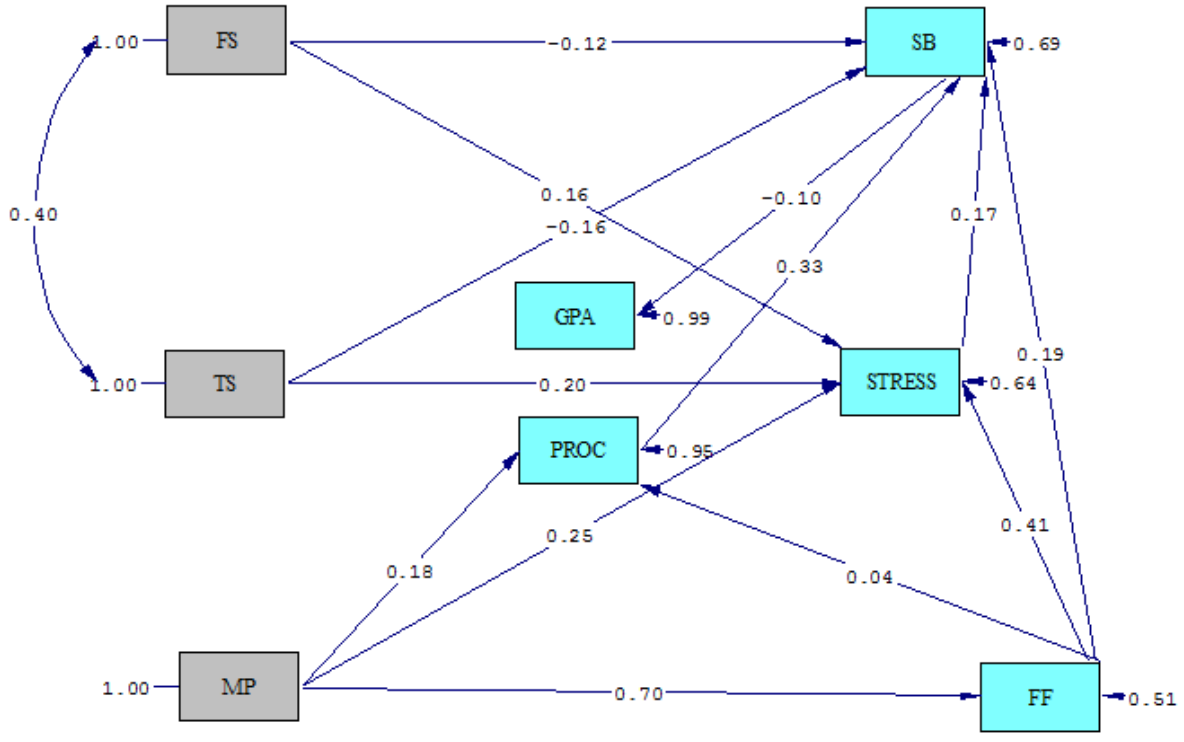
Variables	1	2	3	4	5	6	7	8	9	10
1. GPA	-									
2. School Burnout	-.112**	-								
3. Family Support	.211**	-.321**	-							
4. Friend Support	-.066*	-.088**	.187**	-						
5. Teacher Support	.173**	-.322**	.388**	.204**	-					
6. Stress	-.031	.209**	.012	.073*	.152**	-				
7. Adaptive Perfectionism	-.042	-.111**	.138**	.068*	.272**	.311**	-			
8. Maladaptive Perfectionism	-.217**	.416**	-.414**	-.115**	-.146**	.440**	.267**	-		
9. Academic Procrastination	-.070*	.430**	-.267**	-.162**	-.339**	-.081**	-.436**	.215**	-	
10. Fear of Failure	-.221**	.392**	-.297**	-.126**	-.181**	.499**	.136**	.706**	.175**	-

*p< .05; **p< .01

As seen in Table 3, academic achievement score did not have a significant relationship with stress, and adaptive perfectionism. There was also no statistically significant relationship between the mean score of stress and family support. Besides, a very low correlation coefficient (r= -.066) was found among variables. These results indicate that the calculated correlation coefficients were affected by sample size. The highest correlation (r= .71, p <.01) was found to be between fear of failure and maladaptive perfectionism.

3.2. Path Analysis

To examine the assumptions of path analysis, we firstly used the Durbin-Watson method to test the multicollinearity problem. The obtained value (1.902) was found to be among the limit values. In addition, variance inflation factor (VIF) value was less than 10 while condition index values (CI) were less than 50. Based on this, it can be said that there were no multiple connections between the variables. Then, the path analysis process of the hypothesis model was examined. Figure 2 presents the path diagram formed as a result of the analysis. Table 4 presents detailed information about the relationships between variables and their predictive ratios.



FS: Family support, **TS:** Teacher support, **MP:** Maladaptive perfectionism, **GPA:** Grade point average, **Proc**: Academic procrastination, **FF:** Fear of failure, **SB:** School burnout.

Figure 2. Path diagram of the tested hypothesis model

Table 4. Standardized path coefficients, t-values and explained variance ratios for the relationships between variables

Independent Variables	Path	Dependent Variables	ß	SE	t	R^2
Family Support	→	School Burnout	-0.12	.003	-3.82**	0.31
Teacher Support			-0.16	.003	5.12**	
Stress			0.17	.002	5.32**	
Academic Procrastination			0.33	.002	11.63**	
Fear of Failure			0.19	.001	5.30**	
Family Support	→	Stress	0.16	.003	5.58**	0.36
Teacher Support			0.20	.002	6.94**	
Maladaptive Perfectionism			0.25	.002	6.21**	
Fear of Failure			0.41	.001	11.41**	
Maladaptive Perfectionism	→	Academic Procrastination	0.18	.003	4.25**	0.05
Fear of Failure			0.04	.003	0.99	
School Burnout	→	GPA	-0.10	.006	-3.33**	.001

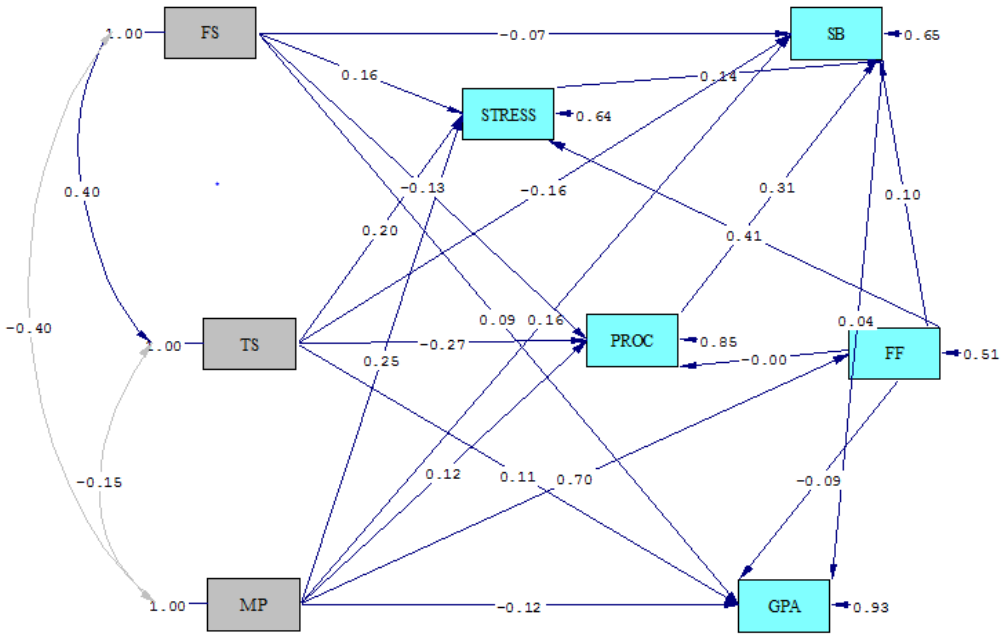
*p< .05; **p< .01

Table 4 shows the standardized path coefficients, t and R^2 values of the variables in the tested hypothesis model. All of the paths from variables (such as perceived social support from family and teachers, stress, academic procrastination, and fear of failure) to school burnout were statistically significant. The strongest relationship was found between school burnout and academic procrastination while the lowest relationship was between school burnout and perceived social support from family. While perceived social support from parents and teachers had a negative effect on school burnout, variables such as stress, academic procrastination, and fear of failure had a positive effect on it. All of these variables accounted for 31% of the change in school burnout (R^2= .31). However,

the effect of school burnout on academic achievement was low (β= -.10; p< .05). It was observed that school burnout explained only 1% of the change in academic achievement. Then, the goodness of fit indexes was examined. Therefore, x^2/df, RMSEA, GFI, AGFI, CFI, NFI, NNFI, and IFI indexes were reported. Acceptable and good fit values for these indexes are as in Table 5 (Çokluk et al., 2010; Schermelleh-Engel & Moosbrugger, 2003; Sümer, 2000).

Table 5. Model fit index criteria

Fit Indexes	Good	Acceptable
x^2/df	$0.00 \leq x^2/df \leq 3.00$	$3.00 \leq \chi^2/Sd \leq 5.00$
p	$0.05 < p \leq 1.00$	$0.01 \leq p \leq 0.05$
RMSEA	$0.00 \leq RMSEA \leq 0.05$	$0.05 \leq RMSEA \leq 0.10$
NFI	$0.95 \leq NFI \leq 1.00$	$0.90 \leq NFI \leq 0.95$
NNFI	$0.97 \leq NNFI \leq 1.00$	$0.95 \leq NNFI \leq 0.97$
CFI	$0.95 \leq CFI \leq 1.00$	$0.90 \leq CFI \leq 0.95$
GFI	$0.95 \leq GFI \leq 1.00$	$0.90 \leq GFI \leq 0.95$
AGFI	$0.90 \leq AGFI \leq 1.00$	$0.85 \leq AGFI \leq 0.90$



FS: Family support, **TS:** Teacher support, **MP:** Maladaptive perfectionism, **GPA:** Grade point average, **Proc**: Academic procrastination, **FF:** Fear of failure, **SB:** School burnout.

Figure 3. Path diagram of the alternative model

Fit indexes were calculated as x^2/df = 15.47, RMSEA= .117, GFI= .95, AGFI= .87, CFI= .93, NFI= .92, NNFI= .85, IFI= .93. Because of x^2/df, RMSEA and NNFI indexes were not within acceptable limits, it can be said that the tested hypothesis model is not valid. Subsequently, consistent with the literature, modification suggestions were examined and a new path was drawn from family support and teacher support to academic procrastination and GPA. Moreover, new paths between maladaptive perfectionism and school burnout as well as GPA and between fear of failure and GPA were added to the model. The reorganized model and the standardized path coefficients of the variables were presented in Figure 3.

Fit indexes were calculated as x^2/df = 4.15 (p= 0.00014), RMSEA= .054, GFI= .99, AGFI= .96, CFI= .99, NFI= .99, NNFI= .97, IFI= .99. x^2/df and RMSEA fit indexes were within the acceptable limits and other fit indexes were within the limits of a good fit. The fact that the x^2/df index value was close to the acceptable limits might be due to sample size because x^2 statistic is affected by sample size. Therefore, the alternative model can be considered valid. Table 6 presents standardized path coefficients, t-values, and coefficients of predictive ratios among variables in detail.

Table 6. Standardized path coefficients, t values and explained variance ratios of the relationships between variables in the alternative model

Independent Variables	Path	Dependent Variables	ß	SE	t	R^2

Family Support			-0.07	.003	-2.40*	
Teacher Support			-0.16	.003	-5.00**	
Stress			0.14	.003	4.39**	
Academic Procrastination	→	School Burnout	0.31	.002	10.06**	0.35
Maladaptive Perfectionism			0.16	.002	5.58**	
Fear of Failure			0.10	.002	2.32*	
Family Support			0.16	.003	2.01*	
Teacher Support			0.20	.002	5.11**	
Maladaptive Perfectionism	→	Stress	0.25	.002	2.94**	0.36
Fear of Failure			0.41	.001	11.41	
Family Support			-0.13	.005	-3.74**	
Teacher Support			-0.27	.004	-8.39**	
Maladaptive Perfectionism	→	Academic Procrastination	0.12	.003	-2.62**	0.15
Fear of Failure			0.00	.002	-0.08NS	
Family Support			0.09	.007	2.53*	
Teacher Support			0.11	.005	3.49**	
School Burnout	→	GPA	0.04	.007	1.21NS	0.07
Maladaptive Perfectionism			-0.12	.003	-2.62**	
Fear of Failure			-0.09	.004	-2.03*	
Maladaptive Perfectionism	→	Fear of Failure	0.70	.003	30.67**	0.49

*p< .05; **p< .01

The most significant variable on school burnout was academic procrastination (ß= .31; p< .01) while the lowest one was family support (ß= -.07; p< .05). Considering other variables, school burnout was affected by teacher support, stress, maladaptive perfectionism, and fear of failure. When teacher and family support increased, school burnout levels of students decreased; as the stress, maladaptive perfectionism, and fear of failure increased, school burnout levels of students increased. These variables accounted for 35% of the total variance in school burnout (R^2= .35).

Except for school burnout (ß= .04; p> .05), all other variables have a significant effect on academic achievement, and fear of failure had the most effect (ß= -.12; p< .01). In a nutshell, as perceived social support from parents and teachers increased, students' academic achievement increased; as maladaptive perfectionism and fear of failure increased, their academic achievement decreased. Social support, school burnout, maladaptive perfectionism, and fear of failure explained 7% of the variance in academic achievement (R^2= .07).

One of the notable findings was the positive relationship between family/teacher support and stress showing that family and teacher support increased the stress. On the other hand, the fear of failure has the most negative effect on stress and maladaptive perfectionism also increased the stress. The family and teacher support, maladaptive

perfectionism, and fear of failure explained 36% of the total variance in the stress variable (R^2= .36).

Regarding variables that affect academic procrastination, family support, teacher support, and maladaptive perfectionism affected academic procrastination while the fear of failure variable did not affect it. The most significant predictor of students' academic procrastination was teacher support. In other words, as perceived social support from teachers increased, students' academic procrastination tendencies decreased. Similarly, perceived social support from family reduced academic procrastination whereas maladaptive perfectionism increased it. All of these variables explained 15% of the variance in academic procrastination (R^2= .15).

Lastly, students' fear of failure was predicted by maladaptive perfectionism. The standardized path coefficient between maladaptive perfectionism and fear of failure was observed to be ß= .70. In addition, it was noted that maladaptive perfectionism explained 49% of the variance in students' fear of failure.

3.3. Discriminant Analysis

Discriminant analysis was used to examine the classification power of repeaters and others. Firstly, the equality of variance/covariance matrices, an assumption of discriminant analysis, was examined with Box's M statistic and it was found that the variance/covariance matrices of the groups in the data set were not equal (F= 1.838; df= 72; p< .01). This may occur in cases where there are more observations (Kalaycı, 2009). Therefore, quadratic discriminant analysis, making classification by calculating the covariance matrices separately (Tabachnick & Fidell, 2013, p.385), was used to determine the separation power of the variables in the model.

Before discriminant analysis, the distributions of the study groups were examined in terms of the study variables presenting in Table 2. The repeaters had the lowest mean scores of the GPA, family support, and teacher support. On the other hand, the repeaters had the highest mean scores of maladaptive perfectionism, stress, and fear of failure. Moreover, the 9th grade students have the highest mean scores of academic procrastination. After identifying the descriptive statistics of the groups, we calculated the eigenvalues of discriminant functions to examine to what extent the variables in the data set distinguished the groups (Table 7).

Table 7. Eigenvalues of discriminant functions

Function	Eigenvalue	Variance	Canonical Correlation	R^2
1	1.851	99.2	.806	0.65
2	0.015	0.8	.121	0.01

Table 7 displayed that the eigenvalue coefficient of the first function was considerably higher than the second function. However, there is no clear explanation about which eigenvalue is more acceptable because there is no cut-off limit for eigenvalues (Çokluk et al., 2010). Kalaycı (2009) advocates that functions with an eigenvalue of .40 and above are considered good although there is no clear limit. In addition, canonical correlation

and R^2 values were examined, it was seen that the first function was more powerful in separating the groups. Thus, it can be said that the first function in the table is important in separating the groups.

Table 8. Wilks' Lambda statistics results of discriminant functions

Function	Wilks' Lambda (λ)	Chi-square	df	p
1	.346	1127.504	16	.000
2	.985	15.529	7	.030

To examine the distinction between groups, we performed Wilks' Lambda (λ) statistics for discriminant functions and found that the values of both functions were statistically significant. The value of λ approaching 0 indicates that there is a distinction between the groups while the value of λ approaching 1 indicates that there is no distinction between the groups. Accordingly, function 1 was found to be more effective in separating groups ($x^2_{(16)}$= 1127.504, p< .01). After this analysis, the contribution of each variable to discriminant classification was examined. The results were presented in Table 9.

Table 9. Wilks' Lambda tests for equality of group means

Variables	λ	F	df_1	df_2	p
GPA	.372	899.197	2	1065	.000
School Burnout	.998	1.182	2	1065	.307
Family Support	.951	27.192	2	1065	.000
Teacher Support	.970	16.745	2	1065	.000
Stress on Academic Expectations	.995	2.493	2	1065	.083
Maladaptive Perfectionism	.963	20.373	2	1065	.000
Academic Procrastination	.999	.529	2	1065	.589
Fear of Failure	.955	25.151	2	1065	.000

As the λ statistic approaches 0, the contribution of the variable to the discriminant function increases. Based on this information, the variables that are effective in separating the groups were academic success (λ= .372; p< .01), family support (λ= .951; p< .01), fear of failure (λ= .955; p< .01), maladaptive perfectionism (λ= .963; p< .01), and teacher support (λ= .970; p< .01) respectively. Among these variables, GPA was the most prominent variable in distinguishing the groups. However, it was observed that school burnout, stress, and academic procrastination were not effective in separating the groups (p> .05). Table 10 displays the percentage of the variables that were statistically significant in separating the groups in the data set.

Table 10. Classification results of discriminant analysis

Predicted group memberships								
Groups	9. Grade	%	Grade Retention	%	10. Grade	%	Total (n)	Total %
9. Grade	220	61.8%	18	5.1%	118	33.1%	356	100%

Grade Retention	6	1.8%	308	90.6%	26	7.6%	340	100%
10. Grade	171	46.0%	29	7.8%	172	46.2%	372	100%
Total classification accuracy percentage= 65.5%								

Table 10 provides information on to what extend the discriminant analysis of the variables used to separate groups could classify the groups. The discriminant analysis could accurately classify 91% of repeaters, 61.8% of 9th graders and 46.2% of 10th graders. In other words, analysis classified repeaters appropriately and the lowest classification percentage belonged to students studying in 10th grade (46.2%). However, one of the aims of this study was to examine to what extend variables could distinguish repeaters from those who did not. This was largely achieved because only 32 of 340 repeaters were not classified accurately. Figure 4 shows the map for classification rates.

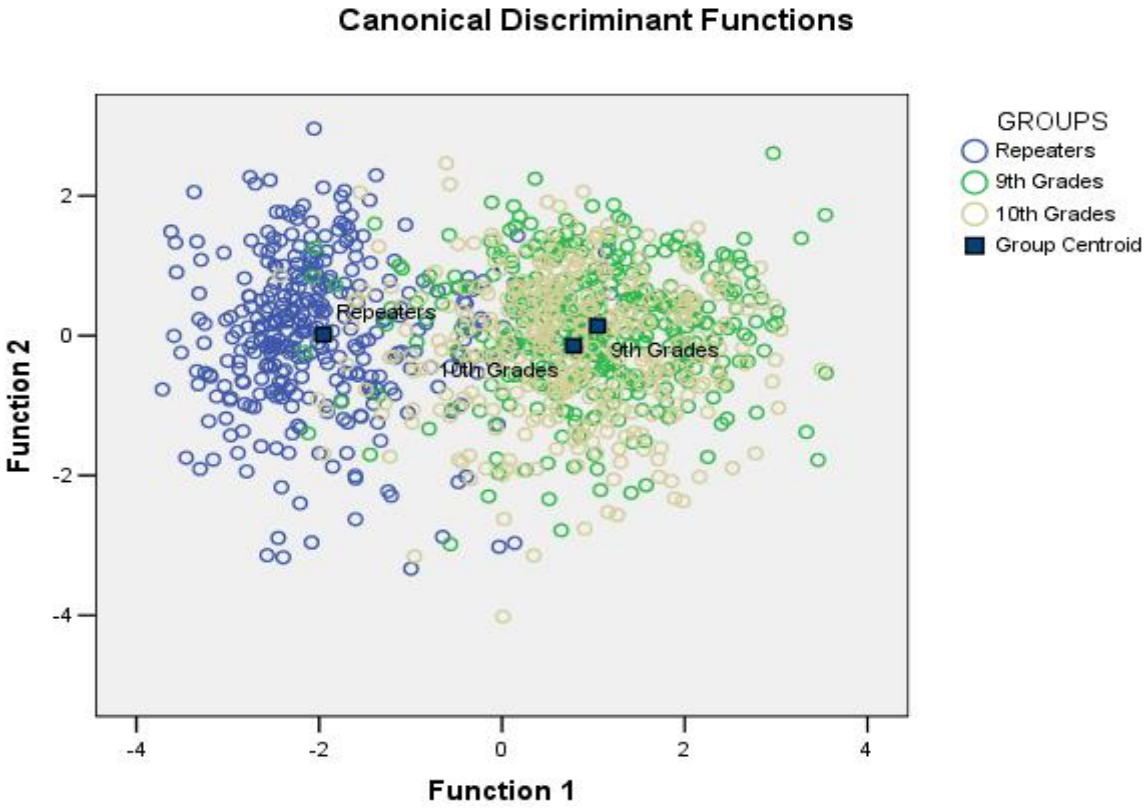


Figure 4. Classification map of discriminant function analysis results

As seen in Figure 4, students studying in 9th and 10th grades were gathered in a separate cluster. Although the discriminant analysis did not clearly distinguish 9th and 10th grades from each other, it distinguished repeaters from others. Therefore, it can be interpreted that the variables performed in the discriminant analysis were good at distinguishing repeaters and others.

Following the classification analysis, the relative chance criterion was calculated to test the accuracy of this classification. In this context, the research group consisted of 356 (33.3%) students studying in the 9th grade, 340 (31.8%) repeaters, and 372 (34.8%) students studying in the 10th grade. Therefore, the chance rate of recruiting repeaters for group membership was 31.8%, the chance rate of recruiting the 9th-grade students for group membership was 33.3%, and the chance rate of recruiting the 9th-grade students for group membership was 34.8%. The relative chance ratio for the research group was calculated as $(0.32)^2 + (0.33)^2 + (0.35)^2 = 0.33$ (33%) by squaring the percentage ratio of the total number of participants of each group (Kalaycı, 2009). Considering the obtained relative chance ratio, this value was considerably lower than the percentage of classification accuracy. Hair et al. (2014, p.262) explain the relative chance value through an example. The researchers state that the percentage of classification accuracy should be at least 62.5 in a case where the chance percentage is 50 (50 x 1.25 = 62.5%). The relative chance ratio obtained from this study was calculated as (33 x 1.25) = 41,25% regarding this formula. This value is again lower than the calculated percentage of accurate classification (65.5%). Based on this, it can be said that there was no chance in predicting group memberships with discriminant analysis, and the variables discussed in the model appropriately distinguished repeaters from others. In other words, these findings may show that the discriminant model developed for repeaters and others is valid.

4. Discussion

A model related to school burnout in high school students was tested, and the power of the variables in the model to classify the students who repeat and pass the grade was examined. The mean of academic success, which is one of the variables studied for this purpose, was found to be M = 51.95, SD = 7.37 in repeaters. One of the minimum criteria for passing a grade according to the Regulation on Secondary Education Institutions is that students have a 50 year-end achievement score (MoNE, 2013). The fact that the GPAs of repeaters were a little above 50 may pose a risk for students to repeat a grade again and therefore to go on outside of formal education. There are contradictory arguments in the literature about whether grade retention is useful. Some argue that repetition is beneficial in the short term, but this benefit is eliminated in the long term (Jimerson et al., 2002). Researchers who favor grade retention emphasize that students become more mature in their relationships with peers and teachers. However, it is stated that this situation has long-term losses. This is because these students may be labeled and stigmatized by their immediate surroundings (Klapproth et al., 2016; Plummer & Graziano, 1987). Stigmatization of repeaters by their peers damages their self-esteem and self-concepts. Self-esteem and self-concepts are related to academic achievement. Therefore, the damage of students' self-esteem and self-concepts uncover negative consequences of grade retention both academically and psychosocially (Gottfredson et al., 1994).

Within the scope of the research, a model describing the relationships among school burnout, social support from family and teachers, stress, maladaptive perfectionism, academic procrastination, fear of failure, and academic achievement was tested with the

data obtained from 1068 students. In this study maladaptive perfectionism, perceived social support from teachers, fear of failure, and perceived social support from a family affected academic achievement scores at a low level. Results indicated that these variables explained a small part of the variance in students' academic achievement. These findings are consistent with the findings of Yıldırım et al. (2008). In their study conducted with high school students, no significant relationship was observed between perceived social support from family/friends and academic achievement. On the other hand, there was a low correlation between academic achievement and perfectionism as well as perceived social support from teachers. Research shows that adaptive perfectionism has a significant effect on the achievement scores of the courses because individuals with adaptive perfectionism set high standards and struggle to achieve them. However, individuals with maladaptive perfectionism set too high standards that they cannot achieve and often fail to realize these expectations (Chang, 2012).

The predictors of school burnout were determined in the path analysis performed with the data obtained from all students. The most powerful predictors of school burnout were academic procrastination, teacher support, maladaptive perfectionism, stress, fear of failure, and family support respectively. Academic procrastination is observed in the forms: people postponing their academic works at the last moment and the pressure of these works. Like stress, perfectionism prepares individuals for exhaustion (Philip et al., 2012). The time pressure of the procrastination on students leads to stress in the short term and this stress causes exhaustion in the long term. Therefore, it is consistent with the literature that academic procrastination is a strong predictor of burnout levels of students (Tice & Baumeister, 1997). In a study conducted with university students in Turkey, a significant relationship was found between university students' academic procrastination and school burnout (Balkıs, 2013). Literature underlined the negative impact of maladaptive perfectionism on school burnout. Farber (2000) states that individuals with burnout have a perfectionist perspective towards themselves, their work, and their families. In this context, the stress that occurred due to these characteristics of perfectionist individuals prepares them for exhaustion. This is because individuals with maladaptive perfectionism have the motivation to avoid making mistakes. Therefore, these people should not be evaluated negatively. The stress of this situation prepares people for exhaustion (Hill et al., 2010; Stoeber & Otto, 2006). One of the reasons that perfectionist individuals experience more burnout is the hardly high standards they set for themselves. When a person fails to reach the standards or goals he / she sets, he / she experiences burnout (Freudenberger, 1974). A study conducted with university students exhibited that maladaptive perfectionism was one of the important factors affecting school burnout (Zhang et al., 2007).

This study showed that family and teacher support affected students' burnout levels at low and medium levels and this effect was negative. Considering the conservation of resources theory, it serves as an important resource for people. People must find someone they can apply for in difficult situations. Consequently, perceived sources of social support, especially in coping with burnout, lead to less negative effects of burnout. More specifically, the sources of social support facilitate coping with burnout (Hobfoll & Shirom, 2001). In a large-scale study conducted by Salmela-Aro et al. (2008) with 88.200 high school adolescents in Finland, it was seen that perceived social support from school

and teachers reduced school burnout among students. In a study conducted with high school students in Turkey, Kutsal and Bilge (2012) found that students who perceived a low level of social support had higher levels of school burnout than their peers. However, it was seen that teacher support was more effective in predicting school burnout. In a study conducted with university students, a moderate relationship was noted between the social support levels of prospective teachers and their burnout levels (Çam et al., 2014). In this study, the findings related to the relationship between social support and school burnout were consistent with the related literature.

A statistically significant but low relationship was found between stress and school burnout. Literature advocates that burnout occurs as a result of long-term exposure to chronic stress (Hobfoll & Shirom, 2001). Adolescence, which corresponds to high school years, includes some transition processes. These transition processes cause stress in adolescence and also different sources may lead to stress in this period (Hankin & Abramson, 2001). Salmela-Aro et al. (2008) state that the school's demands and norms are compelling for students and this process is also stressful. This stress may result in low academic success and school engagement, and school burnout. Stress caused by academic pressures is listed among the causes of emotional exhaustion and researchers underline the similarity of this situation with the sense of stress (Barnett & Flores, 2016). Regarding the findings of this study, the relationship between stress and school burnout coincides with the findings obtained from other empirical studies (Koeske & Koeske, 1991; Meylan et al., 2015; May et al., 2014).

Regarding the analysis of all participants, the variables that affected students' stress levels the most were fear of failure, maladaptive perfectionism, teacher support, and family support respectively. These variables explained 36% of the stress of all students. Findings exhibited that the most important variable affecting students' stress levels was fear of failure. In addition, it is emphasized in the literature that social support is a factor that reduces stress. However, this study showed a positive relationship between stress and social support. This may occur due to the measurement tools used in the scope of the research. The dimensions of Academic Expectations Stress Inventory (Ang & Huan, 2006; Kelecioğlu & Bilge, 2009) are an individual's expectations of self and expectations of parents/teachers. This may be due to the confusion of social support with expectations. Students might confuse the expectations of social support with expectations of social support resources. Therefore, this situation might arise depending on the characteristics of the sample and measurement tools. In addition, the availability and adequacy of social support resources are important. Thus, the high perception of social support does not provide clear information about the availability and adequacy of these resources. In the case of measuring social support based on self-report, the stress and social support relationship is expected to be different than expected. Being lack of reflecting the correct results, it is more appropriate to conduct behavioral observations instead of measuring perceived social support based on self-report (Barrera, 1986). In this context, perceived social support is an important factor in reducing the general daily stress of students (Neumann et al., 1990), while it may have a negative effect on the stress of academic expectations.

A study conducted by Çivitci (2015) with university students displayed that perceived social support explained only 4% of students' stress levels. However, after negative

emotion variable was added to the regression model, the interaction of these two variables was noted to explain 45% of the students' stress levels. In this sense, negative emotions had a mediating effect on the relationship between social support and stress. Based on this finding, it is possible to advocate that stress causes negative emotions and social support is an effective variable in reducing these negative emotions. Yet, in this study, no test for mediation effect was performed and negative emotions, which are components of life satisfaction, were not included in the study. Therefore, a positive relationship between social support and stress might occur. In the correlation analysis, no statistically significant relationship was found to be between stress and support from teacher and family. In the literature, some studies have positive relationship between social support and stress, albeit limited. In their longitudinal study, Aneshensel and Frerichs (1982) found a positive relationship between stress and social support. In the literature, the positive relationship between stress and social support is explained by the reaction of social support resources to the individual in situations where the individual encounters stressful life events. In other words, when an individual experiencing stressful situations activates the social support resources and when these social support resources react against these situations, the intensity of the stress experienced by the person increases (Barrera, 1986).

Fear of failure had a moderate effect on students' stress levels. The fear of failure is the emotion that people experience in the face of a possible failure, especially as a result of a particular task. Although the possible failure is a real or assumed situation, people with an intense fear of failure experience this feeling. In addition, people with an intense fear of failure have a tendency to self-handicapping (Elliot & Thrash, 2004). Fear of failure involves evaluation anxiety, low self-confidence, and maladaptive perfectionism. These variables explained 49% of the variance in students' fear of failure. Fear of failure explained 18% of the variance in students' abandonment of academic tasks (Alexander & Onwugebzie, 2007). In approach-avoidance theory, the approach includes coping with difficulties; avoidance involves denial and postponing the task (Moos & Holahan, 2003). Also, one of the determinants of avoidance behavior is fear of failure (Stipek, 2002). Based on this, it can be said that the stress levels of the people with high fear of failure are high and their ability to cope with stress is low. The relationship between fear of failure and stress can be interpreted within the framework of these explanations. The fact that students' fear of failure caused stress can also be interpreted within the cultural context. Interdependence is an element of value, especially in collectivist cultures. For this reason, in individualist cultures, individuals attribute their success to their abilities and their failure to more lack of effort. On the contrary, in collectivist cultures, individuals attribute their success and failure to effort. Therefore, fear of failure can lead to stress, especially in collectivist cultures (Pang et al., 2009). In Turkish culture, people often act with the idea of "What do others say?". Thus, it is considered that the students get the idea of being disgraced towards other individuals when they fail (Karaşar & Öğülmüş, 2016). Fear of failure is associated with the need for social approval; especially the fear of failure, which is associated with the need for social approval, causes stress (Walsh & Ugumba-Agwunobi, 2002). In addition, since perfectionist individuals attribute their self-worths to excellent performance, they experience more stress than non-perfectionist individuals in case of a possible failure (Pacht, 1984).

In this study, the variables that affected students' academic procrastination (from the highest to the lowest) teacher support, family support, and maladaptive perfectionism. On the other hand, the fear of failure variable did not significantly affect the academic procrastination. These variables were observed to explain 15% of academic procrastination in the model created with the data of all students. Literature emphasizes that being supported by important close persons in difficult situations is vital for individuals to cope with these situations. Weak relations between parents and children increase procrastination along with developmental problems (Ferrari, 1994). In a study on the power of parental styles to predict academic procrastination, authoritarian and permissive parental styles were found to predict the tendency of university students' academic procrastination (Mahasneh et al., 2016). Especially, it is reported that procrastinators often experience conflict in their relationship with their parents because postponement of the tasks that parents expect from the child leads to conflicts (Ferrari & Olivette, 1993). In addition, It is stated that parents, teachers and other important people help the person overcome difficult situations. In a study conducted with university students, it was found that family support and close friends were negative predictors of procrastination. Based on these results, procrastinators were reported to experience problems in their relations with their families and close circles (Ferrari et al., 1999). The fact that perceived family and teacher support negatively affects academic procrastination is consistent with the literature. As the perceived teacher support increases, there is a decrease in students' academic procrastination. As Eccles (2004) points out, it is one of the important contexts that influence the school development process. Based on this, teacher support, which has a negative impact on academic procrastination, can be considered as important developmental resources for reducing the procrastination tendencies of adolescents. However, it is an undeniable fact that social media has an important role nowadays. In this context, sharing via social networking sites is perceived as social support for social people, but this situation also causes the person to postpone to the next step (Meier et al., 2016).

The role of maladaptive perfectionism and fear of failure was investigated in predicting students' academic procrastination. The analyzes performed with the whole data displayed that the relationship between maladaptive perfectionism and academic procrastination was (β= .12) and the relationship between academic procrastination and fear of failure (β= .00). Thus, academic procrastination was observed to be only predicted by maladaptive perfectionism. This is also mentioned as typical characteristics of perfectionist individuals (Conroy et al., 2007; Frost et al., 1990). However, individuals having fear of failure advocate that only 10% of individuals leave their works at the last moment (Steel, 2007). Studies finding negative relations between procrastination and perfectionism are available (Steel & Klingsieck, 2016). Knaus (2010) states that individuals experience intense fears of failure, especially if they attribute their self-worth to the performance they perform in a job. For these people, the feeling of interpersonal acceptance and value depends on how successful a job is. However, no measurement tool was used to measure self-worth in this study. Therefore, it is not clear whether self-worth lies under the fear of failure. The fact that the fear of failure variable does not have a significant effect on predicting students' academic procrastination can be attributed to this situation. In particular, the fact that maladaptive perfectionism predicts academic

procrastination is consistent with the theoretical and empirical research in the literature (Bong et al., 2014; Steel & Kligsieck, 2016). In socially prescribed perfectionism, people struggle to meet the standards of others, and this is closely related to the tendency of academic procrastination. However, in self-prescribed perfectionism, the person sets certain standards for himself and this situation has a negative relationship with academic procrastination. In addition, the relationship between fear of failure and perfectionism can be mutual. In other words, a person may postpone his/her work because he/she is afraid of failing. The idea of failure due to leaving the work to the last moment can create fear (Steel & Kligsieck, 2016). This explains the low relationship between maladaptive perfectionism and academic procrastination while it explains that there is no significant relationship between fear of failure and academic procrastination.

In this study, it was observed that maladaptive perfectionism predicted students' fear of failure at a high level. Maladaptive perfectionism explained approximately 50% of the variance in students' fear of failure. Thus, it can be said that students' fear of failure was largely due to maladaptive perfectionism. According to studies, fear of failure is commonly observed in maladaptive perfectionist individuals and even maladaptive perfectionism is one of the components of fear of failure (Solomon & Rothblum, 1984). Fear of failure is expressed as a maladaptive motivation for success (Conroy, 2001; Sagar & Lavallee, 2010). Maladaptive perfectionist individuals do not enjoy their work, often find themselves inadequate and evaluate themselves negatively. Almost 20% to 30% of high school and university students were reported to be maladaptive perfectionists. This situation causes students to worry about making mistakes and criticize themselves more than necessary (Rice et al., 2012). In this sense, maladaptive perfectionism causes people to refrain from being evaluated. As a result, people experience shame or embarrassment. In other words, maladaptive perfectionism causes people to experience shame and embarrassment from being evaluated (Sagar & Stoeber, 2009).

In the research, it was examined how the variables in the model (such as GPA, school burnout, perceived social support from family, perceived social support from teachers, stress, maladaptive perfectionism, academic procrastination, and fear of failure) classified repeaters and others. Quadratic discriminant analysis was used for classification. According to the analysis, the best classifiers were GPA, family support, fear of failure, maladaptive perfectionism, and teacher support respectively. The most significant variable in the classification was academic achievement; that is, students' GPAs in the previous semester. However, it was observed that school burnout, stress and academic procrastination did not make a significant contribution to the classification of the groups. These variables classified correctly 91% of repeaters, 62% of the 9th-grade students and 46% of the 10th-grade students. The total correct classification percentage of the discriminant function was calculated as 65.5%, and the relative chance value was calculated as 33%. Based on this, it was seen that the variables did not classify the groups according to the chance factor.

Considering the findings obtained from the discriminant analysis, the most significant variable in the classification was students' GPA, which could be considered as a finding that performing one-year grade retention did not have a significant effect on the increase of students' academic achievement. This can be considered in the context of the debate over whether class repetition is useful. Literature provides information that grade

retention does not contribute to students in the long term (Gottfredson et al., 1994; Jimerson et al., 2002; Klapproth et al., 2016; Plummer & Graziano, 1987). The passing grade score in secondary education in Turkey is 50. The fact that repeater's year-end scores are close to this score indicates that these students have the risk of grade retention.

In this study, it was seen that perceived social support from family and teachers was lower in repeaters when compared to their peers and these variables were found to be effective in classifying repeaters and others. Studies emphasize the effect of social support on academic achievement. In their study conducted with high school students studying in 9th grade. Hernandez, Oubrayrie-Roussel and Prêteur (2016) found that social support predicted students' academic achievement. Based on this information, the academic success of the supported, appreciated and accepted adolescents was positively affected. This emphasizes the effect of social support on adolescents' school performance during adolescence. In a similar study conducted with university students, parental interest and social support played an important role in predicting the academic achievement of university students (de la Iglesia et al., 2014). Similarly, an increase was observed in the academic achievement of the students at the end of the social support development intervention program developed for the first-year university students. This effect persisted one year later (Mattanah et al., 2012). In a longitudinal study conducted with 15-year-old high school students, the social support levels of the students were found to predict their academic success in the following years (Mackinnon, 2012). In this study, low relationships between social support and academic achievement may seem to be contrary to the relationship between social support and academic achievement. However, in discriminant analysis, perceived social support from family and teachers was a significant variable in classifying repeaters and others. This shows that social support affects students' success and failure.

Being two closely related concepts, fear of failure and maladaptive perfectionism had a significant effect on differentiating between repeaters and others. The fact that fear of failure was higher in repeaters might be observed depending on the students' past failure experiences. Especially the characteristics of Turkish culture might individuals' fear of failure. As stated by Karaşar and Öğülmüş (2016), evaluations and discourses of people around the individuals might lead to the occurrence of fear of failure. This situation is claimed to arise mainly from the need for social approval of individuals. Martin and Marsh (2003) indicate that people who avoid failure are more anxious than others and they are motivated by fear of failure. People who live with anxiety often have uncertainty about their abilities. Therefore, people prevent themselves, are reluctant to approach the task, abandon the tasks they have begun, and eventually fail. In a study conducted with 325 German high school students, Wach et al. (2015) found that fear of failure significantly predicted the mathematics achievement scores of female students. Tseng (1972) conducted a study with 149 participants (77 repeaters; 72 studying students) and showed that the achievement motivation of repeaters was lower than others. The relationships between self-efficacy, goal orientation, school engagement, academic achievement, and fear of failure were examined in a study conducted with adolescents aged. A negative and significant relationship was found between fear of failure and academic achievement. Similarly, a negative relationship was observed between school

engagement and fear of failure (Caraway et al., 2003). The developmental aspect of fear of failure was also emphasized. In particular, it is stated that healthy and warm relations with parents prevent students' stress and fear of failure. Therefore, authoritative parents support the development of their children's adaptive emotions and behaviours when compared to helicopter parents (Sideridis & Kafetsios, 2008). Based on this, the fact that repeaters' perceived social support from family was low and the fear of failure was high shares similar findings with the literature.

Maladaptive perfectionism and fear of failure are two important concepts associated with developmental processes. Parental attachment processes affect maladaptive perfectionism and, as a result, this affects academic achievement (Soysa & Weiss, 2014). Cultural characteristics may be considered as the reason for higher maladaptive perfectionism in repeaters when compared to other peers. Since interdependence is a valued property in collectivist cultures, individuals take their relationships as reference when defining themselves (Markus & Kitayama, 1991). Socialization processes in collectivist cultures help people explain their successes and failures not through themselves but through the units of the community they belong to. Therefore, one of the reasons behind the failure leads to a socially prescribed maladaptive perfectionism. This is because there is a pressure or obligation from family regarding academic achievement, especially in collectivist cultures (Yoon & Lau, 2008). In addition to cultural characteristics, perfectionism (to some extent) is associated with high success, but excessive perfectionism has a negative effect on academic achievement and well-being (Fong & Yuen, 2011). Individuals who have adaptive perfectionism set more realistic standards for success whereas individuals with maladaptive perfectionism set unrealistic standards. Additionally, adaptive perfectionism lets people have their ideal selves while maladaptive perfectionism causes people to avoid their feared selves (which they do not want to be) (Lo & Abbott, 2013). When findings of studies and maladaptive perfectionism related explanations of culture were examined, maladaptive perfectionism was observed to have an effect on repeaters' failure status.

5. Conclusion and Suggestions

The current study tested a school burnout model based on various variables such as school burnout, perceived social support, stress, perfectionism, fear of failure, and academic achievement. The following results were obtained:

Repeaters' GPAs of the previous semester were slightly above 50 points. This value was slightly above passing a grade score. The hypothesis model tested for school burnout was not verified; after the proposed modifications, the alternative model was found to be in a good fit. In the model, school burnout was predicted by support from family and teachers, stress, academic procrastination, maladaptive perfectionism, and fear of failure, and these variables explained 35% of the variance in school burnout. Predictors of stress were perceived family and teacher support, maladaptive perfectionism, and fear of failure. These variables explain 36% of the variance in the stress variable. Predictors of academic procrastination were perceived support from family and teachers, maladaptive perfectionism, and fear of failure. These variables explain 15% of the variance in academic procrastination. Predictors of academic achievement (GPA) were support from

family and teachers, maladaptive perfectionism, and fear of failure. School burnout did not predict academic success. These variables explain 7% of the variance in academic achievement. The predictor of fear of failure was maladaptive perfectionism. Maladaptive perfectionism explained nearly half of the variance in the fear of failure variable. The most effective variables in the classification of repeaters and others were academic success, family support, fear of failure, maladaptive perfectionism, and teacher support. School burnout, stress and academic procrastination had no significant effect in classifying groups. These variables correctly classified 65.5% of the whole group. The correct classification rate of repeaters was about 91%.

Based on the research findings, suggestions were presented. When the academic achievement scores of repeaters were examined, they were slightly higher than the criterion score for passing a grade. This can be seen as a sign that grade retention does not make a significant contribution to the students' academic progress. Therefore, instead of grade retention, a system change can be made according to the learning speed of each student (tracked school system). The fact that academic procrastination was the strongest predictor of school burnout levels may be due to the stress that occurred as a result of students' leaving their works at the last moment. Thus, both academic procrastination and school burnout can be reduced through psycho-education programs, based on various theoretical approaches and organized by school psychological counselors, which prevent academic procrastination. Today, high stakes tests, applied for studying in higher education and high schools, increase students' stress levels. A success-oriented approach may cause students to experience intense fear of failure. Therefore, school-based practices can be implemented to reduce the fear of failure caused by exams. In this study, social support had a negative effect on school burnout but a positive effect on stress. Thus, studies can be conducted on students' social support resources, access to these resources, and the quality of perceived social support from these resources. The relationships between school burnout and various variables were examined; however, these variables explained only 35% of the variance in school burnout. Research can be conducted with fewer variables to explain school burnout. Causality relationships between variables were examined within the framework of theoretical causality. However, the results of this study cannot provide information about changes in variables over time and how they affect each other. Recent studies on school burnout and school engagement are often carried out in a longitudinal design. Therefore, longitudinal studies can be carried out especially on school burnout. Although grade retention generally has negative consequences for repeaters, there may be students whose success increases after they repeat a grade. That's why phenomenological studies based on qualitative research on the experiences of repeaters can be conducted. The fact that culture was not considered as a variable is the limitation of this study. However, cultural processes underlie variables such as fear of failure and maladaptive perfectionism. Especially, studies examining the relationship between self-construal and these variables can be conducted.

6. Conflict of Interest

The authors declare that they have no conflicts of interest.

7. Ethical Approval

This study was conducted in accordance with the Declaration of Helsinki on ethical principles for medical research involving human participants. Ethics approval for this study was obtained from the Ankara University Ethics Committee (85434274-050.04.04/4138). Then, legal permission for research was obtained from Provincial Directorate of National Education.

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