School Burnout in Middle School Students: Role of Problem Solving Skills, Peer Relations and Perceived School Experiences

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ARTICLE INFO	ABSTRACT
	Purpose: The purpose of this study is to examine the relationships between middle school students' school burnout, problem-solving skills, peer relationships, and perceived school experiences and to determine the predictive power of perceived school experiences, problem-solving skills, and peer relationships on academic burnout. Method: The research was created based on the survey model. The sample of the study composed of 2538 secondary school students (1257 girls and 1281 boys) who attended ten official secondary schools during the 2018-2019 academic year. In the research, "Elementary School Student Burnout Scale for Grades 6-8", "Problem Solving Inventory for Children at the Level of Primary Education", "Peer Relationship Scale" and "Perceived School Experiences Scale" were used. Pearson Product Moment Correlation Analysis and Multiple Hierarchical Regression Analysis were used for the statistical analysis of the study. "p≤.05" was considered as the significance level for the study. Findings: According to the study results, it was determined that there are significant relationships between the predicted variable and the predictor variables. Significant predictors of the school burnout score were determined to be variables of gender and age, school engagement, academic motivation, confidence in problem-solving skills, self-control, avoidance, self-disclosure and loyalty subscales, respectively. Implications for Research and Practice: The importance of including activities related to protective factors in individual and group counselling services planned to prevent or reduce students' school burnout was emphasized. Risk factors that may affect school burnout are discussed and recommendations are made for further research. Keywords:[^2] Middle school students, school burnout, problem-solving skills, peer relations, perceived school experience.

1. Introduction

The school is an institution that prepares an environment and contributes to students' behavioral, social, affective, and cognitive development (Aypay, 2017). In addition to developing the student psycho-socially and academically, school life sometimes hosts stressful life events due to the nature of academic life (Durmuş, Aypay, & Aybek, 2017). In the study carried out by Fan (2000), 86.6% of the students perceived high stress originating from their academic life. When students cannot cope constructively with the stress they experience, they may develop school burnout due to the school or family (Durmuş et al., 2017).

School burnout has been defined in two ways. Aypay (2011) stated that school burnout is a state of physical, emotional, cognitive exhaustion and tiredness that occurs in students due to the "excessive" requests/demands of the education process on students. Yang (2004) expressed school burnout as emotional exhaustion, depersonalization and low personal/ individual accomplishment that students develop due to the

stress they experience due to excessive course load and any psychological problems that may be experienced in the school environment. School burnout is a continuing phenomenon that originates from the educational process and school environments and extends to student burnout with the stress process (Salmela-Aro et al., 2009). The academic competition situation that exists between students increases its' severity with each passing day. On the other hand, this competitive environment is supported by others (teachers and parents). As a result of this situation, a stress factor occurs for students and students who cannot cope with this stress factor sufficiently can develop school burnout at a young age (Aypay, 2018). Studies on school burnout have found that students develop school burnout at their early stage (secondary school years) (Adhiambo et al., 2016; Baş, 2012; Demirel & Afat, 2018; Zhang et al., 2013). At the same time, school burnout is considered as a risk factor that may bring out negative consequences regarding physical and mental health (Çam & Öğülmüş, 2019). In some studies, conducted on secondary or secondary school students, it has been determined that school burnout is associated with some risk factors. *For example*; anxiety, hostility (Shin et al., 2011), antisocial tendencies (Lee et al., 2017), excessive internet use (Salmela-Aro et al., 2017), depressive symptoms or depression (Fiorilli et al., 2017; Lee and Lee, 2018; Salmela-Aro et al., 2009; Salmela-Aro & Upadyaya, 2014; Salmela-Aro et al., 2017; Shin et al. , 2011; Wang et al., 2015), cannabis use (Walburg et al., 2015), daily smoking (Kinnunen et al., 2016), suicidal thoughts (Walburg et al., 2014) gambling frequency (Räsänen et al., 2015), compulsion/impulsivity (Lee & Lee, 2018; Shin et al., 2011), being bully, being a victim, problem behaviors (Hafen et al., 2013). Studies reveal the importance of school burnout as a risk factor.

The existence of interpersonal problems that the student may experience in the school and the solution of these problems may be related to school burnout. Slivar (2001) stated the situations that may cause school burnout in six items. One of the items is the student's failures in interpersonal relationships and the lack of appropriate interpersonal relationships. Individuals who apply positive problem-solving skills, utilise assertiveness skills, manage stress, and have sufficient social support from their environment can establish healthy communication and interaction with others; it has also been found that the risk of developing burnout decreases (Payne, 2001).Problem-solving skill has been defined as a cognitive interpersonal process that aims to discover, define, and resolve the conflict in a acceptable or satisfactory manner for all parties concerned (D'Zurilla et al., 2004). Problem solving refers to a process. Problem solving covers a process from the individual encountering the problem to solving the problem (Eskin, 2014). Kim, Kim, and Lee (2017) found in their study of 405 middle school students that problem-focused coping ability had a significant impact on the relationship between school burnout and effort-reward imbalance, while emotion-focused coping ability had no significant impact.. As a result, problem-focused coping skills are effective in reducing risk situations such as school burnout. Shin et al. (2012), in their study on 357 middle school students; found that there is a negative relationship between coping skills and school burnout, and a positive relationship between passive coping skills and school burnout. Luo, Wang, Zhang, Chen, and Quan (2016) found in their study of 1222 middle school students that there was a negative significant relationship between task-oriented coping skills and school burnout, and that there was a positive significant relationship between emotion-oriented coping skills and school burnout.. At the same time, they found that self-esteem and emotion- focused coping skills mediated the relationships between different dimensions of perfectionism and school burnout, respectively.

Peer relationships that often conflict, try to dominate or establish superiority, and create a negative behavior pattern with the individual's peers and close environment. Negative behavioral patterns of students may cause reactions towards them from their classmates and teachers. These negative reactions may cause students to drift apart from their classmates and classroomactivities, feel lonely, and weaken their commitment to the school (Berndt, 2002). Peer relationships can provide a favorable environment for the individual in terms of healthy development and constructive educational life (Vaquero & Kao, 2008). Constructive peer relationships have apositive effect on the adolescent's life (Berndt & Keefe, 1995). Salmela-Aro and Tuominen-Soini (2010) stated that peer relationships play a role in students' participation and attendance at school.

Individuals who receive peer support are likely to perceive the school climate positively (Vaquera & Kao, 2008). It has been determined that the relationship and interaction established with high achieving peers can function as a protective factor against school burnout (Kiuru, Aunola, Nurmi, Leskinen, & Salmela-Aro, 2008). Berndt and Keefe (1995), in their study on 297 middle school students; found that groups of friends resembled each other with the process they went through inpeer groups and became similar in destructive behaviors within themselves. At the same time, it was stated that adolescents are closely related to the

characteristics of their friends, and they are affected by these characteristics. In this case, students whose friendship relations are more friendly and supportive increase their participation in school.

On the other hand, they found that students whose peer relationships were related to competition and conflict decreased their involvement in school, displayed incompatible behaviors and experienced discomfort in the process. No, Sam, and Hirakawa's (2012) study examined individual, family, and school reasons for school dropout among Cambodian primary school students in rural areas and found that among individual factors, strong peer relationships were a factor that increased their participation in school. Wang, Kiuru, Degol, and Salmela-Aro (2018) conducted a study of 1419 students to determine the effects of peer relationships and peer selection on emotional (continuity/participation in school activities, school burnout, school attendance), cognitive (academic effort), and behavioral (retention in school) involvement in adolescents' school life.According to this, they found that; peer selection and level of peer effects change according to the level of school participation, in the process peers have an effect on the cognitive, emotional and behavioral interaction of the adolescent, the similarity in the behavioral dimension (between peers) is a factor that increases the possibility of establishing peer relationships, the academic success factor is a factor affecting the peer choice and the peer relationship.

In addition to providing academic skills and knowledge, school environments create important social experience areas to perform their social, emotional and behavioral functions. While the roles of the school environment for students are to build healthy relationships with peers, develop their social skills, continue school attendance, succeed in the classroom, their efforts to graduate, protect their mental health; all of this makes up the content of the concept of "school experiences" (Anderson-Butcher, Amorose, Iachini, & Ball, 2012). School experiences have important implications for how students perceive themselves, their thoughts and feelings, and school life (Akın, 2015).Early adolescence (middle school period) is a difficult and sensitive period in psychological, social and academic changes. During the transition from primary school to secondary school, great changes occur in school experiences, and students are expected to adapt to these situations; at the same time, they must cope with negative situations that may occur during this developmental transition period (Goldstein, Boxer, & Rudolph, 2015). Supporting constructive school experiences will be an important step to increase students' psychological and social well-being (Akın, 2015). There are three building blocks of perceived school experiences: academic pressure (academic monitoring), commitment to school, and academic motivation (Anderson-Butcher et al., 2012). These are critical to school experiences. Taken together, it strengthens overall academic achievement in school and plays an important role in the positive youth development process (Anderson-Butcher et al., 2012). In his study, Shin (2020) determined a significant positive relationship between students' school burnout and teachers' academic views. Accordingly, when teachers increase the pressure on academic achievement, school burnout in students also increases. In their study, Lee, Puig, Lea, and Lee (2013) determined that as the grade levels of the students (from the 4th to the 12th grade) increase, the academic demands from students increase and the burnout levels of the students increase accordingly. It has been stated with studies conducted on middle and high school students that there is a significant negative relationship between school burnout and school engagement, and school engagement is a significant predictor of school burnout (Özdemir, 2015; Pilkauskaite-Valickiene, Zukauskiene, & Raiziene, 2011; Shin & Yu, 2014; Şahan and Duy, 2017). In addition, Rathmann, Heilmann, Moor, and Richter (2017), in their study on 1190 adolescents, found that the smoking probability is increased of adolescents with low school engagement levels and high school burnout levels. Studies conducted on middle and high school students have proved that there is a significant negative relationship between school burnout and academic motivation, and they are significant predictors that affect each other (Avara, 2015; Chang, Lee, Byeon, & Lee, 2015; Herrmann, Koeppen, & Kessels, 2019; Özdemir, 2015; Seçer & Öztürk, 2015; Zhang et al., 2013). In light of these results, the three factors that build up the structure of school experiences can play a protective role in reducing or preventing school burnout.

In line with the explanations above, this study is important in determining the predictive power of some variables (problem solving skills, peer relations, perceived school experiences) on school burnout levels of secondary school students. Accordingly, this study aims to determine the characteristics of the relationships among school burnout, problem-solving skills, peer relationships, and perceived school experiences that have significant effects on individuals in early adolescence (secondary school), and to determine the gender

variable, age variable, perceived school experiences, problem-solving skills, and the predictive power of peer relationships on school burnout scores.

2. Method

2.1. Research Design

The dependent variable of this study is school burnout and its independent variables are problem solving skills, peer relationships and perceived school experiences. To determine the relationship between the variables, the relational descriptive survey model, which is included in the general survey model, was taken as a basis. Relational descriptive survey models are research models that aim to determine the existence or degree of change between two or more variables (Karasar, 2020).

2.2. Research Sample

The study population of the research is based on 7th and 8th grade, which includes an average of 98271 students from 376 public middle schools (1 middle school for the hearing impaired and 3 special schools were excluded from the study population) in all districts of Bursa province affiliated to the Ministry of National Education in the 2018-2019 school year.. In this study, the disproportionate cluster sampling method was used to determine and select the number of clusters that will form the research group among the study population (376 middle schools). Accordingly, the study's research group omposed of 2538 secondary school students from ten different middle schools, six of which are normal, three of which are religious vocational schools, and one of which is a regional middle school with a boarding school, located in Bursa province in Yıldırım, Osmangazi, Gürsu and Nilüfer districts. 1257 (49.5%) of the students who make up the study group are girls and 1281 (50.5%) of them are boys. Accordingly, the study's research group composed of 2538 secondary school students from ten different middle schools, six of which are normal, three of which are religious vocational schools, and one of which is a regional middle school with a boarding school, located in Bursa province in Yıldırım, Osmangazi, Gürsu and Nilüfer districts. 1257 (49.5%) of the students who make up the study group are girls and 1281 (50.5%) of them are boys. 1368 (53.9%) of the students are attending the 7th grade and 1170 (46.1%) of them are attending the 8th grade. 1634 (64.4%) of the students attend regular middle school, 826 (32.5%) attend religious vocational middle school, and 78 (3.1%) attend the regional boarding middle school. 1 of the students (.1%) was 10 years old, 133 (5.2%) was 11 years old, 710 (28%) were 12 years old, 1102 (43.4%) were 13 years old, 567 (22.3%) were 14 and 25 (1%) are 15 years old. The average age of the students is 12.86 and their standard deviation is .858.

2.3. Research Instruments

Elementary School Student Burnout Scale for Grades 6-8: The scale was developed by Aypay (2011) on 691 secondary school students (6th, 7th and 8th grade; 371 girls, 320 boys) from ten different primary schools, and consists of 26 items and was gathered under 4 sub-scales: Burnout due to School Activities (SBS -BDSA), Family-induced Burnout (SBS-FIB), Insufficiency in School (SBS-IS) and Lossof Interest in School (SBS-LIS). The scale was created according to the 4-point likert type, the items are scored between "1 (I do not agree at all) - 4 (I completely agree)". The six items (3rd, 6th, 9th, 15th, 19thand 24th items) in the scale are scored in reverse because they consist of positive statements. In the scale, the total school burnout score is obtained (the total score varies between 26 to 104) and the higher the score, the higher the school burnout is. The scale is for middle school 6th, 7th and 8th grades. Within the scope of the study sample, Cronbach Alpha internal consistency value of Elementary School Student Burnout Scale for Grades 6-8 found as; .91 for the total, .88 for School Activities Burnout, .79 for Family-induced Burnout, .74 for Insufficiency in School and .78 for Loss of Interest in School.

Problem Solving Inventory for Children at the Level of Primary Education: The inventory was developed by Serin, Serin and Saygılı (2010) on 568 elementary and middle school students (4th, 5th, 6th, 7th and 8th grade; 285 girls, 283 boys) from eight different primary schools and consists of 24 items. and 3 sub-scales: Confidence in Problem Solving Skills (PSI-CPSS), Self-Control (PSI-SC) and Avoidance (PSI-A). In creating the items of the inventory, in light of the theoretical framework related to problem-solving skills, some items of the problem-solving inventories developed for adults in Germany and abroad were used, taking into account the subscales of confidence in problem-solving skills, self-control, and avoidance indicated by Heppner and Petersen (1982) (Serin et al., 2010).The inventory was created according to the 5-point likert type; the items are scored between

1 (Never) to 5 (Always). A total of twelve items in sub-scales of Self-Control (Items 2, 4, 6, 8, 10, 12 and 14) and Avoidance (Items 16, 18, 20, 22, and 24) in the inventory are scored in reverse since items consist of negative statements. The total problem solving skill score is obtained from the inventory (the total score ranges between 24 to 120) and indicates that the constructive problem solving skill increases as the score increases. The inventory is for elementary and middle school students. Cronbach Alpha internal consistency coefficients of the Problem-Solving Inventory for Children at the Level of Primary Education in the scope of the study sample; calculated as .86 for the total, .83 for the Confidence in Problem Solving Skills .77 for the Self-Control subscale and .63 for the Avoidance subscale.

Peer Relationship Scale: The scale was created by Kaner (2000) based on Social Control Theory and was developed to determine the peer relations qualities of adolescents, and the scale developmentstudies were conducted on 1648 secondary school students (9th and 10th grade; 799 girls and 849 boys ages between 13 to 18; average age, 15.81). The scale was collected into 18 items and 4 subscales: Commitment (PRS-C), Trust and Identification (PRS-TI), Self-Disclosure (PRS-SD) and Loyalty (PRS-L) (Kaner, 2000). The scale was created according to the 5-point Likert type; the items are scored between "1 (Never) and 5 (Always)". In the scale, the total peer relationship qualities score is determined (the total score ranges between 18-90), indicating that positive peer relationship qualities increase as the score increases. The scale is for adolescents. The Cronbach Alpha internal consistency coefficients of the Peer Relations Scale calculated as; within the scope of the study population of this research; .87 for the total, .89 for the Commitment subscale, .70 for the Confidence and Identification subscale, .62 for the Self-Disclosure subscale and .62 for the Loyalty subscale.

Perceived School Experiences Scale: Anderson-Butcher et al. (2012) developed the Perceived School Experiences Scale while covering three basic concepts (school engagement, academic motivation, academic pressure) that form school experiences. Adaptation studies of the scale into Turkish were carried out by Akın and Sarıçam (2014) on 327 secondary school students (9th, 10th, 11thand 12th grade; 160 girls and 167 boys; between 14-18 years old; average age, 15.4). The scale was collected into 14 items and 3 sub-dimensions as the result of adaptation studies: School Engagement (PSES-SE), Academic Motivation (PSES-AM) and Academic Pressure (PSES-AP) (Akın & Sarıçam, 2014). The scale was created according to the 5-point Likert type, the items are scored between "1 (Strongly disagree) and 5 (Strongly agree)". The scale determines the total score of perceived school experiences (the total score ranges between 14-70) and indicates that the perceived school experiences increase as the score increases. The scale is for children and adolescents. Cronbach's alpha internal consistency coefficients for the Perceived School Experience scale were calculated as follows: .88 for the overall scale, .74 for the School Engagement subscale, .78 for the Academic Motivation subscale, and .73 for the Academic Pressure subscale.

2.4. Data Analysis

The scales used in the study were applied by the researchers to the students during the course lessons. Before application, the purpose of the study was briefly explained to the students and only volunteers were asked to participate. Pearson Product-Moments Correlation coefficients were calculated to examine the potential relationships between the variables of the study, which are school burnout, problem-solving skills, peer relationships and perceived school experiences, gender and age. Hierarchical Multiple Regression Analysis was performed to determine the explanation ratio of independent variables to the dependent variable, and their relative explanation levels were compared with standardized Beta values (β) (Büyüköztürk, 2010). "$p \leq .05$" was taken into account for the significance level in the study.

Before the statistical analysis of the data, some statistical evaluations were made to determine whether they met certain assumptions. Respectively, all the correlation coefficient values for the variables used in the study were found to be linear, and sixty-nine of the seventy-eight correlation coefficient values were found to be statistically significant (Results are shown in Table 1). Normal P-P plot (Normal P-P Plot of Regression Standardized Residual) was examined and it was seen that the observation points were gathered around the 45° line, the distribution was concluded to be normal. The double scatter plot (Scatterplot) was examined, it was seen that the observation points showed an even distribution below and above the middle line and the distribution was found to be normal. For the assumptions of variance homogeneity, the standardized predictive values of the standardized errors and the binary scatter plots were examined and it was found that there was no clear structure (Başol & Zabun, 2014). Before Hierarchical Multiple Regression Analysis, Pearson

Product-Moments Correlation coefficients were examined in the relationship between the predictor variables to evaluate the multiple linearity pretentions.

It was observed that the correlation coefficients did not show a very high level (.80 <r <1.00) relationship and the coefficient values varied between -.273 and .698 (Results are shown in Table 1). This situation indicates that there is no multi-linearity. Secondly, Variance Inflation Factor (VIF) and Tolerance values were examined. It was seen that VIF values varied between 1.005 and 2.419, and tolerance values varied between .413 and .995. Due to VIF values showing values less than 5; Tolerance values show values greater than .10, indicating that there is no multi-linearity. Finally, Condition Index values were examined. Accordingly, it was determined that the values were lower than 30, except for four values (36.377; 52.387; 65.340; 78.050, respectively) (Bahçecitapar & Aktaş, 2017; Başol & Zabun, 2014).

2.5. Ethical

This study depends on the master thesis which completed in 2019 at Maltepe University, Guidance and Psychological Counseling master program. Before conducting the research with written approval of Turkish Republic Bursa Governorship Provincial Directorate of National Education, dated 15.10.2018 and numbered 86896125-605.01-E.19315321 is issued.

3. Results

The Pearson Product-Moments Correlation Analysis results for the predictive variables (perceived school experiences subscales, problem solving skills subscales, peer relations subscale, gender and age) and the predicted variable (school burnout) used in the study are given in Table 1.

Table 1. *Pearson Correlation Coefficient Analysis Results of Variables*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. SBS	-											
2. PSES-AP	-.373**	-										
3. PSES-SE	-.511**	.583**	-									
4. PSES-AM	-.578**	.603**	.698**	-								
5. PSI-CPSS	-.415**	.308**	.344**	.434**	-							
6. PSI-SC	-.474**	.200**	.235**	.278**	.331**	-						
7. PSI-A	-.452**	.244**	.257**	.335**	.395**	.551**	-					
8. PRS-C	-.236**	.232**	.309**	.316**	.354**	.155**	.226**	-				
9. PRS-TI	-.130**	.210**	.264**	.218**	.234**	.113**	.105**	.634**	-			
10. PRS-SD	.098**	.025	.083**	.028	.055**	-.155**	-.150**	.371**	.409**	-		
11. PRS-L	.266**	-.067**	-.104**	-.134**	-.122**	-.252**	-.273**	.170**	.265**	.350**	-	
12. Gender	.096**	-.058**	-.136**	-.069**	.029	.068**	-.024	-.115**	-.013	-.129**	.080**	-
13. Age	.110**	-.030	-.056**	-.033	-.029	-.094**	-.063*	.042	.021	.094**	.072**	.068**

*p≤.05, **p<.01

When Table 1 is examined, it is seen that there are completely significant relationships between the school burnout score, which is the predictive variable, and the perceived school experiences subscales, the problem-solving skills subscales, the peer relationships subscales, gender, and age, which are the predictive variables.Accordingly, it has been seen that there is a moderately negative correlation between school burnout score and academic pressure subscale score of perceived school experiences (r=-.373, p<.01, p=.000); a moderately negative correlation between school engagement subscale score ((r=-.511, p<.01, p=.000); a moderately negative correlation between the academic motivation subscale score (r=-.578, p<.01, p=.000). It has been observed that there is a moderate negative correlation between the school burnout score and the score of the confidence in problem solving skills subscale of problem solving skills (r=-.415, p<.01, p=.000); a moderate negative correlationbetween the self-control subscale score (r=-.474, p<.01, p=.000); a moderately negative correlationbetween the avoidance subscale score (r=-.452, p<.01, p=.000). It was observed that there is a weak negative correlation between school burnout score and peer relations scale's commitment subscale score (r=-.236, p<.01, p=.000); a weak negative correlation between trust and identification subscale scores (r=-.130, p<.01, p=.000); a weak positive correlation between self-disclosure subscale score (r=.098, p<.01, p=.000); a weak positive correlation between the loyalty subscale score (r = .266, p <.01, p= .000). It was observed that

there is a weak positive correlation between the school burnout score and the gender variable (r=.266, p<.01, p=.000); a weak positive correlation between the age variable (r=.110, p<.01, p=.000). Hierarchical Multiple Regression Analysis was conducted to determine the predictive level of gender, age, subscale of perceived school experiences, problem solving skills, and peer relations' subscale of school burnout scores. The results are given in Table 2.

Table 2. *Hierarchical Multiple Regression Analysis Results Related to the Prediction of School Burnout Scores*

Variables	R	R^2	(ΔR^2)	Difference p	B	(SH_B)	β	t	p
Standard					30.484	4.327		7.044	.000
Step 1	.141	.020	.020	.000					
Gender					2.568	.572	.088	4.488	.000
Age					1.764	.334	.104	5.288	.000
Step 2	.604	.365	.345	.000					
PSES-AP					.066	.088	.016	.753	.452
PSES-SE					-.786	.090	-.203	-8.728	.000
PSES-AM					-1.305	.069	-.441	-18.789	.000
Step 3	.698	.488	.123	.000					
PSI-CPSS					-.151	.027	-.095	-5.688	.000
PSI-SC					-.588	.041	-.249	-14.259	.000
PSI-A					-.473	.066	-.130	-7.216	.000
Step 4	.706	.499	.011	.000					
PRS-C					-.077	.041	-.037	-1.877	.061
PRS-TI					.055	.072	.015	.765	.444
PRS-SD					.257	.077	.056	3.321	.001
PRS-L					.389	.074	.085	5.252	.000

R=.706 R^2=.499
$F_{(12, 2525)}$=209.679 p=.000

When Table 2 is looked at, it is seen that the gender and age variables that were analyzed in Step 1, when analyzed together, show a high level of significant relationship with school burnout scores (R=.141, R^2=.020, ΔR^2=.020). In step 1, respectively, gender variable (β=.088, p<.01, p=.000) and age variable (β=.088, p<.01, p=.000) are significant predictors of school burnout scores. It is seen that thescores of perceived school experiences subscales (academic pressure, school engagement, academic motivation) which are analyzed in Step 2 show a high level of significant relationship with the score ofthe school burnout scale when analyzed together (R=.604, R^2=.365, ΔR^2=.345). In step 2, school engagement subscale (β=-.203, p<.01, p=.000) and academic motivation subscale (β=-.441, p<.01, p=.000) scores are significant predictors of school burnout scale, respectively. In step 2, it is seen that the academic pressure subscale (β=.016, p>.05, p=.452) does not make a significant contribution to the model. It is observed that the subscales of problem-solving skills (confidence in problem solving skills, self-control, avoidance) scores which are analyzed in Step 3, when analyzed all together, show a high level of significant relationship with the school burnout score (R=.698, R^2=.488, ΔR^2=.123). In step 3, confidence in problem solving skills (β=-.095, p<.01, p=.000), self-control subscale (β=-.249, p<.01, p=.000) and avoidance subscale (β=-.130, p<.01, p=.000) are significant predictors of school burnout score. It is seen that the scores of the peer relations subscales (commitment, trust and identification, self-disclosure, loyalty), which were analyzed in Step 4, show a high level of significant relationship with the scores of school burnout when analyzed together (R=.706, R^2=.499, ΔR^2=.011). In step 4, self- disclosure subscale (β=.056, p<.01, p=.001) and loyalty subscale (β=.085, p<.01, p=.000) are significant predictors of school burnout scores, respectively. In step 4, the commitment subscale (β=-.037, p>.05, p=.061) and the trust and identification subscale (β=.015, p>.05, p=.444) have no contribution, respectively. These findings show that the independent (predictor) variables explain approximately 50% of the total variance regarding school burnout scores.

4. Discussion, Conclusion and Recommendations

This study examined the relational qualities among middle school students' school burnout, problem-solving skills dimensions, peer relationships dimensions, perceived school experiences dimensions, gender, and age variables; it determined the power of gender, age, perceived school experiences dimensions, problem-solving

skills, and peer relationships in explaining school burnout scores. The study determined the correlation coefficients between the predicted variablě and the predictor variables prior to Hierarchical Multiple Regression Analysis. It was found that there were completely significant relationships between the predicted variable and predictor variables. When the relevant literature is examined, it has been seen that some studies support these results. Accordingly, burnout and school commitment (Özdemir, 2015; Pilkauskaite-Valickiene et al., 2011; Shin & Yu, 2014; Şahan & Duy, 2017), academic motivation (Avara, 2015; Özdemir, 2015; Seçer & Öztürk, 2015), academic pressure (Shin, 2020), problem solving skills (Kim et al., 2017; Luo et al., 2016; Shin et al., 2012), and peer relationships (Kim, Lee, Lee, An & Lee, 2018; Kiuru et al., 2008; Laursen et al., 2010; Lee, Lee & Lee, 2021; Rimpelä et al., 2020) were found to have significant relationships. It has been determined that the predictive variables in the Hierarchical Multiple Regression Analysis applied in the study explain approximately 50% of the total variance regarding school burnout scores. In step 1, it was seen that the gender and age variable significantly predicted school burnout scores.

In step 2, it was seen that the students' perceived school experiences, school engagement and academic motivation subscale scores significantly predicted their school burnout scores. In this case, students' high levels of commitment to school and academic motivation have been concluded. It can be considered a protective factor against the risk of school burnout that may arise from the family or school. Some studies on school burnout and school engagement variables in the relevant literature support this research result (Özdemir, 2015; Şahan & Duy, 2017; Pilkauskaite-Valickiene et al., 2011; Shin & Yu, 2014). In the light of these results, high levels of students' school engagement can play a protective role in reducing or preventing the risk of school burnout. Some studies on school burnout and academic motivation variables in the relevant literature support this research result (Avara, 2015; Chang et al., 2015; Herrmann et al., 2019; Özdemir, 2015; Seçer & Öztürk, 2015; Zhang et al., 2013). In light of these results, high academic motivation levels of students may play a protective role in reducing or preventing the risk of school burnout.

In step 3, it was seen that the score of students' problem-solving skills; and confidence in problem solving skills, self-control and avoidance subscale scores significantly predicted their school burnout scores. Students' use of constructive problem skills in interpersonal problems, being determined, persistent, and patient in the problem solving process; has been concluded as it can be considered a protective factor against the risk of school burnout that may arise from the family or school. Slivar (2001) stated that one of the six factors that can be effective against the burnout risk that may develop in students during school life is the failure of the student in interpersonal relationships and the lack of appropriate interpersonal relationships. In addition, Payne (2001) stated that the risk ofdeveloping school burnout in students who can cope with stress and use constructive problem-solving strategies will decrease. In some studies, conducted on middle school students in the relevant literature, have been found that there are significant relationships between coping strategies with school burnout, and the findings support result of this research (Kim et al., 2017; Luo et al., 2016; Shin et al., 2012). Furthermore, in two of the subgoals of the solution-focused psychological group counseling program that Bal and Kaya (2017) developed for middle school students to address school burnout, Bal and Bilge (2017) aimed to develop constructive problem-solving skills (coping strategies) for students who develop school burnout.The quantitative results of this researchsupport this situation.

In step 4, it was seen that the scores of the peer relations scale's self-disclosure and loyalty subscales of the students significantly predicted the school burnout scores. When the relevant literature was examined, results similar to the results of this study were obtained (Kiuru et al., 2008; Laursen et al., 2010; Lee et al., 2021). The students have positive relationships with their peers, the peers develop mutual love and closeness to each other, the peers develop trust for each other, and the peers imitate and identify with each other's positive behaviors; It has been concluded that it can be considered as a protective factor against the risk of school burnout that the family may causethe family or school may cause. Peer relationships can provide a healing environment in terms of healthy development and positive educational outcomes (Vaquero & Kao, 2008). Salmela-Aro and Tuominen-Soini (2010) stated that peer relationships can play an important role in students' school participation. At the same time, the individual who receives peers' suppört is likely to positively perceive the school climate (Vaquera & Kao, 2008). It has been determined that the relationship established with successful peers can function as a protective factor against the risk of school burnout that the individual may develop (Kiuru et al., 2008). The quality of the relationship with peers, stated as factor affecting school participation (Berndt & Keefe, 1995; Kızıldağ, Demirtaş- Zorbaz & Zorbaz, 2017; No et al., 2012; Wang et al.,

2018) or school life quality (Kaya, Erdoğan & Çağlayan, 2014) in researches. In light of these results, students' positive peer relationships may play aprotective role in reducing or preventing the risk of school burnout.

When the research findings are evaluated in general, the importance of the perceived school experience subscales (school engagement, academic motivation), the problem-solving subscales (confidence in problem-solving skills, self-control, avoidance), and the peer relationship subscale (self-disclosure, loyalty) on school burnout scores becomes apparent. Examination of the relevant literature found that burnout, which can occur in adolescence, is associated with many other risk factors (Fiorilli at al., 2017; Hafen et al., 2013; Kinnunen et al., 2016; Lee & Lee, 2018; Lee et al., 2017; Raesaenen et al., 2015; Salmela-Aro et al., 2017; Shin et al., 2011; Walburg et al., 2015; Walburg et al., 2014).Therefore, it can be said that high level of commitment to school and academic motivation, using constructive problem-solving skills in interpersonal problems, and developing qualified peer relationships can be considered as protective factors against the risk of school burnout that students inthe middle school period may develop. In addition, researches have shown that school burnout is reduced to middle school students and can be developed in early adolescence. Therefore, preventive individual or group counseling activities-including the protective factors whose quantitative results were uncovered in this study-are needed against the risk of developing school burnout in preventive psychological counseling and guidance services conducted with individuals in early adolescence (middle school). In reviewing the relevant literature, some psychological variables that may be related to school burnout in middle school students and have not been previously studied (e.g., school satisfaction, peer pressure, school rejection, psychological well-being, social behavior, subjective happiness, destructive behaviors, psychological resilience, decision-making styles, automatic thoughts, etc.) may be explored in further scientific studies. On the other hand, group psychological counseling to prevent school burnout can be developed for high-risk groups of students (e.g., students with divorced parents, students exposed to domestic violence, bullies and student victims, students with aggressive behavior and destructive emotions, students in boarding schools, etc.) who may develop school burnout to study its effects.The findings obtained are limited to the expressions measured by the measurement tools used in the research. On the other hand, the findings of the study are limited to theanswers given by 7th and 8th grade students of some regular, religious vocational and boarding regional middle schools in some districts of Bursa province, which are officially affiliated with the Ministry of National Education.

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