



Social Support and School Climate as Predictors of School Connectedness in High School Students

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Abstract

This study aimed to investigate the extent to which perceived social support and school climate in high school students predicted the school connectedness. The study was carried out with a total of 796 students including 421 girls and 375 boys attending different grades in 10 different secondary schools. Data collection tools included the Perceived School Experiences Scale, the Perceived Social Support Scale, and the School Climate Scale. Data were analyzed using Pearson Product Moment Correlation Coefficient, Multiple Linear Regression, independent groups t-test, One-way ANOVA, and Kruskal-Wallis H Test. According to the results of the study, all of the variables were found to be significantly correlated with each other. The results of the regression analysis indicated that school climate and family, friends, and teacher's variables, which are the sub-dimensions of social support, explained 42.7% of the total variance of school connectedness. As a result of the difference analysis, the school connectedness score was determined to not differ significantly by gender, while it yielded a significant difference by grade level. Also, the school connectedness scores of the students indicated a significant difference by school type and reasons for selecting the school.

Lise Öğrencilerinde Okul Bağlılığının Yordayıcıları Olarak Sosyal Destek ve Okul İklimi

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Öz

Bu araştırmanın amacı, lise öğrencilerinde algılanan sosyal destek puanının ve okul iklimi puanının okul bağlılık puanını ne düzeyde yordadığını incelemektir. Araştırma, 10 farklı ortaöğretim kurumunda farklı sınıf düzeylerine devam eden 421 (% 52,9) kız ve 375 (% 47,1) erkek olmak üzere toplam 796 öğrenci üzerinde gerçekleştirilmiştir. Veri toplama araçları olarak Okul Yaşantıları Ölçeği, Algılanan Sosyal Destek Ölçeği ve Okul İklimi Ölçeği kullanılmıştır. Veriler, Pearson Momentler Çarpım Korelasyon Katsayısı, Çoklu Doğrusal Regresyon, bağımsız gruplar t-testi, Tek yönlü varyans analizi (ANOVA) ve Kruskal Wallis H Testi ile incelenmiştir. Araştırmanın sonuçlarına göre tüm değişkenlerin birbiri ile anlamlı olarak ilişkili olduğu görülmüştür. Regresyon analizi bulgularına göre, okul iklimi ve sosyal desteğin alt boyutlarından aile, arkadaş ve öğretmen değişkenlerinin okul bağlılığının toplam varyansının % 42,7'sini açıklamaktadır. Fark analizleri sonucunda okula bağlılık puanının cinsiyete göre anlamlı olarak farklılaşmadığı sınıf düzeyine göre ise anlamlı bir farklılaşmanın olduğu görülmüştür. Yine öğrencilerin okul bağlılık puanları, okul türü ve okul tercih etme nedenlerine göre anlamlı olarak farklılaştığı ortaya çıkmıştır.

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Introduction

Given the time that the individual spends in school and the reflections of the school in daily life, the importance of the individual - school relationship is much more than it is estimated to be. The role played by the experiences such as the knowledge and skills acquired under the umbrella of the individual - school relationship, interactions with friends and teachers, and participation in class and extracurricular activities is remarkable. It is of great significance for schools to achieve their educational goals effectively for a healthy individual and a healthy society (Kalaycı and Özdemir, 2013). Therefore, individuals' connectedness to school is important for their versatile development (Dilmaç, Karababa and Oral, 2018). Maddox and Prinz (2003) describe school connectedness as a phenomenon associated with a student's school, school staff, and ideals that the school is trying to impart. Student's school connectedness is at the heart of the ongoing educational debate and is considered an important starting point for student's learning. In general, students' school connectedness is discussed as a framework including positive student behaviors such as attendance, participation, and effort and their psychological connections with the school environment (Önen, 2014).

The concept of school connectedness was first mentioned in Hirschi's (1969) theory of social control, which he laid out to explain the causes of crime. Social control theory discusses the phenomenon of crime in terms of individuals' level of commitment to social values and norms. This theory considers the school factor or school life as one of the basic institutions that provide individuals' commitment to social values. Also, a leading cause of criminal and violent behavior is thought to stem from the weakening of individuals' commitment to the school (cited by Kızmaz, 2006).

Many studies have made it possible to take a broader view of the subject by addressing school connectedness with various dimensions. While school connectedness is defined as believing that you are valuable and respected as a member of the school (Bronis, Samdal, and Wold, 1999; Midgley, Roeser, and Urdan, 1996), Osterman (2000) handles school connectedness as a basic psychological need in terms of the sense of belonging to the group. Also, Faircloth and Hamm (2005) discuss the concept of school connectedness in relation to the student's relationships with teachers and classmates, and they see student behaviors as a constantly changing and evolving relationship of activities, rather than merely limiting them to students' relationships with their friends and teachers. Studies reveal that school connectedness affects the student's school life in terms of affective, behavioral and social aspects.

According to Savi (2011), school connectedness is a concept that includes behavioral, emotional and cognitive aspects. The behavioral aspect of school connectedness will enable the student to behave more harmoniously in their social environment and friendship relations. These harmonious behaviors can be seen as behaviors that will benefit the student's psychosocial harmony and indirectly school success (Blumenfeld, Fredricks and Paris, 2004). In studies on the behavioral aspects of school connectedness (Cairns and Mahoney, 1997; Evertson and Weinstein, 2006; Posner and Vandell, 1999), various aspects of school connectedness have been discussed, and various definitions of school connectedness have been introduced. The behavioral aspect of school connectedness is defined as obeying school rules, avoiding absenteeism (Evertson and Weinstein, 2006), fulfilling school-related activities, doing homework, participating in school-related activities, and being active in lessons (Posner and Vandell, 1999), and participating in extracurricular activities (Cairns and Mahoney, 1997). The emotional aspect refers to attitudes, perceptions, interests, and emotions related to school. The cognitive dimension, on the other hand, can be evaluated in terms of two variables. These are feeling of achievement and psychosocial adjustment (Savi, 2011).

The school climate is undoubtedly one of the most important variables affecting the student's connectedness to school. The fact that the student has a feeling of belonging to the school, loves the school, and creates a comfortable psychological environment in the school will increase students' productivity (Mengi, 2011). A negative school environment, on the other hand, can cause feelings of stress, pressure, and loneliness in students, communication problems with teachers, the development of negative emotions about school and lessons, and a decrease in their motivation and success (Karan, 2012). Similarly, negative school climate shows a positive correlation with behavioral problems and low success, and also leads to consequences such as alienation from school (Arıman, 2007; Bilgiç, 2009; Durmaz, 2008). One of the most important factors affecting students' school connectedness is the school climate. Although every school has common goals, they have different climates. This climate affects all the staff working in the school as well as students' school connectedness (Thomasson, 2006). Çelik (2002) evaluates the organizational climate of the school as a set of internal characteristics that affect the behaviors of the members and distinguish one school from the other. Taşkıran (2008) states that schools have to provide a healthy

organizational environment and provide the highest level of personal, social, and academic learning for the people they serve.

Since a school with a positive school climate will have an increased attractiveness for students, it will also increase students' academic achievement in addition to satisfying the students with the quality of school life compared to schools with poor school life quality (Kayıkcı and Sayın, 2010; Özdemir, 2000). While factors such as positive educational environment (Cenkseven and Sari, 2008), a sense of satisfaction (Erkan, Karip, Özdemir, Sezgin and Şirin, 2010) and positive teacher behaviors (Schlechty, 2001) positively affect school connectedness, some studies have laid out a negative relationship between school connectedness and basic problems of adolescence such as substance abuse (Furrer, Kindermann, Marchand, Skinner, 2008), risky sexual behaviors (Abbott, Catalano, Hawkins, Hill, and Kosterman, 1999; Furrer et al., 2008), violence (Sağlam, 2016), and deviant behaviors; deviant behavior towards school equipment, violence, deviant behaviors towards school rules, substance abuse, etc. (Çukur and Ünal, 2011).

Social support is one of the most important factors affecting student's school connectedness. Because social support is a versatile concept that is difficult to conceptualize, define, and measure (Kaşık, 2009), a common definition cannot be found in the literature. However, many researchers have tried to define the concept of social support from different perspectives. Sarason, Levine, Basham, and Sarason (1983) and Lambert (1989) describe social support as the presence of people whom we know and trust that care, mind, and love us and who we believe will help us (cited by Yamaç, 2009), while Sorias (1988) refers to social support as the idea of a person as shown by the environment that confirms the person is accepted and respected. Yıldırım (1997), on the other hand, bases social support on Kurt Lewin's field theory and defines it as all of the factors that affect the individual's behavior at a given time. The teaching and learning experiences of students in secondary education in Turkey undergo an intensive examination program and curriculum. Students spend most of the day at school both in and out of the classroom by establishing social relations with their teachers, fellow students, and school personnel. According to Arslan (2009), physiological, cognitive, psychological, and social changes take place in the circles and inner world of the individual in adolescence which coincides with high school years. In this period, self-confusion and adaptation problems of adolescents who try to become adults increase. In this challenging period, the adolescent can develop a healthy identity only by solving the problems encountered. In this period, the social support to be given to adolescents will not only make them feel more valuable but also increase their self-esteem and enable them to solve their problems more easily and successfully. Also, some studies frequently report (Şahin, 2011) that individuals complain that they cannot share their problems with anyone, especially in adolescence, and find people that understand their problems. The examination of the causes of these complaints indicates that the main reason is the perceived social support. According to Taysi (2000), when an individual encounter a problem, they turn to their friends, family and close friends to get support for the solution of the problem. According to Başer (2006), regardless of the type of social support, it has a positive effect on individuals and is closely related to the individual's mental health. Furthermore, Özen (1998) considers social support as a psychological need.

Studies in the literature have shown that social support behaviors exhibited by their teachers towards students have a positive effect on the behavioral and emotional aspects of school connectedness (Bowen and Brewster, 2004). Many studies (Bowen and Woolley, 2007; Brown, Mcleod, Tressell and Unger, 2000; Crump, Simons-Morton, 2003) have revealed that the social support that students receive from their families and teachers increase their school connectedness. Daly, Shin, and Vere (2007) stated that positive peer norms and peer support positively affected students' school connectedness, while Akman (2010) found that low level of social support among students negatively affected students' school connectedness. İkiz and Sağlam (2017) stated that there was a positive relationship between the level of social support and the level of school connectedness among students, while Wentzel (1998) reported that interest in school, interest in the class, and taking responsibility, which are among academic motivation variables, increased as social support increased. Many studies (Demaray and Malecki, 2002; Guay, Larose, Ratella, and Senecal, 2005; Meeus, 1993; Pastore, Perkins, Santinello, and Vieno, 2007; Yıldırım, 2006) have concluded that the perceived social support has a positive effect on school connectedness. Given the positive impact of social support on high school students, it is inevitable to think that it has a significant impact on students' school connectedness. Therefore, it can be predicted that the school connectedness of high school students who perceive social support adequately is higher. This study aims to investigate whether different sources of social support (family, teachers, and friends) have a decisive role in terms of school connectedness levels of high school students.

The review of the literature indicates that school connectedness has also been studied according to gender, grade level, type of school, and the reason for choosing a certain school. There are many studies addressing students' school connectedness level according to gender variable (Akgül, 2013; Blumenfeld et al., 2004; Çalık, Kandemir, Kurt, Özbay, and Özer, 2009; Demir et al., 2012; Dindar, 2008; Maddox and Prinz, 2003; Sarı, 2013; Sarı et al., 2007; Taşkıran, 2008). Similarly, it is also possible to find studies in the literature addressing school connectedness according to variables such as grade level (Demir, Kaya and Metin, 2012; Dindar, 2008; Erkan et al., 2010; Hagborg, 1994; Sarı et al.), type of school (Coleman, 2003; Dindar, 2008; Karan, 2012; Kashdan and Robert, 2004), and the reasons for selecting the school (Koç, Avşaroğlu and Sezer, 2004; Erkal, Yalçın, and Sancar, 2012; Rahat, 2014; Şahin, Zoraloğlu, and Şahin Fırat, 2011). However, these studies mostly include university students in their samples. The fact that there is limited research into predicting school connectedness of secondary school students and addressing variables such as gender, type of school, grade level, and reasons for selecting the school increases the importance of this study.

The school occupies an important place in all periods of an individual's life. The school is also critical for adolescents in secondary education period to fulfill their developmental duties. The student needs an appropriate school climate and social support to overcome the problems encountered in the school environment. Ignoring these needs of students may bring about serious effects on the physical, psychological, social, and academic development of students. It can be said that having these negative experiences during adolescence, which is an important turning point of the development process, will cause greater damages to the individual in the coming years (Durmaz, 2008). For students to have a high level of school connectedness, they must have successfully and effectively solved the adaptation problems they have faced. In this respect, examining the school climate and social support resources perceived by students increases the importance of the study. The examination of the literature indicates that there are many studies investigating perceived school climate (Eser, 2010; Korkmaz, 2011; Tezcan, 2011) and perceived social support (Bilge and Kutsal, 2012; Çivitçi, 2011; Ergene and Yıldırım, 2003; Gençdoğan, 2006) of teachers, managers, families, and students at all levels of education in Turkey. However, no study has been found in the literature on the relationship of students' school connectedness with variables such as social support and school climate. The availability of few studies in the literature on school connectedness, which is very important for our students' educational lives, necessitates the conduct of this study. Therefore, this study aimed to reveal the relationship between high school students' school connectedness scores and their school climate scores and social support scores. At the same time, the study aimed to investigate school connectedness in terms of variables such as gender, school type, and grade level.

Method

Research Design

This study used relational screening and causal-comparative models. The relational screening model is a research model that examines the relationships between dependent and independent variables or the degree of change of variables (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2013; Karasar, 2012). Furthermore, the causal comparison model is made to determine the cause or sources of the relationship between the dependent and independent variables/variables (Büyüköztürk, vd. 2013). The predictor variables of the study are perceived social support and school climate. The predicted variable, on the other hand, is the school connectedness of secondary school students. Also, the study investigated whether school connectedness, which is a dependent variable, differed in terms of various variables.

Population and Sample/Study Group/Participants

The participants of this study consisted of 796 students including 421 girls (52.9%) and 375 boys (47.1%) studying in a province in the Central Black Sea Region. The distribution of the students by grade level was as follows: 9th-grade, 203; 10th-grade, 205; 11th-grade, 211; and 12th-grade, 177. The distribution of the students according to their school type included 169 students from science high school, 271 from Anatolian high school, 180 from vocational and technical high school, and 176 from Imam Hatip high school.

Data Collection Tools

Data collection tools included a Personal Information Form, the Perceived School Experiences Scale, the Perceived Social Support Scale, and the School Climate Scale. The properties of the measurement tools are as follows.

Personal information form (PIF). PIF was created by the researchers to collect information about participants' gender, grade level, school type, socio-economic level of the family, and reasons for coming to their school.

The perceived school experiences scale (PSES). The scale was developed by Anderson-Butcher, Amorose, Iachini, and Ball (2012) to measure the individual's perceptions of school life. Then, the scale was adapted to Turkish by Baytemir, Kösterelioglu, and Kösterelioglu (2015). The scale has a 5-point Likert type format and consists of 3 subscales and 14 items (Academic Press: 1, 2, 3, 4; Academic Motivation: 5, 6, 7, 8, 9, 10; School Connectedness: 11, 12, 13, 14). The total score of the scale varies between 14 and 70. There is no inversely scored item on the scale. The rating scale was formed as strongly disagree = 1 and agree strongly = 5. Confirmatory factor analysis for structure validity of the scale showed that the fit values were adequate ($\chi^2/sd = 2.87$, RMSEA = .057, SRMR = .039, CFI = .99, NFI = .98, GFI = .94). In the criterion validity study, it was found that the dimensions of the School Experiences Scale had correlations between .40 and .51 with the Perceived Social Competence Scale. The Cronbach alpha reliability coefficients for all the scales were .93, and ranged from .83 to .85 for the subscales. Cronbach's alpha coefficients for this study were .79 for FAS, .78 for FRS, .84 for TES, and .84 for the overall scale.

The perceived social support scale (PSSS-R). The scale was developed by Yıldırım (2004) in Turkey conditions. It consists of three subscales (FAS, Family Support; FRS, Friend Support; TES, Teacher Support) and a total of 50 items. The rating scale was formed as "not suitable for me, partly suitable for me and suitable for me". FAS includes family support such as trusting and understanding the child truly, correcting mistakes gently, highlighting their strengths, and appreciating their success. FRS consists of content such as being supported by friends in case of exposure to injustice, sharing knowledge about the lessons, and being calmed down by friends when furious. On the other hand, TES consists of support such as correcting the mistakes of the child gently, emphasizing the superior aspects of the child, answering the questions about the course sincerely, and being fair. The validity of PSSS-R and its subscales was examined by factor analysis and similar tests. The construct validity of FAS, FRS, and TES subscales was examined with factor analysis, and the factor construct of each subscale was determined. First, the alpha reliability coefficient was calculated for the reliability of PSSS-R and its subscales, and also, test-retest reliability was examined. The values were found to be as follows: the alpha value for the overall PSSS-R = .91; $\alpha = .83$ for FAS; $\alpha = .77$ for FRS; and $\alpha = .83$ for TES. Cronbach's alpha coefficients for this study were .79 for FAS, .78 for FRS, .84 for TES, and .84 for the overall scale.

The school climate scale (SCS). The scale developed by Çalık and Kurt (2010), consists of 22 items prepared in the form of a 5-point Likert type. The rating scale included scoring between "Never = 1" and "Always = 5". The scale consists of three factors such as (1) supportive teacher behaviors (8 items), (2) success-orientation (4 items), and (3) safe learning environment and positive peer interaction (10 items). According to the results of the original validity and reliability study of the scale, the factor load values of the items in this three-factor structure ranged from .45 to .85, and the total variance explained was approximately 45%. The internal consistency coefficients calculated to determine the reliability level of the scores obtained from the factors varied between .77 and .85. Cronbach's Alpha internal consistency coefficients obtained through analyses conducted on data collected in this study for "supportive teacher behaviors", "success-orientation", and "safe learning environment" dimensions of the scale were calculated as .85, .71, and .73, respectively. The internal consistency coefficient of the overall scale was calculated as .84. Based on these results, the scale was found to have sufficient psychometric properties to measure students' perceptions about school climate. Cronbach's alpha coefficient for the present study was found to be .81 for the overall scale.

Data Collection

The data were collected in the first semester of the 2018-2019 academic year. A total of 870 students from different school types were reached. The scales were administered by the researchers in the classroom environment.

Data Analysis

Statistical analysis of the data obtained from the measurement tools was performed using IBM SPSS 22.0 statistical software package. The values in the data set were reviewed for incorrect coding before starting the statistical analyses. The missing data were completed by averaging the series. Mahalanobis distance was employed to determine the extreme values and outliers that could affect the results of the study. For this reason, Mahalanobis values for the .01 significance level were calculated as 12.60; accordingly, 74 observations were removed from the data set, therefore, the analyses were conducted with the remaining 796 data sets. Afterward, multicollinearity,

variance inflation factor (VIF), and tolerance values between variables were examined. Also, the histogram graph and scatter plot matrix were examined to determine the assumptions of linearity and normality. As a result of these investigations, the data set was determined to meet all the assumptions regarding regression analysis. Correlation analyses were employed to test the relationship of school connectedness scores with school climate and social support scores, which was followed by multiple linear regression analysis conducted to determine the extent to which perceived social support scores and school climate scores predicted school connectedness scores. Also, independent groups t-test, one-way analysis of variance (ANOVA), and Kruskal-Wallis H tests were conducted to determine whether school connectedness scores of the participants differed in terms of gender, type of school, grade level, and the reasons for selecting the school. Independent groups t-test was used to examine school connectedness scores according to gender. ANOVA test was used because the scores related to grade-level were distributed normally. The Kruskal-Wallis H test was used because the scores related to school type and reason for school preference did not show a normal distribution.

Research Ethics

Prior to the application, the participants were informed about the purpose, importance, and data collection tools of the study. The volunteering principle was taken into consideration in the participation of the individuals in the study. In addition, get permissions were from relevant institutions for data collection.

Findings

This section involves correlation and multiple linear regression analyses used to test the relationship of school connectedness with school climate and social support in high school students, and independent groups t-test, ANOVA, and Kruskal-Wallis H tests used to test whether there were differences in school connectedness scores according to gender, school type, grade level, and students' school preferences variables.

Findings Related to the Independent Variables as Predictors of the Dependent Variable

This section first addresses relationships between variables and descriptive statistics. Then, it presents the results of multiple regression analysis. Table 1 gives the relationships between variables and descriptive statistics.

Table 1. Pearson Correlation Coefficients and Descriptive Statistics between Variables

Variables	1	2	3	4	5	<i>X</i>	SS
1 School Connectedness	-					3.94	.68
2 School Climate	.58**	-				3.53	.45
3 FAS	.27**	.21**	-			2.70	.22
4 FRS	.23**	.15**	.37**	-		2.56	.26
5 TES	.53**	.47**	.39**	.36**	-	2.51	.32

Note: FAS: social support from family, FRS: social support from friends, TES: social support from teachers.

*N = 796, ** $p < .01$, * $p < .05$*

As is seen in Table 1, there was a significant positive relationship between all variables ($p < .01$). The school climate had the highest relationship with school connectedness ($r = .58$), which was followed by the social support from the teacher ($r = .58$), social support from the family ($r = .27$), and social support from friends ($r = .23$). Also, the standard deviation and mean values of the subscales of the social support were close to each other. Similarly, school connectedness scores and school climate scores had the highest scores, while social support subscales had the lowest scores.

After the Pearson Product Moment Correlation analysis, multiple linear regression analysis was performed to investigate the extent to which social support subscale scores and school climate independent variables predicted students' school connectedness scores. The findings from the multiple linear regression analysis are presented in Table 2.

Table 2. Findings Related to The Multiple Linear Regression Analysis

Variable	B	Standard Error B	B	T	P	Dual r	Partial r
Constant	-.64	.26		-2.44	.02*		
School Climate	.65	.046	.43	13.94	.00**	.58	.44
Family Support	.15	.092	.05	1.67	.10	.27	.06
Friend Support	.12	.077	.05	1.55	.12	.23	.05
Teacher Support	.63	.071	.30	8.88	.00**	.53	.30

$N = 796$, ** $p < .01$, * $p < .05$; $R^2 = .42.7$

The school climate, which is one of the independent variables, and family, friends, and teachers variables, which are the subscales of social support, explained 42.7% of the total variance of the school connectedness score. When the relative order of importance of predictor variables on school connectedness score was analyzed according to the beta coefficient (β), they turned out to be listed as school climate, social support from teachers, social support from the family, and social support from friends. The examination of t-test results related to the significance of regression coefficients indicated that school connectedness was mostly predicted by school climate, which was followed by social support from the teacher. On the other hand, although the relationship of social support from family and friends with school connectedness was significant in the correlation analysis, their contribution to school connectedness was not found statistically significant in the regression analysis ($p > .05$)

Findings Related to School Connectedness in terms of Some Variables

Independent groups t-test was employed to answer the question ‘Do school connectedness scores of high school students differ according to gender variable?’ The results of the analysis are summarized in Table 3.

Table 3. T-test Results of School Connectedness by Gender Variable

Gender	N	\bar{X}	SS	DF	T	P
Female	421	3.95	.68	794	.31	.81
Male	375	3.94	.68			

$N = 796$, ** $p < .01$, * $p < .05$

As shown in Table 3, there was no significant difference between school connectedness scores and gender ($t_{(796)} = .31$, $p > .05$). The mean school connectedness scores of male students ($\bar{x} = 3.94$) were close to the mean school connectedness scores of female students ($\bar{x} = 3.95$).

One-way analysis of variance (ANOVA) was employed to answer the question ‘‘Do school connectedness scores of high school students differ according to grade level?’’ The results of the analysis are summarized in Table 4.

Table 4. Results of Anova Test between School Connectedness and Grade Level

Variables	Levels	N	\bar{X}	S	F	P	Significant Difference
Grade Level	(1)9 th -grade	203	4.02	.64	3.25	.02*	1>2, 1>4
	(2)10 th -grade	205	3.90	.70			2>4
	(3)11 th -grade	211	4.00	.69			3>4
	(4)12 th -grade	177	3.80	.69			-
Total		796	3.94	.68			

$N = 796$, ** $p < .01$, * $p < .05$

The examination of the analysis results in Table 4 indicated that there was a significant difference between school connectedness and grade level ($F(3, 792) = 3.24, p < .05$). Scheffe results were used to investigate the groups that caused the differences emerging in one-way analysis of variance. As a result of the study, 9th-grade students were found to have higher school connectedness than 10th-grade students, and 9th, 10th, and 11th-grade students had higher school connectedness than 12th-grade students ($p < .01$).

ANOVA test was employed to answer another question “Do school connectedness scores of high school students differ according to school type?”, however, the variance of the groups was observed to be not homogeneous ($p < .05$). For this reason, the Kruskal-Wallis H test was employed. The results of the Kruskal-Wallis H test for school type are given in Table 5.

Table 5. Results of The Kruskal-Wallis H Test for School Connectedness and School Type

School Type	N	\bar{X}	Rank averages	X^2	DF	P	Significant difference
(1)Science High School	169	3.81	343.83	36.71	3	.00**	1<3
(2)Anatolian High School	271	3.93	383.36				-
(3) Voc.and Tech. High School	180	4.12	484.89				-
(4) Imam Hatip High School	176	3.94	385.95				-
Total	796	3.94					

$N = 796, ** p < .01, * p < .05$

As is seen in Table 5, the lowest rank average was found to belong to Science High School type, while the highest rank average belonged to Vocational and Technical High School type. Findings indicated that school connectedness scores differed significantly according to school type. Mann-Whitney U test was employed to determine which school types this difference stemmed from. As a result of the analysis, the score differences between science high school and vocational and technical high school types were observed to be significant ($p < .01$). In other words, the school connectedness scores of the students in technical high schools were significantly higher than the scores of science high school students.

ANOVA analysis was employed to answer the other question of the study, “Do the school connectedness scores of high school students differ according to the reasons for selecting the school?” However, the variance of the groups was found to be not homogeneous. For this reason, Kruskal-Wallis H test was used. Table 6 shows the Kruskal-Wallis H test results for reasons for selecting the school.

Table 6. Kruskal-Wallis H Test Results Related to School Connectedness and The Reason for Selecting The School

Reason for Selecting the School	N	\bar{X}	Rank averages	X^2	DF	P	Significant difference
(1)My score	381	3.86	366.55	15.46	3	.00**	3>1
(2)Family	145	4.00	415.33				-
(3)Myself	220	4.01	440.01				-
(4) Other (friend, teacher)	50	3.90	410.51				-
Total	796	3.90					

$N = 796, ** p < .01, * p < .05$

The examination of Table 6 indicated that the lowest rank average regarding the reason for selecting the school belonged to “my score” and the highest rank average belonged to “myself”. Findings revealed that school connectedness scores differed significantly by reasons for selecting the school. Mann-Whitney U test was employed to determine which school type this difference came from. As a result of the analysis, the score differences between “my score” and “myself” reasons for selecting the school were found to be significant ($p < .01$). In other words, the school connectedness scores of the students who chose the reason for school preference as “myself” were significantly higher than the scores of the students who chose the reason for school preference as “my score”.

Discussion and Conclusion

This study pursued two main objectives. First, the study aimed to reveal the extent to which school climate and perceived social support scores predicted the level of school connectedness scores in secondary school students. Second, the study intended to determine whether school connectedness scores differed according to gender, type of school, grade level, and students' preference of the current school. The findings obtained with this regard were discussed in light of the literature.

As a result of regression analysis, the social support received from teachers and school climate were found to be significant predictors of school connectedness. On the other hand, although the social support received from family and friends was correlated to school connectedness, they were not determined to be significant predictors of school connectedness. These results are consistent with related studies in the literature (Bronis et al., 1999; Demir, Kaya, and Metin, 2012; Erkan et al., 2010; Faircloth and Hamm, 2005; Kalaycı and Özdemir, 2013; Maddox and Prinz, 2003; Midgley et al. 1996; Taşkıran, 2008). With this regard, as high-level school climate scores increase students' school connectedness scores (Blumenfeld et al., 2004; Cairns and Mahoney 1997; Cenkseven and Sarı, 2008; Evertson and Weinstein 2006; Mengi, 2011; Osterman, 2000; Posner and Vandell, 1999; Savi, 2011), low school climate score, on the other hand, is associated with the decreased school connectedness scores (Abbott et al., 1999; Çukur and Ünal, 2011; Furrer et al., 2008; Sağlam, 2016; Schlechty, 2001; Şahin, 2011). Students feel more connected to schools with an open school climate. In this case, the school climate can be said to affect school connectedness scores of students positively. Also, the fact that schools have good teachers, positive teacher and student relationships in the school, a democratic environment in the school, and an environment in which students feel or express themselves better can be seen as the reasons that affect the school connectedness scores of students, positively. On the other hand, in a school climate where the student does not feel well and cannot express themselves better, they may feel excluded. In this case, it negatively affects the student's school connectedness scores.

One of the predictors of secondary school students' school connectedness scores is social support. The findings indicate that the social support perceived by secondary school students from their teachers supports their school connectedness. Studies in the literature have shown that one of the concepts emphasized about school connectedness is the social support that students perceive from teachers (Arslan, 2009; Başer, 2006; Brown et al., 2000; Crump, Simons-Morton, 2003; Özen, 1998; Şahin, 2011; Taysi, 2000). However, in this study, the low level of the relationship between the perceived social support from friends and family and school connectedness is similar in some studies (Çivitçi, 2011; Yıldırım & Ergene, 2003), but in some other studies (Arslan, 2009; Kapıkıran and Özgüngör, 2009) shows that perceived social support from friends and families has a high relationship with school connectedness. (Blumenfeld et al., 2004; Çukur and Unal, 2011; Furrer et al., 2008; Scott, 2016; Schlechty, 2001). The social support that secondary school students perceive from their teachers was found to predict the school connectedness score more than the social support perceived from family and friends. Thomson (2005) and Manlove (1998) consider teachers and classroom activities as the most important factor that increases the school connectedness scores of secondary school students. Consistent with the findings of the present study, some researchers (Erkan et al., 2010; Kızılay, 2008; Osterman, 2000) have concluded that as secondary school students are in their adolescence period, the social support they perceive from their family predicts their school connectedness less than the social support they perceive from their teachers. Peer relationships are very important in the secondary school period. However, in the study, students mostly attributed their school-related connectedness to teachers. It can be said that this situation may be because the main subject of the school in terms of teaching activities and student engagement is the teacher. Similarly, as secondary education is a preparatory process for higher education, it can be said that the student gives more importance to the social support received from the teacher in terms of achieving the goals towards higher education.

As a result of the t-test conducted to examine the level of the students' school connectedness according to the gender variable, no significant difference was found between the school connectedness scores of the students. Although the findings of some of the studies in the literature on whether the school connectedness scores of secondary school students differ according to gender overlap the findings of this study (Akgül, 2013; Blumenfeld et al., 2004; Çalık et al., 2009; Demir et al., 2012; Dindar, 2008; Maddox and Prinz, 2003; Sarı, 2013; Sarı et al., 2007; Taşkıran, 2008), there are also some studies whose findings do not match the results of the present study (Akgül, 2013; Brown, Higgins, Pierce, Hong, and Thoma, 2003; Doğan, 2012; Durmaz, 2008; Erkan et al., 2010; Uwah, McMahon, and Furlow, 2008). Doğan (2012) found that male students had higher school connectedness scores than female students. Nevertheless, some studies (Bourke and Smith, 1998; Brown et al., 2000; Dindar, 2008; Durmaz, 2008; Erkan et al., 2010; Karatzias, Power, Flemming, Lennan and Swanson, 2002; Marks, 1998; Saraç, 2015; Thomson, 2005) have shown that female students perceive the climate of their school more positively than male students. Furthermore, according to Erkan et al. (2010), the school connectedness scores of female students were higher compared to male students because female students adapted to the learning environment more easily and they had more positive peer interaction. Dindar (2008), on the other hand, found that school connectedness scores of female students were higher compared to male students because female students were more interested in guidance activities and communicated more easily with teachers and administrators.

In the present study, a significant difference was observed in school connectedness scores of the students according to school type. According to this difference, the highest rank average was in vocational and technical high school, which was followed by Imam Hatip high school, Anatolian high school, and science high school, respectively. Some of the studies in the literature (Coleman, 2003; Dindar, 2008; Durmaz, 2008; Karan, 2012; Kashdan and Roberts, 2004; Şencan, 2009; Taşkıran, 2008) are consistent with the findings of this study. Taşkıran (2008) and Dindar (2008) concluded that students in vocational high schools studied subjects that they were interested in and which they chose according to their abilities, and that this had a positive effect on their school connectedness scores. Also, Akgül (2013) argued that high-level of school connectedness scores of secondary school students in vocational high schools was related to the quality of teacher and student relationships in these high schools. Teacher-student relationships in workshops, laboratories, and similar educational environments in vocational high schools are more supportive and closer than those of Anatolian high schools and this may have resulted in higher school connectedness scores in vocational high schools. In the study, the finding that students in vocational high schools are more connected to school than students in science high schools may indicate that the school environment in vocational high schools is perceived as more stress-free and that the pressure of exams is lower than science high schools, which can affect students' school connectedness scores positively.

The grade level was another variable that brought about a significant difference in school connectedness scores. The results of the analysis indicated that 9th-grade students had higher school connectedness compared to the 10th-grade students, while students in the 9th, 10th, and 11th-grade had higher school connectedness compared to students in the 12th-grade. The findings of some studies in the literature (Akgül, 2013; Demir et al., 2012; Dindar, 2008; Erkan et al., 2010; Hagborg, 1994; Sarı et al., 2007; Sığınır, 2013; Taşkıran, 2008) are consistent with the findings of this study. According to Doğan (2012), since students who start high school generally continue their education in the environment where they live, they do not have much trouble in the adaptation process because they already know the school where they will be studying. The school adaptation process is largely achieved within a month. However, students in higher education go to schools which are generally in different cities (Aktaş, 1997; Rahat, 2014; Taşkıran, 2008; Yılmaz, Yılmaz, and Karaca, 2008) and in different socio-cultural environments (Saraç, 2015; Sığınır, 2013; Yılmaz et al., 2008); therefore, adaptation processes may take longer. Besides, some studies (Baykara, 2009; Doğan, 2012; Durmaz, 2008; Karan, 2012; Sarı et al., 2007) show that as the grade level of secondary school students increases, the level of their school connectedness decreases. Dogan (2012) claimed that as the grade level of students increased, their relationships with their teachers did not continue positively and that their school connected scores decreased because they better analyzed the weaknesses of the school and adopted the attitudes and behaviors of the school administration less during the learning process.

The last finding of the study is related to the differences in the school connectedness scores of the students according to their reasons for selecting the school. The findings indicated that there was a significant difference in the school connectedness scores of the students according to the reason for school preference and that the school connectedness of the students who preferred the school based on their reasons was higher than students who preferred their school based on other reasons. Although there was no study comparing the reasons for school preference and school connectedness in the literature, the examination of studies on the adaptation levels of university students as predictors of school connectedness scores (Aktaş, 1997; Koç, Avşaroğlu and Sezer, 2004;

Erkal, Yalçın, and Sancar, 2012; Rahat, 2014; Şahin, Zoraloğlu, and Şahin Fırat, 2011), the students who selected their school on their own will be found to have more adaptation to the school, on the other hand, the students who selected their school only by their scores or with the guidance of others had more difficulty in adapting to the school. Similar results may be true for secondary school students. The fact that secondary school institutions are mostly located in the environments where students live and that the choice of schools on the student side is limited suggests that students often choose the schools that they are more comfortable with. “My score” option was found to be evaluated as the reason for selecting the school more by students in higher education than students in secondary education. However, students pointed out school counselors as the lowest reason in the selection of schools, which suggests that school counselors were not effective enough in the reasons for school preference of students.

According to the findings of this study, the predictor power of school climate, which is one of the predictors of school connectedness, was higher compared to the predictor power of social support. However, the cross-sectional design of the study could not reveal the true cause-effect relationship between the variables. For this reason, the relationships between variables can be understood more clearly with experimental or longitudinal studies. In the study, the fact that the social support perceived from friends and family predicted school connectedness scores at a low level was not expected. Although there are some studies consistent with this finding, the study can be repeated with different samples and the results can be evaluated comparatively. Similarly, qualitative studies using observation, interview, and portfolio file analysis can be conducted to investigate the school climate perceptions and social support perceptions more deeply in terms of students' school connectedness scores. Also, the source of difference in students' school connectedness scores by grade level can be investigated to find out whether the difference comes from students' individual and developmental characteristics or they stem from the structural features of schools. Similarly, the differences in school connectedness scores of students according to school type can be investigated more deeply to discover which characteristics of students and schools this difference comes from. In the study, social support scores and school climate were found to significantly predict school connectedness scores of the students. Therefore, for students to have a high level of school connectedness, teachers, especially school counselors, should offer supportive and informative guidance activities that will increase the social support score of the students and improve the school climate. Developing a common understanding within school-parent cooperation under the supervision of school counselors in schools through consultation services will make a positive contribution to the school engagement scores in terms of social support perceived by students from the family and teachers. Furthermore, school counselors can arrange informative seminars and parent visits about social support and school climate for all stakeholders of the teaching and learning (teachers, school administration, parents, school clerks, etc.) to increase the school connectedness scores of the students.

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Statement of Publication Ethics

Authors declare that the research has no unethical problems and observe research and publication ethics.

Researchers' Contribution Rate

Authors	Literature review	Method	Data Collection	Data Analysis	Results	Conclusion
Ali Rıza Yavrutürk	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tahsin İlhan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kemal Baytemir	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Conflict of Interest

Authors declare that there is no conflict of interest related to the current study.

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Appendix 1


Bartın University Journal of Faculty of Education
The Ethical Issues Declaration Form For Authors

Article Title	Social Support and School Climate as Predictors of School Connectedness in High School Students
Discipline	Social and Humanities
Type of Article	Research Article
Year of Data Collection	2018-2019

As the author of the article, I declare in this form that scientific and ethical rules are followed in this article and that the article does not require the permission of ethical committee for the reason that.....

Date 16/05/2020

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