EDUCATIONAL SCIENCES: THEORY & PRACTICE eISSN: 2148-7561, ISSN: 2630-5984

Received: 1 May 2020
Revision received: 22 June 2020
Accepted: 3 July 2020

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www.jestp.com

DOI 10.12738/jestp.2020.3.004 ♦ **July** 2020 ♦ 20(3) ♦ 44-55

Article

Investigation of School Burnout and School Attachment among Secondary School Students

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Abstract

School burnout can be defined as a student's negative attitudes towards school, their decreased school attachment, and their sense of inadequacy. According to this definition, burnout is related to a decrease in school attachment. Burnout and attachment notions, which constitute a conceptual contrast, are mostly dealt with alone and rarely together in studies conducted with students. This study aims to determine whether secondary school students' burnout dimensions predict their level of school attachment. In addition, the study explores whether students' school burnout and school attachment differ according to some demographic variables. Participants in the study, which was conducted with a correlational survey design, consisted of 550 students (276 females and 274 males) receiving education in secondary schools in a city east of Turkey in the 2018–2019 academic year. The research data were collected using the *School Attachment Scale* and *School Burnout Scale*. Data were analyzed by multiple linear regression, an independent sample *t*-test, and a one-way ANOVA. The results revealed a negative relationship between school attachment and school burnout. The key finding was that feelings of low success and emotional exhaustion were significant predictors of school attachment. Moreover, some differences existed in terms of gender and class level. Although the research achieved significant results, it will be useful to conduct studies with larger sample groups, including private schools, in the future.

Keywords

School attachment • burnout • middle school • multiple regression

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Citation: Yıldız, V. A., & Kılıç, D. (2020). Investigation of school burnout and school attachment among secondary school students. *Educational Sciences: Theory and Practice, 20*(3), 44 - 55. http://dx.doi.org/10.12738/jestp.2020.3.004

In education, individualized understanding and practices are becoming increasingly widespread, and individuals are treated as a whole in various ways. In this context, it is important to design learning environments where students' affective needs are taken into consideration along with their cognitive needs. A student's academic self-concept, attitude, self-confidence, anxiety, perception, self-esteem, control focus, and motivation are among the affective variables that can be studied (Higbee & Thomas, 1999). Burnout, as a negative notion, is another of the affective concepts frequently mentioned in educational environments.

The term burnout was first introduced by Freudenberger (1974) and has been the focus of many studies in different fields. Freudenberger (1974) described burnout as a state of exhaustion resulting from failure, attrition, loss of energy or power, or unfulfilled desires on human resources. Furthermore, Maslach et al. (1986) characterized burnout as a psychological syndrome that leads to emotional exhaustion, depersonalization, and personal success, which may occur among working people or among other people. Burnout research is most often related to an occupational context, usually conducted among employees in social professions and defined as occupationally specific dysphoria (Maslach & Leiter, 2016). Occupational burnout refers to employees, while school burnout is experienced by students. Amongst the wealth of research concerning student burnout, the vast majority has focused on assessing burnout among university undergraduates. In contrast, the number of studies with high school students is low (Wickramasinghe et al., 2018), and studies on secondary school students are also limited.

School burnout can manifest itself as a student's negative attitudes towards school, their decreased school attachment, and their sense of inadequacy (Maslach et al., 1986; Salmela-Aro et al., 2009; Schaufeli et al., 2002). School burnout may also be thought of as process by which the excessive demands of school and educational life in general wear students out emotionally, cognitively, and physically (Aypay & Eryılmaz, 2011). School burnout can be considered a continuous phenomenon running from school-related stress to major burnout. Previous results have demonstrated that in Finland, approximately 10% of adolescents suffer from severe school burnout (Salmela-Aro et al., 2008). The opposite of burnout in these definitions and explanations may be termed "school attachment".

In general, student's school attachment is associated with positive student behaviors such as attendance, participation, effort, and psychological connections with the school environment (Önen, 2014). Some studies deal with school attachment using a three-dimensional structure comprised of affective, cognitive, and behavioral dimensions (Fredricks et al., 2004). In addition, some studies explain the concept with a four-dimensional structure by adding an academic dimension to those three dimensions (Appleton et al., 2006). Simons-Morton and Crump (2003) describe school solely in terms of academic motivation, including how much students care about the school, how much attention they give to the school, and how much they strive to do better academically. Students' attachment to school is considered an integral part of academic achievement as it includes their social and emotional connections with school environments (Furlong & Christenson, 2008). Therefore, it is one of the most important affective concepts to be considered in learning environments. In addition to these classifications, the dimensions considered in the developed scale studies have started to be based on theoretical foundations with numerous studies. In the literature, the *School Attachment Scale* developed by Hill and Werner (2006), includes three dimensions, namely attachment to school, attachment to friend, and attachment to teacher, and this dimensional classification has been used in many studies.

The literature suggests that school burnout is associated with many variables. Students' burnout levels have been found to relate to affective variables such as motivation levels (Aypay & Eryılmaz, 2011), students' perceived social support levels (Kutsal & Bilge, 2012), and their competence beliefs (Bilge et al., 2014). Some studies have found that relationships with teachers and friends (Schaufeli et al., 2002),

perfectionism (Zhang et al., 2007), cynicism and inadequacy perception (Parker & Salmela-Aro, 2011), perceived stress (Divaris et al., 2012), and problematic internet use (Tomaszek & Muchacka-Cymerman, 2020) were related to school burnout. Furthermore, according to the literature, many variables affect burnout, including gender and time allocated to homework (Özdemir, 2015) as well as the type of school, academic achievement, academic field, and status of attending classrooms (Seçer & Gençdoğan, 2012). Studies (e.g., Gündüz et al., 2012) have also presented the effects of social support, place of birth, faculty, grade level, and weekly course load on burnout.

There are also several studies in the literature on school attachment. The study by Fredricks et al. (2004) extensively analyzed the concept and its sub-dimensions, their effects on the educational process, and outputs, and it established a general framework. In the studies that have conducted, the following have been found to be related to students' attachment to school: levels of physical and relational aggression (Hill & Werner, 2006), quality of school life (Kalaycı & Özdemir, 2013), motivational factors (Guay et al., 2017), the support of siblings (Rogers, Guyer et al., 2018), some protective and risk factors (Scott, 2018), and relations with teachers and peers (Buhs et al., 2018). Apart from those, Arastaman (2009) examined changes in the level of school attachment in terms of demographic variables and the opinions of the school's stakeholders. In addition, studies have shown that adherence to school reduces negative behaviors (Ünal & Çukur, 2011) and it is negatively related to criminal and violent behaviors (Varela et al., 2018; Watts et al., 2019).

Purpose of the Present Study

The studies in the literature have revealed negative relationships between burnout and school attachment (Özdemir, 2015; Schaufeli et al., 2002; Virtanen et al., 2018). Some studies have found that both variables take place in structural equation modeling where they affect together or in other variables (Fiorilli et al., 2017; Salmela-Aro et al., 2017; Vasalampi et al., 2009). Student attachment and school burnout are central concepts for understanding students' wellbeing and adjustment to school. Both terms depict a student's social and emotional wellbeing and, therefore, may provide a complementary understanding. To date, few studies have explored how the combination of student attachment and school burnout may form different profiles, and almost none have focused on the lower-secondary school years (Virtanen et al., 2018). Thus, examining the relationships among these concepts is important. Conducting a study with a large sample in terms of socio-economic and demographic variables, especially at all grade levels of secondary school, will fill gaps in the literature.

According to the literature, some demographic variables affect both school attachment and school burnout. A large study on burnout determined that public school students experienced more burnout than private school students. In addition, having a mobile phone and internet increases school burnout, and burnout was found to increase as the grade level increased (Öztan, 2014). Regarding burnout, the gender variable has also been explored in studies, but with contrasting results. While some studies demonstrate that school burnout does not differ by gender (Kiuru et al., 2008), other studies suggest that it differs according to gender (Salmela-Aro & Tynkkynen, 2012).

The situation is not different in terms of attachment to school. In some of the studies, students' attachment to school has been found to differ in terms of gender (Jonhson et al., 2006; Song et al., 2009), whereas in others, it did not (Wei & Chen, 2010). Furthermore, in some studies, school attachment decreases as the grade level increases (Wei & Chen, 2010), while in others, no differentiation was observed in terms of class level (Yildiz, 2020). Therefore, in the studies about both school burnout and school attachment, no agreement has been reached regarding the effect of grade level and gender. In this respect, more studies are required to examine the effects of these two variables on school attachment and school burnout. Also,

burnout in studies has been expressed as a decrease in school attachment (Maslach et al., 1986; Salmela-Aro et al., 2009; Schaufeli et al., 2002). If the decrease in school attachment creates burnout, then relations can be assumed to exist between these two concepts, and the burnout dimensions can be predicted by school attachment. In this respect, the study is considered important in terms of addressing the relation between burnout dimensions and school attachment. The study is also important in that it provides data on gender and grade-level variables, which are considered to affect school attachment and school burnout but are not adequately addressed. The aim of this study is to determine whether school burnout among secondary school students predicts their school attachment. In addition, the study aims to examine whether students' school burnout and school attachment differ in terms of certain variables. For this purpose, the following questions are answered: (i) Is there a relationship between school burnout and school attachment among secondary school students? (ii) Are the school burnout sub-dimensions of secondary school students' significant predictors of school attachment? (iii) Do school burnout and school attachment of secondary school students differ according to gender and class level?

Methods

Participants

The study group consisted of 550 students (276 females and 274 males) at secondary schools in Erzurum, east of Turkey. Of these students, 148 are in fifth grade, 126 in sixth grade, 142 in seventh grade, and 134 in eighth grade. Furthermore, their ages range between 10 and 13 (M = 11.48, SD = 1.13). The students were chosen by a random cluster sampling method (Frankel et al., 2012). In cluster sampling, instead of using random sampling to select individuals or items, random sampling is employed to select specific sets or groups. All people in each set are included in the sample. The advantage of this sampling technique is that, as the name suggests, clusters normally contain items that are grouped closely together in one place or geographical area (Denscombe, 2010).

Instruments

Data were collected with two measurement tools: The *School Burnout Scale* and the *School Attachment Scale for Children and Adolescents*. Both scales are commonly used in the field and are suitable for the purpose of the research.

The *School Burnout Scale* is a 5-point Likert measure adapted by Seçer et al. (2013). The scale consists of 9 questions and 3 sub-dimensions: *Emotional exhaustion* (item 4 "The intensity of school lessons often disrupts my sleep patterns"), *Desensitization* (item 5 "I feel that I am starting to lose interest in school"), *Low individual success* (item 8 "My expectations for the school are decreasing day by day"). The answers to the questions consist of five options ranging from "disagree at all" to "fully agree". The Cronbach Alpha internal consistency coefficient for the data in this study was .85 for the entire scale. It was calculated as .65 for the *Emotional exhaustion* sub-dimension, .78 for the *Desensitization* sub-dimension and .65 for the lower personal achievement sub-dimension.

The *School Attachment Scale for Children and Adolescents* is a 5-point Likert-type scale adapted by Savi (2011). The scale consists of 13 questions and 3 sub-dimensions: *Attachment to school* (item 2 "I am happy to be at this school"), *Attachment to teacher* (item 11 "I feel that I am starting to lose interest in school"), and *Attachment to friends* (item 8 "I have friends I care about in this school"). The answers to the questions consist of five options ranging from "absolutely yes" to "absolutely no". The Cronbach Alpha internal consistency coefficient for the data of this study was .76 in total, .68 for the sub-dimension of

Attachment to school, .64 for the sub-dimension of *Attachment to teacher* and .67 for the sub-dimension of *Attachment to friends*.

Procedure

Since the research aims to determine the relationship between school burnout and school attachment of secondary school students, it is considered correlational research. Correlational studies attempt to determine whether there is a co-change between variables without intervening in these variables (Büyüköztürk et al., 2016; Fraenkel et al., 2012).

In the study, the measurement tools, and schools to which they would be applied were determined. With the cluster sampling method, two large schools were identified, and all classes at the four grade levels in these schools were included in the study. Two secondary schools chose from Erzurum city, where is east of Turkey. These schools are located in a low or middle socio-economic environment, and both are culturally diverse.

After official permissions were obtained, schools were visited for implementation, and support was received from the school administrations during the implementation process. Permits were obtained from class teachers, and applications were held during the lessons. Before the forms were distributed, the students were informed of the study, and the researcher explained how to fill out the sample form. In addition, before the application, a conversation was held with the students, and they were provided with information that would enable them to fill in the forms correctly and feel comfortable with the process. All applications were made voluntarily and were carried out by the researcher in person. Furthermore, ethics committee approval was not required in the country where we were working on the article. However, permission was obtained from official authorities, and applications were made.

Data Analysis

First, a missing data analysis was performed, and quite a few missing data were completed. Second, an extreme value analysis was performed, and outliers were excluded from the study. Forty-nine forms that could be accepted as extreme values were excluded from the study. Third, the distributions, normality, and homogeneity assumptions were examined using descriptive statistical techniques. As a result of the normality test, descriptive data, a q-q plot test, kurtosis-skewness values, and a homogeneity test, the data were deemed to be normally distributed, and their variances were homogeneous. Fourth, Cronbach's α internal consistency coefficients were calculated, and the data were analyzed by a Pearson correlation analysis, a multiple linear regression analysis, an independent sample *t*-test, and a one-way ANOVA test. Multiple comparison (post hoc) tests were used concerning the differences that emerged in the variance analysis. In this context, when comparing the groups with close sample numbers for homogeneous groups, a Gabriel test was performed, and for the non-homogeneous groups, the Games Howell test was performed, which yielded reliable results (Field, 2013).

Results

The Relationship between School Attachment and Burnout

Table 1 lists the results of the Pearson correlation analysis conducted to determine whether a significant relationship exists between secondary school students' school attachment and school burnout sub-dimensions.

Table 1. *Results of Pearson correlation analysis*

Variable	*School attachment (r)*	*n*	*p*
Average of burnout	-.40	501	.000
Emotional exhaustion	-.34	501	.000
Depersonalization	-.35	501	.000
Low personal accomplishment	-.38	501	.000

According to the table, students' attachment to school has a moderate negative relationship with *School burnout* (r = -.40, p < .05), *Emotional exhaustion* (r = -.34, p < .05), *Depersonalization* (r = -.35, p < .05), and *Low personal success* (r = -.38, p < .05).

The Power of School Burnout Predicting School Attachment

Prior to the regression analysis, critical values of the analysis were examined. Correlations between the variables were examined and no correlation value of .90 or more was identified which could cause multiple correlations between independent variables. In addition, the correlation between dependent and independent variables was determined by correlation analysis. The Durbin Watson value for multiple correlation was examined and the value was within the critical limit of 1-3 (1.10). The tolerance and VIF values were then examined for multiple correlations and the tolerance value was increased from the critical value of 1.00 and greater than .2 (.65) and the VIF value was below 10 (1.53). These values indicate that the conditions of the regression analysis are fulfilled. To answer the research question, a multiple linear regression analysis was performed. The findings are presented in Table 2.

Table 2. *Results of regression analysis for determining predictors of school attachment*

		B	*SE*	*β*	*t*	*p*
Model 1	Low Personal Accomplishment	-0.18	0.02	0.14	-90.23	.000
Model 2	Low Personal Accomplishment	-0.13	0.02	0.08	-50.52	.000
	Emotional Exhaustion	-0.09	0.03	0.04	-30.43	.001

Note. Model 1: R = .38, R^2 = .14, F = 85.28, p < .05
Model 2: R = .40, R^2 = .16, F = 11.82, p < .05

When the models with one and two variable predictors are examined in Table 2, both models can predict the *School attachment* variable. The *Low personal achievement* variable in Model 1 alone can explain 14.4% of the total variance, and the *Low personal achievement* and *Emotional exhaustion* variables in Model 2 can explain 16.2% of the total variance together. Model 2 is the most appropriate model because the second variable added in this model contributes 1.8%, which is significant. Therefore, the *Low personal achievement* and *Emotional exhaustion* variables in Model 2 explain 16.2% of the total variance related to *School attachment*, and this variable has significant predictors. Examining the standardized coefficient (β) and *t* values show that the *Low personal achievement* and *Emotional exhaustion* variables are significant predictors of *School attachment* at a relative significance level. This analysis demonstrates that the *Desensitization* dimension was not predictive, and it was therefore excluded.

Differences in Sub-dimensions in Terms of Gender

Table 3 presents the independent samples *t*-test results to determine whether students' school attachment and school burnout sub-scores differ in terms of gender.

Table 3. *Comparison of burnout and school attachment sub-dimension scores by gender*

	Female (n = 258) M (SD)	*Male (n = 243) M (SD)*	$t_{(499)}$	*p*
Emotional exhaustion	1.30 (0.91)	1.44 (0.95)	-1.70	.080
Depersonalization	0.77 (0.97)	0.95 (0.97)	-2.02	.040
Low personal accomplishment	1.11 (1.08)	1.06 (1.06)	0.48	.062
Attachment to school	4.14 (0.73)	4.01 (0.92)	1.65	.981
Attachment to teacher	4.23 (0.57)	4.33 (0.54)	-1.83	.680
Attachment to friends	4.40 (0.59)	4.36 (0.60)	0.78	.430

As seen in Table 3, only the students' scores for *Depersonalization*, which is a sub-dimension of burnout, differ significantly ($p < .05$). Moreover, the means were higher for male students. Therefore, male students can be said to have more feelings of depersonalization than female students.

Differences in Sub-dimensions in Terms of Grade Level

Table 4 presents the one-way ANOVA test results to determine whether students' school attachment and school burnout sub-scores differ in terms of class level.

Table 4. *Comparison of school burnout and attachment sub-dimensions by class level*

	5th Class (n = 134) M (SD)	*6th Class (n = 114) M (SD)*	*7th Class (n = 128) M (SD)*	*8th Class (n = 125) M (SD)*	*F (499)*	*p*
Emotional exhaustion	1.23 (1.01)	1.36 (0.96)	1.52 (0.92)	1.37 (0.83)	2.17	.090
Depersonalization	0.76 (0.99)	0.74 (0.87)	1.00 (0.99)	0.93 (1.02)	2.08	.100
Low personal accomplishment	0.89 (1.10)	1.10 (1.10)	1.26 (1.04)	1.10 (1.03)	2.58	.053
Attachment to school	4.33 (0.98)	4.08 (0.72)	4.01 (0.76)	3.87 (0.77)	7.12	.000
Attachment to teacher	4.29 (0.55)	4. 34 (0.52)	4.15 (0.59)	4.34 (0.56)	3.24	.022
Attachment to friends	4.53 (0.53)	4.43 (0.58)	4.18 (0.65)	4.38 (0.56)	8.07	.000

As Table 4 indicates, *Student burnout* does not differ significantly in terms of grade level in any sub-dimension. School attachment subscales were related to *School attachment* ($F_{3, 497} = 7.12$; $p < .05$), and there is a significant differentiation in terms of grade level in *Teacher attachment* ($F_{3, 497} = 3.24$; $p < .05$) and *Attachment to friends* ($F_{3, 497} = 8.07$; $p < .05$).

Multiple comparison (post hoc) tests were carried out to determine which groups of school loyalty sub-scores differ in which groups. As a result of the Gabriel test and Games Howell test, which were carried out in this context, differentiations were observed in the dimension *Attachment to school* in favor of the fifth grade; in the dimension *Attachment to friends* in favor of the fifth, sixth, and eighth grades; and in the dimension *Attachment to teacher* in favor of the sixth and eighth grades. In general, seventh-grade students have low *School attachment* in terms of all dimensions, and there are differences in favor of other groups.

Discussion

Education is a complex process involving many variables. Affective processes, which are sometimes overlooked in this process, have proven to contribute greatly to the achievement of educational objectives. Since school is one of the most important steps that prepare individuals for life and given that students' experiences in the school environment can help them realize their potential, the psychological effects of their experiences in this process should not be ignored. The quality of school life is one of the factors contributing to student attachment to school (Kalayci & Ozdemir, 2013). In addition, students'

feelings of being a valuable part of the school's social group positively affect their level of attachment (Karababa et al., 2017). Increased attachment to the school in turn contributes to the desired behavior development process in the school environment. It should also be noted that school attachment is an important factor in reducing unwanted behaviors (Ünal & Cukur, 2011) - as negative behaviors diminish, they are replaced by desired behaviors.

The educational environment and school stakeholders also have a great influence on the transformation of students in the desired direction. A study conducted by Rogers, Updegraff et al. (2018) has shown that daily relationships with friends have positive effects on students. These relationships strengthen attachment to friends. Connecting with friends is thus an important part of school attachment. In addition, students' interactions and positive relationships with their teachers are important for the education process because teachers have the power to shape the school environment and influence students both cognitively and affectively. Teachers therefore play a critical role in creating a positive school environment, which can in turn help them to optimize their students' perceptions of the school environment (Wang & Eccles, 2013). The positive relationship between students and teachers will enable students to be connected to their teachers, and thus, to the school.

In the current study, a negative correlation was observed between school burnout and school attachment. Also, all sub-dimensions of burnout were also associated with school attachment. Two variables, one positive and one negative, are conceptually expected to be negatively related. The results obtained from similar studies indicate that a decrease in school attachment increases burnout (Ozdemir, 2015; Schaufeli et al., 2002; Virtanen et al., 2018). Reducing burnout as much as possible will lead to a more favorable school environment and to desired behaviors among students. Moreover, to develop positive affective characteristics and eliminate negative emotions such as burnout, it is important to take into account the age and physical and mental development of the students in the school environment.

Furthermore, the school burnout of students differed only in terms of the desensitization sub-dimension, which was higher among male students. This differentiation is supported by some studies (Kiuru et al., 2008), but contradicts others (Salmela-Aro & Tynkkynen, 2012). Differentiation in the current study in terms of gender may be due to distinctions in students' emotional development depending on their developmental periods or gender perception in their socio-cultural environment. Although the burnout levels of seventh-grade students were high in all sub-dimensions, the burnout levels of the students did not differ significantly in terms of grade level. In contrast, a study by Öztan (2014) found that burnout increase as the grade level increased.

Students' levels of school attachment were high in all sub-dimensions, and no significant difference was observed in any sub-dimension in terms of gender. In some studies, students' school attachment differed in terms of gender (Bellici, 2015; Jonhson et al., 2006; Song et al., 2009), whereas in others, it did not (Wei & Chen, 2010). Our study found that the levels of attachment to school were higher in Grade 5 for the sub-dimensions of attachment to school and attachment to teacher, and in Grade 8 in terms of attachment to friends. Furthermore, Bellici (2015) found that school attachment decreased as class level increased. Therefore, in terms of the two sub-dimensions, the studies yielded similar results.

A limitation of a study is the systematic bias that the researcher did not or could not control and which could inappropriately affect the results (Price & Murnan, 2004). Some limitations of this study should be noted in order to provide direction for future research. Findings of the study could be subject to sampling error because of a relatively small number of participants, that generalization of the results is somewhat limited until replicated with a larger sample. We conducted the study on secondary school students. Thus, these conclusions can be generalized only to students in this level. The study was carried out with a

quantitative method. It may be useful to conduct mixed research involving different education stakeholders in order to identify factors affecting school burnout and school attachment more accurately. In the study, we used two different scale for collecting the data. Thus, in future research other methods also be used, such as individual interview or observation. Also, we did not investigate different demographic variables. In future studies, different variables can be investigated like age or school type. The research was carried out in two secondary school in one of the east cities of Turkey. Schools are also located in a low and medium socio-economic environment. In future studies, more comprehensive results can be achieved with a larger sample group, including all types of schools, as well as students from private schools and schools in different settlements and socio-economic environments.

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