i.e.: inquiry in education

Volume 12 | Issue 2 Article 6

2020

Effect of School Climate, Students 'Self-Handicapping Behaviors and Demographic Characteristics on Students' Achievement

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Cover Page Footnote

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Effect of School Climate, Students' Self-Handicapping Behaviors and Demographic Characteristics on Students' Achievement

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Abstract

This study aimed to examine the relationship between high school students' academic achievements, school climate, students' self-handicapping behavior, and demographic characteristics. The research is a correlational study. The sample of the study consists of 981 students studying in three different types of schools in the city center of Karaman, Turkey, in the 2019–2020 academic year. We used structural equation modeling in the research. According to the results of the research, in a school climate (positive climate) that has success-oriented, supportive teacher behaviors and a safe learning environment, students are less likely to have self-handicapping behaviors, and students with less self-handicapping behaviors are more likely to have a higher grade point average (GPA). The study concluded that school climate also affects grade point average through self-handicapping. It also confirmed that age, school type, gender, and socioeconomic status variables also affected the student's grade point average. In the context of examining student achievement by taking into account structural, social, psychological, and environmental factors of the school, we thought that this research would make an essential contribution to the literature.

Keywords: School Climate, Self-Handicapping, Student Achievement, Socioeconomic Status (SES), Grade Point Average

Introduction

The vast majority of research on educational administration (ED) has been devoted to describing school climate. Academics have focused on understanding effective school climate (Hendron & Kearney, 2016; Hoy et al., 2002). This climate reflects the character of the school, and its influence exposes many of the behaviors that students exhibit at the school. In a school where the climate is supportive, the feeling of trust is also high (Hoy et al., 2002). School climate is positively associated with students' self-confidence (Hoge et al.,

1990). In a positive school climate, students are absent less often, students' anxiety levels decrease (Hendron & Kearney, 2016), and students are less likely to experience substance addiction and psychiatric problems (LaRusso et al., 2008). On the other hand, when the perception of school climate is negative, unwanted attitudes or behaviors are likely to occur in the school. Accordingly, the climate of a school can increase resilience or be a risk factor in the lives of people who work and learn there (Freiberg & Stain, 1999).

In a school climate that does not encourage collaboration and students' participation in the learning process, tensions and weak communication may occur among students (Virtanen et al., 2009). Peer bullying may occur more frequently in schools where the organizational climate is restrictive or prohibitive (Turner et al., 2014). An unhealthy school climate causes low self-efficacy perception among students (Smith et al., 2002). In a competitive classroom environment where the expectation of academic success is high, especially when self-confidence is lacking, students may experience behaviors such as cheating and self-handicapping (Schab, 1991; Özgüngör, 2008; Üzbe & Bacanlı, 2015). High scores on positive classroom climate were significantly associated with decreased levels of self-handicapping (Dorman et al., 2002; Ferguson & Dorman, 2003).

Self-handicapping is a defense mechanism that a person develops against his or her environment. Although it is associated with self-protection, there are some negative psychological reflections of self-handicapping behaviors exhibited by individuals. Self-handicapping behaviors seen in students can have adverse effects on their academic performance, well-being, and self-confidence (Török et al., 2018). According to Üzbe and Bacanlı (2015), although self-handicapping behavior has a short-term, self-protective effect, it may become chronic in the long term and lead to a personality disorder. When evaluated in the context of educational organizations, self-efficacy perception (Özgüngör, 2008), exam anxiety (Barutçu Yıldırım and Demir, 2019) and emotional exhaustion (Akın, 2012) were found to be high in students with high self-handicapping behavior. People observed that the tendency to cheat and academic procrastination behaviors are also higher in such students (Balkıs & Duru, 2010; Beck et al., 2000; Özgüngör, 2008). Researchers have argued that the expectation of high academic success is the basis of self-handicapping behavior among students. In addition, the meaning attributed to success also affects self-handicapping behaviors (Yu & McLellan, 2019).

This study examines the relationship between school climate, self-handicapping, and student achievement, and the relationship between student achievement with age, gender, socioeconomic status (SES) level, and school type. The hypotheses of the study are:

H1: As students' perceptions of positive school climate increase, there is a significant decrease in their self-handicapping behaviors.

H2: As students' perceptions of positive school climate increase, there is also a significant increase in their academic achievement.

H3: A significant decrease in academic achievement is seen as students' self-handicapping behaviors increase.

H4a: Depending on gender, there is a partial difference or no difference in students' academic achievement.

H4b: Depending on age, there is a partial difference or no difference in students' academic achievement.

H4c: Depending on SES, there is a significant difference in students' academic achievement.

H4d: Depending on school type, there is a significant difference in students' academic achievement.

Many studies in the pertinent literature deal with the relationship between school climate, self-handicapping, demographic characteristics, and student achievement in different combinations. However, our belief in the importance of studying all these variables together and carrying out this research in the context of Turkey motivated us as researchers to do this study. We hope the findings of this study will contribute considerably to broadening knowledge on student achievement and what factors are vital for improving student achievement. We also hope the results of this paper can also contribute to national and international policies focused on student achievement.

Review of Literature

School Climate

Although it is difficult to make a single clear definition of organizational climate, we can look to various different definitions within the literature. Halpin and Croft (1963) explained climate by likening it to personality in their pioneering work on organizational climate. Tagiuri (1968) defined organizational climate as the relatively persistent aspect of an organization's internal environment experienced by its members, affecting their behavior, and defining specific characteristics of the organization in terms of values. Researchers in the field of education have defined school climate in different ways based on definitions related to organizational climate. Freiberg (1999) likened school climate to the air we breathe, which we can't easily feel until something goes wrong.

The literature shows that researchers handled school climate in different dimensions with different perspectives. In early studies on school climate, researchers often turned to the "Organizational Climate Description Questionnaire" developed by Halpin and Croft (1963) because it was simple to use (Anderson, 1982; Thomas, 1976). Thapa, Cohen, Guffey and Higgins-D'Alessandro (2013) focused on five aspects of school climate—safety, relationships, teacher and learning, institutional environment, and school development process—in their research, in which they conducted a comprehensive literature review of school climate. Hendron and Kearney (2016) have covered school climate within the context of sharing resources, order and discipline, parent engagement, inter-student relations, and student-teacher relations. Further studies attempting to measure school climate can be found from the book Freiberg (1999) edited. However, in this study, school climate is limited to supportive teacher behaviors, success orientation, and a safe learning environment (Çalık & Kurt, 2010).

Self-Handicapping

It can be argued that self-handicapping reflects one's efforts to protect or improve the self (Thomas & Gadbois, 2007). Jones and Berglas (1978) stated that individuals actively seek to regulate the conditions that affect their behavior to present themselves as capable and

intelligent and to protect their selves against the outside. People can perform this protective behavior against their selves by deliberately finding or producing obstacles that make an excellent performance less likely. In this case, when the person underperforms, the failure state will be attributed to an external element rather than himself or herself. Jones and Berglas (1978) called such defensive strategies "self-handicapping."

It is claimed that a psychological effort to protect the self and externalize failure is valid when considering behaviors such as consuming alcohol (Jones and Berglas, 1978), or using drugs that have an effect on performance (Berglas and Jones, 1978). Similarly, it can be argued that self-handicapping behavior is active behind behaviors such as postponing a specific task or activity, showing excessive interest in activities that are not related to the task, not doing enough practice or exercise, and not paying attention to nutrition and sleep patterns (Abacı & Akın, 2011; Barutçu et al., 2019; Berglas & Jones, 1978).

Efforts to protect the self, which can be seen in all areas of life, are also frequently seen in educational organizations. Some students who do not want to be under this psychological burden in schools, a setting where students' performances come to the fore, may intentionally exhibit some behaviors that may negatively affect their performance. Students with ego-oriented goals and negative attitudes towards education can be observed engaging in self-handicapping behaviors more often (Midgley et al., 1996). Self-handicapping behavior is also useful when students delay their study until the last minute and spend their time on irrelevant efforts during exam preparation (Török et al., 2018; Urdan & Midgley, 2001).

Academic Achievement

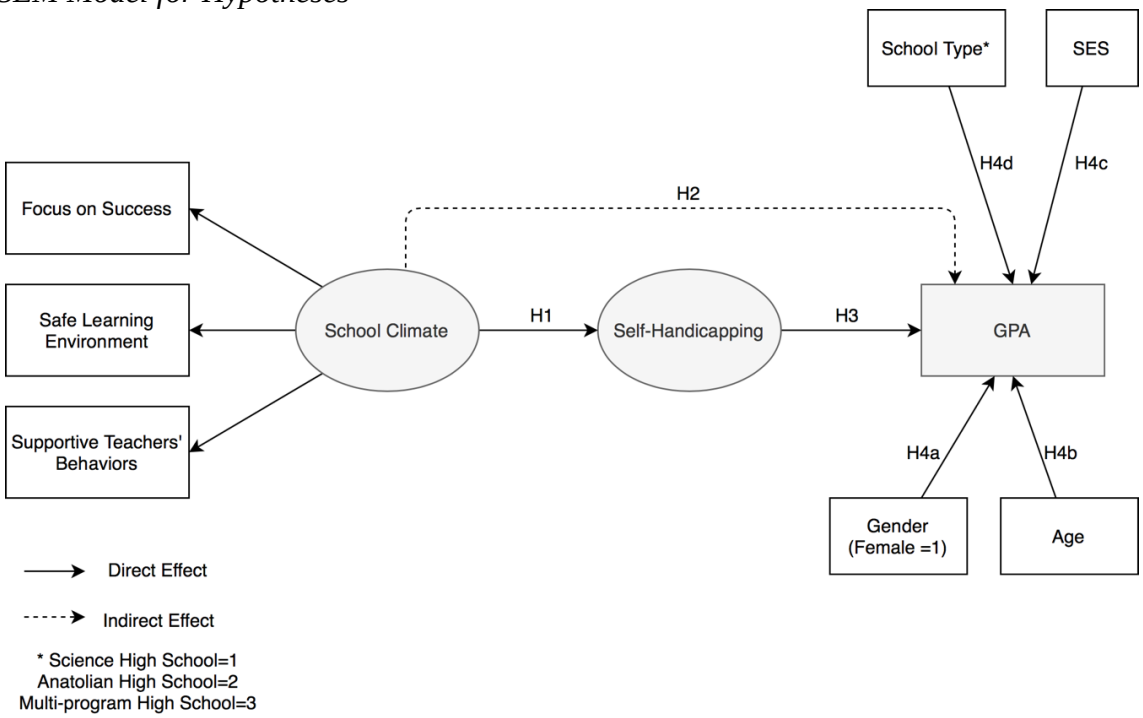
Achievement grades or standardized test scores are generally used in determining students' academic success (Hoge et al., 1990). In meta-analysis studies examining students' success in fields such as mathematics, science, and reading, it is observed that the focus is on cognitive ability tests or national test scores (Özdemir, 2019; Voyer & Voyer, 2014). Students' academic success often measures school success. One of the main characteristics of schools that are considered adequate is the expectation of high academic success they develop towards their students (Hallinger & Murphy, 1986). Schools attract students based on their academic achievement. Families care about academic success in choosing appropriate schools for their children. Academic achievement is an essential criterion for gaining admission to better schools and having better job opportunities (Spinath et al., 2014).

Conceptual Framework

The structural equation model for the hypotheses put forward regarding the variables of school climate, self-handicapping behavior, school type, gender, age, SES, and grade point average (GPA) is given in Figure 1.

Figure 1

SEM Model for Hypotheses



Relationship Between School Climate and Self-Handicapping

In a school climate where there is cooperation, participation, support, and trust, it can be argued that the student will exhibit less self-handicapping behavior. According to a study by Kuczka and Treasure (2005), self-handicapping behaviors are less common in people when there is a motivating climate. In the study of Dorman et al. (2002), positive emotional components of the classroom environment were found to be associated with decreased levels of self-handicapping. According to the results of a study conducted with school administrators and teachers, self-handicapping behaviors are less common among school staff in a positive school climate (Sertel & Tanrıöğen, 2019). On the other hand, in a success-oriented school climate that often places an emphasis on competition, self-handicapping behaviors can be seen more often. In addition to being competition-oriented, an ego-oriented school climate was seen as a positive predictor of self-handicapping (Standage et al., 2007).

Relationship Between School Climate and Student Achievement

The impact of the school's climate or atmosphere on the student or learning environment has attracted the attention of the educational community for more than a century (Freiberg, 1999). According to Creemers and Reezigt (1999), effective and ineffective schools have different climates. For this reason, climate factors are considered important for the change and development of schools. School climate has been frequently explored, especially in the context of student success. According to the research by MacNeil, Prater and Busch (2009), student success was higher in schools with a healthy learning environment. In their research, Uline and Tschannen-Moran (2008) found that school climate has a mediating effect on student achievement. Further research in the literature highlights the meaningful relationship between positive school climate and student achievement (Hallinger & Murphy, 1986; Hoy &

Hannum, 1997). The nature of the learning environment is an essential predictor of students' academic achievement (Kwong & Davis, 2015). Student achievement is higher in schools where teachers have a positive perception of school climate, have adequate resources and facilities, reflect common characteristics and have sincerity (Johnson & Stevens, 2006).

Relationship Between Self-Handicapping and Student Achievement

Academic achievement and self-handicapping are two concepts that are negatively associated (Higgins et al., 1990; Urdan, 2004; Üzbe & Bacanlı, 2015). In other words, as the student's self-handicapping behavior increases, his or her academic achievement decreases. It is also possible to interpret this situation from the opposite perspective. Self-handicapping behaviors are common in students who get low marks in school (Midgley et al., 1996). As in students with low academic achievement in schools, self-handicapping can be observed more frequently in students who have high expectations of success. Jones and Berglas (1978) argued that in the face of the possibility of failure, individuals strive to produce obstacles that will externalize failure and thus protect the self. Also, depending on how the student interprets success, there may be a differentiation in self-handicapping behavior. The student can interpret academic success as developing his academic competencies, or he can interpret this success as an effort to show others his academic competences. Self-handicapping behaviors are more common in students who see success as a benchmark for comparison with someone else (Yu & McLellan, 2019). Accordingly, the following hypothesis has been proposed between student achievement and self-handicapping.

Observed Differences in Student Achievement by Age, Gender, SES, and School Type

Many studies have been conducted to reveal the effect of gender, age, SES, and school type on student achievement. When the relationship between gender and student achievement is examined, there is often research that suggests a significant difference in favor of female students (Özkal & Çetingöz, 2006; Spinath et al., 2014; Voyer & Voyer, 2014), although there are also some studies claiming that there are no significant differences in this direction (Matthews et al., 2009; Yusuf & Adigun, 2010). Due to these contradictory results in the literature, we do not expect to see a significant difference between gender and academic achievement in the research. In the case of a significant difference, we expect this difference to be small.

In the literature, some studies find a significant relationship between age and student achievement, as well as studies that do not find a significant difference in this direction. In a study in which the relationship between the age and skill of university students was examined, researchers found a positive relationship between these two variables (Lammers et al., 2001). An opposite result was obtained in a study that examined the age variable in the context of success in adults (Glazier et al., 2019). Considering these contradictory results, we expect that there will be no significant relationship between research age and student achievement in the research, or that it will occur at a low level.

When the relationship between SES and student achievement is examined, it is seen that SES is an essential factor in student achievement (Dumais, 2002; Johnson & Stevens, 2006). Students who attend schools in low socioeconomic areas often lack the prerequisite skills for academic success, and their interest in academic success is low. In contrast, students with high socioeconomic backgrounds often go to school with a high level of readiness and a favorable academic orientation (Hallinger & Murphy, 1986). According to the theory known

as the Heyneman and Loxley effect (H / L effect), SES is an essential factor in academic success in developing countries (Heyneman & Loxley, 1983).

When the relationship between school type and academic achievement is examined, the research of Yusuf and Adigun (2010) did not find a significant difference between these two variables. However, when the relationship between school type and success is considered in the context of Turkey, there is expected to be a significant difference. This difference was also revealed in the PISA 2015 Turkey national report. According to the results of PISA 2015, when schools were examined in terms of their student success, science high schools ranked highest, followed by Anatolian high schools and then vocational high schools (MEB, 2016). There are three academic years of difference between science high schools and vocational high schools. One of the primary reasons for this is the placement of students from different academic levels in different school types through national examinations in Turkey. In this case, the most successful students prefer science high schools. This situation is thought to make a significant difference in academic achievement.

Method

Research model

This study uses a survey model and examines the relationship between the main variables of the research. Typically, survey studies collect data at a certain point to define the nature of the existing conditions or to determine the standards by which the existing conditions can be compared, or to determine the existing relationships between certain events (Cohen et al., 2018). In this study, we examined the relationship between students' academic achievement, school climate, self-handicapping, and students' demographic characteristics.

Participants

The population of this study was 11,295 students enrolled in public high schools in the city center of Karaman province in the 2019–2020 academic year. A stratified sampling technique was used in the research, taking into account the school type. Accordingly, the appropriate sample size was calculated with a 99% confidence level and a 4% confidence interval (Cohen et al., 2018), and 1,024 students were included in the sample. In Karaman, there are 19 vocational high schools, 12 Anatolian high schools and one science high school. According to the PISA 2015 National Report, the most successful schools are science high schools. Then comes Anatolian high schools. The schools at the bottom of the student success ranking are vocational high schools. As there is only one science high school in the province of Karaman, this school entered the sample directly. We used a random stratified sampling technique to select the Anatolian and vocational high schools used in this study. We separately prepared two bags, one each for vocational high schools and Anatolian high schools, and chose one school from each by lot. Following our draw, Karaman Anatolian High School and Kazımkarabekir Multi-Program High School were included in the sample. Organizing a stratified random sample is simply a two-step process. First, the characteristics that appear in the larger population that is desired to appear in the sample are defined. Then the population is divided into homogeneous and discrete groups, and the sample is selected from these groups (Cohen et al., 2018). Table 1 shows the total student enrollment at each of these three schools.

Table 1

Enrollment by Gender at Surveyed High Schools

Grades	Karaman Science High School		Karaman Anatolian High School		Kazımkarabekir Multi-Program High School	
	Girls	Boys	Girls	Boys	Girls	Boys
9th Grade	67	53	113	58	16	20
10th Grade	69	48	81	40	13	12
11th Grade	83	33	61	47	13	16
12th Grade	58	40	53	50	27	14
Total	277	174	308	195	69	62

The data collection tools were given to all 1,085 students in these three schools, and 1,014 students volunteered to participate in the research. The data of 33 of these students were removed from the sample since they were too incomplete to be subjected to statistical analysis. Ultimately, we analyzed the data of 981 students, which was sufficient for the appropriate sample size calculated (Cohen et al., 2018). Some information about the sample is given in Table 2.

Table 2

Characteristics of Study Participants

Variables		**n**	**%**
Gender	Girl	608	62.0
	Boy	373	38.0
Age	14	185	18.8
	15	269	27.4
	16	238	24.3
	17	242	24.7
	18	47	4.8
Grade	9	293	29.9
	10	234	23.9
	11	239	24.4
	12	215	21.8
School Type	Science High School	441	45.0
	Anatolian High School	116	11.8
	Multi-program High School	424	43.2
Mother's Educational Status	Illiterate	16	1.6
	Primary School	479	48.8
	Secondary School	207	21.1
	High School	98	10.0
	University	181	18.5
Father's Educational Status	Illiterate	8	0.8
	Primary School	265	27.0
	Secondary School	183	18.7
	High School	228	23.2
	University	297	30.3

Family income	0–2,000 TL	237	24.2
	2,001–4,000 TL	339	34.5
	4,001–6,000 TL	221	22.5
	6,001–8,000 TL	100	10.2
	8,001 TL and over	84	8.6
Number of siblings (including the student)	2	31	3.2
	3	112	11.4
	4	344	35.1
	5	325	33.1
	6	121	12.3
	7 and over	48	4.9
Number of Books	0–50	461	47.0
	51–100	243	24.8
	101–150	96	9.8
	151–200	69	7.0
	201 and over	112	11.4
Access to a study room	No	253	25.8
	Yes	728	74.2
Access to a desk	No	184	18.8
	Yes	797	81.2
Computer at home	No	367	37.4
	Yes	614	62.6
Internet at home	No	262	26.7
	Yes	719	73.3
Has a musical instrument	No	545	55.6
	Yes	436	44.4
Has a quiet place for study	No	216	22.0
	Yes	765	78.0
Has a literary Work	No	517	52.7
	Yes	464	47.3
Has an e-book	No	921	93.8
	Yes	60	6.2
Has a resource book	No	145	14.8
	Yes	836	85.2

Table 2 indicates that approximately two-thirds of the students participating in the research were female (62.0%). The distribution of students participating in the research was normal according to their age and grade level. According to the school type variable, the participation from Anatolian High School was low compared to other school types (11.8%). The education level of the students' mothers was predominantly primary school (42.0%), whereas approximately one-third of the fathers (30.3%) were university graduates. The vast majority of students' families were at the middle-income level (60%). The students participating in the research usually had three or four siblings (68.1%). The majority of students had fewer than 100 books at their homes (71.8%). Approximately one-third of the students had a study room (74.2%), desk (81.2%), computer (62.6%), internet (73.3%), quiet work environment (78.0%), and supplementary resource book for study (84.6%). These indicators showed that the vast majority of families gave support to their children to study. However, the low rate of books, literary works, and e-books at home indicated that families were insufficiently support students' reading habits.

Data collection

The School Climate Scale was developed by Çalık and Kurt (2010). The scale consists of 22 items and three subdimensions (supportive teacher behaviors, success orientation, and safe learning environment), and it was prepared as a five-point Likert type. In this scale, items 13, 14, 16, 18, 19, 21, and 22 were reversed. We conducted the validity and reliability analyses of the data. According to our analysis, Cronbach's alpha coefficient was found to be .84 in the supportive teacher behavior subdimension, .60 in the achievement-oriented subdimension, and .77 in the safe learning environment subdimension. The total value of the scale was calculated as .85. If Cronbach's alpha coefficient is .58 and above, it seems to be a satisfactory result (Taber, 2018). Confirmatory Factor Analysis (CFA) was performed on the scale. As a result of the analysis, we observed that the x2 / sd ratio was 5.0, and the RMSEA value was .063. In addition, CFI = .94, GFI = .92 and SRMR = .084. Fit indices were at a good level (Kline, 2005).

The Self Handicapping Scale was developed by Jones and Rhodewalt (1982, as cited in Akın, 2012). In this study, we used the version of the scale adapted to Turkish by Akın (2012). This scale, which consists of 25 items and one dimension, is a 6-point Likert rating. In this scale, items 3, 5, 6, 10, 13, 20, 22, and 23 were reversed. The Cronbach's alpha coefficient for the scale was found to be .60. This value is a suitable value for Cronbach's alpha coefficient (Taber, 2018). In the CFA, good fit indices were here: RMSEA = .037, NFI = .98, CFI = .99, IFI = .99, RFI = .97, GFI = .97, AGFI = .94. The one-dimensional model was found to fit well after the CFA analysis (Kline, 2005).

Personal Information Form: Information such as the type of school the students attended, their socioeconomic status (SES), their age, and gender were obtained through this form. The researchers used the education level of the mother, the education level of the father, the monthly income of the family, the number of people in the student's home, and the number of books factor score to determine the SES variable.

Data analysis

We collected our data from students studying in high schools in Karaman province in the 2019–2020 academic year. Selected for inclusion in the sample were the science high school, which was highly ranked in terms of academic achievement, the Anatolian high school, which was ranked in the middle, and the vocational high school, which was ranked lower. This is because we wanted to examine the variables that affect academic success according to different school types. Before the data collection period, we obtained official permission from the Karaman Provincial Directorate of National Education. The students voluntarily participated in this study and were informed about our subject of self-handicapping before they filled in the measurement tools. A total of 1,014 students participated in the research. When we examined the data, we saw that the data of 33 participants were not suitable for statistical analysis. We used the data of 981 participants in the analysis of the research. To examine the normal distribution of the data, we looked at kurtosis and skewness values. These values were between -.12 and -.28 in the dimension of supportive teacher behavior, -.68 and .45 in the success-oriented dimension, -.41 and .05 in the safe learning environment dimension, -.25 and .45 in the self-handicapping scale. These values are between +1 and -1 (Büyüköztürk et al., 2012), and it showed the scales had a normal distribution. A Structural Equation Model (SEM) was used to analyze the data. SEM is a second-generation analyses

type, and via SEM we see the relations among a lot of dependent and independent variables in a model systematically. We also observe the direct, indirect relations and mediator variables (Anderson & Gerbing, 1988). In this SEM model, the variable "students' GPAs" was the dependent variable. The self-handicapping variable was the mediator variable, the school climate was the predictor variable, and control variables were gender, age, SES, and school types in the model.

Results

Figure 2 indicates the results of the SEM model based on the variables in the research. Also, Table 2 showed the direct and indirect relationships between school climate, students' self-handicapping, and students' GPAs.

Figure 2

The Results of the SEM model

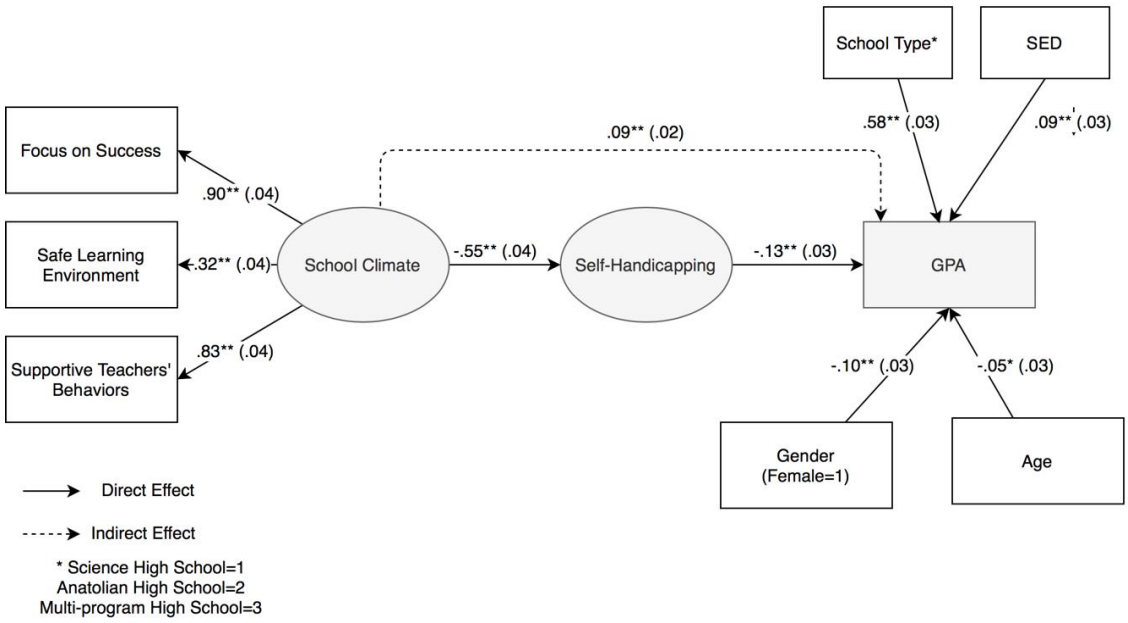


Table 3

The Indirect Relationship between School Climate and Students' GPA

Predictor variable	Mediatory Variable	Predicted Variable	β	*p*
School Climate	Self-Handicapping	Students' GPA	.09	.00

***p*<.05**

The model displayed that the most predictive variable of the students' GPAs was the school type (β = .58, p< .05). Accordingly, students' GPAs in the science high school were higher than those of the multi-program high school and the Anatolian high school. Also, another variable that is significantly related to the students' GPAs was self-handicapping (β = -.13, p< .05). In this context, it can be said that a unit increase in the student's self-handicapping behavior caused a .13-unit decrease in students' GPAs. Regarding the gender variable, we

saw that female students had higher scores than male students (β = -.10, p< .05). When the relationship between the age variable and the students' GPAs was examined, we saw that students' GPAs decreased as the age of the students grew (β = -.05, p< .05). As was seen in the relationship between the SES and students' GPAs, while the SES levels of the families increased, GPAs increased (β = .09, p< .05). The school climate affected the students' GPAs indirectly (β = .09, p <.05), and it directly affected students' self-handicapping behaviors (β = -.55, p <.05). Self-handicapping behaviors occurred less commonly in schools where there were supportive teacher behaviors, caring about student success, and safe learning environments. In this case, the school climate indirectly affected the academic success of the students. According to the model, there was a relationship between school climate and school type and students in science high schools found the school climate negative in their schools, whereas multi-program high school students thought that their schools have a more positive school climate (β = -.15, p< .05).

Discussion, Conclusion, and Suggestions

Our first hypothesis is that a significant relationship exists between school climate and self-handicapping behaviors of students. Our findings indicate that there was a negative and moderately significant relationship between these two variables. This means that if there was supportive teacher behavior, care for student success, and safe learning environments, students could show less self-handicapping behaviors. This result confirmed H1. Especially in schools where the competition was intense and individuals set ego-centered targets, self-handicapping behaviors could be observed more frequently (Midgley et al., 1996; Üzbe & Bacanlı, 2015). On the other hand, in schools where school climate encouraged cooperation and participation, self-handicapping behaviors were less common (Dorman et al., 2002; Sertel & Tanrıöğen, 2019).

The second hypothesis is that there is a significant relationship between high school students' perceptions of school climate and their academic achievement. In this study, we expected to find a significant relationship between these two variables, and although the results were below expectations, the findings confirmed H2. The finding suggests that the school climate indirectly affected the academic achievement of the student by reducing the self-handicapping behaviors of the students. This result was in line with the results of prior research on this subject (Kwong & Davis, 2015; MacNeil et al., 2009; Uline & Tschannen-Moran, 2008). These related studies emphasized that school climate was a significant predictor of student achievement.

Our third assumption is that a negative relationship exists between students' self-handicapping behaviors and academic achievement. The results of the analysis supported this assumption, showing that there is a negative and low-level relationship between these two variables. This result partially confirmed H3, as the negative relationship between these two variables was expected to be higher. According to the research results of Üzbe and Bacanlı (2015), as academic success increased, the level of self-handicapping increased. Similarly, in Urdan's (2004) research, self-handicapping and academic achievement were found to be inversely related when it comes to high school students. It can be suggested that variables such as meaning, social acceptance, and exam anxiety were useful in the negative relationship between academic success and self-handicapping. For example, the negative relationship between academic achievement and test anxiety (Putwain, 2019), and the positive relationship between test anxiety and self-handicapping (Thomas & Gadbois, 2007) reinforced this claim.

Finally, we tested whether there was a significant difference in students' academic scores and demographic characteristics. In this study, we saw that there is a positive and significant difference in the academic achievement of female students compared to male students, but at a low level (confirms H4a). Similarly, there was a significant decrease in student achievement, albeit at a low level, with an increase in age, which justifies H4b. Spinath et al. (2014) in their research achieved a partial result in favor of female students in academic success according to gender differences, and they stated that their better adaptation to the school environment compared to male students could explain this situation. Yu and McLellan (2019) also stated in their research that male students exhibit less adaptation and participation behaviors than female students in support of this claim. In the meta-analysis study in which Voyer and Voyer (2014) discussed student success according to gender difference, a small but significant effect was found in favor of female students. However, in the research of Yusuf and Adigun (2010), there was no significant difference in this direction. It could be argued that the result in the context of gender in this study was generally consistent with the relevant literature. The results of this study in the context of age are similar to the results of some studies. Similarly, it is possible to support the difference in academic achievement due to students' age in the research, albeit in a limited number of studies (Lammers et al., 2001). In contrast, opposing studies also exist (Glazier et al., 2019).

In this study, we also observed that there was an increase in the academic success of the students alongside an increase in the socioeconomic status (SES) of the families, and there was a significant difference between the school type and the academic success of the student in favor of science high schools. In the research, H4d was supported in line with the expectations in the context of school type. However, it can be said that the research results partially supported H4d because we expected the difference in SES to be greater. When we analyzed the values in the research model, we saw that the factor that predicted student success the most was the school type. In the study by Yusuf and Adigun (2010), no significant difference was found between school type and academic achievement, in contrast to the findings of this study. Given the high level of the relationship between the type of school and student achievement in this study, one could argue that there was a difference specific to the context of Turkey. Moreover, the PISA 2015 National Report also stated that school types were an active factor in academic success (MEB, 2016). The H / L effect indicated that SES was a vital factor in developing countries, such as Turkey, in explaining academic achievement (Heyneman & Loxely, 1983). Johnson and Stevens's (2006) study revealed that, similarly to the findings of this study, the impact of school climate on student achievement was stronger in schools with high SES than in low SES communities. Although we determined in this research that age, gender, SES, and school type were found to be significantly related to student achievement, many other factors such as habitat, cultural capital, abilities originating from a student's nature, intelligence, personality, and motivation were always present. It was necessary to consider these (Dumais, 2002; Spinath et al., 2014). For example, Dumais (2002) found in his research that socioeconomic status was related to student achievement, but the skills inherent in the student and the environment in which the student lived explained the success more strongly.

When we evaluated the results of the research in general, we saw that self-handicapping behaviors are less common among students in a positive school climate, and this was related to higher academic success. The research also revealed the significant relationships between school type, age, gender, and SES with academic success. In the context of these results, it could be said that the school's healthy climate characteristics had a positive effect on student

success if students exhibit less self-handicapping behaviors. According to the research of Sertel and Tanrıöğen (2019), the perception of positive school climate increased in schools where leadership skills were strengthened. When employees were included in the decision-making process and cooperation was developed, learning environments were enriched, and this contributed to a decrease in self-handicapping behaviors. In addition, how success was interpreted could affect students' self-handicapping behaviors (Yu & McLellan, 2019). In this context, it was important for students to interpret success as a process of self-empowerment rather than an understanding of success that emphasized competition and ego. According to the results of the research, one of the factors to be considered is self-perception. Individuals could sometimes manipulate the conditions they were in to make themselves more adequate or intelligent (Jones & Berglas, 1978). If a teacher who knew that his or her students had an effort to protect the self in themselves, the teacher was not in an act or would not attempt to harm the students' self. Teachers also supported their students in developing self-esteem, as they knew that students with high self-esteem showed self-handicapping behaviors less frequently (Üzbe & Bacanlı, 2015). For this reason, when teachers give feedback to a student, they should not use positive or negative judgmental language such as, "You are brilliant," or "You are incompetent," so as not to overload the students' success or failure (Putwain, 2019). If teachers avoid these attitudes, they could contribute to a healthy self-development of the student. As a consequence, this contribution could lead to a decrease in students' self-handicapping behaviors.

Limitations and Suggestions for Future Research

As with any research, there are some limitations to this study. For example, we investigated the school climate based on the opinions of the students. We suggest for future studies that, for organizational level variables such as school climate, researchers take the opinions of teachers, school administrators and other school actors and build a two-level model. In addition, this study was quantitative in nature. Further studies that aim to reveal school climate, students' self-handicapping behaviors and other variables that predict academic achievement can be conducted qualitatively. Researchers can conduct qualitative research on the variables that predict students' academic success and obtain more detailed information about academic achievement. The sample itself also poses a limitation. Considering other research that reveals the effect of gender factor on self-handicapping behavior, it may be considered that there is a sampling bias in this research (Berglas & Jones, 1978; Urdan et al., 1998; Yu & McLellan, 2019). However, there are also studies that reveal that gender is not related to self-handicapping behavior (Kuczka & Treasure 2005; Midgley et al., 1996). In addition, considering that geographical context can also be effective in the relationship between gender and self-handicapping, there was no differentiation between these two concepts in a study conducted in Turkey (Üzbe & Bacanlı, 2015). Considering the studies showing that there is no difference, it can be said that there is no sampling bias. However, it is useful to state this situation as a limitation of the research. Finally, it is a limitation of this study that students' GPAs were collected according to their statements. In the future, researchers can use the students' national examination system scores. This approach will make future research more objective.

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