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Investigating the School Climate Perceptions and School Motivations of Middle School Students

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Abstract: The aim of the research was to investigate the relation between middle school students' perceptions of school climate and school motivation, whether school climate perceptions have a significant power on school motivation as well as to see if those perceptions and motivation differ significantly depending on gender, grade level, and school location variables. The sample of the study consisted of 674 middle school students studying in two state schools, which were located in the central district and village in Kosk province in Aydin in Turkey. Data were collected by using School Climate Perceptions Scale and School Motivation Scale with three questioned personal information form. Results showed that there were significant medium-level correlations between school climate perceptions and school motivation of middle school students. While grade-level variables had significant differences in both school climate perceptions and school motivation of middle school students, the location did not create a difference. On the other hand, gender had a significant difference only with school motivation. Finally, the model tested student-teacher relation significantly predicted 18% of the school motivations of middle school students.

Keywords: *School climate, school motivation, middle school students.*

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Introduction

In the educational environment, the researchers attract interest to support safer and better-qualified schools with positive school climate perception all over the world. They have been attempting to uncover the ways of effective learning and teaching for success in educational settings all around the world for years. Because of their inspiration and compassion, they believe they can have a positive impact on their students' personal and emotional growth.

In this respect, satisfying school climate alludes to better quality and character of school life of students. The school climate represents expectations, goals, principles, social relationships, instructing and learning activities, and organizational processes, and is focused on examples of individuals' experiences with school life (Cohen et al., 2009). It consists of factors related to the attitudes, emotions, and behaviors of individuals in the school system. The school's climate is one of the features of the school setting that distinguishes one school from another and influences the behaviour of each student (Calik et al., 2011). Metaphorically it can be described as a heart & soul (Freiberg, 1999), personality, or signature of every school in the literature.

The research on school climate has a long history. Arthur C. Perry's study called "The management of a city school" in 1908 was found to be the earliest example of the school climate concept. Since then, with different aspects and relations were found between the climate and employee motivation, satisfaction as an organizational basis (Chirkina & Khavenson, 2018). Especially to reduce violence and aggression in schools, school climate gained more importance nowadays. The United States Department of Education, the Institute for Educational Sciences, a growing number of state departments of education, international educational ministries, and the United Nations International Children's Emergency Fund (UNICEF) have all emphasized school environment change as an evidence-based strategy for school improvement (Thapa et al., 2013). Also, large-scale experiments, and surveys that rely on students' views of their school climate have been conducted (Ryberg et al., 2020). In the Programme for International Student Assessment

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(PISA), aspects of students' motivation, interests, along with school climate, in-and outside-of-school activities were offered as additional options as reported in the Organisation for Economic Cooperation and Development (OECD, 2019). Though not completely the theme of happiness of students as the focal point of the 2023 vision whose title was written as "*Happy Students, Strong Turkey"* which was declared by the Ministry of National Education of Turkey (2018), importance of positive school climate and motivated students were highlighted in the document.

Although there were more longitudinal and cross wide studies and projects about school climate around the world, there have been a limited number of studies conducted that predicted factors of the middle school students' school climate in Turkey (Bahcetepe, 2013; Sarac, 2015; Tavsanlı et al., 2016), the studies focused on the relation between school climate and school achievement (Barksdale et al., 2019; Bektas & Nalcacı, 2013; Ozgenel et al., 2018), commitment to school and their academic achievement (Pehlivan & Ozgenel, 2020), aggression tendencies (Kusmez, 2019); school engagement and perception of school life quality (Donmez & Tayli, 2018; Koc, 2021), attitude toward universal values (Cepni et al., 2019). Generally speaking these study results showed that positive school climate perception has important effects on students' attitude towards school, well-being, positive school climate perception students' attitude towards school, well-being, willingness to go to school, and also academic achievement of middle school students.

It is known that the environment to be provided to individuals is of great importance in the realization of affective learning so motivation as an affective characteristic was taken into consideration as another variable having relation with school climate perceptions of the middle school students. At this point the second aspect to be considered within the scope of the research is motivation. In educational environments, motivation can be expressed as one of the determining factors that make students go to school willingly and study lessons hard to be successful.

The curriculum is aimed at improving not only the cognitive behaviors of students but also affective and psychomotor goals. It aims to develop the individual as a whole. The goals have an interaction with each other, affective characteristics affect the cognitive behaviors of the students positively or negatively. For example, schooling is important for students to develop skills, but avoiding the affective realm has a huge effect on cognitive fields. The learning process may be interrupted if one feels threatened, sad, or anxious. Respect for personality aspects is another essential aspect of a learning-friendly classroom environment (Williams, 2003, as cited in Griffith & Nguyen, 2006). In this regard, motivation can be seen as a representation of the affective domain in the curricula. Affective characteristics are extremely important in developing perceptual skills. The more perceptual sense organs participate in the learning process, the quicker and more permanent learning can be (Duman & Yakar, 2017). Affective characteristics include thoughts, emotions, values, and motivation. Since they are such an integral part of the experiences and connections that form within the classroom, these thoughts and feelings are vital to how students behave and perform.

The content of the concept of motivation lies in the effort of the human to reach his goal and the triggering of his behaviors to try all the means. The primary aim of motivation is to enable the individual to work voluntarily and efficiently without any discipline and pressure element (Donmez & Tayli, 2018). Motivation is one of the most critical sources of power that determines the direction and stability of educational behavior in school, as well as achieving the desired goal in educational settings. The source of a significant part of learning difficulties and disciplinary events in school and classroom is related to motivation (Akbaba, 2006). School motivation is defined as students' desire to participate in all kinds of activities related to school, desire to go to school, longing for school, positive thoughts about school (Yavuz, 2006).

According to the studies conducted with school motivation shows that the school will strive to increase as well as the speed at which the intended target is accomplished as the academic performance and school success in line with the goals of individuals with high motivation. It is expected that the perceived academic success and school success average of a student with high school motivation is as high as possible, while the student's absenteeism is expected to be as low as possible (Kaynak et al., 2017). The relationship between motivation and school climate can be explained as follows. In a study on affective learning, students' opinions about the ideal classroom environment were taken. Students stated that they wanted a school atmosphere that is primarily tension-free, sincere, open, collaborative, and entertaining; a classroom, where friends can work together, having mutual respect between each other, and school staff. Other request of the students are to have enthusiastic, communicative teachers, and uncrowded classes (Russell, 2004, as cited in Duman & Yakar, 2017). Sarac (2015) mentioned in her study, determining the school climate perceived by students will enable students to be aware of their expectations, needs, and perceptions about school. In this way, it will be easier to respond to the expectations of the students, to create environments that will attract students' attention, and where they can use their potential with better academic success, motivation, and positive interaction among students, commitment to school, satisfaction, and trust will increase.

This concept frequently discussed in the literature in conceptual studies about the school climate and different dimensions of motivation abroad, e.g. relationship between intrinsic motivation and school climate (Fenzel & O'Brennan, 2007), self-efficacy and intrinsic motivation focused on students' views of school climate around teacher/student relationships (Fan & Williams, 2018), school climate and achievement motivation in high school students (Noeei et al., 2020), school climate & achievement (Barksdale et al., 2019; LaRocque, 2008; Mucherah et al.,

2014). But in Turkey, the studies have focused on the more organizational climate, only a few similar studies were found investigating school climate and motivation in different directions conducted on middle school students. The bulk of research on school environment assessments is focused on the experiences of school managers and students (Calik et al., 2011). Studies on students regarding educational settings are limited. Among them, the most similar study to the present study was carried out to test the connection between teachers' imagination and their inherent motivation and the school climate for innovation in both public and private schools (Fidan & Ozturk, 2015). Also Ozbulat (2020) investigated the responsibility and school motivation levels of middle school students according to gender, class, academic achievement and level class variables.

The Purpose and Importance of Research

Although the definition of the school climate is based on simple and universal elements, it has a framework that varies by community. For this reason, variables whose effects were examined in the study and thought to be related to school climate were selected based on scale dimensions and Turkish culture. Besides, when looking at the literature, it was discovered that the studies in this field are often in the form of teachers 'opinions or school principals' opinions based on organizational culture. One of the features that distinguish this study from others is that it was performed on middle school students, aged between 11-14 years old, represents the age of adolescents. Representing the entry into adolescence, this age group students' spending quality time at school is important in terms of decreasing the tendency towards bad habits, which can be described as the cleansing function, which is one of the latent functions of education. Physical and psychological changes can cause differences in both cognitive and affective behaviors of middle school students. Especially in adolescence, which coincides with the school period, students' negative perceptions about school in the process of gaining identity can cause great damage to individuals (Donmez & Tayli, 2018). Middle schools reform efforts argue that many middle schools have improved the climate of their school, particularly relations between teachers and students (Wigfield & Eccles, 2002) so it is important that students spend most of their time in a democratic environment in which they trust themselves, eager to go to school, and being satisfied with the school, in educational institutions where fundamental values such as love, respect, friendship, and tolerance are tried to be implicitly taught. A sustainable, positive school climate fosters youth development and learning necessary for a productive, contributive, and satisfying life in a democratic society (Cohen et al., 2009).

The Purpose of the Study

In the present study, variables considered to be related to students' perceptions of school climate and school motivations were determined as gender, location of the schools, and grade levels consistent with previous study results. The current research explores phenomena of school climate as experienced by middle school students, thereby contributing to the stream of work. Based on this thought the purpose of the study was to investigate the relation between middle school students' perceptions of school climate and their motivation to go to school, whether school climate perceptions have a significant effect on school motivation as well as to see if those perceptions and motivation differed significantly depending on gender, grade level, and school location variables.

The sub-goals determined in line with the main purpose are as follows:

1. Do middle school students' school climate perceptions differ significantly by gender/grade levels/location of the schools?
2. Does middle school students' school motivation differ significantly by gender/grade levels/location of the schools?
3. Is there a significant correlation between school climate perceptions and its sub-dimensions and school motivation and its sub-dimensions of middle school students?
4. Do the sub-dimensions of school motivation have a significant predictive effect on school climate?
5. Do the sub-dimensions of school climate have a significant predictive effect on school motivation?

Methodology

In this part, the model of the study, sample, data collection, and data analysis process were given as follows.

Research Model

This study was designed as a correlational survey model that can be explained as a type of study that is carried out to ascertain the relationships between two or more variables and to gain insight into cause and effect (Buyukozturk et al., 2018).

Sample and Data Collection

The sample of the study consisted of 674 middle school students (5^{th}, 6^{th}, 7^{th}, and 8^{th} grades) studied in the Kosk central district of Aydin. Depending on the purpose of the study, the data were collected with all of the students from 2 schools, one from the village and the other from the district center by taking into consideration easily accessibility. Since

students were selected from 2 different schools in terms of making comparisons maximum variation was used as one of the purposeful sampling methods. The basis for this sampling is to take one or more sub-segments of a population as a purposeful sample rather than a representative sample for the purposes of the research. In other words, purposeful sampling means making a part of the universe best suited to the problem the subject of observation (Sencer, 1989).

In line with the information obtained from official sources, the study universe consists of approximately 1750 students. Based on +/- 5% acceptable error rate and 99% reliability level, the sample size was calculated as 482 by sample size calculating formula so 674 students participating after removing incomplete data in the study were decided to have the sample size enough to represent the population (Balci, 1997; Gurbuz & Sahin, 2018).

Demographic characteristics of the sample was given in Table 1.

Table 1. Socio-Demographic Characteristics of the Sample

Variables	Groups	F	%
Gender	Girl	361	53.6
	Boy	313	46.4
Class level	5th class	208	30.9
	6th class	171	25.4
	7th class	187	27.7
	8th class	108	16.0
Location of the schools	Country	208	30.9
	Village	466	69.1
	Total	674	100

The sample of the research consisted of 361 girls and 313 boys. 31 % of the students were studying in the 5th class, %25.4 were in the 6th class, %27.7 were in the 7th class, and %16 were in the 8th class. The differentiation of the number of the students steams from the absence of the 8th grade students, especially in the village school. Most of the participants were from the country school (69%) and the others were (31%) from a village school.

Data Collecting Instruments

The data were collected using a personal information form consisting of 3 questions, as well as a school motivation scale for middle school students and a school climate perception scale.

School Climate Scale (SCS)

School Climate Scale was originally developed by Emmons et al. (2002) and Turkish reliability and validity studies were conducted on primary and secondary school students by Atik and Guneri (2016) to evaluate the general climate in the school through students' perceptions. The Turkish version of the scale has 36 elements and six sub-dimensions, which are named after justice, order, and discipline, parent involvement, resource sharing, student interpersonal relationships, and student-teacher relationships. Scale items are answered on a triple scale (3 = Agree, 2 = Not sure, 1 = Disagree). Higher scores on the scale indicate that the perceived school climate is more positive or better. Cronbach alpha internal consistency reliability coefficients for the sub-dimensions of the scale range between .68 and .87 (Atik & Yerin Guneri, 2016). In this study, the reliability values were found respectively .87 for the whole scale while the sub-dimensions ranged between .67 and 85. This value was calculated as .67 for justice, .69 for order and discipline, .70 for parent participation, .72 for sharing resources, .79 for interpersonal relationships of students and .85 for student-teacher relations.

Frequently used goodness of fit tests are goodness of fit index, (GFI), adjusted goodness of fit index (AGFI), root mean square error of approximation (RMSEA), comparative fit index (CFI), standardized root-mean-square residual (SRMR), and non-normed fit index (NNFI) (Harrington, 2009; Simsek, 2007). In the study the goodness of fit index gives the values as follows: $\chi 2$=964.54, DF=579, $\chi 2$/ DF = 1.67, CFI = 0.96, NNFI = 0.96, SRMR = 0.07, RMSEA = .050 to test the construct validity of the scale. It was found that all the fit tests were at a good level (Kaplan, 2000).

School Motivation Scale (SMS)

School Motivation Scale was developed by Kaynak et al., (2017) in Turkey to measure school motivation levels of middle school students. The scale has 14 items with 3 subscales called target, performance and school commitment. Higher scores on the scale indicate that students' motivation is more positive. The five Likert type scale was expressed by between strongly disagree (1) and strongly agree (5) (Kaynak et al., 2017). For the whole scale, the Cronbach Alpha internal consistency coefficient was determined as.84. In this study, it was found as .90 for the whole scale and the subdimensions were calculated as .88 for target; .78 for performance and .72 for school commitment sub-dimensions. Cronbach's alpha coefficient esteems with 0.70 or more are viewed as adequate for the unwavering quality (Tezbasaran, 1997) so both scales were accepted as reliable.

In the current study, the scale consisted of fourteen items collected under three factors. As a result of factor analysis, three factors with eigenvalues greater than 1 emerged. The variance explanation percentages of these factors are 30.32 % for target, 21.70 % for performance, and 16.67 % for commitment. It is seen that factors obtained explain 68.67 % of the total variance.

The goodness of fit values of the confirmed model were found as; x2 /df = 2.963, CFI = .95, TLI/NNFI = .940, GFI = .92, AGFI = .88, RMSEA = .076. It can be said that all the fit indices of this structural model created in the CFA analysis were at an adequate level (Kaplan, 2000).

Data Collection

The study data was gathered during the 2018-2019 academic years' fall semester. The applications of the scale were carried out during lunch break and free lessons without interrupting students' lessons on behalf of the permissions taken from school principals and the teachers. Students were told not to write names on the form. The research was conducted based on ethical principles and the duration of marking the tools average of 10-15 minutes.

Data Analysis

Whether the data showed normal distribution or not was tested with the One Sample Kolmogrow-Smirnow test. Accordingly, all the data is found to be unsuitable for normal distribution. (p>.005). It is not appropriate for the observed data to have a normal distribution; rather, the sample values should be consistent with a normal distribution in the population (which they represent). For analysing the data both non parametric and parametric tests were used due to the purpose of the study. Mann Whitney-U test (gender and location of the schools) and Kruskalwallis- H test (grade levels) from non-parametric tests were used to test the differentiation between the variables.

Before analysing the data reliability and validity analysis were done as explained. To test if common method bias effect the data is to use Harman's single factor score, in which all of the constructs in the study into a factor analysis whether items are loaded into one common factor (Podsakoff et al., 2003). The total variance for a single factor was calculated as 20%, less than 50% in the current study so it suggests that common method bias did not affect the data, hence the results. Also the goodness of fit tests (GFI), Adjusted Goodness of Fit Index (AGFI), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Standardized Root-mean-Square Residual (SRMR) and Non-normed Fıt Index (NNFI) were performed to test the construct validity of the scales.

Calculating and interpreting effect size values in hypothesis tests will increase the understandability of the results (Buyukozturk, 2011). If there is a difference in the hypothesis test, the effect size is checked. Effect size value used for the Kruskal Wallis test: The effect size value used for the Kruskal Wallis test can be calculated using the Eta square correlation coefficient. The effect size value used for the Mann Whitney U Test is an effect value coefficient r, which is Pearson's correlation coefficient (Cevahir, 2020). Effect size values calculated for hypothesis tests were tested accordingly.

Additionally, to find out whether there was a correlation between middle school students' school climate perspectives and school motivation, Pearson correlation analysis was performed. Parametric tests can be used by providing normal distributions of the scores with square root, logarithmic or inverse methods (Buyukozturk, 2011). Based on the research problem, firstly normality assumptions by evaluating skewness and kurtosis values (between -1 and +1) achieved by making square root transformations of the scale scores. After controlling the basic assumptions (normality, linearity, homogeneity, and absence of multicollinearity) multiple linear regression analysis was utilized for the last 2 sub-problems of the study.

Findings

The research questions related to the sub-problems of the study were calculated, and presented in this part in Tables 2, 3, 4, 5 and 6.

Differentiation of middle school students' school climate and school motivation levels based on gender

According to the 1st problem of the study, Mann Whitney-U test was conducted to find out whether gender has a significant variable on school motivation and school climate perception of middle school students. The results were computed separately and given together in Table 2 below.

Table 2. Mann Whitney-U test results of students' school motivation and school climate perception total scores based on gender

Variables	Group	N	Mean rank	Sum of Ranks	U	*p*	R
School climate (SC)	Girl	361	349.45	126152.50	52181.500	.087	
	Boy	313	323.71	101322.50			
	Total	674					
School motivation (SM)	Girl	361	374.77	135292.50	43041.500	.000*	-0.205
	Boy	313	294.51	92182.50			
	Total	674					

p<.005

As it was seen in Table 2, gender had a significant difference in students' school motivation total scores while no differences were found in school climate perceptions (p>.05). When mean ranks were investigated, girls had higher scores than boys, in other words, girls were more motivated to school than boys. When the effect size value (r) was examined, it was determined that the gender variable creates a low-level effect size for the scores obtained from the total of the school motivation scale (r = -0.205). In this case, the effect size explains 4% of the total variance (r^2= 0.04).

Differentiation of middle school students' school climate and school motivation levels according to class level

In the 2nd sub-problem, Kruskal Wallis- H test was conducted to find out whether class level had a significant difference with school climate and school motivation total scores of middle school students.

Table 3. Kruskal Wallis-H Test results of students' school climate perceptions and school motivation total scores based on class level

Variables	Class level	N	Mean Rank	Sd	X^2	*p*	Significant Groups	η^2
School climate	5th class	208	370,26	3	17.56	.001*	5-7*	0.025
	6th class	171	344.36				5-8*	
	7th class	187	304.82				6-8*	
	8th class	108	292.14					
School motivation	5th class	208	366.71	3	18.49	.000*	5-7*	0.008
	6th class	171	356.78				5-8*	
	7th class	187	321.24				6-8*	
	8th class	108	276. 60				7-8*	
	Total 674							

p<.005*

In Table 3, it was investigated that class level had a significant difference both with school climate and school motivation total scores of middle school students on behalf of lower grades (p>.005). To find out which groups had significant relations with the variables Mann Whitney-U test was conducted for each group and the results were presented in the right column. According to the results, 5th grade students' both school climate and school motivation total scores had significantly higher than the lower grades. Differences were observed between 5.-7., 5.-8., 6.-8th classes for school climate; 5.-7., 5.-8., 6.-8th and also 7.-8th classes for school motivation on behalf of lower grades students. When the effect size value (Eta squared (η2)) is examined, it is determined that the class level variable creates a low level effect size for the scores obtained from the total of the school climate scale (η2 = 0.025). In this case, the grade level variable explains 2% of the total variance in the school climate scale (η2 = 0.025). It was determined that the scores obtained from the total of the school motivation scale (η2 = 0.008) created a low-level effect size. In this case, the class level variable explains 0.8% of the total variance in the motivation scale (η2 = 0.008).

Differentiation of middle school students' school climate and school motivation levels according to location of the school

For the answer of the 3rd sub-problem, Mann Whitney-U test was conducted to find out whether the location of the school had a significant relation between the school climate and school motivation.

Table 4. Mann Whitney-U test results of students' school motivation and school climate perception total scores based on school location

Variables	Group	N	Mean rank	Sum of Ranks	U	*p*
School climate (SC)	Country	207	339.93	7036500	47004.000	.692
	Village	463	333.52	154420		
	Total	670				
School motivation (SM)	Country	207	319.35	6610600	44578.000	.148
	Village	463	342.72	158679		
	Total	670				

There was not statistically relation between school climate and school motivation total scores according to location of the schools (p>.05) as it was presented in Table 4. In other words, the school's being in the village or the country did not affect neither the school climate nor school motivation of the students.

3.4. Findings regarding the relationship between school climate perceptions and school motivation

For the 4th sub-problem of the study, spearman correlation analysis was utilized to identify whether there was a significant correlation between school climate, and school motivation of middle school students and the results were presented in Table 5.

Table 5. Correlation between school climate perceptions & school motivation of middle school students

Variables	1	2	3	4	5	6	7	8	9	10	11
1-SC Total	-										
2-Justice	.716	-									
3-Order and Discipline	.668	.396	-								
4-Parent Involvement	.460	.215	.137	-							
5-Sharing Resources	.571	.373	.332	.062	-						
6-Interpersonal Relation	.778	.502	.554	.295	.257	-					
7-Student- Teacher Relation	.708	.488	.213	.298	.394	.392	-				
8-SM Total	.390	.260	.140	.176	.256	.195	.480	-			
9- Target	.208	.134	-.016	.106	.142	.047	.361	.740	-		
10-Performance	.375	.232	.161	.189	.212	.229	.398	.885	.527	-	
11-Commitment	.339	.249	.138	.119	.236	.163	.417	.807	.467	.571	-

***Correlation is significant at 0.01 level.*

As it was seen in Table 5, total scores of school climate & school motivation of middle school students had a significant medium level (R= .39; p<.001) positive correlation with each other. Additionally, when the sub-dimensions were calculated, significant positive weak and medium level relations were obtained between the sub-dimensions of the scales except for target dimension (p>.001) The highest correlation were observed between motivation total scores and student-teacher relation sub-dimension (R=.48, p<.001), commitment to school (R=.41, p<.001), performance (R=.40, p<.001), and with target dimension (R=.39, p<.001) of the school climate sub-dimensions. In other words, while the school climate perceptions of middle school students effected school motivation in a positive way and the effect was seen mostly in student-teacher relation and their school motivation dimensions.

Findings regarding the predictive effect of school motivation on school climate perceptions

The data obtained from the multiple linear regression analysis regarding the predictive effect of school motivation on school climate perceptions of middle school students were presented in Table 6.

Table 6. Multiple linear regression analysis regarding the effect of the sub-dimensions of school motivation on school climate

Variables	B	SHB	β	T	p
Dependent	1.715	.070		24.350	.000*
School commitment	.094	.020	.247	4.710	.000*
Performance	.122	.023	.292	5.280	.000*
Target	-.077	.021	-.191	-3.592	.000*

R=0.377; R^2=0.142; F=36.423; p=0.000

In the first model, school motivation was identified as an independent variable with sub-dimensions while school climate was the dependent variable. As it was seen in table 6, the model showing the relationship between school motivation sub-dimensions and school climate was consistent (p <.005). School motivation sub-dimensions explained 14% of the change in the school climate variable.

When the t-test results regarding the significance of the regression coefficient is examined, school commitment (t = 4.71; p <.005); It is seen that performance (t = 5.28; p <.005), target (t = 3.59; p<.005) have a positive and significant effect on the school climate.

When the order of importance of the sub-dimensions of school motivation on the school climate was examined, it was observed that the most important factor was performance (β = 0.29); the second one was listed as school commitment (β = 0.24), and the last one was target (β =- 0.19). According to the results of the regression analysis, the mathematical model related to the prediction of the school climate variable by the school motivation sub-dimensions is as follows.

(S: School commitment, P: performance, T: target): School Climate = 1.71 + 0.29*P + 0.24*S-0.19*T

Findings regarding the predictive effect of school climate sub-dimensions on school motivation

The data obtained from the multiple linear regression analysis regarding the predictive effect of school climate perceptions on school motivation of middle school students were given in Table 7.

Table 7. Multiple linear regression analysis regarding the effect of the sub-dimensions of school climate on school motivation

Variables	B	SHB	B	t	p
Dependent	4.627	.360		12.860	.000*
Justice	.028	.175	.007	.157	.875
Order & Discipline	-.119	.182	-.028	-.652	.515
Parent Involvement	-.113	.175	-.024	-.645	.519
Sharing Resources	.005	.141	.001	,037	.970
Interpersonal Relation	-.116	.205	-.026	-.567	.571
Student-Teacher Relation	2.155	.210	.440	10.252	.000*

R=0.425; R^2=.181; F=24.438; p=0.000

In the second model, school climate was identified as an independent variable with sub-dimensions while school motivation was the dependent variable. As it was seen in table 7, the model showing the relationship between school climate sub-dimensions and school motivation was consistent (p<.005). School climate sub-dimensions explained 18% of the change in the school motivation variable.

When the t test result regarding the significance of the regression coefficient was examined, only the 6th sub-dimension named student-teacher relation (t=10.252; p<.005) had a positive and significant effect on the school climate. The other factors did not have any significant effects on school motivation variable so the mathematical model related to the prediction of the school motivation variable by the school climate sub-dimensions is as follows.

School motivation=4.62+ 0.44*student-teacher relation.

Discussion

In this study, it was aimed to investigate the relationship between school climate perceptions and school motivation of middle school students studying at 2 different schools in Aydin district and to investigate whether school climate perceptions and school motivation of the students differ significantly according to gender, grade levels, and location of the school variables. Also, two models tested to determine whether sub-dimensions of school climate have a significant effect on school motivation and sub-dimensions of school motivations have a significant effect on the school climate.

There are different measurement tools and studies that address school climate and school motivation from different perspectives. In this study school climate was investigated in 6 dimensions called justice, order and discipline, parent involvement, sharing resources, interpersonal relationships of students and student-teacher relations while school

motivation was investigated in 3 dimensions called target, performance, and school commitment. The variables were determined as gender, location of the school, and grade level in accordance with the literature. When the databases were investigated, it was observed that there were a few similar studies conducted with teachers, although no study exactly overlapped with this study, so the study's findings are intended to contribute to the relevant field.

Although the concept of school climate is gathered on basic and common components, it has a structure that can differ between cultures. For this reason, variables whose effects were examined in the study and thought to be related to school climate were selected based on scale dimensions and relevant literature. According to the results of the 1st sub problem differentiation between gender, grade levels and location of the schools on school climate and school motivation were investigated. Except from location of the school, grade level variables had significant relation with both school climate, and school motivation of the middle school students. On the other hand, gender had a strong effect on school motivation, in other words girls had statistically higher school motivation than boys. There are studies that suggest gender differences in the literature (Donmez & Tayli, 2018; Koc, 2021; Ozgenel et al., 2018). Additionally, students studying in lower grades had more positive school climate perceptions and school motivations. As the grade level of the students increases, their positive perceptions towards school and their motivation to go to school decreases. In a sense, this shows that although students adopt and love school more at an early age, they do not enjoy going to school as they get older. There are studies in the literature that support this situation. LaRocque (2008), for example, analysed the effect of gender and grade level on students' views of school and classroom climate. Gender, but not grade level, had a statistically significant relationship with students' perceptions of school, and classroom settings. 5th graders perceived their school climate as more enjoyable and more motivated to school than 6th and 7th graders. Similarly 6th and 7th graders perceived their school climate as more satisfying than 8th graders. The lowest school climate perception and motivation scores belong to 8th graders. Likely Ozbulat (2020) and Koc (2021) found 5th graders had lower school motivation scores than the higher-grade students. The findings indicated that students' satisfaction with their academic experience decreased as they advance through the grades. Likely, middle school students had a more positive view of the school than high school students, according to the research results (Waasdorp et al., 2019). It is a thought-provoking finding that the students do not enjoy school, and their positive perception towards school increases as their grade level increases both for related studies.

In schools where the number of students in the classroom is low, it is expected that there will be a friendlier atmosphere, and students will be positively affected by this situation. In the research sample village schools have fewer students in the classroom, while central schools have more students. From this point of view, village schools seem to have an advantage in creating a friendly school climate but the location of the schools did not create a strong effect on the perception of the school climate or motivation in the study contrary to the research result that was suggested a lower number of classes affected school climate perceptions of students in a positive way (Barksdale et al., 2019). Considering that the studies conducted abroad are large-scale, it can be thought that this situation is due to limited sample selection.

Secondly, correlation between school climate perceptions and school motivation scores in total and sub-dimensions of the two variables were investigated. It was found that there was a statistically positive medium-level correlation between total scores of school climate perceptions and school motivation levels of middle school students. Also, significant low and medium correlations were found between sub-dimensions with two variables in a positive way. But the highest correlation was observed between student-teacher relation and school motivation, which is based on students' thoughts the most important factor that appeals students to school was their relationship with teachers. This is an indication of how important teachers are in students' lives and school motivation. Students associated their school motivation with communication with their teachers. Similar to this finding, Fenzel and O'Brennan (2007) suggested students' perceptions of the quality of the peer social climate in their schools were related to levels of intrinsic motivation and teachers played the most prominent role in establishing school climate in urban African American middle school students who were at risk.

Additionally, due to the results of these studies, the following findings have been reached. Akkanat and Gokdere (2018) found that besides the involvement of parents and teachers, the school climate, as perceived by children contributed significantly to the motivation, talent, and creativity levels in science classes in their study. Reaves and Cozzens (2018) indicated that a teacher's views of aspects of a healthy and welcoming school environment were linked to optimism and self-efficacy. Ozgenel et al., (2018) found a positive and medium level relationship was identified between the school climate and secondary school students' attachment to school, teachers, and friends. Demiroz (2020) explored a significant and strong relationship between the students' perceptions of school climate and their school belonging. To sum up, the findings indicated significant correlations between perceived school climate and various motivational types. As it was observed, a need for a positive school climate and school motivation can no longer be ignored for students to come to school willingly with having a positive school climate perception.

At last predictive effects of school climate perceptions and school motivation of middle school students were tested as forming models. Results indicated that students' love of school and their willingness to attend school means achieving affective acquisitions that directly affect cognitive input behaviors. Student-teacher relations were determined as the main connected variable with positive school climate perceptions of the middle school students. Notably, student-

teacher relations were found to be the most effective predictor alone for students' school motivation. That means teachers can establish school climates by themselves beginning with classroom settings. Although not directly related, Fan and Williams (2018) revealed that the student self-efficacy and intrinsic motivation play a mediating role in the relationship between school climate expectations and reading and mathematics achievement and hypothesized model matched the data well. Similarly, in a university sample, Bilgin et al. (2021) suggested that school climate was a significant predictor of motivation.

Conclusion

In conclusion, school climate encompasses individual experiences (e.g., relationships, teaching and learning, and safety) as well as broader organizational trends. It is a phenomenon that affects a vast number of people rather than a single individual. It encompasses social, mental, and physical standards, beliefs, and aspirations that help people feel safe. A positive, long-term school environment encourages youth growth and learning, which is essential for a productive, long-term future (Cohen et al., 2009). As we need mentally, socially, and emotionally balanced and healthy generations to develop democratic societies, it is valuable to create a satisfying school climate for them.

Although the models tested were at a low level, these findings should not be underestimated. Considering that many variables affect the success of the education system, the results of this study revealed the necessity to draw on the concepts of school climate and school motivation, which are the significant predictors of each other.

Recommendations

Research data were collected through scales, but the concept of school climate and motivational features are multi-dimensional concepts. In future studies, the findings can be supported by making in-class and outside-class observations in schools.

Although not a new concept in the context of the work on the school climate education in Turkey consists of a limited number of noteworthy. This study was carried out with a limited number of student groups in two secondary schools in a district. Studies can be conducted across the country with different variables, longitudinally and with large samples, to examine the perceptions of school climate and the school motivation levels of students.

Along with one of the compelling results of the study, students do not enjoy going to school as they get older and have lower school climate perception. The reasons for this situation are worth investigating by conducting interdisciplinary studies including guidance psychological counselling, education management processes and curriculum development studies integrated with educational activities inside and outside the classroom to create a happy and healthy learning environment.

Limitations

One of the study's drawbacks was that it was conducted with students from a village school and a country school in the district center. Therefore, the data that cannot be generalized across whole populations were obtained. Secondly, the perception of school climate, and the concept of school motivation are multidimensional, so the data obtained in this study were limited to measurement tools.

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