School Climate, Teacher Self-Efficacy, and Professional Satisfaction: A Study of Relations

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Abstract

School climate, teacher self-efficacy, and professional satisfaction are important concepts that affect both teachers' professional development and quality of education. This study aimed to determine teachers' school climate perceptions, self-efficacy beliefs, and professional satisfaction levels, and to examine the relationship between these concepts. It was designed in a correlational survey model. The sample of the study consisted of 397 teachers working in kindergartens, primary, secondary, and high schools in a province center in the Central Black Sea region of Turkey, in the 2020-2021 academic year. A Personal Information Form, Comprehensive Assessment of the School Environment, Teachers' Sense of Efficacy Scale, and Job Satisfaction Questionnaire were used in the data collection procedure. In the data analysis, both descriptive and inferential statistics were performed. Results revealed that: teachers' school climate perceptions were at a medium level, and female teachers' school climate perceptions were found to be statistically higher than those of males'. It was intriguing that only teaching level was associated with school climate, teacher self-efficacy, and professional satisfaction, while teaching experience and academic degree were not associated. A medium, positive, and significant relationship was found to be between teachers' school climate perceptions, professional satisfaction, and teacher self-efficacy. 12% of the variance in teacher self-efficacy and 35% of the variance in professional satisfaction are explained by school climate. Results are discussed within the related literature, and recommendations are made for further research and for stakeholders of education.

Keywords: School climate, teacher self-efficacy, professional satisfaction

Öğretmenlerin Okul İklimi Algıları, Öğretmen Öz-Yeterliği İnançları ve Mesleki Doyumları Arasındaki İlişkinin İncelenmesi
Öz

Okul iklimi, öğretmen öz-yeterliği ve mesleki doyum, hem öğretmenlerin mesleki gelişimini hem de eğitimin kalitesini etkileyen önemli kavramlardır. Bu araştırmanın amacı, öğretmenlerin okul iklimi algılarını, öz-yeterlik inançlarını ve mesleki doyum düzeylerini belirlemek ve bu kavramlar arasındaki ilişkiyi incelemektir. Çalışma ilişkisel tarama modelinde tasarlanmıştır. Araştırmanın örneklemini 2020-2021 eğitim öğretim yılında Türkiye'nin Orta Karadeniz bölgesindeki bir il merkezindeki anaokulu, ilkokul, ortaokul ve liselerde görev yapan 397 öğretmen oluşturmaktadır. Veri toplama işleminde Kişisel Bilgi Formu, Okul Ortamını Kapsamlı Değerlendirme Ölçeği, Öğretmen Yeterlik Algısı Ölçeği ve İş Doyumu Ölçeği kullanılmıştır. Verilerin analizinde hem tanımlayıcı hem de çıkarımsal istatistikler yapılmıştır. Bulgular öğretmenlerin okul iklimi algılarının orta düzeyde olduğunu ve kadın öğretmenlerin okul iklimi algılarının erkeklerden istatistiksel olarak daha yüksek olduğunu ortaya koymuştur. Araştırmanın ilgi çekici bulgularından biri, sadece öğretim düzeyinin okul iklimi, öğretmen öz-yeterliği ve mesleki doyum ile ilişkili olması, öğretim deneyimi ve akademik derecenin ilişkili olmamasıydı. Öğretmenlerin okul iklimi algıları ile mesleki doyumları ve öğretmen özyeterlikleri arasında orta düzeyde, pozitif ve anlamlı bir ilişki bulunmuştur. Okul iklimi öğretmen öz yeterliğinin varyansının %12'sini ve mesleki doyumun varyansının %35'ini açıklamıştır. Sonuçlar ilgili literatürle tartışılmış, ileriki çalışmalar ve eğitimin paydaşları için önerilerde bulunulmuştur.

Anahtar kelimeler: Okul iklimi, öğretmen öz-yeterliği, mesleki doyum.

INTRODUCTION

People's characteristics, self-efficacy beliefs, and perceptions towards the organizations they work for affect their business performance and the productivity of the organizations. Undoubtedly, teachers are one of the major stakeholders that increase productivity in educational institutions. Therefore, teachers' perceptions of the schools they work for may affect their professional performance and the quality of education. Edmonds (1979) emphasized the importance of a positive school culture for the effectiveness of schools. So, having healthy and positive perceptions towards the school is very important both for the development of educational objectives, and the professional and psychological satisfaction of teachers, students, and administrators who are the stakeholders of the school culture.

School Climate

Although goals and processes are similar, every educational institution has a distinctive, observable ambiance and atmosphere. This distinctive atmosphere of educational institutions is named the school climate. For the school, the climate is a metaphorical concept and generally indicates the quality of the relationship and interactions within the school (Freiberg, 1999). School climate expresses the perceptions that all stakeholders of the school get experienced, and share about the learning environment. Although the school climate is explained with metaphorical concepts such as atmosphere and character, it also can be associated with various variables (Hoy, 2003). Cohen (2009) stated that these variables are related to the physical, social, affective, and academic features of the school. The physical environment of the school consists of the school building, the number of teachers, students, and administrators, the number and cleanliness of classrooms, course materials, and technological infrastructure. The relationship and interaction between the partners of the school and participation in the decision-making process have been described as the social environment of the school. The emotions that the stakeholders experience in the school such as love, trust, respect, and tolerance, refer to the affective environment of the school. The academic environment covers all activities related to instruction, which is its main purpose. In light of this information, school climate can be defined as the character and quality of the school reflecting the interpersonal relationships, instructional process, emotions and thoughts, administrative practices, and the physical and organizational structure obtained from the experiences of teachers, students, administrators, and parents.

We know that the combination of behavioral and emotional perceptions about the school, experiences in the learning environment, and value judgments are effective in the formation of the school climate. Accordingly, positive perceptions of the stakeholders towards the school indicate a positive and healthy school climate and negative perceptions indicate a negative school climate (Zullig, Koopman, Patton, & Ubbes, 2010). A positive and healthy school climate has positive effects on all stakeholders of the school, and education outcomes in general (Berkowitz, Astor, Pineda, DePedro, Weiss, & Benbenishty, 2021; Kurt & Çalık, 2010; Saputra, Supriyanto, Astuti, Ayriza, & Adiputra, 2020). That is because, in schools that develop a positive school climate, all stakeholders feel valued, and cooperate with a sense of higher commitment (Thapa, Cohen, Guffey & Higgins-D'Alessandro, 2013). Cohen, McCabe, Michelli, and Pickeral (2009) emphasized that a sustainable positive school climate promotes the learning and individual development necessary for a productive, participatory, and satisfying life in a democratic society.

The concept of school climate, which is both affected by and affects the feelings, behaviors, and perceptions of the stakeholders, has been studied in the previous literature. In previous studies, the relationship between school climate and many variables have been examined such as organizational productivity (Abdel-Basset, Manogaran, Mohamed, & Rushdy, 2019; Hoy, Tarter & Kottkamp, 1991), administrative leadership (Augustine, Engberg, Grimm, Lee, Wang, Christianson, & Joseph, 2018; Dinham, Cairney, Craigie, & Wilson, 1995; Mendel, Watson & MacGregor, 2002), teacher behaviors (Dilbaz-Sayın, 2017; Malinen, & Savolainen, 2016; Rafferty, 2003; Xiaofu & Qiwen, 2007; Wilson, Marks Woolfson, & Durkin, 2020), and student achievement (Berkowitz, Moore, Astor, & Benbenishty, 2017; Pong & Zeiser, 2012). These studies revealed that school climate has positive effects on the mentioned variables. In addition, Aldridge and Fraser (2016) claimed that school climate may be related to teachers' self-efficacy beliefs. Teachers' self-efficacy belief is also an important psychological concept related to teacher effectiveness and the quality of education.

Teacher Self-Efficacy

Self-efficacy belief, based on Bandura's (1982) social learning theory, is related to personal judgments about how well a person can perform necessary actions to deal with possible challenges. According to Schunk (1990), self-efficacy belief is one of the most important predictors of human behaviors, and is effective in choosing and achieving a goal, controlling the environment, and succeeding by organizing necessary actions. If individuals

believe that they have the ability and control power to perform a task, they are more willing to choose the task, express their determination, and exhibit necessary behaviors (Eaton & Dembo, 1997; Sharp, 2002). On the contrary, individuals may not exhibit the desired behaviors, despite having the necessary equipment, because, when people believe that their actions will not bring desired results, they become reluctant to exhibit necessary behaviors (Üstüner, Demirtaş, Cömert & Özer, 2009). Self-efficacy belief affects individuals' behaviors as well as their thinking and emotional reactions. Individuals with a high self-efficacy belief can be more comfortable and productive in performing difficult duties. A low self-efficacy causes people to believe duties and responsibilities are even more difficult than they are. This way of thinking increases anxiety, and stress, and narrows the perspective of an individual to solve a problem in the best way. In conclusion, self-efficacy belief has a strong impact on the achievement levels of individuals, by managing environmental factors positively (Zimmerman, 2002; Üredi & Üredi, 2006). From this perspective, we can claim that self-efficacy is an important concept in understanding, expressing, and developing teachers' feelings, thoughts, and behaviors toward instruction that is affected by several environmental and psychological factors.

Teachers' professional competencies have been the subject of educational studies recently. This concept takes place in the literature as "teacher self-efficacy perception or belief" (Yeşilyurt, 2013). Teacher self-efficacy is described as the personal belief of teachers in the ability to develop knowledge, attitudes, and behaviors of students with different intelligence, readiness, and motivation levels (Skaalvik & Skaalvik, 2010). Put differently, self-efficacy for teachers is the competence of instructional activities conducted to ensure that all students learn (Koşar, 2015). We know that a high level of self-efficacy means a positive situation for teachers. Teacher self-efficacy belief improves teachers' instructional behaviors and positively affects students' motivation levels and academic achievement (Klassen & Chiu, 2010). In addition, self-efficacy belief affects teachers' teaching quality, and sustainability of it (Erdem & Demirel, 2007). Teachers with high self-efficacy are more enthusiastic, energetic, and volunteer to allow new methods and techniques to solve classroom issues (Mojavezi & Tamiz, 2012). Besides, we can claim that teachers with high self-efficacy can respond to students' social, cognitive, and affective needs, be more diligent in solving the problems encountered, be more willing to apply new teaching methods and techniques and be more self-sacrificing and enthusiastic in performing classroom activities.

Professional Satisfaction

In addition to teachers' self-efficacy, other psychosocial factors such as job satisfaction, relationships, interaction with colleagues, and collaboration with stakeholders are also efficient in the development of teachers' attitudes and performances (Demirtaş, 2010; Ho & Au, 2006). Professional satisfaction is defined as the combination of positive and negative judgments of an individual about the profession (Cerit, 2009). Put in a different way, professional satisfaction is employees' attitudes towards the profession as a result of a personal evaluation of the conditions of the profession and the acquirements from the profession. According to Hoy (2007), teachers' professional satisfaction includes positive emotions, expectations, and perceptions towards the instruction process and learning environment. Teachers' professional satisfaction stems from the positive contributions to students' academic and social developments, rather than the financial opportunities and acquirements offered by their profession (Bogler, 2002), because students are the output that teachers develop as a result of the instructional process. Besides, working conditions, quality of job, decent salary, the possibility of promotion, and organizational atmosphere are the environmental factors affecting teachers' professional satisfaction (Taşdan & Tiryaki, 2010).

Teachers' professional satisfaction may be a significant concept in the quality of instruction. Previous studies revealed that teachers with high-level professional satisfaction have higher motivation levels (Ololube, 2006), better performances (Chamundeswari, 2013), and a sense of belonging to the profession (Skaalvik & Skaalvik, 2010) compared to teachers with low levels of professional satisfaction. In addition, teachers with high professional satisfaction are more successful in solving classroom problems, time management, and contributing to the personal development of students (Kıran & Sungur, 2018). Therefore, teachers' professional satisfaction may be considered a significant concept concerning its direct effect on the quality of education.

Purpose of the Study

The teaching profession is influenced both by the professionalism that the profession requires, and many external factors. School climate perception is one of these external factors (Uline, Miller & Tschannen-Moran, 1998). If teachers love and adopt the school and perform with positive emotions, this sets a positive climate in the school, and in turn, this positive climate increases teachers' professional motivation and performance. School climate is an organizational concept that affects and is affected by all stakeholders in the school, including administrators, teachers, and students. On the other hand, teachers' self-efficacy beliefs and professional

satisfaction are necessary preconditions for effective and efficient instructional process. Therefore, teachers should have adequate self-efficacy and professional satisfaction for the quality of education.

Today, schools' goals are not only to provide quality education and instruction but also to enable an optimal working environment for teachers (O'Neill, 2000). Previous literature tells us that in schools that developed a positive climate, teachers exhibit high performance, and so students' positive behaviors and academic achievements increase (Acosta, 2002; Bektaş & Nalçacı, 2013; Reynolds, Lee, Turner, Bromhead & Subasic, 2017). Self-efficacy belief and professional satisfaction are the significant factors affecting teachers' performance, and can also be affected by the school environment. Therefore, it has been seen as important to examine the relationship between these key concepts which are preconditions for an effective instructional process. In addition, when we checked out the previous literature, we found many studies related to these concepts, but we realized that the relationship between these concepts has not been adequately studied. Thus, the current study aimed to examine the relationship between school climate, teacher self-efficacy, and professional satisfaction. This case makes this study unique. To this end, the following research questions were tried to be answered:

1. What is the level of teachers' self-efficacy, professional satisfaction, and school climate perceptions?
2. Do teachers' school climate perceptions, self-efficacy, and professional satisfaction levels differ according to demographic characteristics?
3. What is the relationship between school climate and teachers' self-efficacy beliefs?
4. What is the relationship between school climate and teachers' professional satisfaction?
5. What is the relationship between teachers' self-efficacy belief and professional satisfaction?

METHOD

Research model

The current study was designed in a correlational survey model based on the quantitative research paradigm.

Research sample

The universe of the study consists of teachers working in kindergarten, primary, secondary and high schools in a city in the central black sea region of Turkey for the 2020-2021 academic year. The sample consists of 397 teachers who work at the city center and voluntarily participated in the study. The proportional cluster sampling method, one of the probability sampling techniques, was used to determine the sample. This sampling method aims to determine the subgroups in the population and include them in the sample to the extent that they represent the universe. Since this sampling method ensures that all subgroups representing the universe are included in the sample, enables valid and generalizable statistical inferences (Henderson & Sundaresan, 1982). A total of 168 educational institutions serve the city center, including 17 kindergartens, 75 primary schools, 48 middle schools, and 28 high schools. Among a total of 168 educational institutions 3 kindergartens, 8 primary schools, 5 secondary schools, and 3 high schools were chosen randomly. The sample consists of 397 teachers who worked at these randomly selected schools, and volunteered to participate in the study. The demographic features of the participants are shown in Table 1.

Table 1. Demographic Features of the Participants

Variables		*f*	*%*
Gender	Male	196	49.4
	Female	201	50.6
Teaching Experience	1-5 Years	78	19.5
	6-10 Years	102	25.7
	11-20 Years	99	24.6
	20+ Years	100	25.2
Academic Degree	Bachelor	296	74.5
	Postgraduate	101	25.5
Teaching Level	Kindergarten	81	20.0
	Primary School	114	28.7
	Secondary School	103	25.9
	High School	99	24.4

Research Instruments and Procedure

A "Personal Information Form", "Comprehensive Assessment of School Environment", "Teachers' Sense of Efficacy Scale" and "Job Satisfaction Questionnaire" were used in the data collection procedure.

Demographic Information Form

A personal information form developed by the researcher was used to determine participants' demographic features such as gender, teaching experience, academic degree, and training level.

Comprehensive Assessment of School Environment

Comprehensive Assessment of School Environment (CASE), developed by Nebraska University and West Michigan University in 1982 and adapted to Turkish by Acarbay (2006), was used to measure teachers' school climate perceptions. The scale consisting of 33 items is a 5-point Likert type and scored between 1 (Strongly disagree) and 5 (Strongly agree). According to the results of exploratory factor analysis, the scale consists of 6 factors: teacher-student relationship (12 items, 1-12), security and regularity (6 items, 13-18), administration relationship (3 items, 19-21), student behavior (4 items, 22-25), peer relations (4 items, 26-29) and community and school relations (4 items, 30-33). The minimum score that could be obtained from the scale is 33 (1.00), the maximum score is 165 (5.00) and the average score of the scale is 99 (3.00). A high score obtained from the scale indicates a positive school climate. As a result of the validity and reliability study, the Cronbach Alpha coefficient was calculated as .94 for the entire scale. For sub-factors, the Cronbach Alpha coefficient is calculated at .84 for teacher-student relationship, .84 for security and regularity, .83 for administration relationship, .81 for student behavior, .85 for peer relations, and .82 for community and school relations (Acarbay, 2006). In the current study, the Cronbach Alpha coefficient was calculated at .87 for all measurements, indicating high score reliability.

Teachers' Sense of Efficacy Scale

Teachers' Sense of Efficacy Scale (TSES), which was created by Tschannen-Moran and Woolfolk-Hoy (2001) and adapted to Turkish by Çapa, Çakıroğlu, and Sarıkaya (2005), was used to examine teachers' self-efficacy beliefs. The scale consists of 24 items in a 9-point Likert type and scored between 1-2 (insufficient), 3-4 (less sufficient), 5 (somewhat sufficient), 6-7 (quite sufficient), and 8-9 (very sufficient). In the factor analysis, it was seen that the scale consists of three factors: Efficacy in Student Engagement (ESE) (1, 2, 4, 6, 9, 12, 14, 22), Efficacy in Instructional Strategies (EIS) (7, 10, 11, 17, 18, 20, 23, 24) and Efficacy in Classroom Management (ECM) (3, 5, 8, 13, 15, 16, 19, 21). The minimum score that could be obtained from the scale is 24, the maximum score is 216 and the average score of the scale is 120 (M=5.00). A high score obtained from the scale indicates a positive self-efficacy level. In the validity and reliability study conducted with 628 participants, the alpha values of the sub-factors of the scale were calculated as ESE= .82, EIS= .86, and ECM= .84 (Çapa, Çakıroğlu & Sarıkaya, 2005). In the current study, the alpha was calculated at .81 for all measurements, indicating high score reliability.

Job Satisfaction Questionnaire

The Job Satisfaction Questionnaire (JSQ) was developed by Hackman and Oldham (1975) and adapted to Turkish by Silah (2002). Later, the questionnaire was applied to teachers, and validity and reliability study was performed by Taşdan (2008). The questionnaire consisting of 14 items is in a 5-point Likert type and scored between 1 (never satisfies me) and 5 (makes me very satisfied). The minimum score that could be obtained from the JSQ is 14, the maximum score is 70 and the average score of the scale is 42 (M=3.00). A high score obtained from the questionnaire shows a high level of job satisfaction for teachers. According to Taşdan's (2008) validity and reliability study, Cronbach-Alpha internal consistency coefficient was calculated at 0.95 for the whole questionnaire. In the current study, the alpha was calculated at .89 for all measurements, indicating high score reliability.

Data analysis

One of the assumptions for performing parametric tests in the analysis is the normal distribution of the data (Buyukozturk, 2015). Therefore, in the current study, before starting the data analysis process, all data obtained have been tested by the Shapiro-Wilk test to check for normal distribution. The other main assumption for normal distribution is to look at the kurtosis and skewness values of the data. The data obtained from the CASE, the TSES, and the JSQ were close to normal distribution since the kurtosis and skewness values were between -1 and +1, and according to the Shapiro-Wilk test results (p>.05) (Buyukozturk, 2015). Therefore, we decided to perform parametric tests in the analysis. Descriptive statistics such as frequency, percentage, arithmetic mean, and standard deviation were used to describe participants' demographic characteristics (gender, teaching experience, academic degree, and teaching level). In addition, procedural statistics such as independent samples t-test for gender and academic degree variables, one-way variance analysis (ANOVA) for occupational experience and teaching level

variables, and regression analysis for the relations of the determining variables were performed. All results were interpreted in p<.05 significance level.

Research ethics

Ethical issues were taken into consideration in the current study. The permit application was made to the Social and Human Sciences Research Ethics Committee of the Tokat Gaziosmanpaşa University, and after the approval (Date: 24.11.2020, Number: 33490967-44/ E-13516), the study was conducted. The researcher directly reached the teachers included in the study group, gave information about the purpose of the study, and applied the instruments. In addition, during the research, it was ensured that there was no physical or psychological harm to the participants. They also were assured that the research data would be kept in confidence.

FINDINGS

Findings Regarding the First Research Question

To reveal teachers' self-efficacy, professional satisfaction, and school climate perceptions, the mean scores obtained from the scales were analyzed and summarized (Table 2).

Table 2. Descriptive Statistics Regarding the Determined Variables

	N	Min	Max	$\bar{X}$	Sd	Skewness	Kurtosis
CASE Total	397	1.15	4.94	3.47	.64	-.22	.78
Teacher-student Relationship	397	1.17	5.00	3.77	.71	-.56	.71
Security and Regularity	397	1.33	5.00	3.57	.74	-.16	-.15
Administration Relationship	397	1.00	5.00	3.03	1.06	.065	-.92
Student Behavior	397	1.00	5.00	3.13	.93	.19	-.69
Peer Relations	397	1.00	5.00	3.08	.96	.088	-.72
Community and School Relations	397	1.00	5.00	3.49	.83	-.098	-.49
TSES Total	397	2.54	4.83	3.87	.42	-.164	.44
ESE	397	2.25	4.88	3.78	.47	-.32	.14
EIS	397	2.50	5.00	3.93	.49	-.12	.52
ECM	397	2.63	4.88	3.89	.50	-.19	-.42
JSQ Total	397	1.71	4.79	3.32	.64	.059	-.38

As seen in Table 2, the minimum score obtained from the CASE was 1.15, the maximum score was 4.94, and the mean score of the CASE was calculated as $\bar{X}$=3.42 (Sd=.64). Considering that the average score that can be obtained from the CASE is $\bar{X}$=3, we can say that teachers' school climate perceptions were in a moderate level. Since the mean score ($\bar{X}$=3.87) obtained from TSES is close to the average score ($\bar{X}$=3) of the scale, it can be said that the self-efficacy levels reported by the teachers were at a moderate level. Similarly, since the mean score ($\bar{X}$=3.32) obtained from JSQ was quite close to the average score ($\bar{X}$=3) of the scale, teachers' professional satisfaction levels were at a moderate level.

Findings Regarding the First Research Question

Examining if teachers' school climate perceptions, teacher self-efficacy beliefs, and professional satisfaction levels differ according to demographic features was the second research question. To examine if teachers' school climate perceptions, self-efficacy beliefs, and professional satisfaction levels differ according to the gender variable, independent samples t-test was performed on the mean scores of CASE, TSES, JSQ, and dimensions (Table 4).

Table 3. T-test Analysis of Gender Variable for CASE, TSES, and JSQ

	Groups	N	$\bar{X}$	Sd	t	Df	p
CASE Total	Female	201	3.58	.58	-2.70	193	.008*
	Male	196	3.34	.68			
Teacher-Student Relationship	Female	201	3.89	.61	-2.71	193	.007*
	Male	196	3.62	.78			
Security and Regularity	Female	201	3.69	.67	-2.32	193	.021*
	Male	196	3.44	.80			
Administration Relationship	Female	201	3.09	1.03	-.92	193	.360
	Male	196	2.95	1.08			
Student Behaviours	Female	201	3.25	.97	-1.79	193	0.74

	Male	196	3.00	.86			
Peer Relationship	Female	201	3.28	.93	-3.18	193	.002*
	Male	196	2.84	.96			
Community and School Relations	Female	201	3.51	.77	-.352	193	.725
	Male	196	3.47	.88			
TSES Total	Female	201	3.89	.46	-748	193	.455
	Male	196	3.84	.39			
Efficacy in Student Engagement	Female	201	3.82	.43	-126	193	.209
	Male	196	3.74	.52			
Efficacy in Instructional Strategies	Female	201	3.94	.44	-301	193	.764
	Male	196	3.92	.51			
Efficacy in Classroom Management	Female	201	3.89	.46	-399	193	.691
	Male	196	3.87	.51			
JSQ Total	Female	201	3.39	.62	-1.503	193	.135
	Male	196	3.25	.66			

*p<05

As seen in Table 4, CASE mean score of the female teachers was $\bar{X}$=3.58 (Sd=.58) and the males' was $\bar{X}$=3.34 (Sd=.68). Results of the t-test revealed that the mean scores of teachers on CASE were statistically different according to the gender variable, t(193)=-2.70, p<.05. For "Teacher-Student Relationship" sub-factor, females' mean score ($\bar{X}$=3.89, Sd=.58) was found to be statistically higher than males' ($\bar{X}$=3.62, Sd=.78), t(193)=-2.71, p<.05. For "Security and Regularity" sub-factor, females' mean score ($\bar{X}$=3.69, Sd=.67) was found to be statistically higher than males' ($\bar{X}$=3.44, Sd=.80), t(193)=-2.32, p<.05. For "Peer Relations" sub-factor, females' mean score ($\bar{X}$=3.28, Sd=.93) was found to be statistically higher than males' ($\bar{X}$=2.84, Sd=.96), t(193)=-3.18, p<.05. And, it is found that, "Administration Relationship", "Student Behaviors" and "Community and School Relations" sub-factors did not differ statistically according to the gender variable (p>.05). Teachers' self-efficacy belief and professional satisfaction levels did not statistically differ according to their genders (p>.05).

To examine if teachers' school climate perceptions, self-efficacy beliefs, and professional satisfaction levels differ according to their occupational experiences, an ANOVA test was performed on the mean scores obtained from related scales (Table 4).

Table 4. ANOVA Analysis of Teaching Experience Variable

		Sum of Squares	df	Mean Square	F	p
CASE Total	Between Groups	.944	3	.315		
	Within Groups	77.401	393	.405	.777	.508
	Total	78.345	394			
Teacher-Student Relationship	Between Groups	0.901	3	.300		
	Within Groups	95.732	393	.501	.599	.616
	Total	96.633	394			
Security and Regularity	Between Groups	.614	3	.205		
	Within Groups	107.502	393	.563	.364	.779
	Total	108.116	394			
Administration Relationship	Between Groups	2.371	3	.790		
	Within Groups	215.623	393	1.129	.700	.553
	Total	217.994	394			
Student Behaviours	Between Groups	4.411	3	1.470		
	Within Groups	161.743	393	.847	1.736	.161
	Total	166.154	394			
Peer Relationship	Between Groups	3.333	3	1.111		
	Within Groups	178.638	393	.935	1.188	.316
	Total	181.971	394			
Community and School Relations	Between Groups	1.100	3	.367		
	Within Groups	131.770	393	.690	.531	.661
	Total	132.870	394			
TSES Total	Between Groups	.210	3	.070		
	Within Groups	34.880	393	.183	.384	.765
	Total	35.091	394			

ESE	Between Groups	.825	3	.275		
	Within Groups	42.771	393	.224	1.228	.301
	Total	43.596	394			
EIS	Between Groups	.111	3	.037		
	Within Groups	43.024	393	.225	.164	.921
	Total	43.134	394			
ECM	Between Groups	.111	3	.037		
	Within Groups	44.947	393	.235	.157	.925
	Total	45.057	394			
JSQ Total	Between Groups	1.194	3	.398		
	Within Groups	78.349	393	.410	.971	.408
	Total	79.544	394			

The ANOVA test results given in Table 5 showed that teachers' school climate perceptions, self-efficacy, and professional satisfaction levels were not statistically different according to their teaching experiences ($p>.05$).

To examine if teachers' school climate perceptions, self-efficacy beliefs, and professional satisfaction levels differ according to the academic degree variable, independent groups t-test was performed on the mean scores of related scales. The results revealed that teachers' school climate perceptions, self-efficacy belief, and professional satisfaction levels were not statistically different according to their academic degrees ($p>.05$), (Table 5).

Table 5. T-test Analysis of Academic Degree Variable

	Groups	N	$\bar{X}$	Sd	t	Df	p
CASE Total	Bachelor	296	3.48	.62	.526	193	.600
	Postgraduate	101	3.42	.68			
Teacher-Student Relationship	Bachelor	296	3.78	.70	.719	193	.473
	Postgraduate	101	3.70	.71			
Security and Regularity	Bachelor	296	3.60	.74	1.156	193	.247
	Postgraduate	101	3.46	.76			
Administration Relationship	Bachelor	296	3.03	1.02	-.167	193	.868
	Postgraduate	101	3.05	1.16			
Student Behaviors	Bachelor	296	3.13	.91	-.121	193	.903
	Postgraduate	101	3.15	.98			
Peer Relationship	Bachelor	296	3.08	.91	.279	193	.781
	Postgraduate	101	3.04	1.14			
Community and School Relations	Bachelor	296	3.49	.83	.762	193	.921
	Postgraduate	101	3.50	.82			
TSES Total	Bachelor	296	3.86	.62	-.572	193	.521
	Postgraduate	101	3.60	.68			
ESE	Bachelor	296	3.78	.74	-.192	193	.844
	Postgraduate	101	3.79	.80			
EIS	Bachelor	296	3.92	.86	-.435	193	.664
	Postgraduate	101	3.96	.92			
ECM	Bachelor	296	3.86	.98	-.828	193	.409
	Postgraduate	101	3.93	.104			
JSQ Total	Bachelor	296	3.33	.110	.411	193	.681
	Postgraduate	101	3.29	.116			

To examine if teachers' school climate perceptions, self-efficacy, and professional satisfaction levels differ according to the teaching level variable, an ANOVA test was performed on mean scores obtained from each scale and dimension (Table 6).

Table 6. ANOVA Analysis of Teaching Level Variable

		Sum of Squares	Df	Mean Square	F	p	Significant Difference
CASE Total	Between Groups	9.67	3	3.022	8.332	.000*	K>PS, K>SS, K> HS
	Within Groups	69.28	191	.36			
	Total	78.35	194				
Teacher-Student Relationship	Between Groups	8.91	3	2.939	6.465	.000*	K>PS, K>SS, K> HS
	Within Groups	87.72	191	.46			
	Total	96.63	194				
Security and Regularity	Between Groups	4.79	3	1.596	2.950	.034*	K> HS
	Within Groups	103.330	191	.54			
	Total	108.119	194				
Administration Relationship	Between Groups	27.26	3	9.086	9.099	.000*	K>SS, PS>SS, HS>SS
	Within Groups	190.74	191	.99			
	Total	218.00	194				
Student Behaviors	Between Groups	16.48	3	5.493	7.010	.000*	K>SS, K> HS,
	Within Groups	149.67	191	.78			
	Total	166.15	194				
Peer Relationship	Between Groups	26.23	3	8.745	10.73	.000*	K>PS, K> HS, SS>HS
	Within Groups	155.74	191	.815			
	Total	181.97	194				
Community and School Relations	Between Groups	10.60	3	3.53	5.52	.001*	K>PS, K>SS, K> HS
	Within Groups	122.27	191	.64			
	Total	132.87	194				
TSES Total	Between Groups	2.08	3	.693	4.012	.008*	K> HS
	Within Groups	33.01	191	.173			
	Total	35.091	194				
ESE	Between Groups	3.26	3	1.085	5.137	.002*	K> HS
	Within Groups	40.34	191	0.21			
	Total	43.60	194				
EIS	Between Groups	2.40	3	.80	3.756	.012*	K> HS
	Within Groups	40.73	191	.23			
	Total	43.13	194				
ECM	Between Groups	1.91	3	.64	2.832	.040*	K> HS
	Within Groups	43.14	191	.23			
	Total	45.05	194				
JSQ Total	Between Groups	14.22	3	4.74	13.864	.000*	K>PS, SS, HS SS>HS
	Within Groups	65.32	191	.342			
	Total	79.54	194				

*$p<.05$

As shown in Table 6, it was found that teachers' school climate perceptions significantly differed according to their teaching levels. Sheffee test results revealed that, while kindergarten teachers' school climate perceptions were found to be statistically higher than primary, secondary and high school teachers' (F=8.33, p<.01), there was no significant difference between other teaching levels (p>.05). For "Teacher-Student Relationship" dimension of CASE, while kindergarten teachers' mean scores were found to be statistically higher than those of primary, secondary and high school teachers (F=6.46, p<.01), there was no significant difference between other teaching levels (p>.05). For "Security and Regularity" dimension of CASE, while kindergarten teachers' mean scores were found to be statistically higher than high school teachers (F=2.95, p<.05), there was no significant difference between other teaching levels (p>.05). For "Administration Relationship" dimension of CASE, while secondary school teachers' mean scores were found to be statistically lower than those of kindergarten, primary and high school teachers (F=9.09, p<.01), there was no significant difference between other teaching levels (p>.05). For "Student Behaviours" dimension of CASE, while kindergarten teachers' mean scores found to be statistically higher than those of secondary and high school teachers (F=7.01, p<.01), there was no significant difference between other teaching levels (p>.05). For "Peer Relationship" sub-factor of CASE, kindergarten teachers' mean scores were found to be statistically higher than those of secondary and high school teachers, high school teachers' mean score was statistically higher than secondary school teachers' (F=7.01, p<.01). And for "Community and School Relations" dimension of CASE, while kindergarten teachers' mean scores found to be statistically higher than those of primary, secondary and high school teachers (F=5.52, p<.01), there was no significant difference between other teaching levels (p>.05). Teachers' reported self-efficacy beliefs differed statistically according to

their teaching levels. Kindergarten teachers' self-efficacy beliefs were found to be statistically higher than those of primary, secondary, and high school teachers (F=4.02, p<.01). Teachers' professional satisfaction levels statistically differed according to their teaching levels. Kindergarten teachers' professional satisfaction levels were found to be statistically higher than those of primary, secondary, and high school teachers (F=13.864, p<.01). Secondary school teachers' professional satisfaction levels were statistically higher than high school teachers' (F=13.864, p<.01).

Findings Regarding the Third Research Question

To examine the relationship between teachers' school climate perceptions and self-efficacy, a multi-regression analysis was performed on the mean scores obtained from each scale and dimension (Table 7).

Table 7. Regression Analysis Results Regarding the Teacher Self-Efficacy Belief and School Climate

Dependent Variable=Teacher Self-Efficacy					
Variable	B	Se	β	t	p
Constant	3.207	.169		18.927	.000
Teacher-Student Relationship	.071	.059	.118	1.193	.234
Security and Regularity	.005	.058	.009	.086	.931
Administration Relationship	.020	.036	.050	.553	.581
Student Behaviours	.102	.050	.222	2.038	.043*
Peer Relationship	.060	.042	.136	1.416	.158
Community and School Relations	-.053	.046	-.103	-1.143	.254

R= .334; R^2=.122; F (24.251); p=.000, *p<.05

As seen in Table 7, school climate was determined to be a significant predictor of teacher self-efficacy belief (R=.350; R2=.122; p<.01). A weak, positive and significant relationship was found between teacher self-efficacy and school climate. According to this finding, school climate predicts teacher self-efficacy belief by 12%. Standardized regression coefficients (β) showed that the predictive dimension in explaining teacher self-efficacy belief is Student Behaviors" (R2=.222). While, the "Student Behaviors" sub-factor of CASE was found to be a significant predictor of teacher self-efficacy (p<.05), other sub-factors are not significant predictors (p>.05).

Findings Regarding the Forth Research Question

To examine the relationship between teachers' school climate perceptions and professional satisfaction levels, a multi-regression analysis was performed on the mean scores obtained from each scale and dimensions (Table 8).

Table 8. Regression Analysis Results Regarding the School Climate and Professional Satisfaction

Dependent Variable=Professional Satisfaction					
Variable	B	Se	β	t	p
Constant	1.207	.219		5.522	.000
Teacher-Student Relationship	.197	.077	.218	2.575	.011*
Security and Regularity	.117	.075	.137	1.566	.119
Administration Relationship	.027	.046	.045	.591	.556
Student Behaviors	-.012	.065	-.017	-.181	.857
Peer Relationship	.110	.054	.167	2.026	.044*
Community and School Relations	.162	.060	.210	2.707	.007*

R= .594; R^2=.352; F (104.960); p=.000, *p<.05

As seen in Table 8, school climate was determined to be a significant predictor of teachers' professional satisfaction (R=.594; R2=.352; p<.01). A medium, positive and significant relationship was found between school climate perception and teachers' professional satisfaction. According to this finding, school climate predicts teachers' professional satisfaction by 35%. Standardized regression coefficients (β) showed that in order of priorities of the predictive dimensions in explaining teachers' professional satisfaction were "Teacher-Student Relationship" (R2=.218), "Community and School Relations" (R2=.210), "Peer Relationship" (R2=.167), "Security and Regularity" (R2=.137), "Administration Relationship" (R2=.045), and "Student Behaviours" (R2=.-.017). While the "Community and School Relations", "Teacher-Student Relationship" and "Peer Relationship" dimensions of CASE were found to be significant predictors of teacher professional satisfaction (p<.01, p<.05), other sub-factors were not significant predictors (p>.05).

Findings Regarding the Fifth Research Question

To examine the relationship between teachers' teacher self-efficacy beliefs and professional satisfaction, a multi-regression analysis was performed on the mean scores obtained from each scale and dimensions (Table 9).

Table 9. Regression Analysis Results Regarding the Teacher Self-Efficacy and Professional Satisfaction

Dependent Variable=Professional Satisfaction					
Variable	*B*	*Se*	*β*	*t*	*p*
Constant	1.924	.409		4.703	.003
TSES Total	-1.303	1.208	-.866	-1.079	.028*
ESE	.753	.432	.557	1.743	.083
EIS	.321	.391	.236	.821	.413
ECM	.602	.456	.453	1.319	.189

R= .286; R^2=.082; F (4.217); p=.003, *p<.05

As seen in Table 10, there was a significant, positive, and weak relationship between teacher self-efficacy and professional satisfaction (R=.286; R^2=.082; p<.01). Teacher self-efficacy predicts professional satisfaction by 8%. Standardized regression coefficients (β) showed that in order of priorities of the predictive dimensions in explaining the teacher professional satisfaction is "Efficacy in Student Engagement" (R^2=.557), "Efficacy in Classroom Management" (R^2=.453) and "Efficacy in Instructional Strategies" (R^2=.236).

Discussion & Conclusion

The current findings revealed that teachers' school climate perceptions were at a medium level. This result shows similarities to the findings of previous literature (Collie, Shapka & Perry, 2012; Mert & Özdemir, 2019; Mitchell, Bradshaw & Leaf, 2010; Sezgin & Kılınç, 2011). Contrary to this result, Sutherland (1994) stated that teachers' school climate perceptions were at a high level. School climate is a psychological concept that depends on the relation and interaction of school stakeholders, the physical, social, and affective environment of the school, and student achievement. School climate may differ for every school because every school has a different perceived ambiance and atmosphere. Since the school climate perception is not a constant concept and may differ for any teacher and school conditions, it can be considered the expected situation to obtain different findings in the related literature.

The analysis of the scales showed a difference in teachers' school climate scores by gender. Female teachers' perceptions were found to be statistically higher than male teachers on the "Teacher-Student Relationship", "Security and Regularity" and "Peer Relations" dimensions. Previous literature tells us that gender is not a predictive variable in school climate (Baykal, 2007; Karacaoğlu, 2008; La Salle, McCoach, & Meyers, 2021; Özden, 2009). Because gender is not a distinctive and selective feature in the teaching profession (Sezgin & Kılınç, 2011). In addition, school climate is a concept shared by all teachers, regardless of gender. Thus, it can be considered ordinal for female and male teachers working in the same school to have similar school climate perceptions. However, the current results are quite different from the general trend in the literature. In Turkey, kindergartens' opportunities and school environments are more positive than in other schools (Ayyıldız & Kahraman, 2019). Many studies revealed that the physical opportunities of the school help to set a positive school culture and climate and affect teachers' perceptions of the school (Al-Dababneh, Al-Zboon & Ahmad, 2019; Gök, 2019; Rhee, McQuillan, Chen & Atis, 2017). We know that the majority of the teaching staff of kindergartens are female teachers. The majority of the teachers working for kindergartens are females. Therefore, we conclude that the physical environment of the school is effective on the female teachers' high-level school climate perceptions. On the other hand, the sample of this study was selected not from a single school but from many schools such as kindergarten, primary, middle and high schools. We conclude that the usage of various sample groups is effective in the emergence of this result. So, this result of the current study is considered significant in terms of bringing new findings to the related literature.

The analysis of the scales did not find a difference in teachers' school climate perceptions, self-efficacy beliefs, and professional satisfaction scores by teaching experience and the academic degree of teachers. In other words, teachers with different teaching experiences and academic degrees have similar school climate perceptions, self-efficacy beliefs, and professional satisfaction levels. Kavgacı (2010), Oder and Eisenschmidt (2018), Sezgin and Kılınç (2011), and Tezci (2001) found similar findings in their studies. However, it is also seen that different results have been reported on this subject. For example, Baykal (2007) stated that teachers with low occupational experiences tend to perceive school climate more positively than teachers with high teaching experiences. He pointed out that, while younger teachers are more motivated and eager in school, older teachers may become insensitive about the school culture because they have become more familiar with the operation and processes in the school.

Another finding of the current study pointed out that teachers' school climate perceptions statistically differed according to their training level. In general, kindergarten teachers' perceptions were found to be statistically higher than primary, secondary, and high school teachers. According to this finding, we can conclude that kindergarten teachers have the highest school climate perceptions and that primary school, high school, and secondary school teachers follow them respectively. In addition, kindergarten teachers' reported teacher self-efficacy belief and professional satisfaction levels were also found to be higher than other school teachers. The emergence of this result can be explained by the fact that the physical and social facilities of kindergartens are better than other schools. In Turkey, the average classroom size of kindergartens is lower than in other schools (TUIK, 2019). In addition, in kindergartens, the parent-teacher-student association, which is one of the environmental factors affecting school culture, works more actively than in other schools (Babaroğlu, 2018). That is because students who started kindergarten are more supported by their families since they are in the first years of their school life. This situation decreases gradually from kindergarten to high school as the teaching level increases. We concluded that kindergarten teachers have higher school climate perceptions, teacher self-efficacy beliefs, and professional satisfaction levels because the kindergarten school environments are more comfortable than other schools and more supported by parents. Many findings are overlapping with the results in the previous literature (Johnson, Johnson & Zimmerman, 1996; Günbayı, 2007; Koth, Bradshaw & Leaf, 2008; Meristo & Eisenschmidt, 2014). In some studies, it was stated that training level is not a predictor of school climate, contrary to the current study findings (Baykal, 2007; Karacaoğlu, 2008; Sezgin & Kılınç, 2011).

We found that there was a medium, positive and significant relationship between teachers' school climate perceptions and self-efficacy beliefs. We also found a medium, positive and significant relationship between teachers' school climate perceptions and professional satisfaction. School climate predicts teacher self-efficacy belief by 12%, and teachers' professional satisfaction by 35%. Tschannen-Moran (2011) identified teacher professionalism as an effective variable to explain teachers' school climate perceptions. The current result has also supported this variable as a factor that determines school climate. According to our results, school climate is much more effective in predicting professional satisfaction than in predicting teacher self-efficacy belief. In general, teacher self-efficacy is related to the belief that teachers have the instructional knowledge and skills necessary to ensure all students learn. We can conclude that teacher self-efficacy is more related to the teaching process than to the conditions of the educational institution because the main objective of the teacher is to teach, regardless of the educational institution. Therefore, teachers are expected to perform similar performances in any school.

However, professional satisfaction is more related to the workplace as it covers the personal judgments of an employee about the profession. Professional satisfaction for teachers is related to communication, governance, management, and opportunities at school, as well as the general conditions of the teaching profession. Communication, administrative relations, and opportunities are known to be effective factors in the formation of the organizational culture and climate in schools. In this respect, we concluded that school climate is more effective in predicting teachers' professional satisfaction than predicting teacher self-efficacy. In previous literature, there are many studies in line with the current results. For example, Tashakkori and Taylor (1995) reported a noteworthy association between school climate and professional satisfaction; however, the relationship between climate and self-efficacy was found to be limited. Aldridge and Fraser (2016) found a significant relationship between school climate, professional satisfaction, and teacher sense of efficacy but they did not explain the amount of the relation. Treputtharat and Tayiam (2014) pointed out that the effect of school climate on teachers' professional satisfaction was at a high level. Collie, Shapka, and Perry (2012) stated that two school climate factors, i.e., "teachers' perceptions of students' motivation" and "behavior", had the most powerful impact to predict teaching efficacy and professional satisfaction. Malinen and Savolainen (2016), in their studies designed with a structural equation model, revealed that school climate had a positive effect, partly mediated by self-efficacy, on professional satisfaction. In some studies, findings that do not overlap with the current study were also reported. For example, Lacks' (2016) findings did not provide evidence of a significant relationship between school climate and teacher self-efficacy.

Lastly, there was a significant, positive, and weak relationship between teacher self-efficacy and professional satisfaction. Teacher self-efficacy was found to be a weak predictor of professional satisfaction (8%). When we reviewed the international previous literature, we realized that teacher self-efficacy is an important predictor of teachers' professional satisfaction (Aldridge & Fraser, 2016; Ismayilova & Klassen, 2019; Klassen & Chiu, 2010; Viel-Ruma, Houchins, Jolivette & Benson, 2010; Zakariya, 2020). Unlike the international literature, the amount of this relationship was found to be low in the current study. Teachers' professional satisfaction is not only related to the school environment, but also to working conditions such as salary, personal development opportunities, and promotion (Türkoğlu, Cansoy & Parlar, 2017). Personal rights and economic opportunities of

teachers in Turkey are not yet as developed as in the OECD and the European Union countries (Göker & Gündüz, 2017; Manolova-Yalçın & Hanoğlu, 2020; Süngü, 2012). Therefore, in the current study, we concluded that the basic reason why teacher self-efficacy is weak in predicting professional satisfaction is due to the working conditions of teachers rather than school conditions.

Recommendations

With the guidance of the results, the following recommendations are presented:

According to the results, teachers' school climate perceptions were at a medium level. In this regard, to improve the climate of schools, teachers, administrators, students and parents have to fulfill their responsibilities to keep the quality of the learning environment, and communication between the stakeholders always effective and strong.

Female teachers had more positive school climate perceptions than male teachers in the "Teacher-Student Relationship" and "Peer Relations" dimensions. According to this result, we can conclude that female teachers have better relations with both their students and peers. It is recommended that educational institutions and administrators should investigate the reasons for the inadequacy of corporate communication of male teachers, and take precautions to improve that.

It has been revealed that the perceived school climate levels of schools decrease as the teaching level increases. Therefore, we conclude that the physical conditions of secondary and high schools that affect school climate should be improved.

We observed that teachers' school climate perceptions had a direct relationship with their self-efficacy beliefs and professional satisfaction. School climate is particularly effective in predicting professional satisfaction. Considering that professional satisfaction is one of the factors affecting teacher performance, necessary precautions should be taken to develop the school climate in all schools.

The current study is limited to teachers as participants. The school climate concerns not only teachers but also all stakeholders of the school. Therefore, in further studies that focus on school climate, it may be useful to diversify study groups with students, teachers, and administrators. Lastly, the current study is limited to schools located in a certain location (Tokat City, Turkey). The generalizability of the results can be increased by performing similar studies in other cities and even across the country.

Statements of publication ethics

Ethical issues were taken into consideration in the current study. The permit application was made to the Social and Human Sciences Research Ethics Committee of the Tokat Gaziosmanpaşa University, and after the approval (Date: 24.11.2020, Number: 33490967-44/ E-13516), the study was conducted. The researcher directly reached the teachers included in the study group, gave information about the purpose of the study, and applied the instruments. In addition, during the research, it was paid attention that there was no physical or psychological harm to the participants. They also were assured that the research data would be kept in confidence.

Researchers' contribution rate

The author participated in every part of the research such as data collection, data analysis, and writing this document.

Conflict of interest

None.

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