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An Examination of How Toxic Leadership Behaviors of School Principals Relate to Teachers' Perceived Stress

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Abstract
The study examines how the toxic leadership behaviors of school principals relate to teachers' perceived stress. It is a correlational survey model, and the sample consists of 278 primary and secondary school teachers. We collected the data with the Perceived Stress Scale and Toxic Leadership Scale. The findings show that gender does not cause a statistical difference in perceived stress and all dimensions of toxic leadership. The stress levels of branch teachers are higher than those of primary school teachers, with a statistically significant difference. The perception of branch teachers in terms of ignorance, self-interest, and a negative mental state of toxic leadership is significantly higher than that of classroom teachers. A moderately significant positive relationship exists between teachers' perceptions of stress and all dimensions of toxic leadership. 20% of teachers' perceptions of stress are explained by toxic leadership. The negative mental state of school principals is a significant predictor of teachers' perceptions of stress.

Keywords: Stress, Toxic leadership, Toxic behavior, Teacher, School principal

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Introduction

Stress is a phenomenon that individuals frequently experience in their lives today. As a result of what individuals experience in their social and professional lives, the reactions they develop physically and psychologically affect their lives as a reflection of the stress they experience. Although it is possible to observe the effects of stress on an individual, it is stated that it is not easy to define it to this extent. The French physiologist Bernard, who dealt with the concept of stress in its present meaning, declared that the living organism must maintain its internal integrity in the face of external environmental changes to which the living organism is exposed. Thus, the "balancing the internal structure" principle was introduced to medical science. In 1910, Osler associated stress with "intense work and anxiety," and in 1925, Cannon used the word stress in the examination of "fight or flight" reactions under laboratory conditions (Baltaş & Baltaş, 2017). In the 20th century, physiologist Dr. Hans Selye, who conducted essential studies on stress in 1936, started his research on experimental rats under laboratory conditions and found that stress is a physiological syndrome (Viner, 1999).

Selye explains stress as a non-specific reaction of the body as a result of demands or pressures to which the individual is exposed, states that stress is the most important psychological problem that neutralizes the physiological and biological systems, and emphasizes that stress is not a simple nervous state or a non-specific result of damage (Selye, 1973). Stress is an emotional state pattern and psychological reaction that occur when individuals perceive a situation threatening their goals or important objectives (Baron & Greenberg, 1990, p. 226). Within the framework of these definitions, it can be said that stress is a response that occurs in the body against the effect, and it is a psychological tension that affects individuals' behavior and their relations with other people. Sources of stress can be analyzed in three groups: individual, environmental, and work-related. Personality traits, family, and economic problems are examples of individual factors that cause stress (Robbins & Judge, 2012), while factors such as the structure of society, globalization, relocations, race, and gender can be given as examples of environmental factors (Luthans, 2008). The third important factor, also known as organizational stress or workplace stress, is expressed as a situation that occurs when individuals face demands and pressures in their workplaces that are unsuitable for their knowledge and abilities (Stavroula et al., 2003). A study conducted on the factors causing stress concluded that the most significant source of stress is work. The second factor is income status, which is also related to the individual's job (Robbins & Judge, 2012). Organizational stressors include management policies and strategies, organizational structure, organizational processes, and working conditions (Luthans, 2008). Time pressure to complete the job, excessive responsibility, unfair practices, and unnecessary procedures can cause stress in business life (Cherrington, 1989).

Although stress is generally considered to be negative, the encouraging effect of stress on the individual is also mentioned. Accordingly, stress can also be grouped as constructive or destructive stress. Destructive stress (distress) affects the individual negatively and causes employees to be unable to fulfill their functions in the working environment. Constructive stress, called eustress, motivates the individual and increases work performance. While a moderate level of stress boosts productivity, a high level of stress decreases the performance of employees and impairs their physical and mental systems. In such an employee, situations such as absenteeism, leaving work, making mistakes, accidents, and dissatisfaction occur (Luthans, 2008).
As in many professional groups, teaching is among the most stressful professions (Stoeber & Rennert, 2008; Tekin et al., 2019). Work-related stress is among the most prevalent types of stress among teachers (Austin et al., 2005; Harmsen et al., 2018; Kaplan, 2021). Since teacher stress is a complex psychological phenomenon (Hu et al., 2019), many factors can be expressed as stressors. Workload (Altınok, 2009; Kyriacou, 2001; Zhang & Zhu, 2007), self-efficacy perceptions (Çolak, 2019), financial opportunities (Arıcan, 2011; Yolbakan, 2019), low social status (Özbaş, 2019), biased behaviors (Arıcan, 2011; Aydın, 2016), parental and student pressure (Stoeber & Rennert, 2008), perceived injustices in evaluation (Altınok, 2009; Arıcan, 2011), unfavorable incidents involving the structure and functioning of the school (Aslan & Ağıroğlu-Bakır, 2018; Kyriacou, 2001), school's environment (Bottiani et al., 2019), school's type (Moğul, 2014) are among the causes of teacher stress. Teacher stressors can arise from career development, organizational role, organizational structure and climate, relationships at work, and the job itself (Karadavut, 2005). Aydın (2016) also stated that teachers' stress sources are caused by the education system, administrators and inspectors, students, and the task. Among the reasons arising from administrators and inspectors were weak management skills, conflicts between subordinates and superiors, the inability to create a democratic environment in the school, and the lack of opportunity to participate in management.

Teachers' stress levels are affected by both in-school and out-of-school factors. In-school factors may arise from colleagues, administrators, parents, students, etc. in various ways. Among these, especially the negative attitudes and behaviors exhibited by school administrators affect teachers. These negative behaviors, which can be associated with toxic leadership (TL) in the literature, can be explained by the school administrator's unworthiness, self-interest, negative mental state, and selfishness (Çelebi et al., 2015). TL is a concept that seriously damages

the followers and organizations they are in with the leaders' negative personal characteristics and destructive behaviors (Lipman-Blumen, 2005, p. 44). Toxic leaders exhibit traits including egotism, moral failing, ineptitude, and neuroticism (Green, 2014). Schmidt (2008) states that the factors of TL are "self-promotion, abusive supervision, unpredictability, narcissism, and authoritarian leadership." According to Reed (2004, p. 67), the three main characteristics of TL are (i) disregard for the welfare of the workforce, (ii) a character trait or method of communication that harms the working environment, and (iii) putting self-interest first.

Research on TL provides information about the negative reflections of TL on the organization and employees. It is seen that TL creates a toxic school culture (Kırbaç, 2013), has a negative relationship with school climate (Tepe & Yılmaz, 2020), teacher performance (Mammadova, 2021), psychological capital level (Bahadır & Kahveci, 2020), organizational happiness (Bakır, 2022), organizational commitment (İlhan & Çelebi, 2021), and burnout (Çetinkaya & Ordu, 2017). The increase in TL increases teachers' organizational cynicism (Demirel, 2015) and silence (Demirtaş & Küçük, 2019). TL has psychological, emotional, and physical effects on employees (Snow et al., 2021). In interviews with teachers, physical effects such as exhaustion, insomnia, feeling sick, migraine, weight gain, lack of energy, and substance abuse; emotional effects such as fear, anger, helplessness, and insecurity; and psychological effects such as loss of trust, stress, and depression were identified among the effects of TL (Snow et al., 2021). Teachers exposed to TL develop negative emotions within the school, cut off communication with the principal, distrust the principal, decrease organizational citizenship behaviors and self-efficacy perception, and feel worthlessness and hopelessness (Koçak & Demirhan, 2023).

Leaders' actions have a significant impact on the stress levels of their followers (Harms et al., 2016). In research looking at the relationship between TL and job stress in a sample of knowledge workers (Hadadian & Zarei, 2016) and enterprises (Bakan et al., 2020), it was discovered that there is a positive correlation between the concepts. In other words, as the TL of managers increases, the stress perceived by employees increases. The increase in stress leads to a decrease in employees' organizational commitment (Kahveci et al., 2019; Turhan et al., 2018), professional satisfaction (Alıcı & Yalçınkaya, 2019), job satisfaction (Choi & Kim, 2016; Tipi, 2022), job satisfaction, and motivation (Ertuğrul, 2021). As stress deepens, alienation from work increases (Şimşek & Can, 2022). Thus, the significance of leadership becomes evident as studies examining leader behaviors and employee stress underscore the crucial role of effective leadership. Considering the detrimental impact of stress on organizations, it is crucial to investigate the stress experienced by teachers due to leaders in educational organizations. This principal behavior negatively affects teachers and the school's ability to achieve its goals, as in other organizational areas. Due to this importance and the limited number of studies addressing this relationship in schools in the existing literature, this research aimed to examine the relationship between toxic leadership behaviors of school principals and teachers' perceived stress. Thus, it will benefit relevant literature and practitioners by drawing attention to the reflection on school principals' negative behaviors toward teachers. The research will also be helpful for taking preventive measures in this context. We have sought to answer the following research questions:

1. Do the perceived stress levels of teachers significantly differ in terms of gender, subject, and seniority variables?
2. Do teachers' perceptions of school principals' TL behaviors significantly differ in terms of gender, subject, and seniority variables?
3. Is there a significant correlation between school principals' TL behaviors and teachers' perceived stress?
4. Are school principals' TL behaviors a significant predictor of teachers' perceived stress?

Method

Research Design

We used the correlational survey model in the current study. This model is employed to ascertain the status and strength of the relationship between two or more variables (Büyüköztürk et al., 2012). The dependent variable in the study is the perceived stress by teachers, and the independent one is the perceived TL behaviors of school principals by teachers. In addition, gender, subject, and professional seniority were also included in the study as independent variables.

Sample

The population of the research consists of 7300 primary and secondary school teachers in three districts of Kayseri province (Melikgazi, Talas, and Kocasinan). The sample included 305 teachers, determined by cluster sampling.

In preparing the data for analysis, the data of 278 teachers was processed due to the removal of extreme values. The characteristics of the participants are presented in Table 1.

Table 1. The characteristics of teachers

	Variable	*f*	*%*
Gender	Female	140	50.4
	Male	138	49.6
School	Primary	130	46.8
	Secondary	148	53.2
Subject	Branch	172	61.9
	Classroom	106	38.1
Marital status	Single	32	11.5
	Married	246	88.5
Seniority	1-10 yıl	56	20.1
	11-20 yıl	119	42.8
	21 yıl ve üzeri	103	37.1

Data Collection Tools

We collected the data with the "Perceived Stress Scale" (PSS) and "Toxic Leadership Scale" (TLS), along with the “Personal Information Form.”

Personel Information Form

In the personal information form, teachers were asked about gender, type of school, field of study, and professional seniority.

Perceived Stress Scale

Cohen et al. (1983) developed the PSS to determine people's perceptions of stress. PSS, translated into different languages in the international literature, has been adapted into Turkish by different researchers. Eskin et al.’s (2013) adaptation was used in this study. The consistency coefficients of the 14, 10, and 4-item forms of PSS are 0.84, 0.82, and 0.66, respectively. As a result of factor analyses, it is stated that PSS-14 and PSS-10 consist of two dimensions. The factor names are stress/distress perception and insufficient self-efficacy perception. The stress/distress items include feeling irritable and stressed, angry because of events beyond one's control, and feeling that problems are too much to overcome. For the insufficient self-efficacy dimension, feeling that one cannot cope effectively with essential changes in their life and realizing that one cannot manage the things that need to be done can be given as examples. We used the stress-distress dimension of the scale in the current study. The Cronbach's alpha of stress and distress is .84, and insufficient self-efficacy is .82.

Toxic Leadership Scale

TLS was developed by Çelebi et al. (2015) to measure the TL behaviors of school principals. It has 30 items in four sub-factors. These are named unappreciation, self-interest, selfishness, and negative mental state, and Cronbach alpha coefficients were calculated as .92, .94, .93, and .89, respectively. In the present study, these values of the sub-dimensions of TLS are .95, .95, .93, and .91, respectively. TLS is a 5-point Likert scale, and the higher the score, the higher the TL trait of the school principals.

Data Analysis

In the data analysis process, unidirectional and multidirectional outliers were removed to prepare the data set for analysis. The Kolmogrov-Smirnov test, kurtosis-skewness values, and histogram graphs were analyzed to interpret the normal distribution of the data set. Skewness and kurtosis values between -1.5 and +1.5 (Tabachnick & Fidell, 2012) indicate that the normality assumption will be met. Since the values shown in Table 2 are within these limits, it was accepted that the normality assumption was complete, and parametric tests were used. In addition to the normality assumptions across the sub-factors, the normality of the distribution was also examined according to the independent variables. In the gender variable, skewness values range between 0.022-0.087, and kurtosis values range between 0.081-0.410; in the subject variable, skewness ranges between 0.087-0.107, and kurtosis ranges between 0.059-0.148. In the seniority variable, all assumptions of the analyses preferred for each research question were tested.

Table 2. Skewness and kurtosis values for sub-factors

Sub-factors	Skewness	Kurtosis
Unappreciation	.761	.110
Self-interest	.756	-.013
Selfishness	.575	-.353
Negative mental state	.754	-.320
Stress	.208	-.078

In data analysis, frequency (f), percentage (%), mean, and parametric tests like “Independent Sample T-Test, One Way Analysis of Variance (ANOVA), Pearson Correlation Coefficient (r), and Multiple Linear Regression Analysis (MLRA)” were used. A 0-0.29 weak, 0.30-0.69 moderate, and 0.70-0.99 high-level, robust relationship classification was used to interpret the correlation coefficient (Büyüköztürk et al., 2012). For the effect size in the t-test, Cohen's d coefficient was depicted as 0.2 (small), 0.5 (medium), and 0.8 (big) (Cohen, 1988). After we concluded that the data were close to a normal distribution, there were no extreme values in the data set, and there was no multicollinearity problem among the independent variables, the analysis was started. We used the SPSS 22 program in all statistical analyses.

Findings

First of all, confirmatory factor analyses of both scales were performed. The results obtained for the PSS (X^2/df=3.53; GFI=.995; CFI=.993; NNFI=.989; TLI=.989; RMSEA=.096 and SRMR=.060) good and acceptable fit values and the TLS (X^2/df=1.67, GFI=.997, CFI=.999, NFI=.997, TLI=.999, RMSEA=.050 SRMR=.038) showed good fit values. Next, descriptive data on the dimensions were examined (Table 3).

Table 3. Descriptive statistics on teachers’ stress levels and TL

Factors	Minimum	Maksimum	$\bar{X}$	Ss.
Stress	1.29	4.57	2.80	.64
Unappreciation	1.00	4.10	1.83	.72
Self-interest	1.00	4.56	1.91	.79
Selfishness	1.00	4.60	2.08	.86
Negative mental state	1.00	4.40	2.01	.87

According to the mean scores of teachers in the stress-distress dimension ($\bar{X}$=2.80), it can be said that the stress they perceived was moderate. According to the teachers, the TL behaviors of school administrators are mostly selfishness (X=2.08), followed by negative mental state ($\bar{X}$=2.01), self-interest ($\bar{X}$=1.91) and unappreciation ($\bar{X}$=1.83).

Table 4 shows the findings to compare the perceived stress of primary and secondary school teachers according to gender and subject. We found no significant difference in the stress-distress dimension [$t(276) = 0.21$, $p > .05$] in terms of gender. However, a significant difference was found in the stress-distress dimension [$t(276) = 2.606$, $p < .05$] in terms of subject. The stress-distress scores of branch teachers are greater when the mean scores are examined. However, the effect size is low.

Table 4. Differences between teachers’ perceived stress by gender and subject

Factor	Variable	N	$\bar{X}$	Ss.	*t*	*sd*	*p*	*Cohen d*
Stress	Female	140	2.81	0.62	0.21	276	.834	-
	Male	138	2.79	0.66				
	Branch Teacher	172	2.88	0.62	2.606	276	.010	0.32
	Classroom Teacher	106	2.67	0.65				

Table 5 shows the results of the ANOVA conducted to determine the differences in teachers’ perceived stress and TL perceptions in terms of professional seniority. Firstly, Levene test results were examined to test the assumption of homogeneity of variances, and it was seen that the assumption of homogeneity of variances was met in all dimensions. Teachers’ TL perception did not differ statistically in all sub-dimensions in terms of their professional seniority ($p > .05$).

Table 5. Differences of teachers' perceived stress levels and TL perceptions in terms of professional seniority

Factors Variance	Variance	Sum of squares	*df*	Mean sum of squares	*F*	*p*
Stress	Between group	1.873	2	.937	2.304	.102
	Within group	111.791	275	.407		
Unappreciation	Between group	.265	2	.132	.252	.777
	Within group	144.387	275	.525		
Self-interest	Between group	.387	2	.194	.307	.736
	Within group	173.600	275	.631		
Selfishness	Between group	.128	2	.064	.085	.918
	Within group	206.683	275	.752		
Negative mental state	Between group	.607	2	.303	.397	.672
	Within group	209.854	275	.763		

T-test results were conducted to determine the differences in participants' perceptions about the TL behaviors of school principals according to gender. No significant difference was found in teacher views in the unappreciation [$t(276) = -1.149$, $p > .05$], self-interest [$t(276) = -1.081$, $p > .05$], selfishness [$t(276) = -0.219$, $p > .05$], and negative mental state [$t(276) = -0.317$, $p > .05$] dimensions. In other words, the views of female and male teachers were similar in all four dimensions of TL.

Table 6. Differences in TL perceptions of teachers by gender

Factor	Variable	N	$\bar{X}$	Ss.	*t*	*sd*	*p*
Unappreciation	Female	140	1.78	0.69	-1.149	276	.252
	Male	138	1.88	0.74			
Self-interest	Female	140	1.86	0.74	-1.081	276	.281
	Male	138	1.96	0.83			
Selfishness	Female	140	2.07	0.85	-0.219	276	.827
	Male	138	2.09	0.88			
Negative mental state	Female	140	1.99	0.89	-0.317	276	.751
	Male	138	2.0	0.85			

The T-test results of the comparison made in terms of the subject are given in Table 7. While the views of primary school teachers and branch teachers did not show a significant difference in selfishness [$t(276) = 0.93$, $p > .05$], teacher views were found to be significantly different in unappreciation [$t(269.334) = 3.352$, $p < .05$], self-interest [$t(261.268) = 2.083$, $p < .05$], and negative mental state [$t(276) = -2.995$, $p < .05$] sub-dimensions. TL perceptions of branch teachers were higher than the others in these dimensions. The fact that Cohen d values were lower than 0.5 indicates that the effect size is small in all three dimensions.

Table 7. Differences in TL perceptions of teachers in terms of subject

Factor	Variable	N	$\bar{X}$	Ss.	*t*	*sd*	*p*	*Cohen d*
Unappreciation	Branch Teacher	172	1.93	0.79	3.352	269.334	.001	0.41
	Classroom Teacher	106	1.66	0.57				
Self-interest	Branch Teacher	172	1.98	0.86	2.083	261.268	.038	0.26
	Classroom Teacher	106	1.79	0.67				
Selfishness	Branch Teacher	172	2.11	0.84	0.93	276	.353	-
	Classroom Teacher	106	2.01	0.89				
Negative mental state	Branch Teacher	172	2.13	0.89	2.995	276	.003	0.37
	Classroom Teacher	106	1.81	0.79				

The Pearson Product Moments Correlation Coefficient was used to test the relationship between teachers' perceived stress and TL perceptions. All of the correlation coefficients regarding teachers' perceived stress levels and school administrators' TL were found to be statistically significant (Table 8).

Table 8. Correlations between teachers' perceived stress levels and school principals' TL

	Unappreciation	Self-interest	Selfishness	Negative mental state	Stress
Unappreciation	1	.87**	.72**	.76**	.30**
Self-interest		1	.83**	.81**	.34**
Selfishness			1	.81**	.37**
Negative mental state				1	.43**
Stress					1

**$p < .01$; n=278

Perceived stress was found to show moderately positive significant correlations with unappreaciation ($r = .30$), self-interest ($r = .34$), selfishness ($r = .37$) and negative mental state ($r = .43$) sub-dimensions of TL. In other words, the stress-distress levels of teachers were found to increase moderately as school administrators' TL increased.

MLRA was conducted to determine whether TL perceived by teachers was a significant predictor of perceived stress. First of all, the assumptions of the analysis were examined. In order to make this analysis, there should be no issue with the variables' multicollinearity. For this, the variance inflation factor (VIF) must be less than ten, and tolerance values must be greater than 0.1 (Field, 2005). As seen in Table 9, it can be said that MLRA can be performed according to VIF and tolerance values.

Table 9. Regression analysis results for the prediction of perceived stress

Factors	B	Std. Error	β	*t*	*p*	Zero-order	Partial	Part	Tolerance	VIF
	2.181	.099		21.928	.000					
Unappreciation	-.054	.100	-.060	-.535	.593	.300	-.032	-.029	.232	4.315
Self-interest	-.038	.114	-.047	-.333	.739	.336	-.020	-.018	.148	6.743
Selfishness	.065	.080	.088	.808	.420	.366	.049	.044	.252	3.974
Negative mental state	.328	.077	.447	4.282	.000	.433	.251	.233	.272	3.673

F = 16.17, p = .000; R= 0.44, R^2= *0.20*

According to the results obtained in Table 9, unappreciation, self-interest, selfishness, and negative mental state sub-dimensions of TL showed a significant correlation with (R = 0.44, R^2= 0.20) stress-distress dimension (F= 16.17, p < .01). Four variables explain 20% of the stress-distress dimension. The relative order of importance of variables on stress-distress was negative mental state (β = 0.447), selfishness (β = .088), unappreaciation (β = -0.60) and self-interest (β = -0.047). Only the negative mental state variable was a significant predictor of stress-distress when the regression coefficients' significance tests were investigated (p < .05). It was found that one unit increase in the negative mental states of school administrators caused a 0.328-unit increase in teachers' stress-distress perceptions. According to regression analysis results, the regression equation for the prediction of teachers' stress-distress is as follows: Stress-distress = (0.328 x negative mental state) + (0.065 x selfishness) + (-0.054 x unappreciation) + (-0.038 x self-interest) + 2.181.

Discussion and Recommendations

In this correlational survey model study, it was found that teachers have moderate stress. This finding is supported by different studies in the literature (Alıcı & Yalçınkaya, 2019; Bayramoğlu et al., 2020; Çolak, 2019; Khairani et al., 2021; Özgenel & Canuylası, 2021; Şanlı, 2017; Turhan et al., 2018; Tipi, 2022; Yolbakan, 2019). In Karadavut's (2005) study, it was found that while teachers' career development-related stress was high, their job-specific stress level, organizational role, relations at work, organizational structure, and climate-related stress levels were moderate. In addition, there are studies that show that the work-related stress of teachers is high (Kaplan, 2021). Aslan and Ağıroğlu-Bakır (2018) also obtained that teachers experienced a high level of stress in the "progress and development, professional security, professional appearance, organizational opportunities, attitudes and behaviors of students, and attitudes and behaviors of parents" among organizational stressors. In another study, it was seen that primary school teachers had high stress levels in terms of workload and skills, and the researchers attributed this result to what happened in the COVID-19 pandemic (Şimşek & Can, 2022). A sampling of urban schools found that 93% of the teachers reported having a lot of stress at work (Herman et al., 2018). Bottiani et al. (2019) reported that teachers in low-income schools were more stressed. However, stress levels were lower among teachers who felt more self-sufficient and connected to their colleagues. These different results regarding the level of stress support the aspect of stress as a complex psychological phenomenon, as stated by Hu et al. (2019). The stress perceived by teachers in different contexts and conditions may differ. In addition, there are studies that measure general stress perception, as in the present study, and there are studies that measure only work-related stress perception. The same situation can be seen in comparisons made in terms of gender and subject.

We found no statistical difference between the stress perceptions of male and female participants in this study. Stress levels perceived by male and female teachers are close to each other. In parallel with this finding, there are studies showing that gender is not a significant factor in the organizational stress of teachers (Altınok, 2009; Çolak, 2019; Dinç & Cemaloğlu, 2018; Kaplan, 2021; Moğul, 2014; Özbaş, 2019; Özgenel & Canuylası, 2021; Şanlı, 2017; Şimşek & Can, 2022; Tipi, 2022; Yolbakan, 2019). On the contrary, there are also studies indicating that gender is a significant variable in the perception of stress, with some studies indicating that female teachers experience higher stress levels than their male counterparts. There are also studies that found that gender is a significant variable in the perception of stress (Bottiani et al., 2019; Göksoy et al., 2015; Khairani et al., 2021), female teachers experience more parental pressure and workload related stress than male teachers (Çolak, 2019), and female teachers experience higher levels of work-related stress and organizational role-related stress (Kaplan, 2021).

In a study by Şimşek and Can (2022), while it emerged that gender did not cause a significant difference in general organizational stress, it is noteworthy that female teachers scored higher in the workload sub-dimension, while male teachers scored higher in the decision-making sub-dimension. Additionally, a study discovered that female teachers were less stressed than male teachers in the components of participation in decision-making and administrative behaviors (Aslan & Ağıroğlu-Bakır, 2018). Karadavut (2005) found that the organizational stress levels of male teachers were found to be higher. A study in China discovered that male teachers had higher occupational stress levels than female teachers in terms of personal growth, workload, and career expectations (Ji et al., 2021).

When branch and classroom teachers' perceptions of stress were compared, a significant difference between them was discovered. Although the stress perception of branch teachers is higher than that of the others, the effect size is low. Kaplan (2021) also found that branch teachers' perceptions of work-related stress and organizational stress are higher than those of classroom teachers. Çolak (2019), on the contrary, reached the opposite finding and concluded that primary school teachers have a higher perception of stress in the dimensions of principal, physical and work-related conditions, and parental pressure. There are also findings in the literature that the subject does not cause a difference in the perceived stress level (Dinç & Cemaloğlu, 2018; Şanlı, 2017) or in the perception of organizational stress sources (Karadavut, 2005; Özbaş, 2019). There were no appreciable changes in teachers' stress levels according to the professional seniority variable. Although this result is similar to some research findings (Moğul, 2014; Yolbakan, 2019), there are also studies that found that stress differs significantly according to professional seniority. Şanlı (2017) found that teachers with 1–10 years of professional seniority perceived stress significantly higher than those with 21–30 years of seniority. However, Tipi (2022) found that teachers with 16 years and higher seniority were significantly more stressed compared to other teachers, and Kaya (2019) found teachers with 16–20 years of experience were significantly more stressed than those with 6–10 years. Kaplan (2021) also found that the career-related stress of teachers who have 20 years or more seniority is higher than that of participants with 0–5 years of seniority. As with other variables, the results for professional seniority also differ in the literature.

It can be said that teachers' views about school administrators' TL behaviors are at a low level. This result shows that the teachers think the school administrators have low levels of selfishness, self-interest, and unappreciation, and they have a negative mental state. The reason why they think like this can be the fact that school administrators do not refrain from appreciating the efforts of their employees, they are supportive, and they provide a positive working environment for teachers to think in this way. However, as Kırbaç (2013) stated, toxicity spreads systematically and rapidly from the moment it enters the organization. For this reason, although the perceived TL behavior is low, efforts should be made to prevent the spread of toxicity. These results are also supported by the results of previous research conducted with teachers (Bahadır & Kahveci, 2020; Bakır, 2022; Çetinkaya & Ordu, 2017; Demirel, 2015; Demirtaş & Küçük, 2019; Ertuğrul, 2021; Küçük & Demirtaş, 2021; Mammadova, 2021). However, İlhan and Çelebi (2021) and Kahveci et al. (2019) found a moderate level of TL perception in teachers. Snow et al. (2021) found that teachers had an above-average score of TL perception. Similarly, Green (2014) found that the majority of the participants (90%) in educational organizations work with toxic leaders.
Although TL perceptions of teachers are low, their mean score makes it possible to rank the four dimensions of TL. The teachers think that administrators have the highest tendency to selfishness within the scope of TL behaviors, followed by negative mental states, self-interest, and unappreciation, respectively. It is also observed in previous research findings that the mean selfishness score is higher than the others (Bahadır & Kahveci, 2020; Snow et al., 2021). In some studies (Çetinkaya & Ordu, 2017; Demirel, 2015; Ertuğrul, 2021; Karlı, 2022), mean scores of negative mental states were found to be higher than the other sub-dimensions. The highest score in İlhan and Çelebi's (2021) study was in the unappreciation sub-dimension.

It was found that the perceptions of teachers did not differ by gender. In other words, male and female teachers had similar views on school administrators' TL behaviors. This result is in parallel with the studies of Bahadır and Kahveci, (2020), Bakır (2022), Çetinkaya and Ordu (2017), Mammadova (2021), and Ertuğrul (2021). In the study by İlhan (2019) and Demirel (2015), it was found that female teachers thought that principals showed more TL behavior in the dimensions of unappreciation and negative mental state. In the study conducted by Karlı (2022), in all four dimensions of TL, women thought that school administrators showed TL characteristics in a significant way compared to men. Küçük (2020), however, found the scores of male teachers in narcissism to be higher.

In the comparison made according to the subject variable, no difference was found between primary school and branch teachers in selfishness. In the dimensions of unappreciation, self-interest, and negative mental state, the opposite is true, and branch teachers think that school administrators show more unappreciation, self-interest, and

a negative mental state. Contrary to this result, no significant difference was found in four factors in the study of Demirel (2015), Çetinkaya and Ordu (2017), Küçük (2020), and Mammadova (2021) according to the subject.

It was discovered that the perceptions of teachers were unaffected by their level of professional experience. This finding is also supported by previous research results (Çetinkaya & Ordu, 2017; Demirel, 2015; Küçük, 2020; Snow et al., 2021). In other words, the perceptions of teachers do not change in terms of seniority. Conversely, Bakır (2022) and Ertuğrul (2021) found that professional seniority was a determining variable in dimensions other than the dimension of unappreciation. According to Bakır's (2022) research, teachers with a seniority of 6 to 10 years thought their school principals were less caring and more self-serving than those with a seniority of 16 years or more. Compared to teachers with seniorities of 11–15 years and 16 years or more, teachers with seniorities of 6–10 years believed that school principals had a more depressed mental state. In Ertuğrul's (2021) study, it was found that TL perceptions of teachers with 6–10 years of seniority in the dimensions of self-interest and selfishness were at a higher level than those of teachers with 11–15 years. In the negative mental state sub-dimension, TL perceptions of teachers with a seniority of 6–10 years were at a higher level than the other seniority levels. Karlı (2022) found a difference in terms of seniority in all dimensions of TL. The participants with 6–15 years of experience thought that principals were more unappreciative, self-interested, selfish, and had a negative mental state compared to teachers with 0–5 years of experience. In İlhan's (2019) study, teachers with 11–15 years of professional seniority had a higher TL perception than those with 6–10 years of seniority. In the current study, professional seniority was not found to be a determining variable, and there are studies supporting this result. On the other hand, there are studies that have determined that the perception of TL behaviors of principals increases as professional seniority increases.

The reported stress levels of teachers and school administrators were found to be statistically significantly positive and moderately correlated across every category. It can be said that as school principals' TL behaviors increase, teachers' stress-distress level will increase moderately. Among the four sub-dimensions of TL, the dimension that showed the highest relationship with stress was negative mental state. As the negative mental state of school administrators increases, teachers' perceived stress increases. Parallel results have been obtained in studies performed in different areas such as businesses, the health sector, and law enforcement (Aktürk & Demirbağ, 2022; Bakan et al., 2020; Gök, 2023; Hadadian & Zarei, 2016), and positive, medium, or high levels of relations were found between work stress and TL. The last finding of the research showed that unappreciation, self-interest, selfishness, and negative mental state sub-dimensions of TL explain 20% of teachers' stress and distress. In other words, one unit increase in the TL behavior of school administrators increases teachers' perceptions of stress and distress by 20%. However, only the negative mental state among the variables is a significant predictor of teachers' perceptions of stress and distress. These results show that the negative actions and statements of school administrators and their mental states are a source of stress for teachers. Destructive leadership increases teachers' organizational stress. While it is seen that destructive leadership increases organizational stress of teachers (Özgenel & Canuylası, 2021), school administrators with cynical and rejecting humor style cause stress in teachers (Dinç & Cemaloğlu, 2018), negative correlation of leader-member interaction (Nufer, 2012), and supportive leadership of school principals (Hu et al., 2019) with stress support the findings of this study. While the principal's positive behaviors and interactions reduce teachers' stress, their negative behaviors have the opposite effect. In addition, the fact that there is a high level of positive correlation between the TL behaviors of school principals and the cynicism attitudes of teachers and that 49.7% of organizational cynicism can be explained by TL (Demirel, 2015), the increase in school effectiveness as the perception of TL decreases (Küçük, 2020), and the negative effects of TL on motivation and job satisfaction (Ertuğrul, 2021) show that the leader's toxic behaviors do not only cause stress but also harm the teacher and school. In the study by Gök (2023), it was found that TL perceptions explained approximately 12% of job stress. In a study conducted in the police force (Aktürk & Demirbağ, 2022), it was found that the relationship between employees' work stress and physical and mental health issues could be mediated by harsh supervision by superiors. In the study of Bakan et al. (2020), it was seen that self-praise explained 9.2% of perceived stress, while malicious surveillance explained 12.2%, unpredictability explained 17.1%, narcissism explained 9.0%, and authoritarian leadership explained 12.6%. These studies conducted in different fields show that the toxic behaviors of the leader are effective in reducing the stress of employees.

Regarding the limitations of the research, the fact that a complex psychological phenomenon such as stress was measured on a scale over a period of time can be stated as a limitation. It can be suggested that future research examine the relationship between the two concepts with longitudinal designs. In keeping with the research's conclusions, it can be said that it is extremely essential for principals to avoid this form of leadership since TL has an effect on teachers' perceived stress. Understanding the connection between toxic leadership and stress is essential for improving school performance and many other positive outcomes. The principal's avoidance of such

behavior and adoption of healthier leadership approaches can increase both the leaders' and teachers' well-being. For this reason, awareness studies on TL behaviors and prevention of TL may be beneficial in fighting TL. Moreover, school principals can reduce toxic leadership behaviors by improving emotional intelligence, effective communication, and management skills. Also, rehabilitation support can be offered to principals with TL tendencies and teachers who have been exposed to TL behaviors. Research can be conducted on the issues that trigger the TL behaviors of school principals. It can be said that conducting meta-analysis studies on TL and stress will contribute to the field due to the results obtained in the current study and previous studies regarding gender, subject, and professional seniority. Due to the differences in the perception of stress and TL in terms of subject, conducting qualitative research with branch teachers may contribute to finding out the underlying causes of the perception.

Author (s) Contribution Rate

The contribution rates of the authors are equal.

Ethical Approval

Ethics permission (27.05.2022 / 2022-545) was obtained from "Ondokuz Mayıs University Social and Human Sciences Ethics Committee" for this research.

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