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RESEARCH ARTICLE

The Relationship Between Power Types Used by School Principals and Teachers' Autonomy Behaviors

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ABSTRACT

Background/purpose – This study aimed to reveal the relationship between power types used by school principals and teachers' autonomy behaviors.

Materials/methods – The population of this descriptive study consisted of private and public school teachers employed in primary, secondary, and high schools in the center of İzmir, Turkey. This study was designed according to the survey model, with a sample consisting of 419 teachers. The Teacher Autonomy Scale developed by Çolak and Altınkurt (2017) and The Organizational Power Scale in Schools developed by Altınkurt and Yılmaz (2013) were used as data collection tools. Descriptive statistics, *t*-test, ANOVA, and multivariate regression analysis were used in the analysis of the collected data.

Results – According to the participant teachers, school principals mostly use legitimate power, then expert power, reward power, referent power, and coercive power, respectively. Teachers' general autonomy behaviors were found to be at a high level. Among the autonomy dimensions, teachers mostly displayed teaching autonomy, followed by curriculum autonomy, communication autonomy, and professional development autonomy, respectively. The power types used by school principals explained 18% of teachers' autonomy. Reward power was revealed as a significant predictor of teachers' autonomy behaviors.

Conclusion – As seen in the study results, the school principals' power preferences affect teachers' autonomy behaviors. Therefore, it is important for school principals to use their power appropriately so as to create an open and healthy school climate where teachers can state their opinions easily and take part in decision making. However, leaving this situation to the discretion and initiative of the principals could result in other problems. For this reason, the most important step required would be to make structural arrangements for the empowerment of teachers.

Keywords – autonomy, teacher autonomy, power, school principals

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1. INTRODUCTION

One of the main features that describes a professional occupation is the autonomy owned by members of the profession (Larson, 1977). In spite of this, with the increasing influence of neoliberal policies in the 2000s, a massive attack against "autonomy" can clearly be seen, with both organizations and their employees exposed to this attack. Nevertheless, it is known that autonomy at both the individual and institutional level is one of the most important achievements of modernity. Especially, when considered in the context of educational organizations, and in light of the wisdom and science revealed by modernity, the way to raise inquiring individuals with a critical thinking disposition is through autonomous teachers who can think, act, and take initiative with their own minds. With regards to the Turkish education system, the most concrete legislation which determined the limits of teacher autonomy is the National Education Basic Law (No. 1739). According to this law, the goals and principles of Turkish national education reveal both the limits and the extent of teachers' autonomy.

In practice, there are many factors that affect professional autonomy together with the legislation and occasionally even beyond the legislation. A myriad of factors such as the level of modernization and democratization of countries, their economy policies, and their culture are all affective in terms of professional autonomy. From an organizational standpoint, it may be said that one of the significant factors affecting professional autonomy is power relations, because autonomy is, in a sense, having power. The limit of an employee's power depends on those with more power (e.g., school principals) sharing this power, and in choosing the right power type in order for their subordinate employees (i.e., teachers) to take the initiative. Especially in terms of educational organizations, it may be said that the power preferences of school principals impacts upon the autonomy behaviors of teachers.

The responsibility placed on teachers has increased considerably in recent years. However, in spite of their increased responsibilities, it may be said that they are insufficiently empowered, and are actually increasingly weakened. Teachers in countries with relatively more qualified education systems take on more responsibilities and have a greater say in educational processes, that is, they display autonomous behaviors (Eurydice, 2007, 2008). On the other hand, Turkey is a country where the least amount of autonomy is afforded to schools and teachers among all member countries of the Organisation for Economic Co-operation and Development (OECD, 2013a). When the Turkish education system and its teacher training policies are analyzed, especially with regard to regulations introduced since the 2000s, teachers are expected to behave more as a technician and to give out only the information that is determined by the authorized institutions. This situation has led teachers to not be able to make effective decisions, to use their initiative, and to act autonomously in the education and training process.

In the most general expression, autonomy means that the individual acts relatively independently from others, and that they self-regulate their own behavior. However, autonomy is a complex and contradictory concept. It may be said that autonomy gains meaning with modernity. Through modernization, science, reason, and freedom against dogma have become important values in life. In this context, these facts are the basis of education and training in today's relatively modern societies. As societies develop, the importance of autonomy in education and training increases. Consequently, it may be stated that teachers should have autonomy in order to teach effectively and be qualified within their schools. Even though autonomy includes freedom of decision and movement, it also has certain limits. In this regard, autonomy is not some unlimited form of freedom. It can be said,

therefore, that autonomy is the recognition of more freedom in one's area of expertise, provided that the behavior is in accordance with the legislation, established norms and, most importantly, the ethical understanding required by the profession; and is therefore defined specifically as professional autonomy. Although professional autonomy is similar in different professional groups in terms of certain general characteristics, it is also differentiated according to the characteristics of each particular profession. For example, the professional autonomy of a medical doctor, lawyer, and teacher naturally differ at certain points according to the work they do.

There are different definitions of teacher autonomy in the literature. Pearson and Moomaw (2005) defined teacher autonomy as the freedom of teachers to make choices about students and teaching subjects. According to Lamb and Reinders (2008), teacher autonomy is the capacity of teachers to improve their teaching by their own efforts. Garvin (2007) defined teacher autonomy as the influence, power, and authority of the teacher on teaching, assessment, and school management. In its most comprehensive definition, teacher autonomy is expressed as the freedom that teachers should have in educational activities in light of previously agreed norms, laws, universal ethical codes, as well as established scientific and pedagogical principles in order to achieve the goals determined by the school (Çolak & Altınkurt, 2017). According to an OECD (2020) report, when we look at the school autonomy and teacher autonomy levels, Macau (China) (98%), Czech Republic (96%), and England (91%) grant the highest level of teacher autonomy. However, at 30%, Turkey falls well below the OECD average of 73% in terms of school and teacher autonomy. The Czech Republic, Lithuania, and Macau (China) have the most autonomy in their education systems, while Macau (China) and the Czech Republic have the most autonomy in schools. The autonomy of school principals and teachers is quite limited, however, in Greece, Jordan, Tunisia, and Turkey compared to other OECD countries (OECD, 2016). The Czech Republic (95%), Argentina (89%), and England (88%) have the highest percentage of autonomous schools in terms of lesson content, whilst Saudi Arabia (96%), Turkey (87%), and France (85%) have the highest percentage of non-autonomous schools (OECD, 2020). In this context, it may be said that schools and teachers in Turkey lack autonomy in the selection of textbooks and determining student evaluation criteria, but are partially autonomous in the selection of teaching methods and techniques (OECD, 2013b). As there is an extremely centralized education system in Turkey, teachers' autonomy has been limited by laws and regulations (Çolak et al., 2022; Yorulmaz et al., 2018), and the capacity of schools to develop solutions to the challenges they face has been limited (OECD, 2013a). For instance, in Turkey, curricula are determined centrally and applied in the same way across all schools. Teachers are not afforded autonomy in selecting the textbooks they can use, in creating lesson content, or in the evaluation process. This negatively affects the development of teachers, the discovery of their knowledge and abilities, and thereby their career development (Ramos, 2006).

In the current study, teachers' autonomy behaviors were examined within the framework of a four-dimensional structure which was put forward by Çolak and Altınkurt (2017). Of these dimensions, *Teaching autonomy* refers to the decisions made by teachers on subjects related to teaching and classroom management. Deciding on the type, time, and duration of the activities, choosing the methods and techniques to be used in teaching, determining the assessment and evaluation methods, and rewarding the students as a result of their positive actions can be considered as activities within teaching autonomy. *Curriculum autonomy* is where teachers can take the initiative in the subjects taught, the methods and techniques

they employ, and the amount of time they take in order to be effective teachers. *Professional development autonomy* is where teachers can determine their own professional development needs, and direct thereby control much of their own professional development process. As such, teachers are able to determine the meetings, symposia, congresses, and inservice training, etc. that they wish to attend, and also to decide how their time can be evaluated. *Professional communication autonomy* is where teachers can state their thoughts without undue concerns in their communication with the school's stakeholders (school principals, teaching colleagues, and parents, etc.).

Teachers' autonomy behaviors, however, cannot be considered separately from the modernization level, democratic climate, and political economy of a country. This is because teachers are members of society and the schools where their educational activities are carried out are naturally affected by the government and democratic climate of a country. In addition, the culture and climate of a school, at the organizational level, and the power relations within the school, directly affect teachers' autonomy behaviors. Therefore, it can be said that school principals' power preferences are also a significant factor which can affect teachers' autonomy behaviors.

Power is an extensive conceptual structure that includes formal and informal methods of adapting to organizational aims (Hoy & Miskel, 2015; Pfeffer, 1987). In addition, power is related to imposing, convincing, and persuasion (Aydın, 2014). Hence, it may be said that the basis of power is influencing others by using various instruments, and this influence is owing to the person's position, talents, or skills (Altınkurt & Yılmaz, 2021). When the studies in the literature are examined, it is seen that various classifications are made about power resources. Weber (2005) analyzed power through authority and defined as a group of people obeying direct orders. According to Weber (2012), while power includes coercion, authority is based on legitimacy. According to Weber, there are three types of power that add legitimacy; traditional authority, charismatic authority, and rational-legal authority (Weber, 2012). *Traditional authority* is a type of power peculiar to traditional societies, which comes from the natural belief in the supremacy and decisiveness of tradition. *Charismatic authority* refers to the extraordinary, heroic, and sacred power based on the charismatic characteristics of a leader (Weber, 2005). *Legal authority* is the source of rational-legal authority, whereby all individuals from the top management to the lowest level of employee derive their power from legality (Weber, 2012). On the other hand, French and Raven (1959) classified power resources under two dimensions, as organizational and personal powers, and analyzed them within five sub-dimensions. Organizational powers can also be referred to as authority powers (legitimate power, reward power, and coercive power), whereas powers based on personal characteristics are referent (charisma) power and expert power (Hoy & Miskel, 2015).

When administrators (e.g., school principals) provide opportunities for the professional development of their employees (i.e., teaching staff), create collaborative environments and act supportively, employee autonomy behaviors are likely to increase (Spence, 2016). Teachers can behave more autonomously when teaching in schools with a supportive principal. In schools with supportive administrators, teachers can act more autonomously in their teaching (Çolak & Altınkurt, 2017; Sparks, 2012). In this regard, it may be said that the power types employed by school principals can directly affect teachers' autonomy behaviors. Research on teacher autonomy has emphasized that autonomy can vary according to the conditions of the organizational environment. Participating in the decision processes of the school (determining the content of courses, selecting textbooks, determining student

discipline policies, etc.) (Ayral et al., 2014), encouragement and appreciation (Aydoğan, 2008), and supporting teacher leadership (Yılmaz et al., 2017) can positively affect teachers' autonomy behaviors, whereas if professional development is not sufficiently encouraged (TEDMEM, 2019), or if there exists a closed and/or oppressive management approach (Çolak & Altınkurt, 2017; Hoy & Miskel, 2015), then it will likely negatively affect teachers' autonomy behaviors. It may be said, therefore, that teachers can feel autonomous in schools where school principals use their power resources effectively, correctly, and in a timely manner, and where teachers are given more opportunity to make certain decisions. Non-threatening and supportive principals implement a leadership strategy that aims at helping teachers and improving the quality of teaching (Hoy & Miskel, 2015). In this context, school principals who use expert, knowledge, and reward power along with legitimate power encourage teachers towards exhibiting autonomy behaviors. On the contrary, where power is used as a tool of coercion, it may lead some teachers to move away from risks and decision-making, and to do only what they are told. Thus, Hargreaves (1994) stated that teachers who are under pressure may prefer to work alone and shy away from collaboration. This situation can cause unease among teachers and prevent some from taking on responsibility and displaying autonomous behaviors.

Teachers anticipate support from school principals in order to be able to participate in decisions about education and teaching and to display autonomy behaviors in the selection of teaching methods and techniques (Yazıcı & Akyol, 2017). Therefore, school principals can display supportive behaviors by using their powers effectively and appropriately. In Turkey, teachers' responsibilities in terms of school policymaking, education, and teaching programs are well below the OECD country average (OECD, 2020). In this regard, it can be stated that the autonomy given to teachers in Turkey is at a very low level. Even though teachers in Turkey have very low autonomy from a legal standpoint, school principals can encourage teachers to behave autonomously by applying their power correctly and more effectively. It may be said that teachers who have high a level of autonomy are more successful in achieving the aims of the school and are more effective in their teaching. Moreover, in the study conducted by Çolak et al. (2017), it was concluded that teachers who have high level of autonomy behaviors also exhibit a high level of job satisfaction. When the literature is examined, it is seen that studies on teacher autonomy in Turkey have been limited (e.g., Çolak & Altınkurt, 2017; Kılınç et al., 2018; Oğuz, 2013; Özaslan, 2015; Öztürk, 2011). In addition, examining how the power types used by school principals affect teachers' autonomy behaviors may contribute to the discussion of the reasons that support and constrain teacher autonomy in the literature. In this regard, the aim of the current study is to examine the relationship between the power types used by school principals and the autonomy behaviors of teachers, according to the views of teachers. Within the framework of this general purpose, answers to the following research questions were sought in the study:

According to the study's participant teachers:

1. What power types and levels do school principals employ?
2. Do the power types used by school principals differ significantly according to gender, school type (public and private), school level (primary school, secondary school, and high school), and professional experience?
3. What is the level of teachers' autonomy behaviors?
4. Do teachers' autonomy behaviors differ significantly according to gender, school type, school level, and professional experience?

5. To what extent do the power types used by school principals predict teachers' autonomy behaviors?

2. METHODOLOGY

The study was designed according to the survey model. The population of the study consisted of 30,333 teachers working in public and private primary, secondary, and high schools in the center of Izmir, Turkey, during the 2019-2020 academic year. Disproportionate cluster sampling technique was used to determine the sample. The sample size was calculated to be at least 379 for a 95% confidence level. In the study, data were collected from 482 teachers, and analyses conducted using 419 usable scales. Of the teachers who participated in the study, 69% ($n = 289$) were female and 31% ($n = 130$) were male. Of the participants, 74.9% ($n = 314$) worked in public schools and 25.1% ($n = 105$) worked in private schools, whilst 20.8% ($n = 87$) worked in primary schools, 28.4% ($n = 119$) worked in secondary schools, 23.9% ($n = 100$) worked in vocational high schools, and 27% ($n = 113$) worked in general high schools. Additionally, the data showed that 27.2% ($n = 114$) had 9 years or less professional experience, 46.1% ($n = 193$) had 10-19 years, and 26.7% ($n = 112$) had 20 or more years of professional teaching experience.

The data of the study were collected using the Organizational Power Scale in Schools and the Teacher Autonomy Scale. The *Organizational Power Scale in Schools*, which was developed by Altınkurt and Yılmaz (2013), consists of five subdimensions: legitimate power (four items), reward power (seven items), coercive power (10 items), expert power (eight items), and referent power (eight items). The scale consists of a total of 37 Likert-type items, with all items responded based on a range of 1 = *never* to 5 = *always*. There are no reverse scored items in the scale, and there is no possibility to obtain a total score from the whole scale. When a subdimension score is high, it indicates that school principals apply the power in that dimension more. The construct validity of the scale was tested using exploratory and confirmatory factor analyses. As a result of the exploratory factor analysis, the factor loading values of the subdimension items ranged from .47 to .84, and the total item correlations ranged from .43 to .85. The variance ratio explained by the five factors together was found to be 66.61%. The goodness of fit values calculated by the confirmatory factor analysis of the scale are as follows: $\chi^2 / SD = 1.40$, RMSEA = .03, CFI = .99, GFI = .97, AGFI = .96, RMR = .09, SRMR = .08, NFI = .98, NNFI = .99, and PGFI = .85. It was indicated that the Cronbach alpha internal consistency coefficients of the scale's subdimensions ranged from .83 to .94 (Altınkurt & Yılmaz, 2013). The Cronbach alpha internal consistency coefficients of the scale were recalculated in the current study and ranged from .74 to .95.

The *Teacher Autonomy Scale* was developed by Çolak and Altınkurt (2017). The scale consists of 17 Likert-type items, with all item responses based on a range of 1 = *never* to 5 = *always*. There are no reverse-scored items in the scale, and it is possible to obtain a total score from the whole scale. Where the scores obtained from a factor or from the whole scale increase, this indicates an increase in teachers' behaviors towards that factor or their general autonomy. The scale consists of four subdimensions: teaching autonomy (six items), curriculum autonomy (five items), professional development autonomy (three items), and professional communication autonomy (three items). The construct validity of the scale was tested using exploratory and confirmatory factor analyses. As a result of the exploratory factor analysis, the factor loading values of the items in the subdimensions of the scale ranged from .52 to .88, and the total item correlations ranged from .47 to .76. The four dimensions of

the scale together explain 63.84% of the total variance. The goodness of fit values calculated by the confirmatory factor analysis of the scale are as follows: χ^2 / SD = 2.23, RMSEA = .06, CFI = .97, GFI = .90, AGFI = .86, SRMR = .06, IFI = .97, NFI = .94, NNFI = .96, and PGFI = .66. It was indicated that the Cronbach alpha internal consistency coefficients of the scale's subdimensions ranged from .78 to .89 (Çolak & Altınkurt, 2017). The Cronbach alpha internal consistency coefficients of the scale were recalculated in the current study and were found to range from .77 to .82.

Descriptive statistics, t-test for paired comparisons, and one-way analysis of variance (ANOVA) for comparisons with three or more dimensions were used in the analysis of the study data. All of these analyses were conducted against average scores. Sidak test was used in order to determine the source of the difference for the significant F-values. Multivariate regression analysis was used in order to determine to what extent the types of power used by school principals predicted teacher autonomy. Prior to the regression analysis, the required assumptions were tested. Extreme value analysis was conducted, with Z-scores ($z < 3$) and Mahalanobis distance values calculated in determining the extreme values. The normality of the distribution was tested according to skewness and kurtosis coefficients, which were established to be in the range of +1 to -1. Another potential issue in regression analysis is the multicollinearity between predictor variables. In the current study, it was decided whether or not any multicollinearity problem existed between the variables by examining the Variance Inflation Factor (VIF) and Durbin Watson values. If the VIF value was less than 10 (Büyüköztürk, 2018) and the Durbin Watson value between 1.5 and 2.5, it was interpreted that no multicollinearity problem exists (Kalaycı, 2009). As a result of the analysis, it was seen that none of the VIF values were greater than 10 (between 1.37 and 3.99), while the Durbin Watson value of 2.01 was within the specified range.

3. FINDINGS

The first aim of the study was to reveal the power types used by school principals. According to the participant teachers, school principals mostly use legitimate power ($\bar{X}$ = 4.14, S = 0.64), followed by expert power ($\bar{X}$ = 3.97, S = 0.79), reward power ($\bar{X}$ = 3.73, S = 0.79), referent power ($\bar{X}$ = 3.59, S = 0.95), and coercive power ($\bar{X}$ = 2.27, S = 1.01), respectively. The teachers' views on power types used by school principals did not differ significantly according to the type of school (public school or private school) where they worked, or their professional experience as teachers. Their views on power types used by school principals differed significantly according to gender only in the dimension of coercive power [$t_{(417)}$ = 2.14; $p < .05$], with male teachers ($\bar{X}$ = 2.43, S = 1.00) having higher perceptions than female teachers ($\bar{X}$ = 2.20, S = 1.00) regarding school principals' use of coercive power. Teachers' views on power types used by school principals differed significantly according to school level in the dimension of legitimate power [$F_{(3-415)}$ = 5.17; $p < .05$], reward power [$F_{(3-415)}$ = 12.54; $p < .05$], coercive power [$F_{(3-415)}$ = 11.48; $p < .05$], expert power [$F_{(3-415)}$ = 11.35; $p < .05$], and referent power [$F_{(3-415)}$ = 15.55; $p < .05$]. Primary school teachers ($\bar{X}$ = 4.31, S = 0.61) were revealed to have higher perceptions than general high school teachers ($\bar{X}$ = 4.05, S = 0.56) and vocational high school teachers ($\bar{X}$ = 3.44, S = 0.79) regarding school principals' use of their legitimate power. Primary school teachers ($\bar{X}$ = 3.95, S = 0.67) and general high school teachers ($\bar{X}$ = 3.97, S = 0.61) showed higher perceptions than secondary school teachers ($\bar{X}$ = 3.57, S = 0.92) and vocational high school teachers ($\bar{X}$ = 3.44, S = 0.79) regarding school principals' use of reward power. Vocational high school teachers ($\bar{X}$ = 2.64,

S = 0.87) were revealed to have higher perceptions than primary school teachers ($\bar{X}$ = 2.08, S = 1.01) and general high school teachers ($\bar{X}$ = 1.92, S = 0.80) with regards to school principals' use of coercive power. Secondary school teachers ($\bar{X}$ = 2.42, S = 1.15) were shown to have higher perceptions than general high school teachers ($\bar{X}$ = 1.92, S = 0.80) regarding school principals' use of coercive power. Primary school teachers ($\bar{X}$ = 4.22, S = 0.69) showed higher perceptions compared to secondary school teachers ($\bar{X}$ = 3.74, S = 0.82) and vocational high school teachers ($\bar{X}$ = 3.78, S = 0.89) regarding school principals' use of their expert power. General high school teachers ($\bar{X}$ = 4.18, S = 0.63) were revealed to have higher perceptions than secondary school teachers ($\bar{X}$ = 3.74, S = 0.82) regarding school principals' use of their expert power. There was a difference between primary school teachers, secondary school teachers, and vocational high school teachers in terms of the referent power dimension, with primary school teachers ($\bar{X}$ = 3.86, S = 0.82) and general high school teachers ($\bar{X}$ = 3.95, S = 0.82) having higher perceptions than secondary school teachers ($\bar{X}$ = 3.30, S = 0.98) and vocational high school teachers ($\bar{X}$ = 3.30, S = 0.98) regarding school principals' use of referent power.

Teachers' views on power types used by school principals differed significantly according to subject taught in the dimension of legitimate power [$F_{(2-416)}$ = 8.08; $p < .05$], reward power [$F_{(2-416)}$ = 10.49; $p < .05$], coercive power [$F_{(2-416)}$ = 6.05; $p < .05$], expert power [$F_{(2-416)}$ = 8.61; $p < .05$], and referent power [$F_{(2-416)}$ = 5.76; $p < .05$]. Primary school teachers ($\bar{X}$ = 4.33, S = 0.60) were revealed to have higher perceptions than subject teachers ($\bar{X}$ = 4.13, S = 0.61) and vocational high school teachers ($\bar{X}$ = 3.90, S = 0.70) regarding school principals' use of their legitimate power. Subject teachers ($\bar{X}$ = 4.13, S = 0.61) were shown to have higher perceptions than vocational high school teachers ($\bar{X}$ = 3.90, S = 0.70) regarding school principals' use of their legitimate power. There was a difference shown to exist between primary school teachers and vocational high school teachers, and between subject teachers and vocational high school teachers in terms of the reward power dimension. Primary school teachers ($\bar{X}$ = 3.87, S = 0.68) and subject teachers ($\bar{X}$ = 3.77, S = 0.78) were shown to have higher perceptions than vocational high school teachers with regards to school principals' use of reward power. There was a difference found to exist between vocational high school teachers and primary school and subject teachers in terms of the coercive power dimension. Vocational high school teachers ($\bar{X}$ = 2.69, S = 0.94) were found to have higher perceptions than primary school teachers ($\bar{X}$ = 2.19, S = 1.03) and subject teachers ($\bar{X}$ = 2.20, S = 0.99) regarding school principals' use coercive power. There was a difference found to exist between primary school teachers and vocational high school teachers, and between subject teachers and vocational high school teachers in terms of the expert power dimension. Primary school teachers ($\bar{X}$ = 4.20, S = 0.70) and subject teachers ($\bar{X}$ = 3.97, S = 0.77) were revealed to have higher perceptions than vocational high school teachers ($\bar{X}$ = 3.64, S = 0.89) with regards to school principals' use of expert power. There was a difference found to exist between primary school teachers and vocational high school teachers, and between subject teachers and vocational high school teachers with regards to the referent power dimension. Primary school teachers ($\bar{X}$ = 3.82, S = 0.86) and subject teachers ($\bar{X}$ = 3.60, S = 0.96) were shown to have higher perceptions than vocational high school teachers ($\bar{X}$ = 3.24, S = 0.97) regarding school principals' use of referent power.

Another aim of the current study was to determine teachers' autonomy behaviors. The participant teachers' autonomy behaviors were revealed to be at a high level ($\bar{X}$ = 4.06,

S = 0.62). The teachers displayed teaching autonomy ($\bar{X}$ = 4.20, S = 0.63) the most among the autonomy dimension, followed by curriculum autonomy ($\bar{X}$ = 4.05, S = 0.78), communication autonomy ($\bar{X}$ = 4.00, S = 0.94), and professional development autonomy ($\bar{X}$ = 3.85, S = 0.98), respectively. The teachers' autonomy behaviors were not found to differ significantly according to gender [$t_{(417)}$ = 0.41; p > .05], school level [$F_{(3-415)}$ = .36; p > .05], or professional experience [$F_{(2-416)}$ = 0.36; p > .05]. However, the teachers' professional development autonomy [$t_{(417)}$ = 3.67; p < .05], communication autonomy [$t_{(417)}$ = 4.79; p < .05], and general autonomy [$t_{(417)}$ = 2.89; p < .05] behaviors were revealed to differ significantly according to school type (public or private). The teachers employed at public schools were shown to have higher professional development autonomy [$t_{(417)}$ = 3.67; p < .05], communication autonomy [$t_{(417)}$ = 4.79; p < .05], and general autonomy ($\bar{X}$ = 4.12, S = 0.56) behaviors than teachers employed in private schools. The teachers' teaching autonomy [$F_{(2-416)}$ = 2.06; p > .05], curriculum autonomy [$F_{(2-416)}$ = .48; p > .05], professional development autonomy [$F_{(2-416)}$ = 2.06; p > .05], and general autonomy [$F_{(2-416)}$ = 2.33; p > .05] behaviors were not found to differ significantly according to the variable of subject taught. From the data's analysis, only communication autonomy was shown to differ significantly according to the variable of subject taught, with subject teachers ($\bar{X}$ = 4.08, S = 0.88) having displayed more autonomy behaviors than vocational high school teachers ($\bar{X}$ = 3.70, S = 1.03) in terms of communication autonomy.

The final aim of the current study was to establish whether or not power types used by school principals predicted teachers' autonomy behaviors. For this purpose, the results of the regression analysis are presented in Table 1.

Table 1. *Regression Analysis on Predicting Teachers' Autonomy Behaviors*

Variable	B	SE	B	t	p	Zero order (r)	Partial (r)
Constant	2.42	.24	-	10.23	.00	-	-
Legitimate power	.07	.05	.08	1.39	.17	.24	.07
Reward power	.22	.05	.27	4.21	**.00**	.39	.20
Coercive power	-.05	.03	.09	1.63	.10	.12	.08
Expert power	.01	.07	.01	.15	.88	.33	.01
Referent power	.10	.06	.16	1.80	.07	.35	.09
	R = .42	R² = .18	$F_{(5-413)}$ = 17.63, p = .00				

According to Table 1, there was a positive and moderate-level relationship shown to exist between teachers' autonomy behaviors and school principals' reward power (r = .39), referent power (r = .35), and expert power (r = .33). There was a positive and low-level relationship found between teachers' autonomy behaviors and school principals' legitimate power (r = .24), and a negative and low-level relationship between teachers' autonomy behaviors and school principals' coercive power (r = -.12). When other variables were controlled, a positive and low-level relationship was found to exist between teachers' general autonomy behaviors and school principals' reward power (r = .20). Negligible low-level relationships were found between teachers' general autonomy behaviors and school principals' referent power, coercive power, legitimate power, and expert power. There was a moderate and significant relationship revealed to exist between all dimensions of power

types used by school principals and teachers' general autonomy behaviors (R = .42, p < .05). The power types used by school principals explained 18% of the total variance in teachers' general autonomy behaviors. When the t-test results regarding the significance of the regression coefficients were examined, only reward power was found to be a significant predictor of teachers' general autonomy behaviors.

4. DISCUSSION, CONCLUSION AND SUGGESTIONS

This study aimed to reveal the relationship between power types used by school principals and teachers' autonomy behaviors. According to the participant teachers in this study, school principals mostly use legitimate power, then expert power, reward power, referent power, and coercive power, respectively. This finding generally overlaps with the study results to be found in the literature (Altınkurt & Yılmaz, 2012b, 2012c; Aslanargun, 2009; Bayrak et al., 2014; Karaman, 2015; Yılmaz & Altınkurt, 2012). School principals use of legitimate power at a high level can be said to be an expected result. However, when school principals use these powers, it should not be done in such a way that prevents teachers from exhibiting autonomy behaviors. In this context, it is considered positive that legitimate power is supported by expert power. The fact that the results showed the power type least preferred by school principals as being coercive power means that legitimate power is not used as a means of coercion. However, when the scale items used in the current study on this power type are taken into consideration, it was seen that coercive power, as a type of power, includes certain unethical elements. Therefore, although the result ($\bar{X}$ = 2.27, S = 1.01) appears to be relatively low compared to the other power types, this may be interpreted as a high level due to the nature of this power type and considering that it may have a negative effect on teachers. Moreover, the standard deviation of the coercive power was found to be higher than for all other power types, which demonstrates that coercive power is used in a wider range than the mean. This indicates that coercive power, which should be used only in exceptional circumstances, is actually used by many school principals as a tool of domination. In this regard, school principals should provide more help and support to teachers in order to improve the overall teaching process, rather than displaying an oppressive attitude towards the teachers in their schools (Hoy & Miskel, 2015), and by doing so they would support teachers' autonomy behaviors.

The second aim of the current study was to find out whether or not the power types used by school principals, according to teachers' views, differed in terms of demographic variables. According to the teachers who participated in the study, the power types used by school principals differed significantly according to gender, school level, and subject taught, whereas it was not found to differ according to school type (i.e., public or private) and their length of professional teaching experience. The teachers' views on power types used by school principals differed significantly according only to the gender variable in the dimension of coercive power. Male teachers were found to have higher perceptions than female teachers regarding school principals' use of coercive power. This finding indicates that school principals exert more pressure power on male than female teachers. Perhaps linked to this; most school principals in Turkey are male. According to TEDMEM (2019), the OECD average for female school principals is 47%, while for female school teachers it is 68.3%. However, in Turkey the picture is considerably different, with only 7.2% of school principals being female, whilst female teachers in Turkey account for 55.8%. According to Hofstede (2001), Turkish society has a high power distance which signifies certain collectivist and feminine characteristics.

Therefore, it may be stated that the patriarchal social structure seen in Turkey is effective in school principals' using more coercive power on male teachers, or in male teachers' thinking in this way. Altınkurt and Yılmaz (2012a) stated that the most important obstacle for facing women seeking to be school principals is the patriarchal social structure and gender stereotypes of women in Turkey. In addition, it was also determined that the gender-based values used by males towards females are more internalized by females (Altınkurt & Yılmaz, 2012a). Therefore, in traditional societies such as Turkey, the right to manage is seen as being more associated with males than females (Altınkurt & Yılmaz, 2012a). Further exploring this, Arslantaş and Dayanan-Uğur (2018) concluded that there was a significant difference in the dimensions of reward power and coercive power according to the gender variable of the power sources used by school administrators in their study with primary and secondary school teachers. They reported that male teachers had higher perceptions than female teachers regarding school principals' use of coercive power and reward power; a result similar to that revealed in the current study. Moreover, it can be said that school principals use their coercive power more against male teachers, and that coercive power used by school administrators is used more easily against male teachers in societies with patriarchal and feminine characteristics such as Turkey (Hofstede, 2001). However, the authors of the current study would recommend that further research is conducted in this area.

Teachers' views on the power types utilized by school principals were shown in the current study to differ significantly in all dimensions according to the school level. Primary school teachers were shown to have higher perceptions than high school teachers and vocational high school teachers with regards to school principals' use of their legitimate power. Primary school teachers and high school teachers were shown to have higher perceptions than secondary school teachers and vocational high school teachers regarding school principals' use of reward power. Vocational high school teachers were found to have higher perceptions than primary school teachers and high school teachers regarding school principals' use of coercive power. Secondary school teachers were found to have higher perceptions than high school teachers with regards to school principals' use of coercive power. It was also determined that while vocational high school principals used their legitimate power and reward power less, they used coercive power more. Primary school teachers were found to have higher perceptions than secondary school teachers and vocational high school teachers regarding school principals' use of expert power. High school teachers have higher perceptions than secondary school teachers in that school principals use their expert power. Both primary school teachers and high school teachers were revealed to have higher perceptions than secondary school teachers and vocational high school teachers regarding school principals' use of referent power. The primary school teachers also stated that their school principals used mostly legitimate power, reward power, expert power, and referent power, whereas high school teachers stated their school principals using mostly reward power, expert power, and referent power. In addition to school administrators, the existence of different administrative levels such as workshop chief, departmental chief, and laboratory chief in Turkish vocational high schools differentiates the power distribution in these types of schools. This may be suggested as a reason why school principals working in vocational high schools exert more pressure power.

The third aim of the current study was to determine teachers' autonomy behaviors. The participant teachers displayed teaching autonomy the most among the autonomy dimensions. This dimension was followed by curriculum autonomy, communication

autonomy, and professional development autonomy, respectively. It was an expected outcome that teachers displayed mostly teaching autonomy behaviors as this type of autonomy generally relates to classroom-based practices in which they can act freely to a large extent. Therefore, teachers who are with their students in the classroom can behave more autonomously in terms of classroom practices. Some studies in the literature overlap with this result (e.g., Çolak & Altınkurt, 2017; Üzüm & Karslı, 2013); however, it is remarkable that teachers' autonomy behaviors were found to be at such a high level since the Turkish education system has an extremely centralized structure, and does not structurally afford autonomy to its teachers. According to research conducted by the OECD, Turkey affords virtually the least amount of autonomy to teachers among all OECD countries (OECD, 2013a). Turkey also ranks second to last among non-autonomous countries in creating lesson content and textbook selection among OECD countries (OECD, 2020). Consequently, it may be said that teachers and schools in Turkey have minimal say in the selection of lessons, textbooks, and lesson content. Therefore, in spite of this situation, it was quite remarkable that teachers displayed high autonomous behaviors in the current study. This indicates that despite the legislative restrictions, teachers in Turkey take initiative and risk in order for students to receive a more quality education.

The fourth aim of the current study was to establish whether or not teachers' autonomy behaviors differ according to gender, school type, school level, and their professional teaching experience. The results showed that teachers' autonomy behaviors differed significantly according to school type; however, they did not differ significantly according to gender, school level, or professional experience. Teachers employed in public schools were found to display more professional development autonomy and communication autonomy behaviors than those employed in private schools. There are other studies in the literature that have also reached similar results. Çolak and Altınkurt (2017) concluded that teachers' views differed in the dimensions of curriculum autonomy and professional communication autonomy based on school type in a study involving teachers employed in preschools, primary schools, secondary schools, and high schools. In Turkey, inservice training exists at the institutional level in public schools, although its effectiveness is seen as somewhat debatable and controversial. Moreover, in public schools, the right to participate in postgraduate education is given to teachers according to the Civil Servants' Law (law number 657) and the right to participate in scientific meetings was afforded to teachers in a 2019 directive from the Turkish Ministry of National Education on Teacher Training and Improvement (number 22916715, dated November 19, 2019). Public school teachers, who enjoy relative job security compared to teachers working in the Turkish private education sector, can apply these rights much more easily. In addition, job security also supports collaboration among colleagues. However, many private schools in Turkey lack any formal institutional structure, with teachers employed in a precarious and competitive work environment, most of which were converted from private teaching institutions. This situation in public schools supports cooperation among teachers rather than competition; hence, public school teachers in Turkey behave more autonomously in professional communication autonomy.

The final aim of the study was to establish the effect of the different power types used by school principals on teachers' autonomy behaviors. Moderate and significant relationships were revealed between the power types used by school principals and teachers' autonomy behaviors, and these explained 18% of the teachers' autonomy behaviors. However, according to the results of regression analysis, only reward power was found to be a

significant predictor of teachers' autonomy behaviors. This reveals that the autonomy behaviors of teachers, which in actuality is structurally limited and weakened in the current situation, depends largely on the support of more informal rewards depending on the personal attitude and preference of each school's administrator. However, autonomy is considered not only as an obstacle against teacher pressures, but also as a way to encourage and support teachers' personal or professional power (Friedman, 1999). Additionally, teachers' high levels of autonomy shows that despite all the structural restrictions they face, teachers in Turkey grasp the initiative by taking such risks into account. However, this result may have been partly due to the study having been conducted in İzmir, which is located in the west of Turkey and shares certain characteristics in accordance with European norms. İzmir is among the provinces of Turkey with a high population education level, with its number of citizens having completed higher education (associate, bachelor, master, or doctoral degrees) (21.39%) being above the population average for Turkey (Bluesyemre, 2019). İzmir is considered to be among a list of provinces that offers a high quality of education, with the education at both public and private schools in the province accepted as being of relatively high quality. Therefore, these factors may be effective in obtaining the results seen in the current study. Moreover, the fact that İzmir ranks third among Turkish provinces for Gross Domestic Product and sixth in per capita income (Akgüngör et al., 2017) may have also indirectly affected the study's results.

It may be suggested, therefore, that certain steps should be taken in order to better support teachers' autonomy behaviors based on the results of the current research. As can be seen from the current study's findings, school principals' power preferences have an effect on teachers' autonomy behaviors. As such, it is of considerable importance that school principals utilize their power appropriately in order to create an open and healthy school climate, where teachers can state their opinions easily and openly, and also take part in decision-making according to their area of expertise. However, leaving this situation to the discretion and initiative of the school principals could result in other problems. For this reason, the most important step here would be to make structural arrangements for the empowerment of teachers employed in Turkish schools.

DECLARATIONS

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