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Development of Social Network Leadership Scale and Analysis of Teachers' Social Network Leadership Perceptions in Terms of Various Variables

Sosyal Ağ Liderliği Ölçeğinin Geliştirilmesi ve Öğretmenlerin Sosyal Ağ Liderlik Algılarının Çeşitli Değişkenler Açısından Analizi

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ABSTRACT: This study aims to develop a valid and reliable scale to assess school principals' social network leadership behaviors based on teachers' perceptions and to examine these behaviors across selected demographic variables. A draft scale of 36 items was developed with expert input and administered to teachers working in public schools in Mardin during the 2023–2024 academic year. The dataset was divided into three groups. Data from the first group (n=300) were analyzed using exploratory factor analysis, while the second group (n=201) was subjected to confirmatory factor analysis. The third group (n=352) was used to determine principals' leadership levels and to analyze differences across variables. Analyses yielded a five-dimensional, 33-item structure: Homophily, Network Quality and Structural Gap, Establishing the Structure, Network Coverage, and Social Capital. Confirmatory factor analysis supported the model's fit and construct validity. The scale was found to be valid and reliable. Teachers evaluated principals' social network leadership behaviors at a moderate level. Among the variables examined, only job title showed significant differences. Given the positive impact of principals' social network leadership on social capital, the study recommends fostering social network awareness among school administrators aligned with institutional goals.

Keywords: Social network leadership, leadership, social network, school principals.

ÖZ: Bu çalışma, öğretmenlerin algılarına dayanarak okul müdürlerinin sosyal ağ liderlik davranışlarını değerlendirmek için geçerli ve güvenilir bir ölçek geliştirmeyi ve bu davranışları seçilen demografik değişkenler üzerinden incelemeyi amaçlamaktadır. Uzmanların katkısıyla 36 maddelik bir taslak ölçek geliştirilmiş ve 2023-2024 akademik yılında Mardin'deki devlet okullarında çalışan öğretmenlere uygulanmıştır. Veri seti üç gruba ayrılmıştır. Birinci gruptan (n=300) elde edilen veriler keşifsel faktör analizinde, ikinci gruptan (n=201) elde edilen veriler ise doğrulayıcı faktör analizinde kullanılmıştır. Üçüncü grup (n=352) ise müdürlerin liderlik düzeylerini belirlemek ve değişkenler arasındaki farklılıkları analiz etmek için kullanılmıştır. Analizler, beş boyutlu, 33 maddelik bir yapı ortaya koymuştur: Homofili, Ağ Kalitesi ve Yapısal Boşluk, Yapının Oluşturulması, Ağ Kapsamı ve Sosyal Sermaye. Doğrulayıcı faktör analizi, modelin uyumunu ve yapı geçerliliğini desteklemiştir. Ölçeğin geçerli ve güvenilir olduğu görülmüştür. Öğretmenler, müdürlerin sosyal ağ liderlik davranışlarını orta düzeyde değerlendirmiştir. İncelenen değişkenler arasında yalnızca iş unvanı anlamlı farklılıklar göstermiştir. Okul müdürlerinin sosyal ağ liderliğinin sosyal sermaye üzerindeki olumlu etkisi göz önüne alındığında, çalışma, kurumsal hedeflerle uyumlu olarak okul yöneticileri arasında sosyal ağ farkındalığının geliştirilmesi önerilmiştir.

Anahtar kelimeler: Sosyal ağ liderliği, liderlik, sosyal ağ, okul müdürleri.

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Whilst making our lives easier, Management, defined as the process that includes all efforts to direct a group of people towards determined goals and to ensure cooperation and coordination among them (Şimşek & Çelik, 2018), is shaped according to the dominant understanding of the time it is in. Every change in these understandings also has an impact on management understanding. The 1970s marked a radical change in the historical trajectory, particularly in information and technology. These transformations, influenced by a postmodernist approach to management, emphasized individual freedom valued creativity, and diversity, highlighting the importance of informal structures over formal ones. This shift introduced new concepts and theories in management, including self-management, governance, innovation management, and network theory (network organizations) (Koçel, 1999).

Network theory, whose philosophical foundations were laid by Auguste Comte in the 19th century (Er, 2017) and accepted as a school in the 1970s (Prell, 2012), is defined as a "bundle of theories and methods" because it contains many theories and unique analysis methods (Barabasi, 2010; Nooy et al., 2005). The distinctive characteristics of network studies, both theoretical and methodological, distinguish these studies from traditional approaches. While combining more than one theory constitutes the basis of network theory, the analysis method reveals the application aspect of the theory.

While a social network is defined as a structure created by regular relationships between individuals (Faust, 1994) or a representation of interconnected objects (Eren, 2018), social network analysis is defined as the analysis of interpersonal ties (relationships) within the scope of social norms or a map of the interpersonal relations (Neyişçi, 2015). Network theory follows specific principles and rules. Christakis and Fowler (2012) outline these as i) individuals shape networks, and networks, in turn, shape individuals; ii) the content carried within networks holds significance; iii) networks can produce both positive and negative effects; iv) actors and their connections continually interact; and v) each network exhibits a unique structure. Through these principles, social networks concretize and make visible the complex social phenomena they represent (Marsden, 2005). Additionally, they facilitate the recognition of individuals within the structure by enabling the flow of information between connections (Lin & Erickson, 2008).

Research on the network approach has led to the development of different theories over time (Ağcasulu, 2019). Among these theories, Coleman's network closure, heterophily theory, Granovetter's strength of weak ties, Burt's structural holes, Milgram's small world experiment, and social capital theory have an important place. The network closure theory, put forward by Coleman, was developed based on the effect of parent, student, and teacher relationships on student absenteeism in communities with low socio-economic levels. This theory reveals that strong relationships between stakeholders reduce student absenteeism and that solid ties exhibit the feature of closure (Coleman, 1988). While the network closure theory provides advantages from an organizational perspective in terms of protecting information, accelerating access to information, creating norms, and ensuring adherence to these norms (Burt, 2008; Coleman, 1988; 1990), reducing conflicts in times of crisis in organizations (Nelson, 1989), it also provides benefits in terms of increasing performance and prestige on an individual level (Burt, 2008; Coleman, 1988; 1990).

Burt's structural hole theory asserts that individuals who serve as bridges within organizations fill gaps between connections and gain power by accessing information (Burt, 2000). Similarly, Granovetter (1973) argues in his theory of the strength of weak ties that these weak ties significantly influence information flow and social adaptation. Although often categorized as weak, bridge ties are crucial in facilitating information flow and supporting social network adaptation within the structure (Kadushin, 2012). Consequently, Granovetter's theory of the strength of weak ties emphasizes the importance of bridge ties, indicating that relations without bridging roles lack the same significant effect (Granovetter, 1992).

The theory put forward by Stanley Milgram with the "Small World Experiment" is based on the idea that distances can be shortened with the help of intermediary actors in very dense and complex networks. With this experiment, Milgram gave a package to randomly selected people between Kansas and Nebraska in America and asked them to deliver the package to the person at one end. The package reached the desired destination with an average of six intermediaries (Öztaş & Acar, 2004). This result was called "six degrees of separation" (Gürsakal, 2009).

Tarde and Simmel's concepts of homophily and heterophily emphasize the similarities and differences in the qualities of individuals. Homophily suggests that similar individuals establish stronger bonds with each other (Kadushin, 2011), while heterophily argues that differences encourage innovation and change (Rogers, 1983). The social capital theory, based on the benefits of interpersonal relationships (Leana and Van Buren, 1999), is also accepted as a value embedded in the social network and emerging as a result of these relationships (Inkpen and Tsang, 2005). Although there are different views on which ties will benefit the organization, structural holes in strong and weak ties are prominent (Burt, 2000).

These theories mentioned above collectively form the framework of social network theory and are often described as a bundle of theories that highlight various aspects while complementing each other. For instance, network closure theory focuses on the boundaries of organizational relationships, whereas structural hole theory emphasizes individuals who function as bridges. In the theory of the strength of weak ties, the roles and contributions of bridge ties—characterized as weak ties—become particularly significant. Postmodern management approaches have brought freedom, diversity, and informal structures to the forefront and have made the concept of leadership more valuable. In educational management, the development of leadership types such as humanist, natural, and cultural leadership can be associated with these effects.

In educational organizations such as schools, the establishment and management of informal social network structures in line with organizational goals require effective leadership. Positioned at the top of the organizational hierarchy, school principals assume a critical leadership role in this process. Accordingly, understanding school principals' social network leadership behaviors has emerged as an important area of research.

In this study, the key structural features emphasized in social network theory namely network closure, structural holes, homophily/heterophily, weak ties, small world characteristics, and social capital are not treated as spontaneously emerging outcomes of

social networks. Rather, they are conceptualized as structures shaped by the deliberate leadership behaviors of school principals. From this perspective, social network structures are framed as dynamic processes guided by leadership behaviors.

Network closure is interpreted as a reflection of principals' leadership behaviors aimed at building trust, developing shared norms, and strengthening collaboration, whereas structural holes are associated with the capacity to bridge different groups, facilitate information flow, and enhance interaction. Homophily and heterophily are addressed within the framework of leaders' ability to balance similarity-based relationships and manage diversity by bringing differences together.

Within the context of Granovetter's strength of weak ties theory, weak ties are conceptualized as leadership behaviors through which school principals support access to information, innovation, and organizational learning by establishing strategic relationships with both internal and external actors. Small world theory, in turn, is linked to principals' leadership practices aimed at shortening communication paths, increasing accessibility among actors, and accelerating information flow.

From the perspective of social capital theory, school principals' efforts to develop trust-based relationships, strengthen reciprocity and a sense of belonging, and expand shared resources and support mechanisms through networks are regarded as a central dimension of social network leadership. In this respect, social capital is viewed as an outcome of leaders' capacity to enhance organizational commitment, collaboration, and collective capacity through network structures.

Based on this theoretical approach, the scale developed in this study aims to operationalize the structural features of social networks through the concrete leadership behaviors exhibited by school principals. Accordingly, network closure, structural holes, homophily/heterophily, weak ties, small world characteristics, and social capital are transformed into measurable indicators of social network leadership based on teachers' perceptions, thereby establishing a comprehensive, behavior-based theoretical link between social network theory and the school leadership literature.

Method

This study employs a descriptive survey model, which aims to present the characteristics of the group as they naturally exist. The scale development process followed several key stages (Karasar, 2010): defining the scale's content, reviewing relevant literature, generating an item pool, consulting field experts, teachers, and school administrators to establish content validity, developing and assessing the scale form, conducting a pilot study, administering the scale, and performing validity and reliability analyses.

In the initial stage of developing a reliable and valid scale to assess school principals' social network leadership behaviors, the research team reviewed the literature on social network theory, analyzed existing studies, and interviewed a faculty member experienced in this field. Based on these steps, they drafted a scale comprising 36 items. Three experts then reviewed this draft, and consultations were held with two school principals and four teachers to ensure the clarity of the scale items. Participants rated their self-efficacy using a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree."

The study population consisted of teachers from all levels of public schools in the Artuklu district of Mardin province, while the study group included 853 teachers employed in these schools. To determine the study group (sample), we employed maximum variation sampling from purposeful sampling methods to capture diversity across different levels, and they used simple random sampling from random sampling methods to select schools. Maximum variation sampling aims to reflect the highest level of participant diversity and to identify similar phenomena within diverse situations (Yıldırım & Şimşek, 2011). In contrast, random sampling ensures that each unit in the population has an equal and independent probability of being selected, allowing for impartiality in the sampling process (Balcı, 2001). In scale development studies, the sample size typically exceeds the number of targeted items several times (Balcı, 2001). Accordingly, the sample size for this study was significantly more significant than the number of scale items. Specifically, we utilized data from 300 participants for exploratory factor analysis (EFA), 201 for confirmatory factor analysis (CFA), and 352 for teachers' perceptions of school principals' social network leadership across various variables. In a population of 5,000 individuals, a sample size of 357 teachers is sufficient to represent different subgroups at a 95% confidence level (Can, 2016). Therefore, the sample size achieved in this study is adequate to describe the overall population. Personal information about the participants is summarized in Table 1.

Table 1

Demographic Information of Participants

Variable	Scale Development Dataset					Application Dataset			
				Total				Total	
		N	%	N	%	N	%	N	%
Marital Status	Single	103	20.5	501	100	83	23.6	352	100
	Married	398	79.5			269	76.4		
Professional Experience (years)	1-5	187	37.3	501	100	74	21	352	100
	6-10	99	19.7			62	17.6		
	11-15	138	27.6			82	23.3		
	16-20	56	11.2			57	16.2		
	< 20	21	4.2			77	21.9		
Career Title	Teacher	216	43.1	501	100	160	45.5	352	100
	Expert teacher	285	56.9			192	54.5		
Education level	Preschool	69	13.7	501	100	50	14.2	352	100
	Primary school	190	37.9			125	35.5		
	Secondary	139	27.8			88	25		
	High school	103	20.6			89	25.3		
Age	20-30	76	15.1	501	100	55	15.6	352	100
	31-40	235	46.9			156	44.3		
	41-50	152	30.4			111	31.5		

	51-60	35	7			27	7.8		
	< 60	3	.6			3	.8		
Bachelor's Degree	Undergraduate	378	75.5	501	100	269	76.4	352	100
	Graduate	123	24.5			83	23.6		
Job Title	Teacher	420	83.8	501	100	289	82.1	352	100
	Deputy principal	50	10			38	10.8		
	Principal	31	6.2			25	7.1		

Examining Table 1 reveals that the participants predominantly fall into the married category regarding marital status (79.5% compared to 76.4%). Additionally, a higher proportion of teachers possess 1-5 years (37.3%) and 11-15 years (23.3%) of professional Experience. Regarding career titles, the group includes more expert teachers (56.9% versus 54.5%). The education level is also notable, with a higher percentage of primary school teachers (37.9% compared to 35.5%). Regarding age, most participants are between 31 and 40 years old (46.9% versus 44.3%). Furthermore, a significant majority hold a bachelor's degree (75.5% compared to 76.4%), and the title of "teacher" is prevalent among the participants (83.8% versus 82.1%).

The study conducted validity and reliability analyses in two study groups (300 and 201 participants). Researchers used the data from 300 participants for EFA to establish construct validity. This analysis resulted in a five-dimensional structure consisting of 33 items. CFA used data from 201 participants to confirm whether this five-dimensional structure was valid. The results of the CFA were assessed regarding model data fit by examining the fit indices CMIN/DF, CFI, GFI, and RMSEA. We accepted a statistical significance level of $p< 0.05$.

The "Social Network Leadership Scale" developed in the first part of the study was used as the data collection tool. The first part of the scale, consisting of five dimensions and 33 items, was created by adding the variables of marital status, age, professional experience, education level, educational status, career title, and job title. The second part included the scale items.

The study examined teachers' opinions regarding the social network leadership of school principals and analyzed these opinions across various variables. To achieve this, we applied descriptive analyses to the collected data. We utilized parametric methods such as the t-test and one-way analysis of variance (ANOVA), assuming a normal data distribution. The LSD test identified variables that exhibited significant differences following the one-way ANOVA. Additionally, we calculated η^2 (eta squared) to determine the effect sizes of the variables that showed significant differences due to the parametric tests.

Ethical Procedures

Ethics committee approval for the study was obtained from Mardin Artuklu University Scientific Research and Publication Ethics Committee with the date 07.05.2024, number 142140 and decision number 29.

Results

The results are presented in two parts, which discuss the two purposes of the research. The first part includes the validity and reliability studies regarding the "Social Network Leadership Scale." In contrast, the second part consists of teachers' opinions regarding the social network leadership of school principals and whether these opinions differ in demographic variables.

The first part of the study focused on establishing the construct validity of the draft scale. Construct validity evaluates the theoretical framework of the measurement tool developed to assess a variable, its adequacy in measuring that variable, and the strength of its relationship with the variable (Büyüköztürk et al., 2008). To this end, we assessed the sample size's adequacy for factor analysis using the Kaiser-Meyer-Olkin (KMO) test. Additionally, we determined multivariate normality, a prerequisite for EFA, through the Bartlett Sphericity Test. The results of the KMO and Bartlett sphericity tests are summarized in Table 2.

Table 2

Kaiser-Meyer Olkin (KMO) and Bartlett Test of Sphericity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.925
Bartlett's Test of Sphericity	Approx. Chi-Square	7142708
	df	630
	Sig.	.000

Table 2 determined the KMO value to be .925, indicating an "excellent" level for factor analysis. The results of the Bartlett Sphericity Test revealed a significant chi-square value ($X^2(630) = 7142.708$, $p < 0.05$). These KMO and Bartlett sphericity test results demonstrate that the data are appropriate for factor analysis.

In the study, we performed EFA to determine the sub-dimensions of the data whose data suitability was determined. EFA is an analysis in which the relationships between variables are examined to reveal a new structure (Can, 2016). In the EFA process, we used principal components analysis to determine the sub-dimensions of the scale. Among the rotation methods, we used orthogonal rotation and the most frequently preferred "varimax" process within the orthogonal rotation method. This method reveals the sub-dimensions more clearly (Can, 2016). The item factor loadings and total correlation coefficient results for the draft scale are given in Table 3.

Table 3
Factor Loading Values of Scale Items and Item-Total Correlation Coefficients

Item	Factor Loading Values	Item-Total Correlation Coefficients	Item	Factor Loading Values	Item-Total Correlation Coefficients
M1	.867	.561	M19	.825	.515
M2	.825	.601	M20	.926	.564
M3	.825	.666	M21	.936	.671
M4	.903	.690	M22	.901	.670
M5	.794	.741	M23	.935	.727
M6	.897	.501	M24	.953	.697
M7	.809	.570	M25	.940	.665
M8	.698	.648	M26	.940	.616
M9	.915	.632	M27	.903	.538
M10	.953	.729	M28	.966	.719
M11	.948	.750	M29	.920	.486
M12	.944	.782	M30	.945	.654
M13	.952	.725	M31	.919	.632
M14	.897	.509	M32	.951	.752
M15	.907	.553	M33	.953	.780
M16	.882	.549	M34	925	.752
M17	.826	.502	M35	.945	.699
M18	.832	.559	M36	.956	.746

Examining Table 3 reveals that the item factor loadings ranged from .966 to .698, while the squared coefficients varied between .782 and .501. After the rotation, 17 items clustered under six sub-dimensions with eigenvalues greater than 1, a finding further supported by a scree plot. However, some items showed overlap, with the difference between the two high-loading values being less than .10 for five items (M9, M14, M19, M27, M29). To address this, we removed the items with low differences (M9, M14, M19) in order and then repeated the process. Since the difference between the loading values of M27 and M29 exceeded .10 after the process, these items remained on the scale. Ultimately, the analysis yielded a six-dimensional structure. Table 4 presents the total variance explained for the six-factor structure.

Table 4

Total Variance Explained (M9, M14, M19 items were removed)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	11.816	35.805	35.805	11.816	35.805	35.805	9.123	27.645	27.645
2	4.636	14.048	49.854	4.636	14.048	49.854	4.244	12.861	40.506
3	1.708	5.175	55.029	1.708	5.175	55.029	4.101	12.426	52.932
4	1.512	4.581	59.610	1.512	4.581	59.610	1.945	5.893	58.825
5	1.140	3.453	63.063	1.140	3.453	63.063	1.271	3.852	62.678
6	1.041	3.153	66.217	1.041	3.153	66.217	1.168	3.539	66.217

Examining the total variance explained in Table 4 reveals that the 33 analyzed items are grouped into six factors, each with eigenvalues greater than 1. These six factors account for 66.217% of the total variance. We applied orthogonal rotation (varimax) to obtain more accurate results. The analysis revealed that each factor contributed to the total variance as follows: 27.645% for the first factor, 40.506% for the second factor, 52.932% for the third factor, 58.825% for the fourth factor, 62.678% for the fifth factor, and 66.217% for the sixth factor. The item loading values obtained after rotation are presented in Table 5.

Table 5

Rotated Components Matrix (M9, M14, M19. items were removed)

Load Values After Rotation											
1.Factor		2.Factor				3.Factor		4.Factor		5.Factor	
M5	.789	M12	.852	M13	.771	M17	.724	M22	.776	M27	.501
M4	.775	M33	.836	M28	.770	M18	.653	M23	.730		
M2	.750	M34	.820	M32	.724	M16	.615	M24	.687	6.Factor	
M7	.745	M11	.817	M26	.713	M15	.528	M20	.676	M8	.877
M3	.743	M10	.808	M30	.680			M25	.652		
M1	.706	M36	.803	M31	.650			M21	.632		
M6	.650	M35	.801					M29	.459		

An examination of Table 5 indicates that the first subdimension of the six-factor structure consists of seven items (M1, M2, M3, M4, M5, M6, M7), the second subdimension comprises thirteen items (M10, M11, M12, M13, M26, M28, M30, M31, M32, M33, M34, M35, M36), the third subdimension includes four items (M15, M16, M17, M18), and the fourth subdimension consists of seven items (M20, M21, M22, M23, M24, M25, M29). The fifth and sixth subdimensions, however, each contain a single item (M27 and M8, respectively).

In scale development studies, single-item factors are widely recognized as having limitations in terms of structural stability and content validity (DeVellis, 2017). Accordingly, considering that the fifth and sixth subdimensions consisted of only one item each, M27 was evaluated as exhibiting stronger theoretical and conceptual alignment with the fourth subdimension, while M8 demonstrated greater theoretical coherence with the second subdimension. Therefore, these items were incorporated into the respective subdimensions. This decision was guided by the aim of ensuring that the factor structure is not only statistically acceptable but also theoretically interpretable and conceptually coherent.

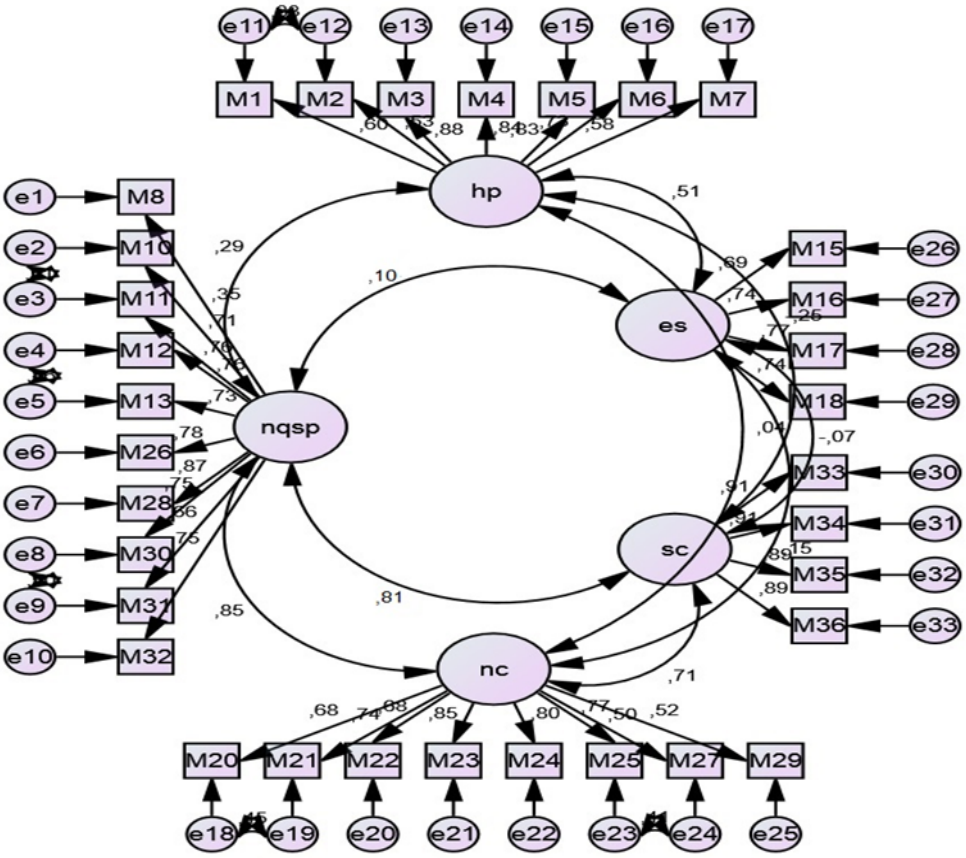
During the interpretation of the EFA results within the framework of social network theory, items M33, M34, M35, and M36, which were initially loaded on the second subdimension, were found to emphasize trust, reciprocity, sense of belonging, and shared resource utilization. These content characteristics directly reflect the distinctive dimensions of social capital theory rather than those of network quality or structural holes. Although the six-factor solution was statistically acceptable, these items could not be sufficiently explained within the existing factor from a theoretical perspective. For this reason, expert opinions were sought, and based on their evaluations, it was concluded that treating items M33, M34, M35, and M36 as a separate dimension would strengthen both content validity and theoretical consistency.

As a result of these refinements, the scale was restructured into a five-factor model. The dimensions were labeled as “Homophily” for the first factor, “Network Quality and Structural Holes” for the second factor, “Building the Structure” for the third factor, “Network Scope” for the fourth factor, and “Social Capital” for the fifth factor. The factor loadings of the items across dimensions ranged from .877 to .501.

We conduct CFA to evaluate the model-data fit of the structures obtained after the EFA. CFA is applied to reveal the suitability of the relationships between variables for a previously determined hypothesis or a structure (Can, 2016). The scale factor structure is given in Figure 1.

Figure 1

Social Network Leadership Scale Factor Structure



The fit indices obtained for the first level CFA are as follows: $\chi 2$ = 912.422, sd = 479, $\chi 2$/sd = 1.90, GFI = .92, CFI = .91, RMSEA = .06. Chi-square statistics, $\chi 2$/sd < 2 indicates a perfect fit and $\chi 2$/sd < 3 indicates an acceptable fit; a value of .90 for GFI and CFI indicates an acceptable fit and a value of .95 indicates a perfect fit; a value of .08 for RMSEA indicates an acceptable fit and a value of .05 indicates a perfect fit (Schermelleh-Engel et al., 2003). The factor loadings for the five-dimensional model obtained from the first level CFA are presented in Figure. Accordingly, the factor loadings for the quality of networks sub-dimension range from .35 to .87, for the homophily range from .60 to .88, for the network quality and structural gap range from .50 to .85, for the establishing of structure range from .69 to .77. For the social capital range from .89 to .91. The t values obtained as a result of the first-level CFA are presented in Table 6.

Table 6

t-Values for Social Network Leadership Scale

Item	***t***	**Item**	***t***	**Item**	***t***	**Item**	***t***	**Item**	***t***
M1	7.82*	M8	4.72*	M17	9.11*	M25	9.78*	M32	4.83*
M2	7.90*	M10	4.76*	M18	8.86*	M26	4.87*	M33	19.4*
M3	9.20*	M11	4.84*	M20	11.74*	M27	6.61*	M34	21.02*
M4	8.97*	M12	4.84*	M21	12.73*	M28	4.96*	M35	19.67*
M5	8.90*	M13	4.80*	M22	8.71*	M29	6.88*	M36	19.38*
M6	8.21*	M15	5.32*	M23	10.64*	M30	4.82*		
M7	6.90*	M16	8.56*	M24	10.07*	M31	4.68*		

* p <.01

According to Table 6, the t values of the Social Network Leadership Scale items varied between 4.72 and 21.02. All t values were greater than 2.58 and significant ($p < .01$), indicating that the number of participants was sufficient for CFA and that no item needed to be removed (Kline, 2011).

Examining the CFA findings indicates that the model-data fit of the scale is at an acceptable level. Consequently, the results of both the exploratory and confirmatory factor analyses provide evidence supporting the construct validity of the social network leadership scale.

Results Regarding Reliability Studies

Reliability assesses the consistency of responses to the items and the accuracy with which the feature is measured. Table 7 presents the Cronbach's alpha reliability values calculated for Social Network Leadership and its sub-dimensions.

Table 7

Cronbach's Alpha Reliability Coefficient of Social Network Leadership Scale

Factor	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
1.Factor	.876	.877	7
2.Factor	.890	.893	10
3.Factor	.717	.719	4
4.Factor	.884	.883	8
5.Factor	.946	.949	4
Total	.907	.908	33

As seen in Table 7, Cronbach's Alpha value of the social network leadership scale was .907. The values obtained reveal that the social network leadership scale is highly reliable. Thus, the scale effectively measures school principals' perceptions of social network leadership.

In the second part of the study, we discussed the views of school principals on social network leadership and whether these views differ in terms of some variables. The perception levels of school principals on social network leadership are given in Table 8.

Table 8

Teacher Perceptions of School Principals Regarding Social Network Leadership

Factor	Items	X̄	S	Factor	Items	X̄	S
Homophily	1	2.29	1.25	Establishing the structure	15	2.96	1.10
	2	2.24	1.15		16	2.30	1.26
	3	1.87	1.16		17	2.70	1.12
	4	1.83	1.10		18	2.66	1.08
	5	1.84	1.31		Factor	2.65	1.14
	6	1.91	1.10	Network coverage	20	3.28	1.06
	7	2.03	1.07		21	3.13	1.17
	Factor	2.00	1.16		22	3.41	1.05
Network quality and structural gap	8	2.23	1.17		23	3.28	1.09
	10	3.58	1.04		24	3.41	1.06
	11	3.49	1.12		25	2.99	1.16
	12	3.38	1.14		27	2.78	1.14
	13	3.47	1.06		29	2.73	1.02
	26	3.48	1.21		Factor	3.12	1.09
	28	3.24	1.12	Social capital	33	3.30	1.17
	30	2.80	1.19		34	3.13	1.14
	31	2.88	1.16		35	3.09	1.18
	32	3.18	1.10		36	3.42	1.20
	Factor	3.17	1.13		Factor	3.23	1.17
Scale						2.83	1.13

According to the findings in Table 8, teachers' perceptions regarding the social network leadership of school principals were at the level of "moderately agree" (X̄=2.83). In terms of dimensions, the perceptions of teachers were at the level of "slightly agree" in the "Homophily" dimension, while they were at the level of "moderately agree" in all other dimensions. While all the items in the "Homophily" dimension were at the level of "slightly agree," the averages of "social networks based on gender, professional seniority, and age" were higher than the other item averages, and the lowest average was in the item "establishes social networks based on religious belief."

In the "Network quality and structural gap" dimension, the item "formal social networks" was at the level of "slightly agree," "professional development networks, strong social networks, networks of relationships between unrelated individuals and

groups, directing different individuals (vice principal, guidance counselor, etc.) to establish social networks between unrelated actors, accessing information that is far away through social networks with people at different levels" was at the level of "moderately agree." The item "professional solidarity networks, trust networks, advice/solidarity/information sharing networks and prevents the formation of social networks that will negatively affect the school" was at the level of "agree."

In the "establishing the structure" dimension, the item "there are people in the social network with whom one has no relationships" had an average of "slightly agree." The item "being at the center of the network, creating social networks directly related to oneself, and using intermediary people in social networks" had an average of "moderately agree."

"In the dimension of "network coverage," the school principals' average scores for the items "establishing social networks with parents, students, the school environment, and non-governmental organizations, using unrelated people to access information, and establishing social networks among unrelated people" were found to be at the "moderately agree" level, while the average scores for the items "establishing social networks with senior managers and different school administrators-teachers" were found to be at the "agree" level.

In the "social capital" dimension, the items "efficiency, individual and organizational performance are revealed thanks to social networks" have reached the level of "moderately agree." The item "A healthy school climate is created thanks to social networks" has reached the level of "agree." The t-test results of teachers' opinions on school principals' social network leadership behaviors in terms of gender, educational status, and career title are presented in Table 9.

Table 9

Analysis Results of Teachers' Perceptions of Social Network Leadership Behaviors in Terms of Gender, Bachelor's Degree, and Career Title (t-Test)

Factor	**Variables**	***N***	***X̄***	***S***	***df***	***t***	***p***	***η2***
Homophily	Single	83	2.16	.859	350	1.995	**.047***	.01
	Married	269	1.95	.856				
Network quality and structural gap	Single	83	3.10	.774	350	.828	.408	-
	Married	269	3.19	.810				
Establishing the structure	Single	83	2.70	.896	350	.569	.569	-
	Married	269	2.64	.848				
Network coverage	Single	83	3.09	.715	350	.338	.735	-
	Married	269	3.13	.850				
Social capital	Single	83	3.14	1.09	350	.814	.416	-
	Married	269	3.25	1.09				
Scale	Single	83	2.86	.553	350	.080	.936	-
	Married	269	2.85	.574				
Homophily	Undergraduate	269	1.95	.812	350	1.699	.090	-
	Graduate	83	2.14	.992				

Network quality and structural gap	Undergraduate	269	3.16	.778	350	.205	.838	-
	Graduate	83	3.18	.878				
Establishing the structure	Undergraduate	269	2.60	.858	350	2.004	**.046***	.01
	Graduate	83	2.81	.844				
Network coverage	Undergraduate	269	3.12	.798	350	.090	.928	-
	Graduate	83	3.11	.892				
Social capital	Undergraduate	269	3.24	1.09	350	.440	.660	-
	Graduate	83	3.18	1.09				
Scale	Undergraduate	269	2.84	.535	350	.862	.389	-
	Graduate	83	2.90	.668				
Homophily	Teacher	160	2.06	.821	350	1.364	.174	-
	Expert	192	1.94	.889				
Network quality and structural gap	Teacher	160	3.06	.801	350	2.317	**.021***	.01
	Expert	192	3.26	.792				
Establishing the structure	Teacher	160	2.75	.840	350	1.905	.058	-
	Expert	192	2.57	.868				
Network coverage	Teacher	160	3.09	.830	350	.723	.470	-
	Expert	192	3.15	.812				
Social capital	Teacher	160	3.09	1.104	350	2.219	**.027***	.03
	Expert	192	3.35	1.071				
Scale	Teacher	160	2.82	.557	350	.965	.335	-
	Expert	192	2.88	.578				

Table 9 shows no significant difference in teachers' perceptions of social network leadership regarding gender, education level, and career title variables. In terms of sub-dimensions, we found a significant difference in the "homophily" sub-dimension in the marital status variable, in the "establishing the structure" sub-dimension in the educational status variable, and in the "network quality and structural gap" and "social capital" sub-dimensions in the career title variable. After we performed the eta square (η2) calculation to determine the effect values of the variables with significant differences, the difference between the variables was a "small level." The t-test results of teachers' views on school principals' social network leadership behaviors in terms of the education level variable are presented in Table 10.

Table 10

Analysis Results of Teachers' Perceptions of Social Network Leadership in Terms of Job Title Variable (ANOVA)

Factor	Job Title	*N*	$\bar{X}$	*S*	Source of Variance	Sum of Squares	*df*	Mean Square	*F*	*p*	Difference (LSD)	*η2*
Homophily	Teacher	289	1.96	.839	Between Groups	1.974	2	.987	1.336	.264	-	-
	Deputy Principal	38	2.13	.750	Within Groups	257.923	349	.739				
	Principal	25	2.20	1.193	Total	259.897	351					
	Total	352	2	.860								
Network quality and structural gap	Teacher	289	3.09	.783	Between Groups	17.170	2	8.585	14.377	.000*	1-3 2-3	.06
	Deputy Principal	38	3.26	.704	Within Groups	208.397	349	.597				
	Principal	25	3.94	.737	Total	225.567	351					
	Total	352	3.17	.801								
Establishing the structure	Teacher	289	2.63	.862	Between Groups	2.398	2	1.199	1.631	.197		-
	Deputy Principal	38	2.88	.833	Within Groups	256.539	349	.735				
	Principal	25	2.54	.825	Total	258.937	351					
	Total	352	2.65	.858								
Network coverage	Teacher	289	3.06	.800	Between Groups	10.849	2	5.424	8.402	.000*	1-3 2-3	.04
	Deputy Principal	38	3.20	.788	Within Groups	225.323	349	.646				
	Principal	25	3.74	.861		236.717	351					
	Total	352	3.12	.820	Total							
Social capital	Teacher	289	3.15	1.09	Between Groups	18.685	2	9.342	8.144	.000*	1-3 2-3	.04
	Deputy Principal	38	3.25	.967	Within Groups	400.338	349	1.147				
	Principal	25	4.06	.947		419.023	351					
	Total	352	3.23	1.09	Total							
Scale	Teacher	289	2.79	.552	Between Groups	7.954	2	3.977	13.134	.000*	1-3 2-3	.06
	Deputy Principal	38	2.96	.488	Within Groups	105.676	349	.303				
	Principal	25	3.36	.613		113.629	351					
	Total	352	2.85	.568	Total							

The data in Table 10 indicate that teachers' opinions varied significantly by job title in the overall scale and the "network quality and structural gap," "network coverage," and "social capital" sub-dimensions. We identified that school principals held the highest perceptions on the overall scale and in the sub-dimensions, showing

significant differences. Our eta squared (η2) calculation revealed a "moderate" level of difference for both the overall scale and the specific sub-dimensions. Table 11 presents the t-test results for teachers' views on school principals' social network leadership behaviors according to professional experience.

Table 11

Analysis Results of Teachers' Perceptions of Social Network Leadership in Terms of Professional Experience Variable (ANOVA)

Factor	Professional Experience (years)	*N*	$\bar{X}$	*S*	Source of Variance	Sum of Squares	*df*	Mean Square	*F*	*p*	Difference (LSD)	*η2*
Homophily	1. 1-5	74	2.09	.770	Between Groups	14.148	4	3.537	4.994	.001*	1-5 2-5	.05
	2. 6-10	62	2.20	.896	Within Groups	245.750	347	.708				
	3. 11-15	82	1.97	.893	Total	259.897	351					
	4. 16-20	57	1.99	.818								
	5. >20	77	1.78	.875								
	Total	352	2	860								
Network quality and structural gap	1. 1-5	74	3.06	.780	Between Groups	12.103	4	3.026	4.919	.001*	1-5 2-5 3-5 4-5	.05
	2. 6-10	62	3.02	.832	Within Groups	213.464	347	.615				
	3. 11-15	82	3.09	.818	Total	225.567	351					
	4. 16-20	57	3.14	.707								
	5. >20	77	3.49	.779								
	Total	352	3.17	.801								
Establishing the structure	1. 1-5	74	2.81	.794	Between Groups	11.949	4	2.987	4.197	.002*	1-5 2-5 3-5 4-5	.04
	2. 6-10	62	2.79	.928	Within Groups	246.988	347	.712				
	3. 11-15	82	2.63	.839	Total	258.937	351					
	4. 16-20	57	2.71	.839								
	5. >20	77	2.36	.841								
	Total	352	2.65	.858								
Network coverage	1. 1-5	74	3.14	.666	Between Groups	7.843	4	1.961	2.980	.019*	2-5 3-5	
	2. 6-10	62	3.05	.982	Within Groups	228.329	347	.658				

	3. 11-15	82	2.98	.744	Total	236.171	351				.03
	4. 16-20	57	3.11	.765							
	5. >20	77	3.33	.902							
	Total	352	3.12	.820							
Social capital	1. 1-5	74	3.13	1.08	Between Groups	19.873	4	4.968	4.319	.002*	1-5 2-5 3-5 4-5 .04
	2. 6-10	62	3	1.09	Within Groups	399.150	347	1.150			
	3. 11-15	82	3.13	1.04	Total	419.023	351				
	4. 16-20	57	3.23	1.02							
	5. >20	77	3.61	1.12							
	Total	352	3.23	1.09							
Scale	1. 1-5	74	2.85	.495	Between Groups	1.461	4	.365	1.130	.342	- -
	2. 6-10	62	2.82	.641	Within Groups	112.169	347	.323			
	3. 11-15	82	2.77	.549	Total	113.629	351				
	4. 16-20	57	2.85	.568							
	5. >20	77	2.96	.590							
	Total	352	2.85	.568							

Table 11 shows that although the service year variable did not result in a significant difference on the overall scale, it did reveal significant differences across all sub-dimensions. We found the highest perception in the "homophily" sub-dimension among participants with 6-10 professional experience. Participants with 21 or more professional experience showed the highest perception in the "network quality and structural gap" and "network coverage" sub-dimensions, while those with 1-5 professional experience scored highest in "establishing the structure." In the "social capital" sub-dimension, participants with 21 or more professional experience had the highest perceptions. Our eta squared (η2) calculations revealed a "small level" difference in the "network coverage" sub-dimension, with a "medium level" difference in the other sub-dimensions.

Discussion and Conclusion

This study designed a 33-item scale across five dimensions to evaluate school principals' social network leadership through teachers' perspectives. Analyses confirmed that the scale demonstrates both reliability and validity. Initially, the scale included three reverse-coded items (M8, M14, M19). After CFA, we removed two reverse-coded items (M14, M19), leaving one. The finalized scale includes five sub-dimensions:

"Homophily," "Network Quality," "Establishing the Structure," "Structural Gap," and "Social Capital."

The Homophily dimension consists of seven items (M1, M2, M3, M4, M5, M6, M7), and these items emphasize the similarities that school principals prioritize in their social relationships. In this dimension, 7 is the lowest possible score, while 35 is the highest. The increase in scores in this dimension shows that school principals use various social relationships (age, gender, union, etc.).

The Network Quality and Structural Gap dimension consists of ten items (M8, M10, M11, M12, M13, M26, M28, M30, M31, M32). These items emphasize the quality of the social networks established by school principals. In this dimension, participants can score between a minimum of 10 and a maximum of 50. The increase in scores in this dimension shows that school principals use networks of various qualities (solidarity, cooperation, consultation, etc.).

The Establishing the Structure dimension consists of four items (M15, M16, M17, M18). These items emphasize the school principals' skills in building social networks and their positions within them. In this dimension, participants can score between a minimum of 4 and a maximum of 20. The increase in scores in this dimension reveals school principals' leadership in establishing social networks and determining their positions within this structure.

The Network Coverage dimension consists of seven items (M20, M21, M22, M23, M24, M25, M27, M29). These items emphasize school principals' leadership in establishing social networks and networks among unrelated networks. Participants can score between a minimum of 7 and a maximum of 35 in this dimension. The increase in scores in this dimension indicates that school principals' social networking and the leadership behaviors they exhibit while establishing these networks are at a high level.

The Social Capital dimension consists of four items (M33, M34, M35, M36). These items emphasize the reflections of the social network leadership displayed by school principals as social capital. Participants can score between a minimum of 4 and 20 in this dimension. The increase in the scores in this dimension shows that the social network leadership displayed by school principals has a higher impact on social capital.

In this study, school principals' social network leadership behaviors were examined within a multidimensional framework based on teachers' perceptions. The findings revealed that principals' social network leadership behaviors were generally perceived at a moderate level; however, these perceptions differed significantly across certain variables. When interpreted within the context of social network theory, the results indicate that school administrators' positions within the organization play a determining role in network structures, information flow, and the distribution of power. The fact that principals' social network leadership behaviors were perceived at a moderate level by teachers is consistent with the findings of Koyuncu and Kazak (2022), who reported that school principals experience deficiencies in communication with teachers. Nevertheless, the existence of studies in the literature demonstrating that principals' communication skills are perceived as good or above average (Akan & Mehrdad, 2019; Getmez, 2018; Anderson, 2022; Kabia, 2022; Köprülü, 2021; Kaplan et al., 2023; Ergenekon, 2019; Karayiğit, 2019; Baycan, 2018; Sert, 2018; Casiadi, 2017; Uzun, 2015) suggests that the findings of the present study indicate that while school

principals have reached a certain level of competence in communication and social interaction, they have not yet achieved the desired level of maturity in terms of social network leadership. This situation points to limitations not in the existence of communication skills per se, but in the systematic and strategic transformation of these skills into network-based leadership behaviors. One possible reason for this may be that school principalship is often structured not as a primary leadership profession, but rather as an administrative responsibility added to the teaching role. The limited emphasis placed on network-specific leadership competencies—such as building social networks, creating bridges among stakeholders, managing information flow, and generating social capital—during selection, preparation, and in-service training processes may make it difficult for school principals to translate their existing communication skills into strategic network structures.

The findings of the study indicate that school principals prioritize variables such as gender, professional seniority, and age when forming social networks, and that they tend to establish network structures that support professional solidarity, trust, consultation, collaboration, and information sharing. Although principals demonstrate leadership behaviors such as creating new opportunities by linking professional development to diverse networks and accessing distant information through social relationships, these behaviors have not yet reached the desired level. In addition, it was found that school principals occupy central positions within the social networks they establish, that these networks are largely initiated by the principals themselves, and that they make use of individuals who assume brokerage roles. However, the presence of actors within the network with whom no relationships are established indicates that these leadership behaviors remain insufficient. In the study conducted by Akçekoce and Bilgin (2016), “trust” was identified as the most important leadership characteristic. Similarly, Barutçugil (2002) emphasized that among the five fundamental components required of leaders, trust is the most critical, as it constitutes the foundation of all other components.

According to the research findings, school principals build strong social networks with upper-level administrators, other school leaders, and teachers; however, networks involving parents, students, the local community, and civil society organizations tend to be weaker. Although leadership behaviors such as accessing information, using intermediaries to reach individuals with whom there is no direct relationship, and creating networks among otherwise unconnected actors are observed, these behaviors do not appear to be at the expected level. In the study by Aslan and Karip (2014) aimed at defining leadership standards for school principals, collaboration with stakeholders was identified as one of the fundamental leadership standards.

The findings obtained from this study demonstrate that the social network leadership behaviors exhibited by school principals constitute a form of social capital in terms of individual and organizational performance and productivity, and that these behaviors are particularly effective in the development of a healthy school climate. The positive and strong relationship identified between social capital and innovative school climate in the study by Polatcan and Balcı (2022) supports the findings of the present research.

One of the most striking findings of the study is the significant differentiation in perceptions of social network leadership according to professional title. The perception

that school principals and vice principals exhibit higher levels of social network leadership behaviors compared to teachers can be strongly explained by the core assumptions of social network theory. In particular, Burt's (2000) Structural Holes Theory provides an important theoretical framework for interpreting this differentiation. School principals and vice principals, by virtue of their managerial positions, assume bridging roles between different groups within the organization and are positioned as central actors who facilitate information flow among teachers, upper management, external stakeholders, and inter-institutional networks. This central position enhances administrators' capacity to bridge structural holes and grants them a strategic advantage within the network.

From this perspective, teachers' higher perceptions of principals and vice principals in terms of social network leadership should not be regarded merely as a perceptual difference, but rather as a natural outcome of network-based power and information distribution within the organization. Within the framework of Burt's theory, the network position held by administrators increases both their access to information and their capacity to control information dissemination, which in turn directly influences leadership perceptions. Accordingly, differentiation based on professional title offers an important theoretical implication by demonstrating that leadership in educational organizations is not only hierarchical, but also fundamentally network-based.

This finding can also be associated with Coleman's (1988, 1990) Theory of Network Closure. School principals play a central role in the establishment of norms, the development of trust, and the maintenance of collaboration within the school. In structures characterized by strong network closure, actors in leadership positions are expected to function both as norm setters and as agents ensuring the enforcement of these norms. This provides an additional theoretical basis for explaining why teachers perceive administrators as stronger social network leaders.

Analyses conducted in the findings section reveal that significant differences primarily emerge between teachers and school principals or vice principals. These differences, particularly evident along the teacher–administrator divide, offer important insights into how social networks intersect with hierarchical positions in educational organizations.

An examination of the effect size calculated for variables exhibiting significant differences ($\eta^2 = .06$) indicates that professional title has a near-moderate effect on perceptions of social network leadership. This finding suggests that the observed statistical significance is not merely a function of large sample size, but that the differences identified also have meaningful practical implications. In other words, the higher perceptions of social network leadership among school principals and vice principals compared to teachers point to a structural condition related to organizational roles and network positions, rather than to a random or coincidental difference.

The significant difference observed in the "Homophily" subdimension according to marital status is noteworthy in terms of illustrating how the principle of homophily emphasized in social network theory operates on the basis of individual characteristics. The higher perceptions among single teachers compared to married teachers suggest that this group may be more capable of forming similarity-based ties more rapidly and

of constructing more flexible and expandable network structures. From a social network theory perspective, individuals' life arrangements and levels of responsibility may influence the time they can allocate to networks and the diversity of their relationships. This finding indicates that homophily-based ties are shaped not only by demographic similarities, but also by individuals' capacity for network participation and the intensity of their relationships. Similarly, Getmez's (2018) finding that male teachers reported more positive perceptions in the "Social Comfort Competence" subdimension supports the notion that individual characteristics emphasized in social network theory influence interaction patterns and relational ease within networks. Taken together, these findings suggest that individual variables such as marital status and gender play an important role in shaping the formation and perception of homophily-based networks in educational organizations.

The significant difference identified in the "Network Construction" subdimension according to educational level can be associated with the emphasis in social network theory on the intentional formation and management of networks. The higher perceptions reported by teachers holding a master's degree compared to those with a bachelor's degree may stem from this group's greater capacity to evaluate organizational processes, relational structures, and leadership behaviors within a more analytical framework. From a social network theory standpoint, higher levels of education are expected to increase individuals' awareness of how networks are constructed, who occupies central positions, and how structural holes are bridged. This finding is consistent with the study by Kaplan et al. (2023), which reported significant differences in teachers' perceptions of school principals according to educational level, with higher perceptions among those holding a master's degree. In contrast, the finding by Akan and Mehrdad (2019) that associate degree holders reported higher perceptions than doctoral degree holders suggests that the relationship between educational level and perception is not linear, but rather sensitive to contextual and organizational conditions. This highlights the need to consider perceptions not only in relation to educational level, but also in conjunction with individuals' organizational positions, expectations, and modes of participation in social networks.

Significant differences across multiple subdimensions according to professional experience can be explained through social network theory's emphasis on the cumulative construction of networks over time and their transformation alongside organizational position. The highest perceptions in the "Homophily" subdimension among participants with 6–10 years of professional experience may be attributed to this group's tendency to establish more intensive, trust-based relationships with similar others during their organizational integration phase. This aligns with network closure theory, which suggests that similarity-based ties are perceived as more functional during early and mid-career stages. The highest perceptions in the "Network Construction" subdimension among participants with 1–5 years of experience may reflect the heightened visibility of efforts to understand the organizational structure, build relational networks, and establish a position within the organization. From a social network theory perspective, this finding indicates that individuals in the early stages of their careers perceive network-building behaviors as more intentional and goal-oriented. In contrast, the highest perceptions in the "Network Quality," "Structural Holes," and "Social Capital" subdimensions among participants with 21 years or more of experience

can be associated with the strengthening of organizational positions and access to more central network roles over time. Individuals with extensive professional experience tend to possess not only strong ties but also weak ties that serve as bridges between different groups, thereby filling structural holes and generating higher levels of social capital. This pattern is consistent with Burt's theory of structural holes and Granovetter's theory of the strength of weak ties. While these findings partially align with Getmez's (2018) results indicating that communication perceptions differ significantly by professional seniority, the finding by Tunç (2015) that participants with very high levels of seniority reported lower perceptions of communication competence suggests that the relationship between professional experience and perception is not linear, but dynamic and contingent upon career stages and organizational roles. Accordingly, the effect of professional experience on perceptions of social network leadership should be evaluated not solely in terms of years of service, but also in relation to individuals' network positions, relational diversity, and access to brokerage roles.

Overall, the findings of this study reveal that school principals' social network leadership behaviors are closely related not only to individual leadership characteristics, but also to organizational network structures, structural holes, network closure, and the production of social capital. In this respect, the study adopts a network-based perspective on school leadership and establishes a strong theoretical link between social network theory and the educational leadership literature.

In conclusion, school principals' social network leadership behaviors play a critical role in the circulation of information, the construction of trust, and the sustainability of collaboration within educational organizations. The development of this form of leadership appears to depend not only on individual leadership training, but also on the deliberate design and management of schools' social network structures. Based on the research findings, the following recommendations can be made:

•Further studies could explore the relationship between school principals' social network leadership behaviors and other variables, such as school climate, organizational commitment, and teacher performance.

•Considering the positive impact of social network leadership behaviors on social capital, raising awareness among school administrators regarding social networks in alignment with school goals and objectives may be beneficial.

•Given the finding that school principals tend to establish strong social networks with senior administrators, other school leaders, and teachers but weaker connections with parents, students, local communities, and civil society organizations, efforts could be made to encourage school principals to foster social relationships with their broader school environment.

•Although school principals exhibit leadership behaviors such as engaging in professional development, building connections between different networks to create new opportunities, and accessing distant information through social relationships, these behaviors appear insufficient. Therefore, initiatives could be developed to reinforce these behaviors and further enhance their practice.

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Statement of Responsibility

S.B.: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **B.A.:** Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data curation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. The first author contributed 50% to the study, and the second author contributed 50%.

Conflicts of Interest

The authors declare that they have no conflict of interest with any institution or individual within the scope of the study.

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