



The Effect of Servant Leadership on Organizational Empowerment: A Multi-Group Structural Equation Modeling*

Tevfik Aydın¹, Hüseyin Serin²

¹Istanbul Provincial Directorate of National Education, İstanbul, Türkiye

²Istanbul University-Cerrahpaşa, Hasan Ali Yücel Faculty of Education, İstanbul, Türkiye

ABSTRACT

This study explored the relationship between teachers' perceptions of servant leadership and their levels of organizational empowerment, while examining whether gender serves as a moderating variable in this relationship. The sample consisted of 632 high school teachers working in Istanbul districts with varying socio-economic characteristics. In this study, data were collected using three measurement tools: "Personal Information Form", "Servant Leadership Scale", and "Teacher Behavioral Empowerment Scale". Structural equation modeling was employed for data analysis. The findings indicated that teachers' perceptions of servant leadership significantly and positively predicted their levels of organizational empowerment. Although the existing literature reported gender-based differences in leadership perceptions, multi-group structural equation modeling results revealed that gender did not moderate this relationship.

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1. Introduction

Education is a multidimensional and dynamic process that plays a vital role in both societal development and individual well-being. The effectiveness of this process largely hinges on the professional competence, motivation, and professional well-being of teachers. School administrators hold a pivotal role in facilitating effective educational practices, supporting teachers, and promoting the holistic development of schools (Yunus, Sukarno, & Rosadi, 2021; Bush, 2006). Consequently, the leadership style adopted by administrators directly influences not only the overall success of the school but also critical factors such as teachers' job satisfaction and organizational commitment.

Servant leadership (SL), one of the leadership styles embraced by school administrators, is characterized by a leader's prioritization of the growth and well-being of their followers, meeting their needs, and fostering collaboration (Greenleaf, 1977; Spears, 2010). In contrast to traditional authoritarian leadership models, this approach emphasizes power-sharing, ethical values, and mutual trust (Van Dierendonck, 2011; Sendjaya & Sarros, 2002). Servant leaders are known for traits such as attentive listening, empathy, delegating authority and responsibility, and encouraging participation in decision-making processes (Liden et al., 2008; Parris & Peachey, 2013). Within educational settings, this leadership approach has been shown to foster more collaborative and people-centered school environments. As such, SL can significantly contribute to the organizational empowerment of teachers.

¹ Corresponding author's address: İstanbul Provincial Directorate of National Education, İstanbul, Türkiye

e-mail: tevfikaydin034@gmail.com

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Beyond cultural nuances, the literature suggests that perceptions of such leadership styles are often filtered through universal and evolutionary determinants of gender. According to Social Role Theory, societal expectations regarding gender-appropriate behaviors lead individuals to develop communal traits in women and agentic traits in men (Eagly & Wood, 2012). From an evolutionary perspective, these differences are sometimes attributed to ancestral survival strategies where female fitness was enhanced through kin-tending and social cohesion, while male fitness was linked to hierarchy and resource acquisition (Buss, 1995; Geary, 2021). These universal archetypes may influence how teachers perceive and react to SL; for instance, the altruistic and serving nature of SL may align more closely with communal expectations, potentially leading to gender-based variations in how empowerment is experienced and internalized.

The organizational empowerment of teachers is a multidimensional process aimed at fostering both individual and institutional development by enhancing their professional autonomy, competence, motivation, and job satisfaction (Short & Rinehart, 1992; Bogler & Somech, 2004). Empowered teachers tend to demonstrate greater job commitment, engage in more effective communication with students, and exhibit higher levels of professional performance (Ingersoll, 2003; Lee & Nie, 2014). Thus, empowering teachers should be considered a strategic priority for school administrators.

The relationship between SL and organizational empowerment has emerged as a growing area of scholarly interest in recent years. This interest has led to substantial theoretical and empirical insights into how various leadership styles influence employee engagement, organizational commitment, and performance. SL, which emphasizes meeting the needs of others and supporting employees, holds the potential to promote the holistic development of individuals by cultivating an empowerment-oriented organizational culture. Allen et al. (2018) found that perceptions of SL are positively and significantly associated with structural empowerment processes and play a critical role in fostering an empowering organizational environment. Drawing on Social Exchange Theory, Udin et al. (2025) argued that SL enhances trust and respect in workplace relationships, strengthens employees' psychological empowerment, and reinforces their commitment and sense of belonging within the organization. Empirical studies examining the effect of SL on organizational empowerment consistently support this relationship. Khan et al. (2021) demonstrated that SL not only contributes positively to psychological empowerment but also fosters innovative work behavior through supportive workplace environments. Tripathi et al. (2020) reported that servant leaders' encouragement of knowledge sharing among employees significantly enhances both job performance and psychological empowerment. Similarly, Kamil et al. (2024) asserted that the effective implementation of SL principles leads employees to take greater initiative, thereby boosting their organizational citizenship behaviors and levels of innovation.

This growing body of literature demonstrates that the relationship between SL and organizational empowerment is not merely a theoretical discourse but also carries significant practical implications for organizations seeking to enhance employee engagement and commitment. In today's context, where ethical values and people-centered management approaches are gaining increasing prominence, understanding the interplay between SL and organizational empowerment has become essential for fostering work environments in which employees feel valued and motivated. Accordingly, a comprehensive examination of the interaction between these two concepts is critical not only for achieving sustainable organizational success in educational settings but also for informing contemporary management practices.

In Türkiye, SL is increasingly recognized as a leadership model that positively influences organizational empowerment processes in educational institutions. This approach holds the potential to transform the organizational structure and climate of educational institutions by reshaping educators' interactions with society and institutional missions. While universal evolutionary theories provide a baseline for understanding gender, these predispositions interact with the specific socio-cultural fabric of Türkiye. The literature supports the notion that this leadership style—centered on the development and well-being of individuals—fosters a culture of empowerment among teachers. In this context, SL has been identified as an effective strategy for enhancing teachers' job satisfaction and

mitigating the burnout syndrome that is prevalent within the teaching profession (Baykal et al., 2018; Öner, 2012).

Studies conducted in the context of Türkiye clearly underscore the positive impact of SL on organizational commitment. Cerit (2010) found that SL behaviors demonstrated by school administrators in elementary schools significantly enhanced teachers' levels of organizational commitment. Similarly, Zehir et al. (2013) reported that SL reinforced perceptions of organizational justice, thereby exerting positive and indirect effects on teachers' job performance and organizational citizenship behaviors, ultimately contributing to the overall organizational structure of educational institutions. In addition to these findings, Kahya and Sağlam (2019) demonstrated that psychological empowerment plays a crucial role in reducing organizational silence, and that SL contributes positively to the organizational climate by enabling teachers to express their opinions freely. These findings suggest that the influence of SL extends beyond individual teacher outcomes, generating transformative effects at the organizational structure.

Ulutürk (2023) emphasized that SL aligns well with Turkish cultural values and contributes to the cultivation of a more collaborative and supportive atmosphere in public institutions, particularly within educational settings. This cultural compatibility facilitates the shift toward a more participatory governance model by minimizing resistance to new leadership approaches. The adoption of SL principles in Turkish educational institutions holds strategic importance for fostering a more committed, empowered, and motivated teaching workforce. In this context, SL is viewed as a foundation for sustainable development in education by enhancing institutional performance and learning outcomes.

In recent years, the Ministry of National Education in Türkiye has implemented various policies aimed at empowering teachers and enhancing the leadership roles of school administrators (Şensin & Can, 2024; Özer & Suna, 2023; Yıldırım, 2022). However, further research is needed to evaluate the extent to which these policies are being implemented in schools, the degree to which school administrators demonstrate SL behaviors, and the impact of these behaviors on teacher empowerment. This need is particularly pronounced at the high school level, where teachers face increased workloads due to academic pressures and exam-focused curricula, thus amplifying the importance of leadership practices and teacher empowerment. This necessity becomes even more apparent when considering the common challenges faced by education systems globally. Schools that embrace SL principles are better equipped to address these challenges by empowering teachers, which in turn enhances institutional performance and supports teacher well-being (Abubakar et al., 2018; Yue & Thelen, 2023; Zulkarnain et al., 2021). Consequently, the broader and more effective application of SL is increasingly seen as a promising solution to the shared challenges confronting educational leaders in an increasingly globalized world (Abubakar et al., 2018; Saleem et al., 2020; Zulkarnain et al., 2021).

In conclusion, the findings of this study are expected to offer both theoretical and practical contributions to the field of educational leadership. The results hold the potential to provide concrete recommendations for enhancing the effectiveness of school administrators' leadership practices. In this regard, the study's findings are anticipated to inform the design of administrator training programs and the development of leadership-focused policy initiatives. Furthermore, the outcomes may serve as a valuable reference for policymakers and stakeholders in making strategic decisions to improve teachers' motivation and professional well-being.

2. Theoretical Background and Hypotheses

2.1. Servant Leadership and Organizational Empowerment

Leadership is a phenomenon as old as human history, and it has been examined through various theoretical lenses, with new models emerging in response to evolving social, economic, and technological conditions (Bakan & Doğan, 2012; Northouse, 2018). The rapid transformations experienced by modern societies and organizations have exposed the limitations of traditional

leadership models and necessitated the development of new approaches (Yalçinkaya, 2002). One such model that has gained increasing prominence in both academic literature and organizational practice is SL. This approach emphasizes the leader's responsibility to prioritize the needs of others over their own, thereby fostering a sense of trust and commitment within organizations (Qiu & Dooley, 2019; Spears, 2010; Van Dierendonck, 2011).

SL, introduced by Robert K. Greenleaf (1970), is characterized by a leader's primary motivation to serve their followers. This leadership style centers on meeting the needs and supporting the development of followers through power-sharing, collaboration, and adherence to ethical values (Davis, 2017; Greenleaf, 1977; Sendjaya & Sarros, 2002; Spears, 1996). In this context, the core attributes associated with servant leaders—and those that distinguish this style from other leadership models—are particularly relevant for understanding its potential impact in educational settings.

Servant leaders are characterized by their ability to listen attentively to followers, demonstrate empathy, foster awareness, rely on persuasion rather than authority, think conceptually, act with foresight, manage effectively, and prioritize personal development and community building (Spears, 2010; Zhang et al., 2019). SL has been linked to numerous positive organizational outcomes, including enhanced job satisfaction, organizational commitment, motivation, creativity, and overall performance. Empirical studies consistently highlight the favorable impacts of SL in these domains (Alasadi et al., 2019; Barmanpek, 2022; Liden et al., 2008; Parris & Peachey, 2013; Sapta, Wiadnyana, & Wijana, 2023; Vrcelj, Bevanda, & Bevanda, 2022).

In educational settings, SL can yield significant benefits such as empowering teachers, fostering professional growth, encouraging participation in decision-making processes, enhancing the school climate, and ultimately improving student achievement. This leadership model centers on the development and well-being of both teachers and students (Cerit, 2009; Gultekin & Dougherty, 2021; Kainde & Mandagi, 2023; Nikmah, 2024; Noland & Richards, 2015; Uluç, 2023; Villanueva, 2024). In this context, the concept of "empowerment," which forms the foundation of SL, holds critical importance for the quality of teachers' professional lives and the overall effectiveness of educational institutions.

Organizational empowerment refers to a managerial approach that grants employees greater control over their work, encourages initiative, involves them in decision-making processes, and supports the realization of their potential (Conger & Kanungo, 1988; Spreitzer, 1995). Empowered employees tend to perceive their work as more meaningful, feel a stronger sense of competence, believe they exert greater influence over their tasks, and experience increased autonomy (Thomas & Velthouse, 1990). In the educational context, empowering teachers is vital for enhancing their professional autonomy and competence, enabling them to contribute effectively to school success and student achievement, and reducing the risk of professional burnout (Short & Rinehart, 1992; Bogler & Somech, 2004). However, teacher empowerment is a multidimensional process that demands intentional and systematic efforts from school administrators.

Empowerment emerges as a strategic component in improving both the professional quality of teachers' professional life and the overall effectiveness of schools. Empowering teachers has been shown to boost their job satisfaction and foster a sense of organizational trust—factors that ultimately contribute to enhanced school performance (Jiang et al., 2019; Khany & Tazik, 2016; Mapacpac & Yango, 2023).

In an empowered school environment, teachers receive support for their professional development, actively participate in decision-making processes, play a significant role in shaping and implementing school policies, have opportunities to put forward innovative ideas and approaches, and collaborate closely with their colleagues (Lee & Nie, 2014). Such an environment enhances teachers' job satisfaction, organizational commitment, and motivation, ultimately contributing to more effective and efficient professional performance (Ingersoll, 2003; Uygur & Arabacı, 2019). Simultaneously, empowered teachers foster a more supportive and motivating learning environment, which helps boost students' self-confidence and academic achievement (Rachmawatia & Lantu, 2014).

2.2. Gender as a Moderator

Although it has been suggested that teachers' perceptions of SL may vary according to gender, the existing literature presents inconsistent findings on this issue. Some studies have shown that female teachers tend to evaluate SL practices more favorably than their male counterparts. This tendency is often attributed to the alignment between SL and relational traits traditionally associated with femininity—such as empathy, participation, and supportiveness (Hasan, 2022; Masry-Herzallah & Arar, 2019). It has also been suggested that female teachers are more receptive to participatory approaches, which are key features of SL, as they promote effective collaboration and a trust-based school climate—factors that may enhance their motivation and job satisfaction (Hasan, 2022; Masry-Herzallah & Arar, 2019).

In this regard, gender can be considered a potentially determining variable in shaping perceptions of leadership styles within educational settings. Research has shown that female school administrators are often associated with transformational and supportive leadership behaviors, which largely align with the core principles of SL (Hammad et al., 2023; Burke & Collins, 2001). Conversely, it has been argued that male teachers may be more inclined toward transactional leadership perspectives, which could limit or negatively influence their perceptions of SL (Hallinger et al., 2016).

Nevertheless, empirical findings on gender-based differences in leadership perceptions remain inconclusive. Some studies have found no significant differences between male and female teachers in how they perceive leadership characteristics, suggesting that individual experiences and contextual factors may play a more decisive role than gender alone (Doğan & Aslan, 2024; Ghavifekr et al., 2019). Supporting this, Alexander et al. (2017) conducted a meta-analysis emphasizing that perceptions of leadership effectiveness are generally shaped by contextual dynamics rather than gender. Moreover, while some studies indicate that male teachers tend to perceive female leaders as less effective, these attitudes appear to stem from traditional gender biases rather than actual differences in leadership performance (Alexander et al., 2017; Hasan, 2022). Overall, while gender may influence teachers' perceptions of SL, this relationship is complex and highly context-dependent.

In the context of Türkiye, teachers' perceptions of SL are shaped by the multidimensional interaction among gender roles, cultural values, and the educational system. As a leadership philosophy grounded in serving others, prioritizing individual needs, and fostering supportive relationships, SL aligns closely with the moral and ethical responsibilities traditionally attributed to teachers within Turkish culture. Research in this area has also indicated that the principles of SL resonate well with cultural norms such as social solidarity and collectivism (Crippen & Willows, 2019; Öner, 2012; Ulutürk, 2023).

Findings suggest that both female and male teachers generally recognize the value of SL in reducing teacher alienation and enhancing job satisfaction. However, the perception and lived experience of this leadership style may vary by gender. Specifically, female teachers tend to emphasize the collaborative and nurturing dimensions of SL as critical for professional commitment, whereas male teachers are more likely to value leadership traits such as authority and decisiveness (Polatcan, 2020; Yirci & Kurtulmuş, 2018). These differences appear to be closely linked to the traditional caregiving and support roles assigned to women in Turkish society (Öner, 2012; Palta, 2019). This ongoing interaction between gender roles and cultural expectations not only shapes how teachers perceive SL but also influences the ways in which this leadership style is enacted—ultimately leading to differential outcomes in areas such as organizational commitment and emotional well-being (Zeng et al., 2022; Georgolopoulos et al., 2018).

As a result, it appears that the supportive and empowering behaviors teachers perceive from their leaders can positively influence their sense of organizational empowerment. However, based on existing literature and the socio-cultural context unique to Türkiye, it is likely that the relationship between leadership perceptions and teachers' empowerment levels does not manifest uniformly across all individuals. It is plausible that gender acts as a determining factor in this variation. In this regard, it is posited that gender may moderate the positive relationship between teachers' perceptions of SL and their levels of organizational empowerment.

2.3. Research Hypotheses

Based on the theoretical framework and literature review presented above, the current study aims to investigate the relationships between servant leadership, organizational empowerment, and the moderating role of gender. By synthesizing the existing empirical evidence and the specific dynamics of the Turkish educational context, the following hypotheses have been formulated to guide the research:

- H₁: Teachers' perceptions of servant leadership (SL) positively predict their levels of organizational empowerment.
- H₂: Gender has a moderating role in the positive relationship between teachers' perceptions of servant leadership (SL) and their levels of organizational empowerment.

3. Method

This study employed a correlational research design to examine the relationship between teachers' perceptions of school administrators' SL behaviors and their levels of organizational empowerment. The correlational design aims to identify the relationships between two or more variables and to determine the strength and direction of these relationships (Karasar, 2020). It focuses on examining existing or assumed relationships between variables and analyzes how they influence one another and change in tandem (Bekman, 2022).

3.1. Participants and Procedure

The population of the study consisted of high school teachers working across nine different districts in Istanbul during the 2022–2023 academic year. Istanbul is considered a significant region for educational administration research due to its status as the largest and most socio-economically diverse city in Türkiye (TÜİK, 2023). The selected districts reflected varying socio-economic levels and were chosen to represent both central and peripheral areas of the city, as well as diverse characteristics in terms of student density, school types, and teacher distribution (MEB, 2023). This sampling strategy aimed to provide a broad and representative perspective on the general dynamics of educational administration in Istanbul.

The sample consisted of 632 high school teachers who were selected through the cluster sampling method and voluntarily participated in the study. Cluster sampling involves selecting naturally occurring groups—referred to as clusters—instead of individual participants from the population. In this method, clusters are generally selected with equal probability, and all individuals within the selected clusters are included in the sample (Innocenti et al., 2020; Karasar, 2020). In this study, schools were treated as clusters, and efforts were made to reach all teachers within the selected schools.

In determining the sample size, factors such as population size, confidence interval, and margin of error were taken into account. According to Yazıcıoğlu and Erdoğan (2004), for a population of 100,000 individuals, the minimum required sample size is 383 when the confidence interval is set at 95% and the margin of error at 0.05. In the present study, data were collected from a total of 632 teachers, thereby exceeding the minimum threshold recommended. The demographic characteristics of the participants are presented in Table 1.

Table 1. Demographic characteristics of the participants

Variable	Category	n	%
Gender	Female	349	58.0
	Male	253	42.0
Age	25 or younger	25	4.2
	26–35	171	28.4
	36–45	208	34.6
	46–55	169	28.1
	56–65	29	4.8

Marital status	Married	445	73.9
	Single	157	26.1
Educational background	Associate degree	7	1.2
	Bachelor's degree	412	68.4
	Master's degree	167	27.7
	Doctoral degree	16	2.7
School type	Anatolian High School	227	37.7
	Vocational and Technical Anatolian HS	206	34.2
	Anatolian Imam Hatip HS	120	19.9
	Science High School	27	4.5
	Social Sciences High School	12	2.0
	Others*	10	1.6
Professional seniority	1–5 years	90	15.0
	6–10 years	118	19.6
	11–15 years	102	16.9
	16–20 years	73	12.1
	21 years or more	219	36.4
Tenure at current school	1–5 years	361	60.0
	6–10 years	142	23.6
	11–15 years	63	10.5
	16–20 years	22	3.7
	21 years or more	14	2.3
Subject taught	Science, Math, and Informatics	202	33.6
	Social and Cultural Courses	160	26.6
	Vocational Courses	103	17.1
	Foreign Language Courses	61	10.1
	Religious Culture and Philosophy	55	9.1
	Imam Hatip Courses	21	3.5

Note. $N = 602$. *Others category includes Multi-program Anatolian HS ($n=5$), Fine Arts HS ($n=2$), Sports HS ($n=2$), and Project HS ($n=1$).

When the demographic characteristics of the participants were examined, it was found that 349 (58%) were female and 253 (42%) were male teachers. In terms of age distribution, 25 (4.2%) participants were aged 25 or younger, 171 (28.4%) were between 26–35 years old, 208 (34.6%) were between 36–45, 169 (28.1%) were between 46–55, and 29 (4.8%) were between 56–65 years of age. Regarding marital status, 445 (73.9%) of the participants were married, while 157 (26.1%) were single. Concerning educational background, seven teachers (1.2%) held associate degrees, 412 (68.4%) had bachelor's degrees, 167 (27.7%) held master's degrees, and 16 (2.7%) held doctoral degrees. When analyzing the type of schools in which the participants were employed, 120 (19.9%) worked in Anatolian imam hatip (religious vocational) high schools, 227 (37.7%) in Anatolian high schools, five (0.8%) in multi-program Anatolian high schools, 27 (4.5%) in science high schools, two (0.3%) in fine arts high schools, 206 (34.2%) in vocational and technical Anatolian high schools, one (0.2%) in a project high school, two (0.3%) in sports high schools, and 12 (2.0%) in social sciences high schools. Regarding professional seniority, 90 teachers (15%) had 1–5 years of experience, 118 (19.6%) had 6–10 years, 102 (16.9%) had 11–15 years, 73 (12.1%) had 16–20 years, and 219 (36.4%) had 21 years or more. In terms of tenure at their current school, 361 teachers (60%) had worked there for 1–5 years, 142 (23.6%) for 6–10 years, 63 (10.5%) for 11–15 years, 22 (3.7%) for 16–20 years, and 14 (2.3%) for 21 years or more. With respect to the subjects they taught, 202 teachers (33.6%) were responsible for Science, Mathematics, and Informatics Group Courses; 160 (26.6%) for Social and Cultural Courses; 103 (17.1%) for Vocational Courses; 61 (10.1%) for Foreign Language Courses; 55 (9.1%) for Religious Culture and Philosophy Group Courses; and 21 (3.5%) for Imam Hatip Courses.

Data collection tools were administered following the necessary permissions obtained from the original developers of the scales, along with the ethics committee approval granted by the Istanbul University-Cerrahpaşa Social and Human Sciences Research Ethics Board (Date: 16.02.2023-616948). The data were collected online through Google Forms during the 2022–2023 academic year. Prior to data collection, school administrators and teachers were informed about the aim, scope, and voluntary nature of the study, and their informed consent was duly obtained.

3.2. Measures

The data in this study were gathered through three measures: the “Personal Information Form” developed by the researcher, the “Servant Leadership Scale” developed by Kıral (2021), and the “Teachers’ Behavioral Empowerment Scale” developed by Kıral (2015).

Personal Information Scale. This form includes questions designed to capture the demographic characteristics of the participating teachers, such as sex, age, marital status, educational background, subject area, professional seniority, type of school, and tenure at the current school.

Servant Leadership Scale. The Servant Leadership Scale (SLS) is designed to assess the SL behaviors of school administrators as perceived by teachers. The scale comprises 32 items distributed across eight sub-dimensions: empowerment, effective communication, trust, vision, school–community relations, ethical behavior, authenticity, and humility. Items are rated on a 5-point Likert-type scale ranging from “Never” (1) to “Always” (5). The internal consistency of the overall scale was found to be high, with a Cronbach’s alpha coefficient of .98 (Kıral, 2021). Sample items include: “My administrator gives me freedom to do my job,” “My administrator prefers face-to-face communication,” and “My administrator sets realistic goals for the school.” In the present study, the Cronbach’s alpha internal consistency coefficient for the entire scale was also calculated as .98.

Teachers’ Behavioral Empowerment Scale. The Teachers’ Behavioral Empowerment Scale (TCES) is designed to assess the degree to which teachers perceive themselves as behaviorally empowered within the school setting. The scale consists of 30 items grouped under five dimensions: delegation of authority, managerial support, participation in decision-making, teamwork, and communication. Each item is rated on a 5-point Likert-type scale ranging from “Never” (1) to “Always” (5). The internal consistency coefficient of the scale, as measured by Cronbach’s alpha, was reported as .98 (Kıral, 2015). Sample items include: “He/she gives us the feeling that we are competent in solving the problems we encounter at school,” “He/she strives to create a common consciousness in getting the work done,” and “He/she encourages working in cooperation.” In the present study, the Cronbach’s alpha internal consistency coefficient for the entire scale was also calculated as .99.

3.3. Analyses

The data were analyzed using the Jamovi statistical software. Initially, descriptive statistics and correlation analyses were conducted, followed by structural equation modelling (SEM). Within the SEM framework, the dimensions of the SLS and the TBES were utilized as observed indicators. The analysis first assessed whether the latent variables were adequately represented by their indicators. Upon confirmation of an acceptable measurement model, the structural model was established. To evaluate model fit, the following indices were examined: Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and Tucker–Lewis Index (TLI). Based on established criteria (Hu & Bentler, 1999), SRMR and RMSEA values below 0.08 and CFI and TLI values equal to or above 0.90 were considered indicative of acceptable model fit.

The effect of teachers’ perceptions of SL on their levels of behavioral empowerment was tested using SEM. Subsequently, multigroup SEM was conducted to explore potential differences in model structure across gender groups. In this analysis, group-specific parameter estimates were compared using the chi-square difference test to determine whether the model varied significantly between male and female participants.

4. Results

4.1. Descriptive Results

The means, standard deviations, skewness, and kurtosis coefficients of the variables are presented in Table 2, while the Pearson correlation coefficients are provided in Table 3. An examination of the mean and standard deviation values indicates that teachers' perceptions of SL (M = 4.00, SD = 0.84) and their levels of organizational empowerment (M = 3.98, SD = 0.92) were relatively high. The skewness values ranged from -1.55 to -0.71, and the kurtosis values ranged from -0.08 to 2.22. The correlation coefficients revealed moderate to strong positive relationships among the variables (see Table 3).

Table 2. Descriptive results

Variables	Mean	SD	Skewness		Kurtosis	
			Skewness	SE	Kurtosis	SE
Servant Leadership	4.00	0.838	-1.125	0.0996	1.2668	0.199
Empowerment	3.95	0.910	-1.024	0.0996	1.0053	0.199
Effective Communication	4.06	0.907	-1.201	0.0996	1.4293	0.199
Trust	4.18	0.930	-1.552	0.0996	2.2277	0.199
Vision	4.00	1.005	-1.133	0.0996	0.8927	0.199
School-Community Relations	4.06	0.902	-1.160	0.0996	1.2741	0.199
Authenticity	4.08	0.789	-1.156	0.0996	1.9218	0.199
Ethical Behavior	3.96	1.000	-1.048	0.0996	0.7432	0.199
Humility	3.69	1.023	-0.710	0.0996	-0.0841	0.199
Organizational Empowerment	3.98	0.924	-1.116	0.0996	0.9243	0.199
Delegation of Authority	3.86	0.964	-0.954	0.0996	0.6435	0.199
Managerial Support	4.14	0.876	-1.373	0.0996	1.8798	0.199
Participation in Decision Making	3.97	0.989	-1.068	0.0996	0.7087	0.199
Teamwork	4.12	0.966	-1.291	0.0996	1.2853	0.199
Communication	3.71	1.083	-0.705	0.0996	-0.2494	0.199

N = 602.

Table 3. Correlations among study variables

Variables	1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2	2.1	2.2	2.3	2.4	2.5
1.SL	—													
1.1.E	0.89	—												
1.2.EC	0.92	0.84	—											
1.3.T	0.89	0.77	0.82	—										
1.4.V	0.94	0.80	0.83	0.82	—									
1.5.SCR	0.88	0.73	0.77	0.75	0.85	—								
1.6.A	0.84	0.68	0.76	0.69	0.77	0.77	—							
1.7.EB	0.92	0.78	0.83	0.79	0.85	0.74	0.75	—						
1.8.H	0.89	0.79	0.77	0.71	0.80	0.72	0.68	0.85	—					
2.OE	0.87	0.79	0.81	0.74	0.82	0.75	0.70	0.81	0.82	—				
2.1.DA	0.82	0.78	0.76	0.68	0.76	0.69	0.65	0.77	0.80	0.93	—			
2.2.MS	0.82	0.74	0.75	0.71	0.78	0.73	0.70	0.74	0.73	0.91	0.82	—		
2.3.PDM	0.85	0.79	0.80	0.73	0.79	0.71	0.65	0.80	0.82	0.98	0.90	0.87	—	
2.4.TW	0.82	0.72	0.77	0.70	0.79	0.73	0.68	0.76	0.74	0.96	0.84	0.86	0.90	—
2.5.C	0.79	0.70	0.75	0.66	0.73	0.67	0.63	0.74	0.78	0.92	0.84	0.78	0.87	0.84

N = 602, p < .001; SL= Servant Leadership, E= Empowerment, EC= Effective Communication, T= Trust, V= Vision, SCR= School-Community Relations, A= Authenticity, EB= Ethical Behavior, H= Humility, OE= Organizational Empowerment, DA= Delegation of Authority, MS= Managerial Support, PDM= Participation in Decision Making, TW= Teamwork, C= Communication

4.2. Measurement Model

A confirmatory factor analysis (CFA) was conducted on the full sample to examine the relationship between the latent variables—SL and organizational empowerment. The results of the measurement model indicated that the fit indices met the recommended thresholds, demonstrating a good fit to the data ($\chi^2(64) = 14.1$, $p > 0.05$, RMSEA = 0.017, 90% CI [0.016, 0.019], CFI = 1.000, TLI = 1.005, SRMR = 0.023).

Table 4 presents the standardized factor loadings of the observed variables, as well as the Cronbach's alpha coefficients, composite reliability (CR), and average variance extracted (AVE) values for each latent construct. Cronbach's alpha and CR values exceeding 0.90 indicate strong reliability. Standardized factor loadings above 0.70 and AVE values greater than 0.50 suggest that the model demonstrates satisfactory validity (Hair et al., 2017). Furthermore, Table 4 shows that the square root of each construct's AVE exceeds its correlations with other constructs, providing evidence for discriminant validity in line with the Fornell and Larcker (1981) criterion.

Table 4. Results of reliability, convergent and discriminant validity analyses

Latent	Observed	β	Cronbach's α	CR	AVE	1	2
1. Servant Leadership	Empowerment	0.884	.98	.97	.78	(.88)	.87
	Effective Communication	0.916					
	Trust	0.847					
	Vision	0.928					
	School-Community Relations	0.848					
	Authenticity	0.800					
	Ethical Behavior	0.911					
	Humility	0.894					
	2. Organizational Empowerment	Delegation of Authority					
Managerial Support		0.913					
Participation in Decision Making		0.964					
Teamwork		0.927					
Communication		0.892					

Notes. $N = 602$, Values in parentheses are the root square of the AVEs; β = Standard loading; CR= Composite reliability; AVE= Average variance extracted

4.3. Structural Model

The results of the SEM presented in Figure 1 indicate that the proposed model demonstrates an excellent fit to the data ($\chi^2(64) = 14.1$, $p > 0.05$, RMSEA = 0.017, 90% CI [0.016, 0.019], CFI = 1.000, TLI = 1.005, SRMR = 0.023). The structural model revealed that teachers' perceptions of SL have a significant and positive direct effect on their levels of organizational empowerment ($\beta = 0.91$, $p < 0.001$).

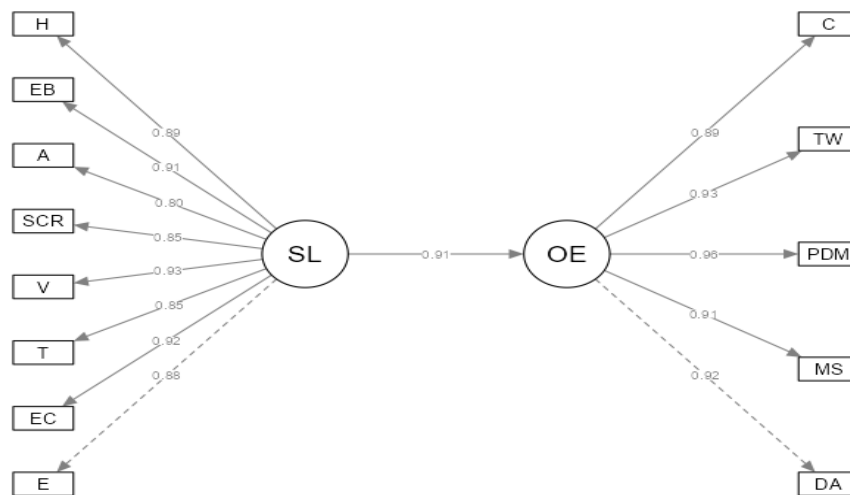


Figure 1. Path diagram

Notes. SL= Servant Leadership, E= Empowerment, EC= Effective Communication, T= Trust, V= Vision, SCR= School-Community Relations, A= Authenticity, EB= Ethical Behavior, H= Humility, OE= Organizational Empowerment, DA= Delegation of Authority, MS= Managerial Support, PDM= Participation in Decision Making, TW= Teamwork, C= Communication

4.4. Measurement Invariance

Measurement invariance of the latent variables across gender was assessed through a series of hierarchical models. The configural model demonstrated a good fit to the data ($\chi^2(128) = 16.6, p > 0.05, RMSEA = 0.018, 90\% CI [0.016, 0.019], CFI = 1.000, TLI = 1.000, SRMR = 0.023$), indicating that configural invariance was established. The metric ($\chi^2(139) = 30.7, p > 0.05, RMSEA = 0.019, 90\% CI [0.016, 0.023], CFI = 1.000, TLI = 1.000, SRMR = 0.034$) and scalar ($\chi^2(150) = 38.8, p > 0.05, RMSEA = 0.022, 90\% CI [0.019, 0.025], CFI = 1.000, TLI = 1.000, SRMR = 0.036$) invariance models also yielded acceptable model fit indices. Furthermore, the changes in chi-square values were not statistically significant for either metric invariance ($\Delta\chi^2 = 14.1, \Delta df = 11, p = 0.233$) or scalar invariance ($\Delta\chi^2 = 8.1, \Delta df = 11, p = 0.579$), confirming the presence of both. Strict (residual) invariance was also tested, and the model demonstrated an adequate fit ($\chi^2(163) = 43.9, p > 0.05, RMSEA = 0.022, 90\% CI [0.019, 0.025], CFI = 1.000, TLI = 1.000, SRMR = 0.039$). The non-significant increase in chi-square ($\Delta\chi^2 = 5.1, \Delta df = 13, p = 0.884$) further supported the establishment of strict invariance.

Table 5. Measurement invariance across genders

	χ^2	df	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$	Δdf	ΔCFI	p
Configural invariance	16.6	128	1.000	1.000	0.018	0.023	-	-	-	-
Metric invariance	30.7	139	1.000	1.000	0.019	0.034	14.1	11	.000	.233
Scalar invariance	38.8	150	1.000	1.000	0.022	0.036	8.1	11	.000	.579
Strict invariance	43.9	163	1.000	1.000	0.022	0.039	5.1	13	.000	.884

4.5. Multigroup SEM

Multigroup SEM was employed to examine potential differences in model structure across gender groups. Specifically, SEM was used to test for significant differences in group-specific parameter estimates, and chi-square difference testing was conducted to assess the multi-group effects. A fully constrained model, in which all structural path coefficients were fixed to be equal across groups, was tested and demonstrated a good fit to the data ($\chi^2(129) = 19.1, p > 0.05, RMSEA = 0.018, 90\% CI [0.016, 0.020], CFI = 1.000, TLI = 1.000, SRMR = 0.027$). The comparison between the fully constrained model

and the baseline (unconstrained) model ($\Delta\chi^2 = 2.52$, $\Delta df = 1$, $p = 0.112$) indicated that the relationship between teachers' perceptions of SL and their levels of organizational empowerment did not differ significantly by gender. The effect of SL perceptions on organizational empowerment was found to be statistically significant and comparable for both male ($\beta = 0.87$, $p < 0.001$) and female ($\beta = 0.93$, $p < 0.001$) teachers (see Figure 2).

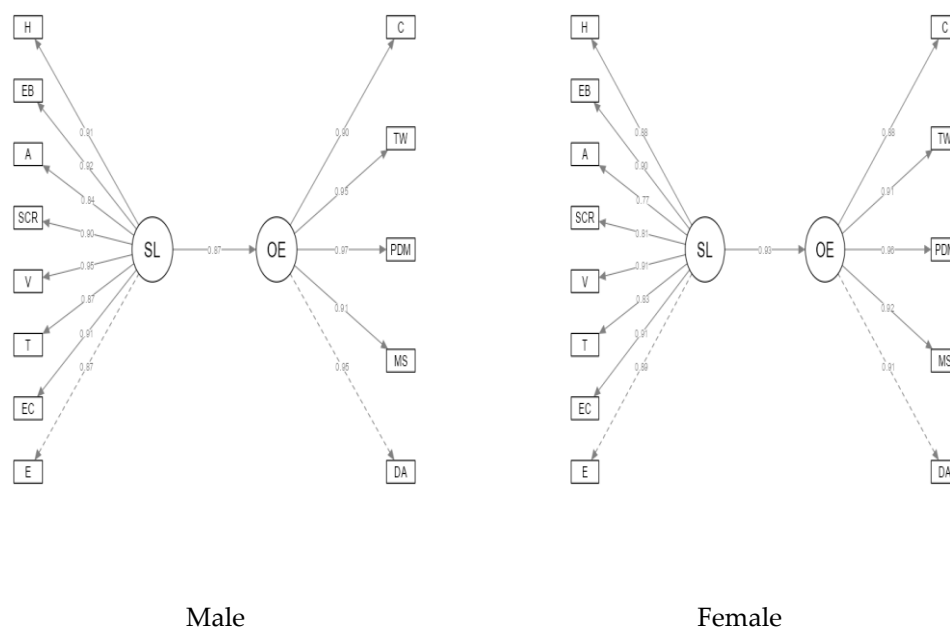


Figure 2. Path diagrams by gender group

Notes. SL= Servant Leadership, E= Empowerment, EC= Effective Communication, T= Trust, V= Vision, SCR= School-Community Relations, A= Authenticity, EB= Ethical Behavior, H= Humility, OE= Organizational Empowerment, DA= Delegation of Authority, MS= Managerial Support, PDM= Participation in Decision Making, TW= Teamwork, C= Communication

5. Discussion

This study aimed to examine the relationship between teachers' perceptions of SL and their levels of organizational empowerment. The findings revealed that perceptions of SL had a strong and positive effect on teachers' organizational empowerment. This result is largely consistent with previous research highlighting the positive effect of SL on employee empowerment (Afaq et al., 2017; Irfan et al., 2022; Murari & Gupta, 2012; Villanueva, 2024; Zada et al., 2023).

Studies conducted within the context of educational administration in Türkiye have yielded similar findings. For instance, Cerit (2009) found that school administrators who exhibit SL traits enhance teachers' job satisfaction. Uluç (2023) emphasized the positive association between SL and teachers' organizational commitment, noting that job satisfaction plays a mediating role in this relationship. Likewise, Akın (2023) demonstrated a significant relationship between SL and both job satisfaction and organizational commitment among teachers. Beştaş Marakçı and Boz (2022) similarly found that SL has a direct effect on teachers' motivation. Additionally, the studies by Kahveci and Aypay (2013) and Kandemir and Akgün (2019) underscored the positive effects of SL on teacher empowerment and school climate.

Numerous studies in the international literature have emphasized the positive effects of SL on employees. For example, Ehrhart (2004) noted that SL enhances organizational citizenship behaviors and team performance. Stone et al. (2004) reported that this leadership style increases employees' job satisfaction and levels of trust. Similarly, Yoshida et al. (2014) demonstrated that SL positively contributes to employees' psychological well-being and job performance.

In the present study, the strong positive effect of teachers' perceptions of SL on their levels of organizational empowerment was found to be consistent across gender. In other words, both male and female teachers experienced similar levels of empowerment as a result of SL. This finding aligns with the broader literature suggesting that SL is inherently empowering and supports organizational structures and employee commitment regardless of gender (Allen et al., 2018). It has been reported that SL—through its focus on prioritizing, supporting, and developing the needs of followers—enhances both structural (Allen et al., 2018) and psychological empowerment (Winkle et al., 2014; Zorlu et al., 2019), and that this impact is not influenced by gender.

The lack of gender-based differences in this study can be further analyzed through the lens of universal and evolutionary determinants. While Social Role Theory (Eagly & Wood, 2012) suggests that gender roles are socially constructed—potentially leading to different expectations from leadership—evolutionary psychology points toward shared human needs for altruism and cooperation within social hierarchies (Buss, 1995; Geary, 2021). From an evolutionary standpoint, both genders have developed psychological mechanisms to value leaders who ensure group survival through resource sharing and protection—traits that are central to SL. SL, by emphasizing empathy and communal support, addresses these fundamental human needs, which may explain why it functions as a universal antecedent of empowerment across both genders. Furthermore, the egalitarian nature of SL may neutralize traditional "agentic" (male-oriented) versus "communal" (female-oriented) role expectations, providing a common ground where both male and female teachers feel equally recognized and professionally autonomous.

Beyond these theoretical frameworks, the non-significant moderating role of gender suggests a profound homogenization of professional expectations within contemporary educational landscapes. We interpret this convergence as an indication that the structural and emotional exigencies inherent in high-school environments—ranging from rigorous academic standards to intensified exam-related pressures—precipitate a universalized demand for supportive leadership that transcends gender-based dichotomies. From our perspective, SL functions as a unifying psychological infrastructure that addresses the fundamental professional needs of all educators, regardless of their gender identity. In this context, the service orientation of the leader is perceived not as a gender-congruent behavioral trait, but rather as a functional imperative for maintaining professional well-being and institutional efficacy. Furthermore, we posit that as the Turkish educational system transitions toward increasingly collaborative governance models, the traditional boundaries governing gender-specific responses to leadership are undergoing a period of conceptual blurring. Consequently, SL provides a consistent empowering effect by fostering a collective organizational culture anchored in mutual trust and professional autonomy, effectively neutralizing the potential influence of gender-specific perceptions.

The empowering effects of SL are evident in both structural and psychological dimensions. Structural empowerment refers to employees' control over their work, participation in decision-making processes, and access to essential resources (Conger & Kanungo, 1988; Hikmah et al., 2024). Psychological empowerment, on the other hand, involves employees feeling competent and autonomous, and perceiving their work as meaningful (Spreitzer, 1995; Yang & Oh, 2024). Servant leaders foster an environment in which teachers feel valued and capable (Winkle et al., 2014), thereby contributing significantly to both structural and psychological empowerment. Notably, this contribution to psychological empowerment appears to be independent of gender (Zorlu et al., 2019). Moreover, SL is recognized as a leadership model that promotes long-term, sustainable development at both individual and institutional levels—beyond its immediate empowering effects (Ma et al., 2020). This universality suggests that SL transcends the binary of traditional gender stereotypes, fulfilling an evolutionary preference for prosocial leadership that promotes the welfare of the collective. This approach enables school administrators to take an active role in supporting teachers' organizational empowerment and facilitates the creation of more inclusive and equitable work environments by transcending gender-based disparities (Hoven et al., 2021). In conclusion, both the findings of the present study and the existing literature strongly suggest that the positive impact of SL on teachers'

organizational empowerment is consistent across gender and that this leadership model offers universally applicable benefits.

5.1. Limitations and Future Direction

The current study should be considered in light of several limitations. First, it is a cross-sectional study based on self-reported data obtained from a single source. Future research may explore the relationships among similar variables using multiple data sources to enhance the robustness of the findings. Experimental studies may also be conducted to improve teachers' organizational empowerment through interventions that promote SL practices. Another limitation concerns the generalizability of the results. The sample consisted of 632 teachers from Istanbul, Türkiye. Replicating this study in different cultural contexts and with more diverse populations could enhance generalizability. Additionally, future research could investigate the mediating roles of variables such as school climate, organizational justice, psychological capital, workload, stress and burnout, organizational trust, and organizational commitment in the relationship between SL and organizational empowerment. The potential moderating effects of these or similar variables may also be examined.

6. Conclusion

The finding that teachers' perceptions of SL positively influence their levels of organizational empowerment suggests that school management practices should become more inclusive and democratic. Furthermore, given that gender does not play a moderating role in this relationship, it can be inferred that school administrators can support the organizational empowerment of both female and male teachers similarly through a SL approach. It is essential for school leaders to develop policies that promote and strengthen teachers' organizational empowerment and to raise awareness of empowerment as a fundamental principle of SL. By cultivating closer, more supportive, and inclusive relationships with teachers, administrators can foster greater synergy within the educational environment.

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