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Research Article

The Mediators of Collegial Solidarity on Job Performance: A Relational Study in the Education Sector

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Abstract: One of the distinguishing features of educational institutions is that the learning and teaching processes that are at their core are mostly carried out by expert educators independently on their own in the classroom. This state of independence and solitude causes collegial solidarity to emerge as a more important issue for educational institutions when compared to other institutions. This study examines the mediators of the relationship between educators' collegial solidarity and job performance. This study examines the mediating roles of three individual variables (i.e., thriving at work, self-efficacy, and work engagement) and three institutional variables (i.e., collegial relations, administrative support, and organizational climate) have on the relationship between educators' collegial solidarity and job performance using data collected from a total of 766 participants working at educational institutions. It has been determined that institutional and individual variables have a mediating effect in the relationship between educators' colleague solidarity and job performance. It was observed that institutional variables had a weaker mediating effect than individual variables in this effect. This result shows that the unique nature of the education profession reveals a different structure in terms of the variables examined in the research.

Keywords: Collegial solidarity, job performance, self-efficacy, thriving at work, work engagement, collegial relations, administrative support, organizational climate

Öz: Eğitim kurumlarının fârik özelliklerinden biri özünde yer alan öğrenme ve öğretme süreçlerinin çoğunlukla uzman eğitimciler tarafından sınıfta bağımsız olarak yürütülmesidir. Bu bağımsızlık ve eşsizlik hali, meslektaş dayanışmasının diğer kurumlara göre eğitim kurumları için daha önemli bir konu olarak ortaya çıkmasına neden olmaktadır. Bu çalışma, eğitimcilerin meslektaş dayanışması ile iş performansı arasındaki ilişkide kişisel ve kurumsal aracı değişkenlerin etkisini incelemektedir. Bu çalışma, eğitimcilerin arasındaki ilişkide meslektaş dayanışması ile iş performansı arasındaki ilişkide üç bireysel değişkenin (işte kendini yetiştirme, öz-yeterlilik ve çalışmaya tutkunluk) ve üç kurumsal değişkenin (meslektaş ilişkileri, idari destek ve örgütsel iklim) toplam 766 katılımcıdan toplanan verileri kullanarak aracı rollerini incelemektedir. Eğitimcilerin meslektaş dayanışması ile iş performansı arasındaki ilişkide kurumsal ve bireysel değişkenlerin aracı etkiye sahip olduğu belirlenmiştir. Bu etkide kurumsal değişkenlerin bireysel değişkenlere göre daha zayıf aracılık etkisine sahip olduğu görülmüştür. Elde edilen sonuç, eğitim mesleğinin kendine özgü doğasının araştırmada incelenen değişkenler açısından farklı bir yapı ortaya koyduğunu göstermektedir.

Anahtar Kelimeler: Meslektaş dayanışması, iş performansı, öz-yeterlik, işte kendini yetiştirme, çalışmaya tutkunluk, meslektaş ilişkileri, idari destek, örgütsel iklim

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Introduction

The increasingly complex structure of work life has added to the interest in factors affecting job performance (JPER). Dynamics such as flexible working conditions, changing qualifications, process management, knowledge-based structures, and the spread of communication technologies highlight communication, cooperation, team spirit, and solidarity among employees as some of the main determinants of JPER. This search has led to an increase in studies aimed at understanding the level of the relationship between collegial solidarity (CS) and JPER in recent years.

Professional organizations (e.g., trade unions, nongovernmental organizations [NGOs]) have become quite widespread in the education sector, which has had positive and negative effects on educators. Meanwhile, reasons such as educational institutions being professional organizations, employees being experts, and the inability to standardize products distinguish educators' qualities of CS and JPER from those in other types of organizations. The aim of this study is to investigate the mediating effect of educators' individual levels of self-efficacy (SE), thriving at work (TW), and work engagement (WE) and the organizational levels among colleagues regarding collegial relations (CR), administrative support (AS), and organizational climate (OC) on the effect collegial solidarity has on JPER in terms of educators' standardized outputs.

Studies conducted to find out whether a relationship exists between CS and JPER have revealed a clearly positive relationship (Groysberg & Lee, 2008; Abbasi et al., 2011; Papay et al., 2020). Papay et al.'s (2020) study on students matched teachers with other teachers who had low or high job performance and found the JPERs of teachers who'd been matched with teachers who have high JPER to be higher than the JPER of teachers who'd been matched with teachers who have low JPER. The concept of TW has recently occurred as a new concept in the literature (Spreitzer et al., 2005). This concept has been researched in different sectors and has been determined to have been insufficiently examined with regard to educators. Thus, the current study aims to fill this gap in the literature. In addition, the need exists for studies that examine the direction and how strongly employees' personal characteristics and features (e.g., individual variables) and institutional variables mediate the effects of CS on JPER. Understanding the extent to which individual effort and characteristics such as SE, TW, and WE and institutional variables such as CR, AS, and OC affect the relationship between CS and JPER can guide businesses in increasing organizational productivity and employee satisfaction.

The research is also based on the broaden-and-build theory (BBT), which proposes that positive emotions expand the thought-action repertoire of individuals, eliminate

persistent negative emotions, strengthen psychological resilience, support the formation of personal resources, and increase psychological and physical well-being (Fredrickson, 2004). BBT states within its framework that employee solidarity is effective at creating positive emotions in employees. According to BBT, employee solidarity is expected to have a positive effect on work performance; however, previous research has already examined the interaction between these two concepts outside of BBT.

Theoretical Framework

The present study examines the mediating role that three institutional variables (i.e., CR, AS, OC) and three individual variables (i.e., SE, TW, WE) have on the relationship between CS and JPER. The definitions and scopes of these concepts and the results from relevant research are summarized below.

Collegial Solidarity (CS)

In a general sense, CS is a concept that expresses the solidarity between experts in the same profession relating to the professional field. Solidarity between members of a profession can be considered as a dimension of inter-individual solidarity in daily life. Solidarity is the basic relational element of social life through which individuals overcome the difficulties of life together (Rodriguez & Cohen, 1998). Durkheim classified solidarity in social life as mechanical and organic and argued that a natural and strong social life to have to transition from mechanical to organic solidarity. In this context, CS is recommended to be maintained as an organic communication between experts who have the same profession and includes such dimensions such as solidarity and the transfer of principles, problems, knowledge, and experience related to the profession (Gubanov & Gubanov, 2018). CS can be observed in four dimensions: emotional solidarity, solidarity by sharing professional information, solidarity through practice, and solidarity through professional appreciation (Çoban, 2005). Educators' CS includes the solidarity among school managers and solidarity among teachers, as well as solidarity between school managers and teachers. However, the phenomenon of CS in terms of educators has mostly been discussed in terms of school, with CS among teachers being mostly researched (Little, 1982; Hoerr, 1996; Jarzabkowski, 2002, 2003; Clark, 2001). However, when considering the society beyond the school at which an individual works, a more comprehensive CS concept can be mentioned for educators, whether they be teachers or administrators. Educators don't just communicate with each other at school, they also socialize with each other's families and cooperate to increase their personal development and meet their economic, social, and other needs.

Job Performance (JPER)

According to the Turkish Language Association (TDK, 2021a), performance means "success; the achievement shown while doing any work, job or play." The behavioral dimension emphasizes what employees do in the workplace (i.e., their own actions). One aspect of JPER focuses on the results of an individual's behaviors (Campbell et al., 1990). Performance includes selling things to customers, programming computer software, and assembling the parts of a product. The JPER dimension of results may also be affected by other external factors. For example, while some sales assistants do their job well, others can have low sales figures, or even if a high school teacher teaches very well, they may have a low success rate due to low motivation and students' unwillingness to learn. Therefore, JPER should be discussed multi-dimensionally.

This study will examine variables regarding their mediating roles on CS and JPER under two categories: institutional and individual.

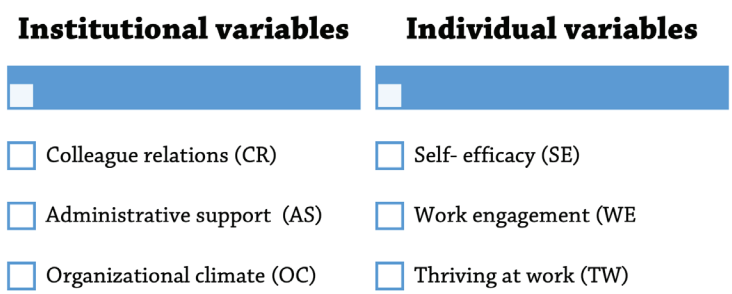

Figure 1. *The mediating variables between CS and JPER*

The theoretical framework of these variables and the research of the literature on the mediating relationship between the dependent and independent variables are explained below. In order to test the effect of the mediating variables on the relationship between CS and JPER, the study will first examine whether a significant relationship exists for CS and JPER with the other six mediating variables. Meanwhile, one of the assumptions of the mediation analysis is that no multicollinearity exists between the variables.

H_1: A correlation exists for educators' CS, AS, OC, CR, SE, TW, and WE that predicts their JPER.

Institutional Variables

Collegial Relations (CR)

CR have been discussed over a wide range of topics, from the minimum basic communication required by living together to doing business together (Shah, 2011). In general, studies have shown that individuals who communicate well with other employees and managers in the institution where they work have higher commitment to their institution (Mamacı et al., 2020), job, and job satisfaction; have lower turnover; and provide many positive contributions. On the other hand, negative communication is seen to have negative consequences such as professional frustration and decreased institutional belonging (Rathel et al., 2014).

CR also involve a dimension that goes beyond institutional relationships and interactions. The relationships and communications had with colleagues working in other institutions that develop as a result of professional awareness (also called professionalism in literature) has been explained by the concepts of CR and collegiality (Lieberman & Miller, 1999). In terms of institutional CR, Little (1999) modeled CR between teachers in four levels ranging from independent to mutually dependent: storytelling and scanning for ideas, aid and assistance, sharing, and joint work. According to Little's model, deeper CR increases the desire to work innovatively, passionately, and selflessly, which in turn has a direct effect on JPER.

H_2: CR have a mediating role in the relationship between CS and JPER.

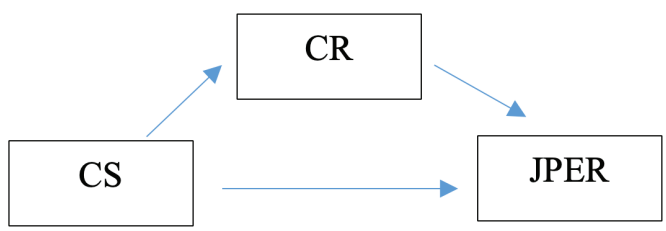

Figure 2. *The model for H_2*

Administrative Support (AS)

AS is considered one of the basic elements in the modern management approach. The role and importance of CR have begun being seen more in the literature in the transition from the scientific management approach to the human-centered management approach as well as in leadership models and approaches. Management

attitudes toward employees who are new to the profession in particular are seen to be determinants in terms of job commitment and job satisfaction (Brown & Wynn, 2007). Meanwhile, institutions that lack CR have higher human resource circulation and significant decreases in the continuity of the profession and the institution (Tickle et al., 2011).

CR have been discussed over a wide range of topics, from communication with managers to institutional support systems. CR have also been found to be associated with other variables such as leadership and management styles, as well as organizational culture. Due to educators mostly carrying out educational processes independently and alone, a greater need exists for CR in educational institutions. Leithwood and Jantzi (2006) modelled CR for educators, and according to them, CR takes place under different dimensions: (1) building school vision, (2) developing specific goals and priorities, (3) offering individualized support, and (4) developing a collaborative school culture. CR strengthens CS and have a direct effect on JPER.

H_3: *AS has a mediating role on the relationship between CS and JPER.*

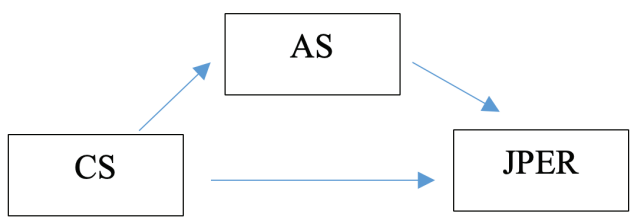

Figure 3. *The model for H_3*

Organizational Climate (OC)

According to Pritchard and Karasick (1973), OC represents an individual's general impression regarding the organization and the personal impact of the work environment and affects individuals' work behaviors and work-related attitudes. OC is a general perception of the place where the employee works and includes the workplace and duties (Aarons & Sawitzky, 2006). OC is an effective concept about how employees are expected to behave in the workplace according to the purposes, values, beliefs and norms of the organization. OC becomes more effective at determining employee actions in this way and creates a difference with other organizations. OC is a tool that affects and is affected by environmental conditions, the organization's attitudes, and individuals' behaviors (Neal et al., 2000). The literature has studies that have shown OC to positively and significantly affect CS (Hoy & Hannum, 1997; Yoder, 2004; Dan et al., 2018) and JPER (Raza, 2010; Selamat et al., 2013; Özgenel,

2020). However, the literature has yet to examine OC as a mediating variable between CS and JPER.

H_4: OC has a mediating role on the relationship between CS and JPER.

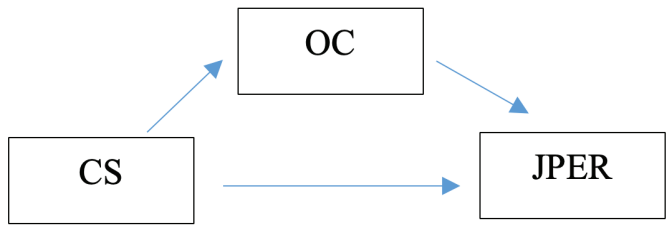

Figure 4. *The model for H_4*

H_5: The institutional variables of CR, AS, and OC have mediating roles on the relationship between CS and JPER.

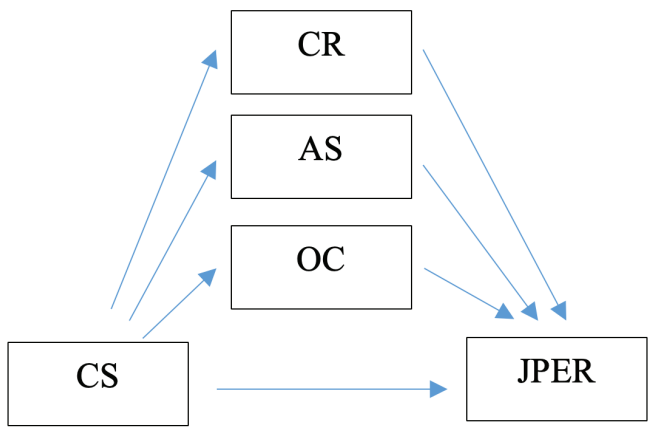

Figure 5. *The model for H_5*

Individual Variables

Self-Efficacy (SE)

According to TDK (2021b), efficacy is defined as the special knowledge and competence that gives strength to doing a job. The concept of SE was first introduced by Bandura (1977). SE belief (Bandura, 1986a; Zimmerman, 2000; Lorig et al., 1989; Schwarzer; Bassler et al., 1997; Hackett & Betz, 1981) is defined as the belief that one has the ability and skills needed to do a job.

SE judgments are evaluated through three main areas: level, power, and generalizability. SE level refers to the degree of difficulty individuals think they may encounter while performing an action. SE power is the amount of belief individuals have in their ability to perform successfully in difficult situations. SE generalizability refers to the extent to which expectations can be generalized to different situations. Bandura (1986a) grouped the basic features of SE under cognitive processes, emotional processes, and control. Cognitive processes involve the state in which individuals' goal setting is affected by their self-assessment of their abilities. Emotional processes involve individuals' beliefs in their abilities affecting not only their motivation but also their stress and depression. Lastly, SE control refers to individuals' perceptions of the main causes of events in their lives (Arseven, 2016). Individuals with high SE expect good results and therefore show risk-taking internal entrepreneurial behaviors (Meydan, 2011). According to social cognitive theory (SCT; Bandura, 1986b), performance feedback provides information about the employee's previous performance and helps to assess their ability to perform subsequent tasks successfully (Karl et al., 1993). Accordingly, SE is expected to have a mediating role on the relationship between CS and JPER.

H_6: Perceived SE has a mediating role on the relationship between CS and JPER.

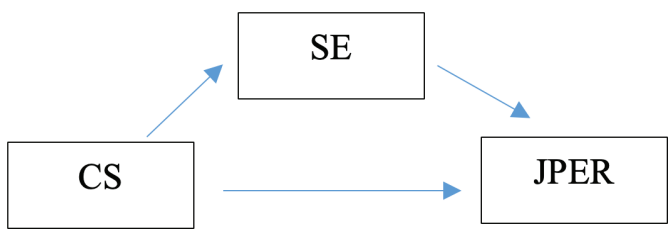

Figure 6. *The model for H_5*

Thriving at Work (TW)

Spreitzer et al. (2005) explained thriving at work to resemble existing structures such as flexibility, development, subjective well-being, and flow but to also be different from these. Another definition of TW shows it to be employees' process for being successful by simultaneously experiencing the feelings of vitality and learning and continuously improving themselves in accordance with their objectives (Porath et al., 2012). As can be seen in this definition, one has to simultaneously experience the feelings of vitality and learning.

TW consists of two sub-dimensions: learning and vitality. As employees experience learning, they feel that they are constantly improving themselves and become better

at their jobs (Porath et al., 2012). Learning is the acquisition and realization of new knowledge, skills, and abilities (Dweck, 1986). The learning experienced by self-educated individuals in the business involves acquiring new job-related knowledge and skills and being aware of talents. In short, TW means achieving all kinds of gains that will contribute to better JPER. Personal development and new awareness can also be added to this. Referring to Deci and Ryan's (1985, 2008) self-determination theory (SDT), Ryan and Frederick (1997) argued vitality to involve a sense of energy arising from oneself and one's own deliberate actions. The concept of TW is expected to play a mediating role on the relationship between CS and JPER.

H_7: Perceived TW has a mediating role on the relationship between CS and JPER.

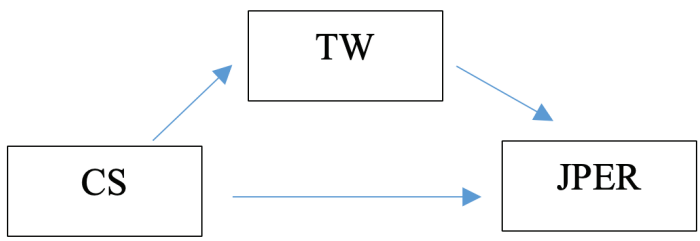

Figure 7. *The model for H_6*

Work Engagement (WE)

The word "engagement" is derived from the word "to engage" (McIntosh & Turnbull, 2005). Studies on WE have been conducted from different aspects. The first of these was called employee engagement and was first used by Gallup Consulting (Saks, 2006). WE is another concept that has been studied in the literature on personal engagement and was defined by Maslach and Leiter (1997) as employees' not showing symptoms of burnout (Maslach & Leiter, 1997). Schaufeli et al. (2002) first introduced the concept of WE, and according to them this concept is defined as a satisfying, positive, work-related mood. According to Schaufeli et al. (2010), WE includes the dimensions of engagement, vitality, commitment, and focus. In terms of social cognitive career theory (SCCT), perceptions of one's engagement and goal-related progress at work are theorized to be an integral part of satisfaction experiences (Lent & Brown, 2006). According to studies conducted on educators, WE is also a concept that contributes significantly to career development (Altunel et al., 2014; Perera et al., 2018).

H_8: Perceived WE has a mediating role on the relationship between CS and JPER.

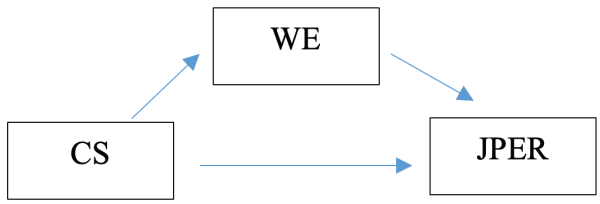

Figure 8. *The model for* H_7

H_9: The individual variables of SE, TW, and WE have mediating roles on the relationship between CS and JPER.

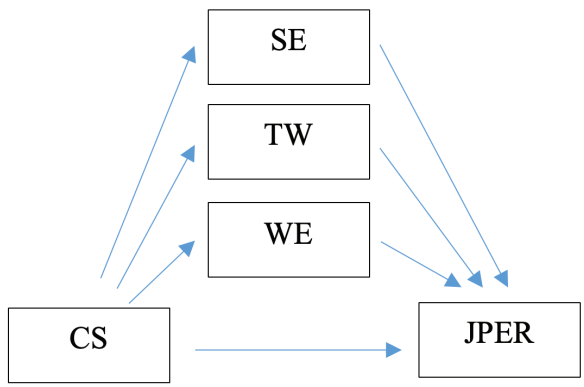

Figure 9. *The model for* H_5

H_{10}: Educators' CS, CR, AS, OC, SE, TW, and WE predict their JPER.

Figure 10. *The model for* H_8

Method

This study is a quantitative relational field research and has been conducted to examine the variables' mediating effects on the relationship between administrators' and educators' CS and JPER in educational institutions.

Population and Sample

The population of the study consists of administrators and teachers working in educational institutions in Istanbul. The sample of the study consists of 766 educators. The sample was determined using the convenience sampling method, with maximum diversity being aimed at over 19 demographic variables. Demographic information about the sample is shown in Table 1.

Table 1.

Demographic Data

		Frequency	Percentage	MoNE* Data
Gender	Male	204	26.6	
	Female	562	73.4	
	Total	766	100	
Duty	School principal	41	5.4	
	Assistant principal	69	9	
	Group leader	58	7.6	
	Teacher	586	76.5	
	Other	12	1.6	
	Total	766	100	
Professional length of service	1 month- 1 year	29	3.8	
	1-4 years	61	8	
	4-7 years	170	22.2	
	8-13 years	178	23.2	
	14-20 years	155	20.2	
	20 years and more	173	22.6	
	Total	766	100	

Administrative length of service	None	572	74.7	
	1 month- 1 year	37	4.8	
	1-3 years	50	6.5	
	4-7 years	52	6.8	
	8-13 years	22	2.9	
	14-12 years	13	1.7	
	20 years and more	20	2.6	
	Total	766	100	
School type	State	609	79.5	
	Private	152	19.8	
	Other	5	0.7	
	Total	766	100	
Level of school	Preschool	85	11.1	
	Primary	198	25.8	
	Secondary	238	31.1	
	High school	229	29.9	
	Other	16	2.1	
	Total	766	100	
Branch	Preschool teacher	89	11.6	
	Primary school teacher	159	20.8	
	Turkish-social sciences	183	23.9	
	Mathematics-Science	104	13.6	
	Sports-Art	46	6	
	DİKAB and İHL vocational courses	54	7	
	Vocational technical fields	51	6.7	
	Other	80	10.4	
	Total	766	100	
Level of education	Undergraduate	621	81.1	81.76
	Non-thesis master's	75	9.8	11.22
	Masters with thesis	68	8.9	
	Doctorate	2	0.3	.23
	Total	766	100	

NGO membership	Yes	115	15	
	Was a member, not any more	74	9.7	
	No	577	75.3	
	Total	766	100	
Union membership	Yes	371	48.4	
	Was a member, not any more	49	6.4	
	No	346	45.2	
	Total	766	100	
Participation in NGO* activities	Once a week	14	1.8	
	Once a month	59	7.7	
	Once a year	126	16.4	
	Never	424	55.4	
	Other	143	18.7	
	Total	766	100	
Participation in union activities	Once a week	7	0.9	
	Once a month	39	5.1	
	Once a year	106	13.8	
	Never	528	68.9	
	Other	86	11.2	
	Total	766	100	
Participation in scientific meetings	Once a week	14	1.8	
	Once a month	150	19.6	
	Once a year	290	37.9	
	Never	76	9.9	
	Other	236	30.8	
	Total	766	100	
Self-learning and development	Once a week	45	5.9	
	Once a month	168	21.9	
	Once a year	247	32.2	
	Never	32	4.2	
	Other	274	35.8	
	Total	766	100	

* MoNE: Turkey's Ministry of National Education

When analyzing the distribution of the participants included in the sample, the participants' distributions were found to resemble Türkiye's averages in terms of gender, job, work experience, branch, type of educational institution, and level of education (Ministry of National Education [MoNE], 2022). Due to the study being based on the basic variables of CS and JPER, the distributions regarding NGO and union membership, participation in NGO and union activities, participation in scientific meetings and self-learning and developmental status were also examined to learn about participants' NGO and union memberships, efforts toward in-school and out-of-school professional solidarity, and professional development.

Data Collection Tools

The study uses nine different data collection tools with a total of 99 items. Of these, the 15-item demographic information form was a survey tool involving various types of questions, while the remaining eight data collection tools were 6-point Likert-type scales. Information about the scales used in this study are shown in Table 2.

Table 2.

Scales Used in the Study

Scale Name	Developed by	Adapted by	Number of items
Hemşirelerde Meslektaş Dayanışması Ölçeği [Collegial Solidarity Scale for Nurses] to measure CS	Çetinkaya Ulusoy (2010; α = .88)	-	23
School Administration Support Scale for measuring AS	Magill (2002; α = .82)	Özgün (2005; α = .93)	7
Unnamed scale for measuring CR	Oranje (2001; α = .78)	Özgün (2005; α = .76)	6
Organizational Climate Description Questionnaire for measuring OC	Hoy & Tarter (1997; α > .77)	Yılmaz and Altınkurt (2013; α > .70)	21
Ultra-short Measure for Work Engagement: UWES-3 for measuring WE	Schaufeli et al. (2017; α > .76)	Şahin & Çankır (2019; α = .88)	3
Thriving at Work Scale for measuring TW	Porath et al. (2012; α = .92)	Koçak (2017;α = .84)	10

General Self-Efficacy Scale for measuring SE	Schwarzer & Jerusalem (1995)	Yeşilay, Schwarzer, & Jerusalem (1996) (α = .91)	10
Job Performance Scale for measuring JPER	Sigler & Pearson (2000); Kirkman & Rosen (1999; α > .70)	Çöl (2011) (α = .83)	4

Validity and Reliability

Validity and reliability studies were carried out in two stages. In the first stage, the validity and reliability of the data collection tools were tested, while the second stage examined whether the dataset met the assumptions for the regression and mediation tests.

The items on the demographic information survey were formed in line with the purposes of the study by making use of the related literature and by considering the four stages of the survey preparation process as explained by Büyüköztürk (2005). This survey was finalized after a preliminary application. Validity and reliability studies of the scales used in the study were determined using factor analysis and normal distribution tests.

Table 3.

Exploratory Factor Analysis Results of the Scales Used in the Study

	N	Number of items	KMO	Total variance explained by the factors	1st factor load average	2nd factor load average	3rd factor load average	Skewness	-Kurtosis
CS	766	23	.923	42.957%	.649	.629		-1.013	1.386
CR	766	6	.824	49.522%	.690			-0.780	.543
AS	766	7	.939	82.282%	.907			-1.038	.200
OC	766	21	.940	71.211%	.745	.669	.599	-0.536	.391
TW	766	10	.830	58.187%	.742	.565		-0.693	.541
WE	766	3	.683	79.517%	.890			-0.491	.208
SE	766	10	.929	64.120%	.799			-1.250	1.805
JPER	766	4	.804	72.355%	.850			-0.983	1.019

Before conducting the exploratory factor analysis of the eight scales used in the study, the dataset was examined for missing data and outliers. Before subjecting the dataset to analysis, rows with missing data and outliers were removed from the dataset, and analyses were made on this remaining dataset. Next, the KMO test results (Table 3) show all eight scales to be suitable for factor analysis. CS was found to have 2 factors, OC to have 3 factors, WE to have 2 factors, and the other scales to have single factors; the item factor loads were determined to be sufficient (Table 3). Item 20 from the CS scale was excluded due to its low factor load (0.216). As a result of the alpha model reliability analysis results (α = 0.773-0.964), the scales were found to be highly reliable (Table 4).

Table 4.

Internal Consistency Analyses

Scales	Number of items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
CS	23	.843	.881
CR	6	.773	.787
AS	7	.964	.964
OC	21	.863	.866
SE	10	.935	.937
TW	10	.820	.844
WE	3	.871	.870
JPER	4	.872	.872

The second stage examines whether the dataset meets the assumptions required for the regression and mediation analyses. This stage examined the skewness and kurtosis coefficients of the variables to see whether they met the assumption of normality and determined the dataset to have values between +/-2 (Table 3; George & Mallery, 2010). Thus, no excessive deviation was shown and the distribution was determined to be normal. Based on the assumption that the relationship between the variables is higher than .80, a multicollinearity problem was assumed to be present, and the correlations among all the variables were calculated and shown to have values less than .80 (Table 5).

In order to ensure the external validity of the research, the data collection tools were examined over three dimensions: the suitability of the data collection tools with the theoretical foundations of the research (Tables 2 & 3), the suitability of the sample to the real world, and the sample distribution reflecting the maximum diversity in the universe (Table 1).

Analyses

Frequency analysis was conducted over the participants' demographic information, and internal consistency analyses for each scale used in the study were found by calculating Cronbach's α. Pearson's r correlation analysis was applied to find out the relationships among the variables examined in the study. The research hypotheses were tested using Pearson's correlation analysis; simple, multiple, and hierarchical regression methods; and the bootstrap method. The mediation analysis accepted the bootstrap method as having a lower standard error value and more sensitive results, especially in cases where the number of samples is not high (Örs Özdil, 2017).

The data analysis was carried out over four stages in line with the research hypotheses. The first stage, performed a simple regression analysis to determine whether a relationship exists between CS and JPER. Many researchers have stated that a relationship must first be present between the independent variable and the dependent variable before talking about the mediating effect from another variable on these two. From this point of view, revealing the effect from CS on JPER has been considered as a priority step in determining the variables that have a mediating effect and in clarifying their effects.

Next, single mediation analyses were applied using the bootstrap method in order to test Hypotheses 2, 3, 4, 6, 7, and 8 of the research regarding the mediating roles of CR, AS, OC, SE, TW and WE on the relationship between CS and JPER. In social events, the single and multiple effects of mediating variables may differ with regard to the relationship between a dependent and independent variable. Again, claiming that only one variable has an effect on any dependent variable in social events is mostly inconsistent with the complexity of social events. In this case, the study considered that a single mediation analysis of the six variables needed be done.

The third stage applied multiple mediation analyses using the Bootstrap method in order to test Hypotheses 5 and 9 of the research regarding the mediating roles of the institutional variables (i.e., CR, AS, and OC) and the individual variables (i.e., SE, TW, and WE) on the relationship between CS and JPER. The aim was to determine the mediating effect of the three institutional and three individual variables using multi-mediation analysis in order to reveal these variable groups' effects on the relationship between teachers' and school administrators' CS and JPER.

The fourth stage conducted a multiple regression analysis to test the extent to which the seven variables (i.e., CS, AS, OC, CR, SE, TW, and WE) predict JPER. Thus, this stage aims to reveal the predictive levels of the institutional and individual variables (CS in particular) that are assumed to affect JPER in educational institutions.

Descriptive, correlation, and regression analyses were performed using the program SPSS21. The bootstrap method was used to analyze the mediation effects, with calculations being made using the application Process 4.0 (SPSS macro from Andrew F. Hayes' website; developed by Preacher and Hayes, 2004, 2008 based on Model 4 as developed by Hayes, 2013). The significance level was accepted as p .05 in the study.

Results

The results regarding the research hypotheses are presented below. Before testing the research hypotheses, the mean and standard deviation values of the variables were calculated, and the relationships among the variables were tested using Pearson's r correlation analysis in order to have a general idea about the variables. The mean values of the variables in Table 4 were calculated and presented with standard deviation values. As a result of the correlation analyses, significant correlations were found with no multicollinearity present among CS, AS, OC, CR, SE, TW, WE and JPER, which is in line with the first hypothesis.

Table 5.

The Participants' Mean Scores on the Scales and the Results of the Correlation Analysis Among the Variables

	N	Mean	*SD*	CS	CR	AS	OC	SE	TW	WE	JPER
CS	766	5.0650	.49353	1							
CR	766	4.9463	.82132	.550**	1						
AS	766	4.6762	1.34051	.371**	.461**	1					
OC	766	3.8829	.81497	.255**	.355**	.738**	1				
SE	766	5.0101	.73954	.404**	.330**	.340**	.226**	1			
TW	766	4.7636	.70595	.442**	.372**	.302**	.229**	.617**	1		
WE	766	5.0827	.93343	.398**	.299**	.328**	.238**	.519**	.677**	1	
JPER	766	5.1625	.76964	.417**	.314**	.351**	.208**	.693**	.600**	.640**	1
** Correlation is significant at the p = 0.01 level (2-tailed).											

When examining the participants' mean scores on the scales, the scores were found to be at the level of "usually" with regard to the CS (5.07), CR (4.95), AS (4.68), SE (5.01), TW (4.76), TW (5.08) and JPER (5.16) scales and at the level of "often" on the OC (3.88) scale. According to these means, educators perceived their levels

of CS, CR, AS, SE, TW, WE, and JPER to be higher than moderately positive, while they perceived their levels of OC to be close to moderate.

A high correlation was found between AS and OC; low correlations for OC with CS, SE, TW, TW, and JPER; moderate correlations for CS with CR, AS, SE, TW, WE, and JPER; moderate correlations for CR with AS, OC, SE, TW, WE, and JPER; moderate correlations for AS with OC, SE, TW, WE and JPER; moderate correlations for SE with TW, WE and JPER; moderate correlations for TW with WE and JPER; and a moderate correlation between WE and JPER.

Simple Regression Analyses for Testing the Hypotheses

As a result of the correlation analyses, multiple regression analysis was first used to determine whether all variables predicted JPER in order to test whether the variables that had significant correlation with one another provided a result in line with the previously determined hypotheses. Table 6 shows the results from this analysis regarding H_{10}.

Table 6.

Multiple Regression Analysis Results for the Effects of Participants' CS, CR, AS, OCC, SE, TW, and WE Levels on JPER

Variable	*B*	Standard Error	Beta	t	p	Paired *r*	Partial *r*	Tolerance	VIF
Fixed*	.700	.202	-	3.472	.001	-	-	-	-
CS	.101	.046	.065	2.190	.029	.079	.050	.607	1.647
CR	-0.013	.028	-0.014	-0.484	.628	-0.018	-0.011	.609	1.643
AS	.069	.021	.120	3.242	.001	.117	.074	.387	2.583
OC	-0.079	.032	-0.084	-2.466	.014	-0.089	-0.057	.453	2.207
SE	.456	.032	.438	14.398	.000	.463	.331	.570	1.753
TW	.076	.038	.070	1.982	.048	.072	.046	.425	2.351
WE	.268	.027	.324	10.067	.000	.343	.231	.508	1.968
R = 0.775	R^2 = 0.600	Adj. R^2 = 0.596	$F_{(7, 758)}$ = 162.338		.000				

*JPER (dependent variable) is fixed.

The multiple regression analysis that was performed to test the tenth hypothesis of the study H_{10}, which states educators' CS, CR, AS, OC, SE, TW, and WE to predict their JPER, found the variance in these seven listed variables to significantly explain 60% of the variance in educators' JPER (R^2 = 0.60, $F_{(7, 758)}$ = 162.338; p < .01). Accordingly, this result confirms H_{10} in the study.

When examining which variables significantly predict this effect regarding educators' JPER, all variables except CR were seen to predict JPER, with CS explaining 10.1%, AS explaining 6.9%, OC explaining -7.9%, SE explaining 45.6%, TW explaining 7.6%, and WE explaining 26.8% of the variance in JPER.

Table 7.

The Partial Mediating Role of CR on the Relationship Between CS and JPER

				Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER				.1131	.0089	.0956	.1306
Direct effects of CS on JPER				.0949	.0106	.0741	.1157
				Unstandardized B	SEBOOT	LLCIBOOT	ULCIBOOT
Indirect effects of CS on JPER through CR				.0182	.0068	.0053	.0316
Independent		Mediator	Dependent				
CS	>	CR	> JPER				

Unstand. = unstandardized coefficient

In the mediation analysis performed to test the second hypothesis (H_2) of the study that states CR to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method contain no zero values, supporting CR as having a partial positive mediating effect over CS's relationship with JPER.

Table 8.

The Partial Mediating Role of AS on the Relationship Between CS and JPER

				Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER				.1131	.0089	.0956	.1306
Direct effects of CS on JPER				.0901	.0093	.0718	.1085
				Unstandardized B	SE	LLCIBOOT	ULCIBOOT
Indirect effects of CS on JPER through AS				.0230	.0046	.0146	.0328
Independent		Mediator	Dependent				
CS	>	AS	> JPER				

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the third hypothesis (H_3) of the study, which states AS to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method were found to contain no zero values, which supports AS's partial positive mediating effect over the CS's effect on JPER.

Table 9.

The Partial Mediating Role of OC on the Relationship Between CS and JPER

			Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER			.1131	.0089	.0956	.1306
Direct effects of CS on JPER			.1056	.0092	.0876	.1236
Indirect effects of CS on JPER THROUGH OC			Unstandardized B	SEBOOT	LLCIBOOT	ULCIBOOT
			.0075	.0027	.0027	.0131
Independent	Mediator	Dependent				
CS	> OC	> JPER				

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the fourth hypothesis (H_4), which states OC to have a mediating role on the relationship between OC and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method do not contain a zero value, thus supporting CR's partial positive mediating effect over OC's effect on JPER.

Table 10.

The Partial Mediating Role of the Institutional Variables on the Relationship Between CS and JPER

	Unstandardized B	SE	LLCI	ULCI	CS's effect on JPER
Total effects of CS on JPER	.1131	.0089	.0956	.1306	.4169
Direct effects of CS on JPER	.0840	.0105	.0634	.1046	.3097
Indirect effects of CS on JPER through CR, AS and OC	Unstandardized B	SEBOOT	LLCIBOOT	ULCIBOOT	
Total	.0291	.0075	.0147	.0445	
CR	.0069	.0076	-0.0081	.0215	
AS	.0292	.0061	.0181	.0419	
OC	-0.0070	.0036	-0.0146	-0.0002	
Independent	Mediators	Dependent			
CS	> CR, AS, OC	> JPER			

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the fifth hypothesis (H_5) of the study that states the institutional variables of CR, AS, and OC have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval as obtained from the bootstrap method contain no zero values, thus supporting a partial positive mediating effect for AS and partial negative mediating effect for CR over CS's effect on JPER. In this case, the single mediation analysis of CR, AS, and OC together were determined to have a partial positive mediating effect, while the multiple mediation analysis found only AS to have a partially positive effect, CR to have no mediating effect, and only OC to have a partial negative mediating effect.

Table 11.

The Partial Mediating Role of SE on the Relationship Between CS and JPER

	Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER	.1131	.0089	.0956	.1306
Direct effects of CS on JPER	.0444	.0076	.0295	.0593
	Unstandardized B	SEBOOT	LLCIBOOT	ULCIBOOT
Indirect effects of CS on JPER through SE	.0687	.0077	.0542	.0844
Independent Mediator	Dependent			
CS > SE	> JPER			

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the sixth hypothesis (H_6) of the study, which states SE to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method were found to contain no zero values, thus supporting the partial positive mediating effect of SE over the effect of CS on JPER.

Table 12.

The Partial Mediating Role of TW on the Relationship Between CS and JPER

	Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER	.1131	.0089	.0956	.1306
Direct effects of CS on JPER	.0512	.0086	.0344	.0680
	Unstandardized B	SE_{BOOT}	$LLCI_{BOOT}$	$ULCI_{BOOT}$
Indirect effects of CS on JPER through TW	.0619	.0064	.0497	.0746
Independent Mediator	Dependent			
CS > TW	> JPER			

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the seventh hypothesis (H_7) of the study, which states TW to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method were found to contain no zero values, thus supporting TW's partial positive mediating effect over the effect of CS on JPER.

Table 13.

The Partial Mediating Role of WE on the Relationship Between CS and JPER

			Unstandardized B	SE	LLCI	ULCI
Total effects of CS on JPER			.1131	.0089	.0956	.1306
Direct effects of CS on JPER			.0523	.0080	.0365	.0680
			Unstandardized B	SE_{BOOT}	$LLCI_{BOOT}$	$ULCI_{BOOT}$
Indirect effects of CS on JPER through WE			.0608	.0065	.0489	.0743
Independent	Mediator		Dependent			
CS	>	WE	>	JPER		

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the eighth hypothesis (H_8) of the study, which states WE to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method were found to contain no zero values, thus supporting WE's partial positive mediating over CS's effect on JPER.

Table 14.

The Partial Mediating Role of the Individual Variables on the Relationship Between CS and JPER

		Unstandardized B	SE	LLCI	ULCI	CS's effect on JPER
Total effects of CS on JPER		.1131	.0089	.0956	.1306	.4169
Direct effects of CS on JPER		.0200	.0072	.0060	.0341	.0739
Indirect effects of CS on JPER through CR, AS and OC	Unstandardized B		SE_{BOOT}	$LLCI_{BOOT}$	$ULCI_{BOOT}$	
Total		.0930	.0081	.0775	.1092	
WE		.0360	.0053	.0260	.0470	
SE		.0494	.0066	.0372	.0628	
TW		.0076	.0047	.0016	.0171	
Independent	Mediators	Dependent				
CS	>	WE, SE, TW >	JPER			

Unstand. = unstandardized coefficient

In the mediating analysis performed to test the ninth hypothesis (H_9) of the study, which states the individual variables of SE, TW, and TW to have a mediating role on the relationship between CS and JPER, the upper and lower limits at a 95% confidence interval obtained from the bootstrap method were found to contain no zero values, thus supporting the partial positive mediating effect of the individual variables over CS's effect on JPER. In this case, WE, SE, and TW were determined to have partial positive mediating effects for both the single and multiple mediation analyses, unlike the institutional variables that did not have the same mediating effects in their multiple mediation analysis.

When considering the findings regarding all the study's hypotheses, the single and multiple mediating effects from the institutional and individual variable groups over the effect of CS on JPER can be summarized as shown in Figure 12.

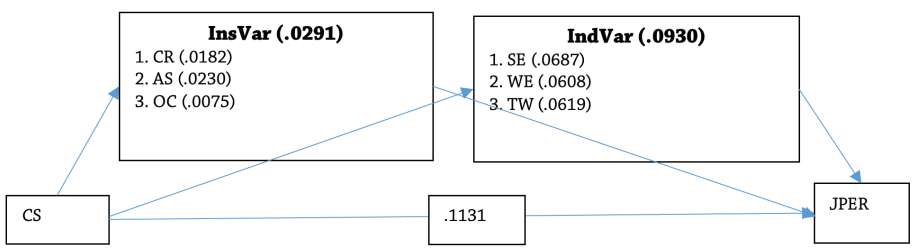

Figure 12. *The effect rates of the mediating variables over the effect of CS on JPER*

Discussion

This study has examined the mediating variables that affect the relationship between educators' collegiate solidarity and job performance, and the obtained findings are interpreted below.

CS is considered one of the basic competencies sought in employees working in 21st-century organizations. Employees need individuals who can understand them in the emotion, knowledge and practice domains regarding job-related issues. CS is a necessity for businesses and a basic need for employees and is also valid for educational institutions. However, the unique characteristics of educational institutions may be the reason why they differ in terms of how CS reflects onto JPER. Educational institutions' unique characteristics have been analyzed in many studies in terms of structure, quality of human resources, institutional policies and mission, and institutional culture (Bolmen & Deal, 2017). This difference has

its own characteristics in terms of the results regarding educators' JPER and the individuals they deal with.

The groups of institutional and individual variables were determined to have indirect effects on JPER. The results showed a moderate correlation to exist between CS and JPER (r = .417), with educators' CS predicting 10% of the variance in JPER. Moreover, the total impact of the seven variables (i.e., collegial solidarity [CS], collegial relationships [CR], administrative support [AS], organizational climate [OC], work engagement [WE], self-efficacy [SE], and thriving at work [TW]) on JPER is very high (R^2 = 0.600). These results are also consistent with other previous studies that found a correlation between CS and JPER (Groysberg & Lee, 2008; Abbasi et al., 2011; Papay et al., 2020).

SE, WE, and TW were chosen as the mediating variables regarding educators' individual characteristics and efforts and as a result of the multiple regression analyses, were found to predict job performance significantly, with SE explaining 43.8% (p = .000), WE explaining 32.4% (p = .001), and TW explaining 7% (p = .048) of the variance. Employees' SE, WE, and TW levels are also known to have a strong relationship with other variables such as job satisfaction and TW (Arıcı Özcan et al., 2021). However, the current study's results showed educators' individual characteristics and efforts to be a stronger predictor than the institutional variables, which reflects the perception and understanding that teaching is a profession that is performed individually.

The individual (i.e., SE, TW, WE) and institutional (i.e., AS, CR, OC) variables remarkably all have single mediating effects over the relationship between CS and JPER. This general result shows that trying to explain the relationship between CS and JPER without considering other variables will be insufficient. Previous research results have also shown that educators' perceptions toward administrators, other employees, and OC to also have a strong effect on motivation, job satisfaction, organizational trust, and organizational citizenship (Karataş, 2020).

Another remarkable result is that the individual variables (i.e., SE, TW, WE) had higher mediating effects on the relationship between CS and JPER compared to the effects from the institutional variables (i.e., CR, AS, OC) with regard to educational institutions. Clearly the need exists for more research aimed at understanding and explaining the nature of the teaching profession in relation to SE, TW, and WE.

Another significant result of the study is that despite the institutional variables of CR, AS, and OC having single mediating effect over CS's impact on JPER, the multiple mediating effect of these variables differed. While OC and CR had partial

positive effects in the single mediating analysis, CR had no effect and OC had a partial negative effect in the multiple mediating analysis. This result clarifies the individual variables to have significantly stronger mediating effects over CS's effect on JPER.

The results show the effects from the mediating variables over the relationship between CS and JPER to range from strongest to weakest as SE, TW, WE, CR, AS, and OC; this is very important in terms of realizing the phenomena that stand out more in educators' perceptions regarding their professional responsibility. This result clearly creates new questions to be answered, such as whether CS, organizational culture, setting a common vision, and cooperation among educators are at lower levels in educational institutions in Türkiye, or whether educators prioritize individual competencies over institutional ones.

The value schools have for society has become better understood during the COVID-19 pandemic. The solidarity among school administrators and teachers is observed to have reflected positively onto their job performance. Despite not being physically at school, their interactions and solidarity with each other have reflected positively on their well-being and thus on their perceptions of work. Meanwhile, the COVID-19 pandemic has clearly shown that educational institutions and educators are indispensable for societies. As a reflection of this obvious significance, the quality, prevalence, and efficacy of the outputs of educational institutions has begun being questioned more. This study has aimed to determine the variables predicting educators' JPER and the mediating variables on the relationship between CS and JPER, and its results are valuable in terms of educational institutions and educators as well as human resource management policies regarding education. The present study was limited to İstanbul, and in line with its results, the need exists for intercultural studies as well as studies focusing on different contexts of schools in terms of understanding whether the mediating variables of job performance differ. In addition, more research needs to be conducted in order to explain the reasons for the ineffectiveness of CR and the negative effects of OC in the multiple mediation analysis.

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