

Research Article

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The Mediating Role of Job Satisfaction Between Leadership and Organizational Performance and the Moderating Effect of Educational Context

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Abstract

Background/purpose. Leadership behaviors correlate with job satisfaction, which is supposed to have impact on overall organizational performance. This study aimed to establish a model to explain organizational performance by determining the relational effect size between transformational and transactional leadership, job satisfaction, and organizational performance, and to examine the moderating effect of educational context.

Materials/methods. Meta-analytic structural equation modeling (MASEM) technique was used to determine the effect size of the relationship between transformational and transactional leadership, job satisfaction, and organizational performance. The model-data fit of the models established between these variables was then examined. Correlation coefficients from 25 primary studies were combined according to the random effects model.

Results. Analysis showed that significant effect sizes ($p < .05$) were found between transformational and transactional leadership, job satisfaction, and organizational performance. The model constructed between these variables was found to have a good model-data fit. Transformational and transactional leadership affects employees' job satisfaction, and job satisfaction affects their organizational performance. The primary findings of the study are that employee job satisfaction is a partial mediator of the indirect effect of transformational leadership on organizational performance, and that leadership context does not significantly moderate the effect between these variables.

Conclusion. Organizational leaders need to consider the job satisfaction level of their subordinates in order to enhance organizational performance.

1. Introduction

With the transition from classical to more contemporary organizational structures, a positive development has begun to occur in the values given to people. As in other organizational contexts, such a structural shift has also been experienced within educational organizations. While people's individual and social needs were largely previously ignored, it has become understood that these needs are actually very important factors in terms of teachers' job satisfaction and performance. Especially in organizations, the idea of how we can take these aspects of educational personnel more into consideration and what we can do about this issue has become ever more important for both subordinates and leaders. However, the question is how to increase job satisfaction and performance. In this regard, leaders, who are an indispensable part of organizations, have crucial roles in every organization, and schools are no exception. Educational leaders determine the mission and vision of the school, then share them with their subordinates, reveal the contributions of the outputs to the school and its teachers, and possess the competence to develop a common unity of purpose by taking their opinions into account when decisions need to be taken. School leaders who can demonstrate these competencies can ensure that their subordinates become committed to the school, exhibit organizational citizenship behaviors, increase their level of dedication to the school, and also increase their job satisfaction; all of which reflect positively in their performance. As a result, the goal of the school is shared with its members, and the goals are achieved at the desired level in a shorter time for both parties.

The current study focuses on the relationship between transformational and transactional leadership, job satisfaction, and organizational performance. Whilst the association between these variables has been revealed individually in primary studies, analysis of the relationships between these variables with a greater population and across various contexts as well as educational organizations could provide insight into the direction of the relationship and its potential moderators.

2. Literature Review

It is certain that, from the perspective of those who manage organizations, there are many leadership characteristics and many organizational behavior outcomes related to these leadership characteristics. However, in the literature, the most common attempt has been to reveal the relationship between transformational and transactional leadership, and job satisfaction and performance (Alamir, 2010; Amin et al., 2013; Asghar & Oino, 2018; Barnett, 2017; Chen, 2005; Cherian et al., 2020; İscan et al., 2014; Kalsoom et al., 2018; Lee & Ding, 2020; Purwanto et al., 2020; Rothfelder et al., 2012; Rowold & Rohmann, 2009). For this reason, considering that a certain number of studies are required for meta-analysis, the researchers in the current study thought that presenting this issue through a meta-analytic structural equation model would provide a remarkable contribution to organizations. Moreover, the current aims to contribute to the literature by examining the association between transformational/transactional leadership, job satisfaction, and organizational performance in a variety of sectors, both public and private. In this meta-analysis, a wide range of working environments was covered, including schools, hotels, orchestras, and profit/non-profit organizations. The current study aims to shed light on the relationship between leadership and organizational performance, as well as the mediating role of job satisfaction between the aforementioned variables through a broad and diverse group of samples, which is considered to provide a general insight into the area for both researchers and practitioners.

When leaders determine the vision of an organization, they have to do this together with their subordinates, else it is very difficult and perhaps impossible for them to achieve goals set only by themselves. Therefore, in order to increase the job satisfaction of subordinates, an environment needs to be prepared that will enable them to participate in the management function, improve their living conditions, ensure that they receive a certain wage, organize their social rights and working

environments in line with their expectations, and provide opportunities for their career and personal development. In this context, transformational leaders motivate and inspire their subordinates to reach a higher potential (Burns, 1978). Transformational leaders become models for employees and influence them through their charisma, vision, and self-confidence (Shanker & Sayeed, 2012). They encourage their subordinates in the work they do and develop a trust-based relationship through praise and appreciation (Mujkić et al., 2014), and thereby instill a greater level of employee motivation in the work that they do. Since transformational leadership also requires constant innovation, it addresses the needs of its employees, shares authority with them, and increases their efforts and productivity, which in turn causes their job satisfaction to increase (Bass, 2000). It also encourages employees to think critically and creatively, creates positive effects on them, and increases their motivation levels as well as being a model for other employees (Rehman et al., 2012). Within the school context, transformational leadership refers to a school leader enhancing teachers' capacities as a means to realizing the vision and mission of the school (Kaya & Koçyiğit, 2023). In short, as a leadership style that is open to change and development, transformational leadership has a positive effect on employees.

Transactional leaders, on the other hand, are those who ensure that employees comply with the rules, avoid risk-taking, and try to maintain the normalcy of the existing structure within a reward and sanction system through the establishment of mutually dependent relationships with their employees (Salman et al., 2011). Transactional leadership can also be viewed as a kind of compromise or trade-off (Barnett, 2017), where employees are rewarded with pay or something else they desire in return for satisfactory performance, while punishment is employed for instances of unsatisfactory performance (Bass & Riggio, 2006). The basis of transactional leadership is that everything has a price and it is the leaders who define all benefits, disciplinary rules, and job duties (Bass & Avolio, 1993). Transactional leaders generally place expectations on their employees, paying less attention to the employees' individual and social needs mentioned at the beginning of this study. Employees' interests and needs tend to be constantly ignored, which has a knock-on negative impact on their job satisfaction and performance.

According to Kim and Lee (2011), transformational leaders instill confidence in their employees, motivate people more by attaching significant meaning to what they produce, and provide them with internal satisfaction. On the other hand, transactional leaders who adopt an uncompromising approach think that a single mistake outweighs multiple contributions and thus will take action that in turn creates dissatisfaction amongst their subordinates, causing them not to enjoy their work. Therefore, it would not be reasonable to expect employees with low job satisfaction to positively contribute to organizational performance, hence it is important for schools to provide the conditions necessary to amplify teacher job satisfaction. As Ker et al. (2022) emphasized, schools with a high level of teacher job satisfaction offer quality teaching and thereby produce more academically successful students.

As can be seen, managers' leadership behaviors are directly related to whether or not employee job satisfaction is high and how that is reflected in their work-based performance. In the literature, it is common to find research related to leadership, job satisfaction, and leadership performance. For example, Alamir (2010) revealed in a regression model that transformational and transactional leadership had a significant effect on job satisfaction. In the model established by Paracha et al. (2012), it was revealed that job satisfaction played a role as a mediating variable between transformational leadership and organizational performance, but that the role of job satisfaction as a mediating variable between transactional leadership and performance was not significant. On the other hand, the model established by Chang (2017) showed job satisfaction to be a significant mediating variable in the relationship between transformational and transactional leadership with organizational performance.

Through examination of these primary studies, it can be understood that leadership has a significant effect on organizational performance and that job satisfaction also has a mediating effect between these two variables. Although model-data fit indices were not included in the studies examined in the current research, it is possible to make inferences from the established regression models. From this perspective, the current study, which includes a number of analysis studies and also reveals their model-data fit, examined the relationship between transformational and transactional leadership, job satisfaction and organizational performance with a larger sample, unlike the primary studies. The current study is therefore expected to contribute to the literature due to the scarcity of comprehensive meta-analytic research that has simultaneously examined the relationship between these variables. While individual studies may have explored these connections, a meta-analysis that synthesizes data from multiple studies could provide a more robust understanding of the complex interplay between these variables across various contexts and populations. Such a meta-analysis could therefore offer further insight into the strength and direction of the relationships, as well as potential moderators or boundary conditions. Considering the results of the published prior theoretical and applied research studies, the model depicted in Figure 1 was designed.

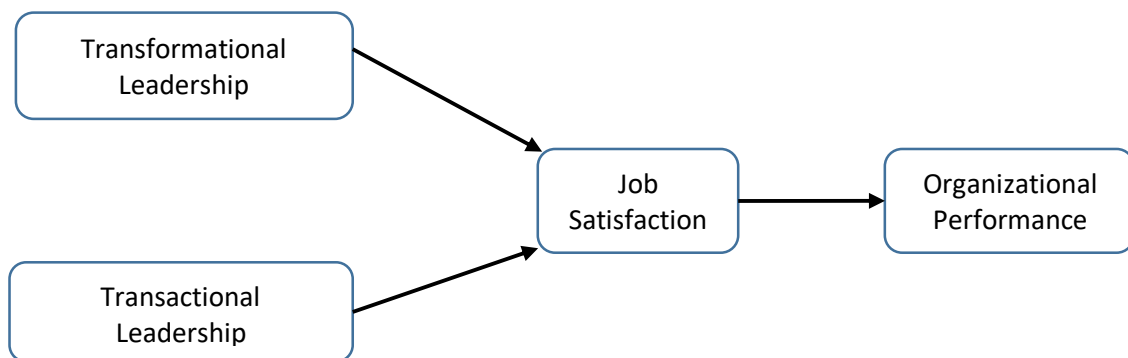


Figure 1. Model established between leadership, job satisfaction, and organizational performance

According to the model illustrated in Figure 1, it can be stated that both transformational and transactional leadership styles affect the job satisfaction of employees, and that job satisfaction affects organizational performance. Therefore, the main purpose of the current study is to determine the effect size of the relationships between transformational and transactional leadership, job satisfaction and organizational performance, to test the data fit of the model in Figure 1 using the meta-analytic structural equation modeling technique (Cheung, 2015), and also to investigate the moderating effect of leadership context. The effect of transformational and transactional leadership on both job satisfaction (Alamir, 2010; Amin et al., 2013; Asghar & Oino, 2018; Barnett, 2017; Chen, 2005; Rothfelder et al., 2012) and organizational performance (Cherian et al., 2020; İşcan et al., 2014; Kalsoom et al., 2018; Lee & Ding, 2020; Purwanto et al., 2020; Rowold & Rohmann, 2009) was determined in the established regression model. According to the proposed model, the following six hypotheses were examined:

Hypothesis 1 (H1): TFL has a significant effect on JS.

Hypothesis 2 (H2): TSL has a significant effect on JS.

Hypothesis 3 (H3): JS has a significant effect on OP.

Hypothesis 4 (H4): JS is a full mediator between leadership style and OP.

Hypothesis 5 (H5): Educational context significantly moderates the effect of leadership style on JS.

Hypothesis 6 (H6): Educational context significantly moderates the effect of JS on OP.

3. Methodology

3.1. Literature Search

A literature search was conducted against the Google Scholar, SSCI, ERIC, EBSCO, and PoP (Publish or Perish) academic publication databases in order to identify studies that examined the relationships between transformational and transactional leadership, job satisfaction and organizational performance. While searching these databases, the terms “transformational leadership,” “transactional leadership,” “job satisfaction,” “organizational performance,” “transformational leadership and job satisfaction,” “transactional leadership and job satisfaction,” “transformational leadership and organizational performance,” “transactional leadership and organizational performance,” and “transformational and transactional leadership, job satisfaction, and organizational performance” were entered in English, and studies retrieved that were published between 2000 and the time that the search was performed. The references listed in the returned studies were also examined in order to identify any other relevant studies not initially returned. The search was conducted independently by two different researchers, who then met to compare the studies they had collected. Studies that were listed more than once or that did not contain the necessary information were excluded from the analytical process. Whilst a total of 2,170 publications were initially accessed through this search process, it was determined that only 74 were actually directly related to the study topic. The literature review process began in September 2022 and was completed in January 2023.

3.2. Inclusion and Exclusion Criteria

For primary studies to be included in the meta-analytic structural equation model of the study, they had to meet the following criteria:

- 1) Studies had to have measured transformational and transactional leadership styles both together and separately;
- 2) Studies had to include sufficient statistical information to calculate effect sizes. For this, a study must have reported at least two correlation coefficients. In other words, the correlation coefficients of transformational or transactional leadership with job satisfaction and organizational performance should have been reported as a minimum;
- 3) Whilst job satisfaction and organizational performance may have been measured with different scales, studies must have calculated the relationship using the total score of these variables;
- 4) Studies must have calculated correlation coefficients using Pearson product-moment correlation, which requires the assumption of normality;
- 5) Studies had to have been published either as an article or a thesis/dissertation.
- 6) Studies had to be reported in the English language;
- 7) Studies had to be published after 2000.

Studies reporting correlation coefficients (e.g., Spearman Brown Correlation Coefficient) that did not meet the normality assumption were excluded from the study since parametric effect sizes are adversely affected by the non-normal distribution of data in primary studies (Leech & Onwuegbuzie, 2002). In addition, papers and studies published in languages other than English were excluded from the scope of this meta-analytical study. According to these criteria, 25 studies were

selected for inclusion in the meta-analysis. A flowchart of the process used to identify the primary studies in the meta-analysis is presented as Figure 2.

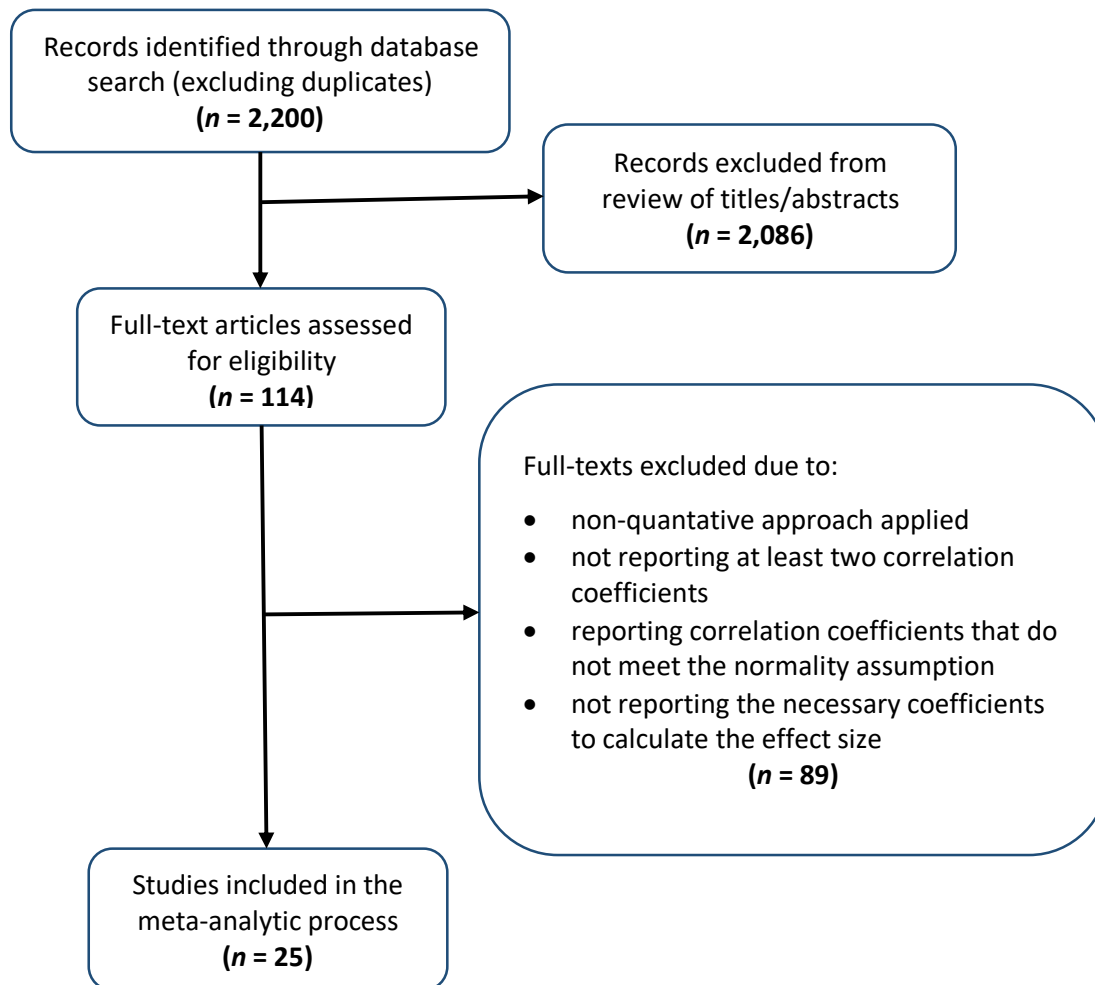


Figure 2. Process flowchart of the meta-analytic review

3.3. Evaluating the Quality of Studies

The system developed by Protogerou and Hagger (2020) was used to evaluate the quality of the studies included in the meta-analysis, which is specific to the evaluation of studies using quantitative observational methods. The evaluation criteria consisted of four parts: Introduction (4 items); participants (3 items); data (collection, analysis, and interpretation of findings) (10 items); and ethics (3 items). The items were evaluated as “Yes” (1 point), “No” or “Not stated clearly” (0 points), or “Not applicable” (2 points). Where “Yes” answers amount to between 70% and 75% of the total “applicable” items, this indicates research to be of sufficient quality. When the 25 studies included in the current meta-analysis were examined according to this evaluation system, it was determined that the studies’ quality ranged between 71% and 82%.

3.4. Coding of the Studies

The studies included in the meta-analysis were recorded in a Microsoft Word file, noting the author names, publication date, purpose of the study, research method used, study group type, and publication type (i.e., thesis or article). As can be seen in Table 1, the stated aim of the research studies was to determine the relationship of transformational and transactional leadership behaviors of managers with the job satisfaction and organizational performance levels of their employees. The methods used in the studies was expressed as descriptive (e.g., Maskurochman et al., 2020),

relational (e.g., Alamir, 2010; Barnett, 2017; Chen, 2005), or experimental (e.g., Chang, 2017). Participants in the study group of the examined published research consisted of various sectors such as teachers, private sector workers, bankers, media workers, orchestra workers, IT workers, manufacturing industry workers, etc. the studies included in meta-analysis were either articles or theses (i.e., master's/doctoral dissertations).

Correlation coefficients extracted from the examined studies included in the meta-analysis were recorded as listed in Table 2. Several factors were taken into consideration while reporting the correlation coefficients. First, high transformational and transactional leadership scores (according to employee views) indicate managers that exhibit more transformational and transactional leadership behaviors. In all of the studies, it was determined that the transformational and transactional leadership style was interpreted in this way. Likewise, as scores obtained from job satisfaction and organizational performance scales increase, this was interpreted as the job satisfaction and organizational performance levels of the participants having also developed. Finally, "n.r." (meaning "not reported") was used to denote where no coefficient correlation was reported in the studies.

Table 1. Studies included in the meta-analysis

Author(s)	Year	Purpose	Research method	Sample group	Publication type
1. Alamir	2010	Examine the strength and significance of links between transformational leadership, transactional leadership, and organizational outcomes (job satisfaction and organizational commitment).	Correlational	Private organization employees	Article
2. Ali et al.	2014	Establish the impact of transformational and transactional leadership on job satisfaction, organizational commitment, organizational citizenship behavior, employees' perceived performance, and turnover intention.	Correlational	Teachers	Article
3. Asghar & Oino	2018	Examine the effect of transformational and transactional leadership styles on job satisfaction.	Correlational	Retail workers	Article
4. Awamleh et al.	2005	Examine the effects of both transformational and transactional leadership styles on employees' satisfaction and self-perceived performance.	Correlational	Bankers	Article
5. Babalola	2016	Investigate the influence of supervisor-employee relationship, perceived leadership style, and job satisfaction on organizational commitment and job performance.	Correlational	Media employees	Article
6. Barnett	2017	Investigate the perceived effect of leadership on job satisfaction.	Correlational	Academic staff	Article
7. Braun et al.	2013	Analyze relations between transformational leadership, trust in supervisor and team, job satisfaction, and team performance via multilevel analysis.	Correlational	Academic staff	Article
8. Chandrasekara	2019	Explore leadership style effect on employee job satisfaction and job performance.	Correlational	Manufacturing workers	Article
9. Chang	2017	Explore how leadership styles affect job satisfaction and job performance.	Empirical	Private sector employees	Article

Author(s)	Year	Purpose	Research method	Sample group	Publication type
10. Chen	2005	Explore the relationships between transformational and transactional leadership styles and trust, job satisfaction, organizational commitment, and turnover intention.	Correlational	IT workers	Thesis
11. Cherian et al.	2020	Investigate the relationship between leadership styles and organizational performance.	Correlational	Private sector employees	Article
12. Fernandes & Awamleh	2004	Examine the effects of both transformational and transactional leadership styles of managers/supervisors on employees' satisfaction and self-perceived performance.	Correlational	International company workers	Article
13. İşcan et al.	2014	Examine the effect of transformational/transactional leadership on innovation and organizational performance.	Correlational	Managerial staff / SME	Article
14. Kalsoom et al.	2018	Investigate the relationship of transformational and transactional leadership style with employee performance.	Correlational	FMCG employees	Article
15. Lee & Ding	2020	Investigate the mediating role of supervisory coaching in the relationship of transformational and transactional leadership with job performance.	Correlational	Private sector employees	Article
16. Maheshwari	2021	Understand the influence of transformational and transactional leadership style on teachers' job satisfaction and job performance.	Correlational	Teachers	Article
17. Maskurochman et al.	2020	Analyze the effect of transformational leadership, organizational support, and job satisfaction on work motivation in improving employee performance.	Descriptive	Private sector employees	Article
18. Paracha et al.	2012	Determine the impact of transformational and transactional leadership style on employee performance, and to see its mediating effect on job satisfaction.	Correlational	Teachers	Article
19. Rothfelder et al.	2013	Examine the influence of different leadership behaviors of hospitality managers on employee job satisfaction.	Correlational	Hotel employees	Article
20. Rowold et al. ¹	2014	Investigate which leadership constructs are important in predicting job satisfaction, affective commitment, and perceived job performance in profit versus non-profit organizations.	Correlational	Nonprofit organization employees	Article
21. Rowold et al. ²	2014	Investigate which leadership constructs are important in predicting job satisfaction, affective commitment and perceived job performance in profit versus non-profit organizations.	Correlational	Profit organization employees	Article
22. Rowold & Rohmann	2009	Investigate the relationship of transformational and transactional leadership with followers' emotions and performance.	Correlational	Orchestra members	Article

¹ Results for profit organizations

² Results for non-profit organizations

Author(s)	Year	Purpose	Research method	Sample group	Publication type
23. Sayadi	2016	Examine the effect of transformational, transactional, and non-leadership on job satisfaction and organizational commitment.	Correlational	Teachers	Article
24. Thamrin	2012	Analyze the influence of transformational leadership and organizational commitment on job satisfaction and employee performance.	Correlational	Shipping employees	Article
25. Torlak & Kuzey	2019	Determine the impact of transformational and transactional leadership on employee job satisfaction and employee job performance.	Correlational	Teachers	Article

Table 2. Raw Correlation considered for meta-analysis.

Research ID	Sample size	TFL-TSL	TFL-JS	TFL-OP	TSL-JS	TSL-OP	JS-OP
1. Alamir, 2010	502	n.r.	.398	n.r.	.452	n.r.	n.r.
2. Ali et al., 2014	224	n.r.	.356	.218	.265	.383	n.r.
3. Asghar & Oino, 2018	270	.270	.860	n.r.	-.890	n.r.	n.r.
4. Awamleh et al., 2005	194	.660	.420	.370	.290	.220	.140
5. Babalola, 2016	255	.710	.040	-.290	.130	-.250	.200
6. Barnett, 2017	77	.410	.540	n.r.	-.020	n.r.	n.r.
7. Braun et al., 2013	360	n.r.	.630	.320	n.r.	n.r.	-.020
8. Chandrasekara, 2019	70	n.r.	.710	.740	n.r.	n.r.	.700
9. Chang, 2017	200	.624	.604	.309	.358	.262	.438
10. Chen, 2005	147	n.r.	.031	n.r.	.934	n.r.	n.r.
11. Cherian et al., 2020	120	n.r.	n.r.	.697	n.r.	-.331	n.r.
12. Fernandes & Awamleh, 2004	141	.800	.400	.250	.390	.170	.150
13. İşcan et al., 2014	118	-.260	n.r.	.349	n.r.	.153	n.r.
14. Kalsoom et al., 2018	350	n.r.	n.r.	.235	n.r.	.727	n.r.
15. Lee & Ding, 2020	500	.780	n.r.	.200	n.r.	.160	n.r.
16. Maheshwari, 2021	144	n.r.	.223	.220	-.398	-.250	n.r.
17. Maskurochman et al., 2020	152	n.r.	n.r.	-.036	n.r.	n.r.	.226
18. Paracha et al., 2012	122	.200	.738	.184	.103	.274	.139
19. Rothfelder et al., 2012	101	.150	.760	n.r.	.080	n.r.	n.r.
20. Rowold et al., 2014 ³	713	.720	.700	.030	.570	.020	.070
21. Rowold et al., 2014 ⁴	1,258	.770	.590	.190	.530	.120	.240
22. Rowold & Rohmann, 2009	212	n.r.	n.r.	.910	n.r.	.630	n.r.
23. Sayadi, 2016	387	n.r.	.362	n.r.	.141	n.r.	n.r.
24. Thamrin, 2012	105	n.r.	.173	.227	n.r.	n.r.	.283
25. Torlak & Kuzey, 2019	189	n.r.	.369	.314	.129	.248	.801
Number of studies		12	19	19	16	15	12

Notes: n.r. = Raw correlations not reported in original papers. TFL = Transformational leadership, TSL = Transactional leadership, JS = Job satisfaction, OP = Organizational performance.

³ Results for profit organizations

⁴ Results for non-profit organizations

3.5. Data Analysis

Meta-analytical structural equation modeling technique was used to determine the strength of the relationship (effect size) between the variables using the correlation coefficients extracted from the 25 studies included in the meta-analysis, and also to test the goodness of fit of the established models. A two-stage structural equation modeling approach (Cheung, 2014) was applied: First, the total correlation matrix was created based on the correlation matrices derived from the primary studies; second, structural equation models were established using this correlation matrix and model-data fit, with webMASEM (Jak et al., 2021) used to conduct the meta-analytic structural equation modeling (MASEM). In order to perform the first stage of the analysis, correlation matrices showing the relationships between the variables were created. Next, these matrices were combined according to the random effects model since the correlation coefficients were collected from the literature (Borenstein et al., 2009). At this stage, the effect size of the relationship between the variables and the heterogeneity (I^2) were determined. Calculated correlation effect sizes were interpreted as “low” up to 0.1, “medium” up to 0.3, and “large” up to 0.5 (Cohen, 1992). The magnitude of heterogeneity, on the other hand, was evaluated as “low” up to 25%, “medium” up to 50%, and “high” up to 75%, though not absolute (Higgins et al., 2003).

In order to conduct the second stage of the analysis, the A-matrix (coefficients on the one-way arrow drawn from the independent variable to the dependent variable) and the S-matrix (coefficients on the two-way arrow drawn between the variables) were created. Next, the model-data fit was examined according to the RMSEA, SRMR, CFI, and TLI indices, in which values of $RMSEA \leq .05$, $SRMR \leq .05$, $CFI \geq .97$, and $TLI \geq .97$ were considered as good in terms of the model-data fit. In the established model, the direct and indirect mediation effect of job satisfaction was examined. If the indirect and direct effects were significant ($p < .05$), it was interpreted that the mediating variable was a partial mediator, and the non-significant ($p > .05$) mediating variable as the full mediator (Jak, 2015, p. 52). The significance of these effects was then tested using the “likelihood based confidence interval.” Moderator analysis was conducted to determine whether or not the leadership style context was a significant predictor of the regression coefficients, with leadership styles grouped according to context. Accordingly, while seven of the studies were conducted within an educational context, the remainder were in other sectors such as bank, media, retail, and manufacturing. For this reason, two categories were created; education and other.

4. Results

4.1. Summary Effects

Correlation matrices created with the correlation coefficients extracted from the studies included in this meta-analysis ($N = 6,893$) were combined according to the random effects model. The correlation effect sizes are presented in Table 3.

Table 3. Summary results obtained from application of MASEM procedure

Associations	<i>k</i>	Total sample	<i>r</i>	95% Confidence interval		I^2
				Lower limit	Upper limit	
TFL–TSL	11	3,872	.498	.303	.692	97.4%
TFL–JS	23	5,760	.552	.418	.686	95.4%
TFL–OP	21	5,108	.228	.109	.347	91.6%
TSL–JS	20	5,225	.202	.003	.402	97.8%
TSL–OP	17	4,421	.109	-.011	.229	92.4%
JS–OP	15	3,759	.270	.143	.398	92.5%

According to Table 3, the correlation effect size between transformational leadership and transactional leadership was calculated as $r = .498$, 95% CI (.303, .692), denoting a large effect size.

Accordingly, as the transformational leadership style perceptions of the employees increased, their transactional leadership style perceptions also increased. Table 3 also shows that the correlation effect size between transformational leadership and job satisfaction was calculated as $r = .552$, 95% CI (.418, .686), and between transformational leadership and organizational performance it was $r = .228$, 95% CI (.109, .347). Considering these results, it can be said that while a high-level relationship exists between transformational leadership and job satisfaction, a moderate relationship exists between transformational leadership and organizational performance. Accordingly, as employees' transformational leadership style perceptions increased, their job satisfaction and job performance also increased.

As shown in Table 3, the correlation effect size between transactional leadership and job satisfaction was calculated as $r = .202$, 95% CI (.003, .402), and between transactional leadership and organizational performance as $r = .109$, 95% CI (-.011, .229). Based on these results, while a moderate relationship was established between transactional leadership and job satisfaction, the effect size between transactional leadership and organizational performance was not found to be significant ($p > .05$). Accordingly, as the employees' perception of transactional leadership style increased, their job satisfaction increased significantly, but there was no significant change noted in their job performance. In addition, a moderate and significant correlation effect size ($r = .270$, 95% CI [.143, .398]) was established between employee job satisfaction and their organizational performance.

As can be seen in Table 3, the I² values varied between 91.6% and 97.8%. This shows that a high level of variance between the effect sizes, meaning that most of the variation between studies was due to the individual characteristics of the studies included in the meta-analysis.

4.2. Test of the Structural Equation Model

In the second stage of the meta-analytic structural equation modeling, the correlation matrices were combined and the fit of the model with the data was analyzed. The goodness of fit indices obtained as a result of the analysis are shown in Table 4.

Table 4. Summary of goodness-of-fit indices of the original model

Model	$\chi^2(df)$	p	RMSEA	RMSEA 95% Lower limit	RMSEA 95% Upper limit	SRMR	TLI	CFI
Original	6.172(2)	.045	0.017	0.017	0.036	0.068	0.825	0.941

As can be seen from Table 4, the chi-square test was significant for 2 degrees of freedom of the original model ($\chi^2 = 6.172$, $p < .05$), RMSEA was shown to be a "perfect" fit with 0.017 95% CI (.000, .036), SRMR was an "acceptable" fit with a value of 0.068, TLI was a "bad" fit with a value of 0.825, and CFI was an "acceptable" fit with a value of 0.941. When these indices are evaluated together, even with a "bad" fit value from the TLI index, it may be said that the model was a fit to the data. The path analysis scheme drawn for the original model is illustrated as shown in Figure 3.

As can be seen from the path model shown in Figure 3, the transformational leadership style ($\beta_1 = 0.495$, 95% CI [.307, .683]) has the most significant impact on employee job satisfaction, and that the effect of the transactional leadership style on employee job satisfaction ($\beta_2 = 0.002$, 95% CI [-.274, .278]) was not found to be significant ($p > .05$). Overall, leadership style explained about 25% of the variance in employee job satisfaction (explained variance = 1-0.75). The path model shows that employee job satisfaction had a moderate effect ($\beta_3 = 0.353$, 95% CI [.214, .492]) on their organizational performance, and explained about 12% of the variance in their organizational performance (explained variance = 1-0.88). Accordingly, whilst both H1 and H3 were accepted, H2 was rejected.

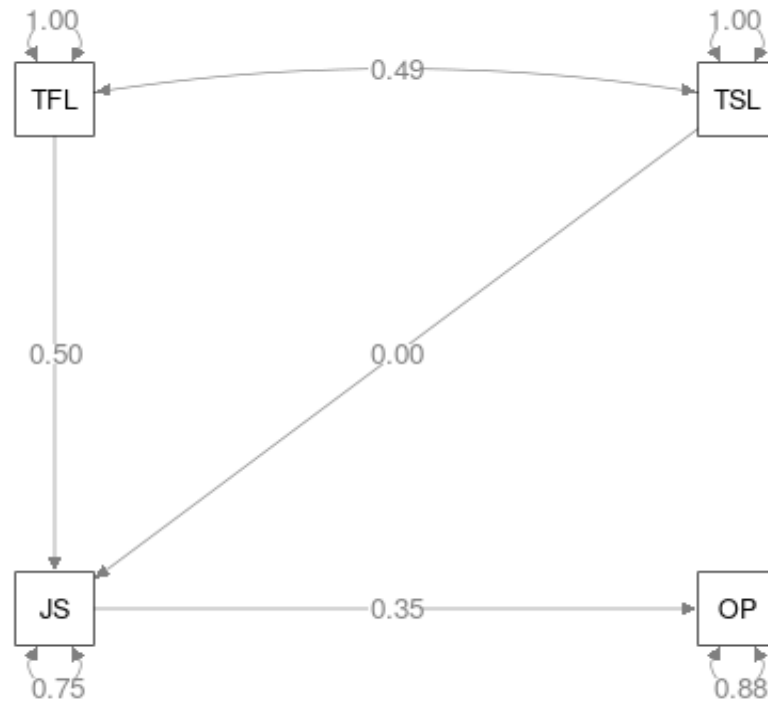


Figure 3. Path of original model with parameter estimates and 95% confidence intervals

Notes: TFL = Transformational leadership, TSL = Transactional leadership, JS = Job satisfaction, OP = Organizational performance.

The mediation effect of job satisfaction was tested by examining the indirect and direct effects of leadership style on organizational performance. As a result, the indirect effect of transformational leadership on organizational performance was calculated as 0.175 95% CI (.108, .308), showing that transformational leadership has a significant ($p < .05$) indirect effect on organizational performance. Therefore, employee job satisfaction can be said to be a partial mediator of the indirect effect of transformational leadership on organizational performance. Accordingly, H4 was rejected.

Next, the regression coefficients calculated in the model were examined to ascertain whether or not significant differences were dependent on the context of leadership (education vs. other). As a result of the moderator analysis, omnibus test of three moderating effects was not found to be significant at $\alpha = .05$, with $\chi^2(3) = 1.579$, $p = .664$, indicating that no direct effect was moderated by educational context. The test on the individual parameters is shown in Table 5.

Table 5. Moderating effect of transformational/transactional leadership in educational context

Regression coefficient	Estimate	SE	z	p
TFL-JS (β_{1_1})	.104	0.189	-0.552	.580
TSL-JS (β_{2_1})	-.283	0.255	1.110	.267
JS-OP (β_{3_1})	.010	0.143	-0.071	.944

Table 5 shows all estimates in the moderation model. According to the β_{1_1} value, the direct effect of transformational leadership on job satisfaction in the educational context was 0.104 larger than for the other contexts. The β_{2_1} value showed that the direct effect of transactional leadership on job satisfaction in the other contexts was .283 greater than for educational contexts. According to the result of β_{3_1} , the direct effect of employee job satisfaction on organizational performance in the educational context was .010 larger than for the other contexts. However, the difference in all

three regression coefficients was not found to be significant at the 95% confidence interval ($p > .05$). Accordingly, both H5 and H6 were rejected.

5. Discussion

This study examined the relationship between transformational and transactional leadership with job satisfaction and organizational performance. It was revealed that studies in the literature that examined the relationship between these variables were conducted with a wide range of occupational groups (e.g., bankers, academicians, teachers, media workers, manufacturing workers, hotel workers, orchestra members, etc.). Whilst one study included in the analysis was a published thesis (Chen, 2005), all of the others were research articles. Considering correlation coefficients, only six of the 25 studies reported on all of the correlation coefficients (Awamleh et al., 2005; Babalola, 2016; Chang, 2017; Fernandes & Awamleh, 2004; Paracha et al., 2012; Rowold et al., 2014). As such, this small percentage of studies reporting all coefficients may reduce the generalizability of the meta-analytical results, which could be considered as a limitation of the current study.

Correlation matrices combined according to the random effects model showed that the relationship between transformational leadership and employee job satisfaction was high ($r = .552$, $p < .05$), while it was “moderate” between transactional leadership and employee job satisfaction ($r = .202$, $p < .05$). Based on this result, it can be stated that as employees’ views on transformational and transactional leadership styles increased, their job satisfaction levels also increased, albeit at different rates. Awamleh et al. (2005) and Chang (2017) also reported similar results in their studies. In order to understand the difference in the relationship between transformational and transactional leadership and job satisfaction, it is essential to address the differences between transformational and transactional leadership. Bass and Avolio (1990) stated that managers who adopt the transformational leadership style gain their employees’ respect and trust by presenting a vision and mission to their employees; whereas, in transactional leadership, a compromise is reached between managers and their employees based on a system of rewards and sanctions. Managers with a transformational style of leadership transform their employees’ values and beliefs (Chang, 2017) and increase their intrinsic motivation towards work (Rowold et al., 2014). On the other hand, managers who display transactional leadership behaviors prefer to motivate their employees with rewards in order to achieve the desired goals. One way or another, the manager and the employee agree, either explicitly or indirectly, that desired behaviors will be rewarded whilst undesirable behaviors will be penalized (Awamleh et al., 2005). More precisely, the relationship between transactional leadership and employees is based on pecuniary advantage. Therefore, it is not a surprising result that employees experience more job satisfaction in transformational leadership, which cares about subordinates’ social and emotional development, rather than in transactional leadership, which only pays regard to their physiological needs. In a school-based setting, a principal’s transformational style of leadership increases their teachers’ job satisfaction and promotes their commitment to the goals of the school organization (Sultoni & Gunawan, 2023), resulting in positive implications for their performance at school. Therefore, school principals should minimize their distance from teachers, commit to holding meaningful discussions with them, and promote harmony with their teaching staff in order to maintain a high level of teachers’ job satisfaction.

When the relationship of transformational and transactional leadership with organizational performance, which is the dependent variable discussed in the study, was examined, a moderate ($r = .228$, $p < .05$) significant relationship was found between transformational leadership and organizational performance, while the effect size between transactional leadership and organizational performance was not significant ($r = .109$; $p > .05$). The findings of a study by İşcan et al. (2014) also supported these results. In research by Torlak and Kuzey (2019), organizational performance was defined as the level of efficiency in fulfilling the employee’s work-related duties, and emphasis was placed on managers taking into consideration their employees’ values and beliefs

in order to ensure efficiency and effectiveness in the workplace. In this way, transformational leaders attempt to motivate their employees to be efficient and effective in line with the established organizational goals (Avolio & Yammarino, 2013). This type of approach by an organizational manager also contributes to a more effective communication between employees (Cherian et al., 2020), and this can also reflect positively on their own performance as managers. On the other hand, as İnandı et al. (2013) stated, transactional leaders avoid taking risks and prefer to focus on rules being obeyed within the reward-sanction system. As a result, subordinates tend to maintain the status quo without venturing beyond their established routines. Therefore, no difference would be expected in the organizational performance of educational staff.

According to the correlation matrix created based on the relationship between the variables used in the current meta-analytical study, a moderately significant relationship was established between employee job satisfaction and their organizational performance ($r = .270$, $p < .05$). Accordingly, as employee job satisfaction levels increased, so too did their organizational performance, with similar results also reported by Rowold et al. (2014) and Thamrin (2012). Research by Chandrasekara (2019) and Torlak and Kuzey (2019) revealed there to be a highly significant relationship between job satisfaction and organizational performance. Ker et al. (2022) indicated that teachers' job satisfaction has a significant impact on their job performance, as well as their retention in the profession and their teaching efficacy. They also found that work environment factors such as having a safe and orderly school, teaching limited according to student needs, teachers' emphasis on science investigation, challenges faced by teachers, and school emphasis on academic success (both students and teachers) were significant predictors of teachers' job satisfaction, which has an indirect influence on their job performance. While a low level of job satisfaction can result in negative employee feelings such as helplessness, burnout, anger, and fatigue, it can also lead them to perform poorly and even to be absent from work, quit their job, or seek early retirement (Brooke, 2006). Therefore, high levels of job satisfaction can help teachers to perform better by contributing to more positive feelings towards their work and the school itself.

In the current study, a model was tested in which the mediating role of job satisfaction in the relationship of transformational and transactional leadership with organizational performance showed job satisfaction to be a partial mediator between transformational leadership and organizational performance. However, the mediating role of job satisfaction between transactional leadership and organizational performance was not found to be significant. In the study conducted by Chang (2017) which was based on private sector employees, job satisfaction was established as a partial mediator in the indirect effect of transformational and transactional leadership on organizational performance. Similarly, Paracha et al. (2012) found job satisfaction to be only a partial mediator between transformational leadership and organizational performance, which are findings similar to those revealed in the current meta-analytical study. Explaining job satisfaction as the positive attitude of an employee towards their job, Thamrin (2012) stated that employee satisfaction can also positively affect the attitude and behavior that an employee exhibits towards their leader, and as a result they will more likely contribute better to the organization reaching its goals by supporting their organizational leader. In other words, subordinates who display trust in managers who exhibit transformational leadership behaviors and see them as a model would more likely internalize the organizational goals and demonstrate a high level of job performance to help achieve those goals.

Lastly, the current study examined the moderating effect of the educational context. Due to the low number of studies found that had focused on the relationship between transformational and transactional leadership, job satisfaction and organizational performance, the leadership context was divided into two groups as "education" and "other." As a result of the moderator analysis, no significant effect was found regarding the educational context. That is, regardless of school principals or other organizational leaders, it was seen that all leaders exhibited a similar approach and behaviors

in directing and influencing their subordinates. Therefore, it can be said that educational context does not have a significant effect on the relationship between the variables of the study, which may be explained by education being an indispensable part of society and plays an important role in shaping society (Ballantine et al., 2021). Schools, as educational organizations, are open system institutions and in a constant and intense interaction with other social, economic, or governmental organizations. Therefore, it is quite likely that educational organizations have considerable commonality with other organizations such as in their styles of leadership, organizational behaviors, and decision-making mechanisms, etc.

The current meta-analytic structural equation modeling study is expected to contribute to the literature since there is a scarcity of similar comprehensive meta-analytic research available that has simultaneously investigated the relationships between the examined variables. Unlike individual studies, meta-analyses synthesize results from multiple studies conducted in various different contexts (e.g., beyond just the educational organizational context), and thereby provide a more robust understanding of the complex associations between the examined variables. Undertaking such meta-analyses could present further insights into the strength and direction of the relationships, in addition to potential moderators such as educational context.

6. Conclusion

In summary, the mediating role of job satisfaction in the relationship of transformational and transactional leadership with organizational performance was analyzed meta-analytically in the current study. The correlation effect size between transformational leadership, job satisfaction, and organizational performance was found to be significant. However, whilst the correlation effect size between transactional leadership and job satisfaction was found to be significant, there was no significant correlation established between transactional leadership and organizational performance. Job satisfaction was also revealed as a partial mediator in the relationship between transformational leadership and organizational performance. Lastly, educational context was shown to have no moderating effect on the relationship between the variables examined in the study.

7. Suggestions

Based on the results reported in this study, the authors recommended that managers attempt to see their employees more as human beings than resources and to consider and approach them holistically, regardless of the sector in which they work. In considering employees' moral and social values, as well as their beliefs, feelings, and thoughts, it can be expected that they will experience higher levels of job satisfaction and therefore higher levels of job performance can be expected from employees that support the established goals of the organization.

In this study, the mediating role of job satisfaction on the effect of leadership on organizational performance was determined according to the meta-analytic structural equation modeling technique. In future research, the association between leadership styles and the organizational commitment and job satisfaction of employees could be investigated.

8. Limitations

This study has certain limitations. First, only transformational and transactional leadership styles were included in the analysis, although numerous other leadership styles also exist in today's business world. Second, the small number of studies found that reported all coefficients reduces the generalizability of the results and may therefore be considered as a limitation of this study. Third, leadership context in this study was limited to two groups, "educational" and "other," due to the limited number of published studies found that had examined the relationship between transformational and transactional leadership, job satisfaction, and organizational performance.

Therefore, organizational contexts other than education were considered together as a whole (“other”), regardless of their differences.

Declarations

Author Contributions. F.G.: Literature review, methodology, original manuscript preparation. S.K.: Methodology, data analysis. Y.G.: Discussion, conclusion, suggestions. Y.İ.: Introduction, literature review, discussion. All authors have read and approved the published final version of the article.

Ethical Approval: This is a meta-analysis study that does not require ethical approval.

Data Availability Statement: The data is available upon request.

Conflicts of Interest. The authors declare no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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