SCIENTIFIC CULTURE
www.sci-cult.com

SCIENTIFIC CULTURE, Vol. 12, No. 4, (2026), pp. 6631-6645
Open Access. Online & Print

DOI: 10.5281/zenodo.12426684

EFFECTS OF TRANSFORMATIONAL, TRANSACTIONAL, AND SERVANT LEADERSHIP ON EMPLOYEE PERFORMANCE IN SAUDI ARABIAN HOSPITALS: THE MEDIATING ROLE OF ORGANIZATIONAL IDENTIFICATION

Meshal Gaber Alonze[1], Dr. Ahmad Alharbi[2], Dr. Mohamad Idrakisyah[3]

[1]Graduate School of Management, Postgraduate Centre, Management and Science University, Shah Alam, Selangor, Malaysia.
[2]Deputy Executive Director Ambulatory Care Services, Management & Science University (MSU)
[3]Senior Lecturer, Management & Science University (MSU)

Received: 15/07/2025
Accepted: 02/02/2026

Corresponding author: Meshal Gaber Alonze (012023070509@gsm.msu.edu.my)

ABSTRACT

This study examined the effects of transformational, transactional, and servant leadership on employee performance in Saudi Arabian National Guard hospitals and tested organizational identification as a mediator. A quantitative cross-sectional survey was conducted across five Ministry of National Guard–Health Affairs hospitals, yielding 500 valid responses. Data analysis was conducted via SPSS and Partial least squares structural equation modeling (SmartPLS 4).the current study found transformational (β = 0.314), transactional (β = 0.286), and servant leadership (β = 0.244) positively predicted organizational identification (all $p < .001$). Employee performance was positively predicted by organizational identification (β = 0.313, $p < .001$) and by transactional (β = 0.362), servant (β = 0.154), and transformational leadership (β = 0.146) (all $p < .001$). The model explained 39.1% of the variance in organizational identification ($R^2 = 0.391$) and 55.3% of the variance in employee performance ($R^2 = 0.553$). Indirect effects via organizational identification were significant for transformational (β = 0.098), transactional (β = 0.090), and servant leadership (β = 0.076), indicating partial mediation (VAF = 40.0%, 20.0%, and 33.0%, respectively). The findings indicate organisational identification is an effective means by which leaders can enhance their ability to lead individuals and, ultimately, organisations to higher levels of performance. The findings indicate organisational identification is an effective means by which leaders can enhance their ability to lead individuals and, ultimately, organisations to higher levels of performance. It is recommended that Saudi hospitals must be implement integrated leadership development programs which require leaders to show both their duties and their operational responsibilities while they develop their forward-looking vision through their service to others. The organization should establish programs which create a sense of belonging among employees while providing them with fair acknowledgment and full membership rights to preserve optimal operational performance.

KEYWORDS: Transformational Leadership style, Transactional Leadership style, Servant Leadership style, employee performance, Organizational Identification, and Saudi Arabia.

1. INTRODUCTION

The healthcare system of Saudi Arabia is currently witnessing a drastic change as part of Vision 2030, which focuses on enhancing access, quality and efficiency of healthcare (Al-Anezi, 2025; Alasiri & Mohammed, 2022). However, several studies have identified severe performance gaps in spite of these efforts Nurse and allied health professional shortages have resulted in increased workloads, low spirits among staff members, and decreased patient care (Tamata & Mohammadnezhad, 2023). According to Al-Hanawi and Makuta (2022), the Saudi public hospitals underperform in terms of efficiency with total factor productivity, including HR performance, decreasing by 6% annually. Burnout, dissatisfaction, and high turnover among healthcare professionals—particularly in the public health sector—further degrade performance results (Alzailai et al., 2021; Al-Mansour, 2021). Studies of Alharbi et al. (2020) ascertained that work performance of workers in Saudi health realm was significantly affected by stress, organizational help and leader quality.

Recent findings hint leadership style as an integral intervention to enhancing employee performance. Transformational transactional and servant leadership, for example, are found to be linked with augmented disposition toward job satisfaction, organizational commitment, and motivation – all three serve as mediators for better job performance (Jiatong et al., 2022; Cai et al., 2024; Saleem et al., 2020; Young et al., 2021).

Organizational identification represents another important psychological mechanism that explains this link; when employees identify with their organization, they are more likely to be engaged and exert discretionary effort (Tuna et al., 2018, Fahlevi et al., 2022).

Along these lines, the present paper examines effects of three leadership styles (transformational, transactional, servant leadership) on performance of employees in Saudi Arabian hospitals by focusing specifically on organizational identification as a mediating process. Recognizing and responding to these relationships is essential in enhancing the efficiency of its workforce, as well as ensuring that workforce performance supports Saudi Arabia's healthcare reform mission.

1.2. Problem statement

Findings from the studies conducted within Saudi Arabia show credible relationships to the primary purpose of this study: There is high relevance in understanding the leadership styles that correlate with extreme employee performance in order for the Saudi healthcare system to achieve its Vision 2030 targets and determine if the mechanism of organizational identification will enable the transfer of leadership into sustained results within hospitals. The majority of local studies focus only on existing correlational relationships between leadership styles and outcomes, generally not considering any potential mediating relationships; therefore, this study intends to fill this gap (Al-Dossary, 2022; Alluhaybi et al., 2024; Suleiman & Ming, 2025). For this reason, the objective of this study is to investigate the relationships among transformational, transactional, and servant leadership styles and employee performance with specific focus on the mediating role of organizational identification so that action can be taken on existing gaps to improve leadership practices, increase employee performance, and positively influence the achievement of the strategic healthcare goals set forth in Saudi Arabia's Vision 2030 initiative to improve healthcare service quality throughout the nation.

1.2. Research Objectives

1. To examine the effect of transformational leadership on employee performance in Saudi Arabian hospitals.
2. To assess the impact of transactional leadership on employee performance in Saudi Arabian hospitals.
3. To evaluate the influence of servant leadership on employee performance in Saudi Arabian hospitals.
4. To investigate the mediating role of organizational identification in the relationship between leadership styles and employee performance.

1.3. Research Questions

1. How does transformational leadership influence employee performance in Saudi Arabian hospitals?
2. What is the relationship between transactional leadership and employee performance in Saudi Arabian hospitals?
3. Does servant leadership contribute to improved employee performance in Saudi Arabian hospitals?
4. Does organizational identification mediate the relationship between leadership styles (transformational, transactional, and servant) and employee performance?

2. LITERATURE REVIEW

2.1. Recent Issues and Development of Leadership Styles in Healthcare

Throughout recent years, transformational leadership has emerged as an increasingly important leadership approach within health care organizations, as organizations seek to support innovative thinking and engage individuals in their employment; therefore, transformational leaders provide inspiration, motivation, and cohesion to members of their teams to improve job satisfaction and employee performance within the context of the ongoing pressure for change in health care and the workforce (Notarnicola et al., 2024). As demonstrated by empirical studies, transformational leadership has a positive effect on the effectiveness of nurse managers, which leads to improved quality of patient care and organizational performance (Alanazi et al., 2022; Hamdan et al., 2024). For example, transformational leaders create trusting and supportive atmospheres, which not only support the morale of the staff but also improves patient outcomes through collaborative care models (Hayat et al., 2024; Farrington & Lillah, 2019).

2.2. Empirical and Theoretical Literature Gaps

Not only are there empirical gaps, but there are also gaps in theoretical explorations of the combined impacts of transformational, transactional, and servant leadership styles on health care outcomes. The theoretical framework is very limited in this area; basically, the theoretical framework does not adequately define the interaction of these leadership styles and the impact of each on health care outcomes and the mechanisms of action associated with each of these leadership styles. More specifically, there are no studies that explore how each of these leadership styles might mediate between the organization and staff regarding Organizational Identification and how the effects of each leadership style might be moderated by Organizational Culture (Hanks et al., 2020; Brún & McAuliffe, 2022). What the Understanding of Organizational Identification will provide is a way to better understand how each of the various leadership styles might affect Employee Engagement, Employee Commitment, and Employee Performance.

2.3. Definition and Literature Review of Each Variable and Dimensions

Transformational leadership comprises four key components (Bass & Riggio, 2006):

Idealized Influence: Leaders act as role models by demonstrating values and ethical behavior (Hu et al., 2015). Creates trust and respect, building strong emotional connections (Bajracharya, 2023). Positively correlates with employee commitment and performance (Xenikou, 2017).

Inspirational Motivation: Leaders articulate compelling vision of the future (Xenikou, 2017), motivating followers to achieve difficult goals. Employees seeing themselves achieving greater things feel better about their jobs, creating positive organizational climate (Allen et al., 2017).

Intellectual Stimulation: Leaders foster creativity and innovation by challenging traditional thinking methods (Dhaheri, 2022). Particularly important in healthcare where innovation culture is necessary for quality service delivery (Alshahrani et al., 2023; Kim et al., 2023).

Individualized Consideration: Leaders create atmosphere supporting professional growth through coaching and mentorship (Sethibe & Steyn, 2018). When employees feel valued and understood, they identify with the organization and support its objectives (Allen et al., 2017).

Research demonstrates transformational leadership effectiveness across industries: positive correlation with job satisfaction in Nepal's educational sector (Bajracharya, 2023); significant positive effect on organizational performance in Vietnam (Dinh et al., 2022); improved organizational effectiveness through sustainable development (Springer et al., 2020).

2.3.1. Transactional Leadership

Transactional leadership involves reciprocal relationships where leaders deliver rewards or administer punishments based on results (Young et al., 2020). Two main components:

Contingent Reward: Leaders express expectations, negotiate resource allocation, and grant rewards to employees meeting performance targets (Pencheva & Ghinea, 2021). Functions as effective motivational tool driving people to meet predetermined objectives (Young et al., 2020). Research shows contingent reward systems create positive effects enabling higher job performance (Hutama et al., 2024).

Management by Exception: Leaders monitor operational activities and intervene when standards are not met. Active monitoring involves immediate action upon deviations; passive monitoring serves as response system for unexpected events (Judge & Piccolo, 2004). Active methods enhance operational efficiency, while passive methods may result in employee disengagement and decreased morale (Yozgat & Kamanli, 2016; Henry et al., 2025).

Servant leadership focuses on follower development and welfare, involving listening, empathy, healing, teaching, building, persuading, and envisioning (Page & Grooms, 2020). Leaders serve subordinates first, prioritize their needs, and help them grow to full potential (Sousa &

Dierendonck, 2021).

Components include altruistic healing (strong concern for followers), emotional healing (fostering environment conducive to healing emotional needs), wisdom (ethical decision-making), persuasive mapping (presenting vision and encouraging action), and organizational stewardship (proper resource stewardship) (Pawar et al., 2020; Lutfia et al., 2021).

Servant leadership is best represented as an aggregate construct combining validated dimensions, forming a coherent global concept (Liden et al., 2015). Higher-order confirmatory factor analyses show the global construct is psychometrically sound and substantively meaningful.

2.4. Theoretical Justifications and Relationships Between Variable and Dimension

2.4.1. Social Identity Theory

proposes that people tend to generally organize themselves into groups for their psychological well-being through creating positive self-esteem through the identification with one's in-group. Hence, an overlap of the group's membership is correlatively associated with maintenance of the norms and group goals that differ from those of the out-group, which provide directives for members' action that coincide with collective identity (Ashforth & Mael, 1989). Within the organizational understanding, such a process results in organizational identification. Organizational Identification is when an employee identifies himself or herself with the organization where his or her values become aligned with the organization and its culture, mission, and objectives (Mael & Ashforth, 1992).

2.4.2. Relevance and Suitability of Social **Identity Theory in Healthcare Organizations**

Social Identity Theory (SIT) clearly applies in the context of health care organizations. Health care organizations are seen as highly interdependent environments with shared goals. Consequently, healthcare employees will routinely develop strong social identities that are largely collective. Amongst some common other shared objectives that constitute the identity of employees are excellence in patient care, ethical practice, and continuous quality improvement in such settings. This then made the theory particularly pertinent in investigating how organizational identification might mediate the influence of leadership styles on employee attitudes, behaviors, and performance.

2.4.3. Application of Social Identity Theory to the Study Variables

The current research explores the influence of transformational, transactional, and servant leadership styles on the performance of employees through organizational identification will be the focus of the present research. The following sections delve deeper into the theoretical foundation of these leadership styles within the Social Identity Theory and their clear association with organizational identification in relation to mediating capacity.

2.4.4. Transformational Leadership and Organizational Identification

Transformational leadership overtly resonates with Social Identity Theory as it underlines the motivational and inspirational sides concerning the leadership that encourage followers to identify very much with the organization's collective objectives and values- (Bass & Riggio, 2006). The four central components of transformational leadership-idealized influence, inspirational motivation, intellectual stimulation, and individualized considerations-are interwoven to create shared vision and group cohesion (Bass & Avolio, 1994). Through visions and practice, they help their employees to internalize the organization's values inherent in enhancing their identification in such an organization, thereby reinforcing organizational identity (Hu et al., 2015; Dinc et al., 2022).

.3 .METHODOLOGY

3.1. Study Variables

3.1. 1Independent Variables include the following:

1. **Transformational Leadership:** Transformational leadership is characterized by four core dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Riggio, 2006).
2. **Transactional Leadership:** Transactional leadership, encompassing contingent reward and management by exception (active and passive), is predicated on clear exchanges between leader and follower, where compliance is rewarded, and deviations are corrected (Bass, 1985).
3. **Servant Leadership:** Servant leadership includes dimensions such as altruistic healing, emotional healing, wisdom, persuasive mapping, and organizational stewardship (Spears, 1995). This style emphasizes meeting the needs of others, fostering growth, and creating a supportive organizational climate.

3.2. Mediating Variable: Organizational Identification

The psychological construct serves as an essential mediator which connects leadership practices with employee performance outcomes. The mediating function of organizational identification receives confirmation through multiple research studies.

3.3. Dependent Variable: Employee Performance

Employee performance is understood as the effectiveness with which healthcare employees fulfill their job responsibilities, including task performance (core technical duties), contextual performance (extra-role behaviors, cooperation), and adaptive performance (coping with change and novel situations).

3.4. Conceptual framework

The conceptual framework for this study illustrates the hypothesized relationships among the variables. The framework posits that different leadership styles influence employee performance both directly and indirectly through the mediating role of organizational identification. Specifically, the conceptual framework is designed to test the direct effects of leadership styles on employee performance and the mediating effects of organizational identification on these relationships.

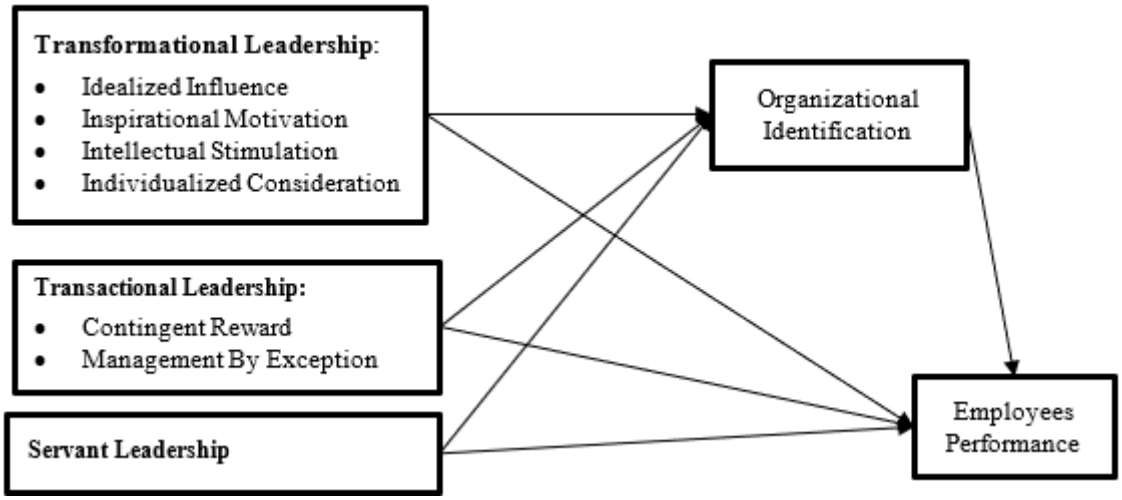

Figure 1: *Conceptual framework*

3.5. *Research Hypothesis*

Table 1: *Research Hypothesis*

Study hypothesis
H1. Transformational leadership has a positive and significant effect on employee performance.
H2. Transactional leadership has a significant effect on employee performance.
H3. Servant leadership positively influences employee performance.
H4. Transformational leadership has a positive and significant effect on organizational identification.
H5. Transactional leadership has a significant effect on organizational identification..
H6. Servant leadership positively influences organizational identification.
H7. Organizational identification positively influences employee performance.
H8. Organizational identification significantly mediates the relationship between transformational leadership style and employee performance.
H9. Organizational identification significantly mediates the relationship between transactional leadership style and employee performance.
H10. Organizational identification significantly mediates the relationship between servant leadership style and employee performance.

3.6. Research Design Process

3.6.1. Research Approach

A quantitative research design was used to inspect interrelationships among different variables and examine hypotheses projected. This type of research typically deals with the collection of numerical data in the setting of a research investigation to identify trends and the farthest validity of propositions and the relationships between specific item(s) of interest (Barroga & Matanguihan, 2022). It is suitable for this investigation to assess the effects of different leadership styles upon employee attainment. The advanced methods put into use would also investigate the mediating effect of any organizational identification on employee performance.

3.6.2. Research Methods

The present study adopts a quantitative cross-

sectional research design to investigate the relationships among leadership styles (transformational, transactional, and servant leadership), organizational identification, and employee performance among employees in Saudi Arabia hospitals. In a cross-sectional design, data are collected from participants at a single point in time, providing a "snapshot" of the variables and their associations (Setia, 2016).

a quantitative cross-sectional research design provides an effective and pragmatic means to investigate the study variables, ensuring methodological rigor, efficiency, and the ability to generalize findings to the larger population of hospital employees.

3.6.3. Type of Data

The current study was gathering primary data from questionnaires administered to the employees of the hospital. The data was comprised of demographic data and responses concerning their impressions on leadership styles, organizational identification, and performance indicators of the hospital. The questionnaire was developed in a way that it was seek information on the independent variables which include transformational, transactional and servant leadership, the mediating variable which is the organizational identification and the dependent variable which is the employee performance. The data obtained from the questionnaires was the primary data that was enable the researcher to test the hypothesized relationships and analyze the results.

3.7. Sampling Design Process

3.7.1. Study Population

The study population consists of all employees across the five selected hospitals of National guard hospitals in Saudi Arabia. The total population comprises 29,041 employees, distributed as follows:

- Hospital A: 16,320 employees
- Hospital B: 6,871 employees
- Hospital C: 2,184 employees
- Hospital D: 1,330 employees
- Hospital E: 2,336 employees

The population includes various job roles, which include Physicians, Nurses, and Other Clinical HCWs. The different job roles which exist within this population enable researchers to study how different leadership styles affect organizational identification and employee performance.

3.7.2. Sample Size

To account for potential non-response and to ensure that each hospital's sample is adequately represented, the sample size was adjusted upward. Considering these factors, a final sample size of 400 to 500 employees was targeted. This range allows for sufficient data collection while ensuring robust and reliable findings.

The sample was proportionally allocated across the five hospitals based on their employee populations. This proportional allocation ensures that each hospital's contribution to the sample size reflects its size relative to the total population.

Proportional Allocation of Sample Size

Based on a total sample size of 500 employees, the sample was proportionally allocated across the five hospitals as follows:

- Hospital A (16,320 employees, 56.2% of the total): Sample Size = 281 employees
- Hospital B (6,871 employees, 23.7% of the total): Sample Size = 119 employees
- Hospital C (2,184 employees, 7.5% of the total): Sample Size=37employees
- Hospital D (1,330 employees, 4.6% of the total):
- Sample Size=23employees
- Hospital E (2,336 employees, 8.0% of the total): Sample Size = 40 employees.

3.8. Instrument Development Process

3.8.1. Instrument Development

The questionnaire for this research was developed following a detailed review. The instrument consists of 20 items on Transformational Leadership, 10 items of Transactional Leadership, 7 items for Servant Leadership, 5 items for Organizational Identification, and 15 items for Employee Performance. Items under each variable were selected and modified from established instruments to ensure validity and reliability.

3.9. Data Analysis Process

This section outlines the steps and methods that was employed to collect, code, and analyze the data, as well as the ethical considerations involved.

3.9.1. Data Collection

The current study used structured questionnaires to gather data from National Guard hospital employees at the Saudi Arabian hospital which served as their study sample. The research team provided participants with two options to complete the questionnaires through online access or through physical paper distribution. The team conducted data collection activities for multiple weeks to achieve their goal of obtaining enough responses. The team distributed follow-up reminders to participants as a way to boost their response rate. The collected data included responses from participants about their

leadership styles and their organizational identification and their various employee performance dimensions.

3.9.2. Data Coding

After data collection, responses were coded for analysis. Each question in the questionnaire was assigned a numerical code to facilitate data entry into a statistical software program. For example, responses on the Likert scale (1 to 5) were coded numerically as 1 = Strongly Disagree, - 2 = Disagree, - 3 = Neutral, - 4 = Agree, - 5 = Strongly Agree. The servant leadership items were measured using a seven-point Likert scale coded as 1 = Strongly Disagree to 7 = Strongly Agree. Some variables use a 5-point Likert scale because their original validated instruments (e.g., MLQ, Organizational Identification Scale) were developed and tested on that format, ensuring comparability and preserving validity. Servant Leadership uses a 7-point scale to match the original Servant Leadership Questionnaire, which requires finer response sensitivity for attitudinal nuances.

3.9.3. Data Analysis

Data analysis was taken up through the use of two primary software tools—SPSS Version 28 and SmartPLS 4, which allowed a very wide margin to conduct data analysis and test all the research objectives and hypotheses. For the preliminary analysis, SPSS is enlightening about basic properties of the validation and data: it cannot be otherwise. SmartPLS is used for structural equation modeling, saturating more than one relationships and complex network effects as well as mediating effects. This method complete detail in which data analysis was applied.

3.10. Ethical Considerations

Ethical issues are important for the guidance of research methodology and to protect the rights of the participants. Participants were informed about the study so that they could make decisions about their involvement, were protected, and could respect confidentiality with regard to their answers. On the other hand, they had the ability to decide to participate. The greatest assurance was that all responses were kept confidential and used solely for the purposes of research. Identifiable information was not disclosed. Identifiers were scant or altogether removed from responses with the aim of understanding the intensity of privacy. Participation in the study was completely voluntary. Participants are permitted to withdraw at any time without suffering any penalties. The research protocol reviewed and found to be compliance with ethical standards at King Abdullah International Medical Research Center, King Saud bin Abdul-aziz University for Health Science, and National Guard Health Affairs.

4. RESULTS AND DISCUSSION

4.1. Average Variance Extracted (AVE)

The AVE results for the current study (Table 4.1) were all above the recommended 0.50 threshold: OI = 0.631, PF = 0.587, SL = 0.638, TFL = 0.580, and TSL = 0.598. These values indicate that each construct captures a substantial proportion of indicator variance, supporting adequate convergent validity. Importantly, the AVE values (0.580–0.638) confirm construct-level convergence, while the outer loadings (approximately 0.725–0.829) provide indicator-level evidence of reliability. Thus, the measurement model demonstrates satisfactory convergent validity and is suitable for subsequent structural model assessment.

*Table 1: **Outer loadings Cronbach's Alpha & Composite Reliability of Model***

	Outer loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
OI1 <- OI	0.824	0.853	0.856	0.895	0.631
OI2 <- OI	0.760				
OI3 <- OI	0.781				
OI4 <- OI	0.777				
OI5 <- OI	0.827				
PF1 <- PF	0.792	0.950	0.950	0.955	0.587
PF10 <- PF	0.759				
PF11 <- PF	0.758				
PF12 <- PF	0.768				
PF13 <- PF	0.763				
PF14 <- PF	0.774				
PF15 <- PF	0.756				
PF2 <- PF	0.774				
PF3 <- PF	0.781				
PF4 <- PF	0.746				

PF5 <- PF	0.778				
PF6 <- PF	0.799				
PF7 <- PF	0.781				
PF8 <- PF	0.730				
PF9 <- PF	0.725				
SL1 <- SL	0.791	0.906	0.908	0.925	0.638
SL2 <- SL	0.797				
SL3 <- SL	0.778				
SL4 <- SL	0.807				
SL5 <- SL	0.829				
SL6 <- SL	0.799				
SL7 <- SL	0.791				
TFIC_16 <- TFL	0.771	0.962	0.962	0.965	0.580
TFIC_17 <- TFL	0.729				
TFIC_18 <- TFL	0.757				
TFIC_19 <- TFL	0.767				
TFIC_20 <- TFL	0.756				
TFII_1 <- TFL	0.760				
TFII_2 <- TFL	0.792				
TFII_3 <- TFL	0.760				
TFII_4 <- TFL	0.734				
TFII_5 <- TFL	0.753				
TFIM_10 <- TFL	0.774				
TFIM_6 <- TFL	0.779				
TFIM_7 <- TFL	0.761				
TFIM_8 <- TFL	0.744				
TFIM_9 <- TFL	0.770				
TFIS_11 <- TFL	0.789				
TFIS_12 <- TFL	0.787				
TFIS_13 <- TFL	0.753				
TFIS_14 <- TFL	0.753				
TFIS_15 <- TFL	0.743				
TSCR_1 <- TSL	0.793	0.925	0.926	0.937	0.598
TSCR_2 <- TSL	0.780				
TSCR_3 <- TSL	0.786				
TSCR_4 <- TSL	0.762				
TSCR_5 <- TSL	0.755				
TSMBE_10 <- TSL	0.788				
TSMBE_6 <- TSL	0.768				
TSMBE_7 <- TSL	0.738				
TSMBE_8 <- TSL	0.798				
TSMBE_9 <- TSL	0.761				

Note: rho_a = composite reliability (rho_A). rho_c = composite reliability. AVE = average variance extracted. Constructs: OI = organizational identification; PF = employee performance; SL = servant leadership; TFL = transformational leadership; TSL = transactional leadership.

4.2. Coefficient of Determination (R^2)

As shown in Table 4.15, the predictors SL, TFL, and TSL explained 39.1% of the variance in organizational identification (R^2 = 0.391; adjusted R^2 = 0.387), indicating meaningful explanatory power for identifying with the organization. In addition, employee performance was explained by the combined effects of SL, TFL, TSL, and OI, accounting for 55.3% of the variance (R^2 = 0.553; adjusted R^2 = 0.549). Collectively, these findings indicate that the structural model provides substantial explanatory capacity, particularly for predicting employee performance within the study context.

Table 2: Coefficient of Determination for Endogenous Constructs (R^2).

Endogenous construct	R^2	Adjusted R^2
Organizational identification (OI)	0.391	0.387
Employee performance (PF)	0.553	0.549

Note: R^2 indicates the proportion of variance explained in the endogenous construct by its predictors; adjusted R^2 accounts for model complexity.

4.3. Predictive Relevance and Out-of-Sample Prediction (PLSpredict; Q^2predict)

As shown in Table 4.2, both endogenous constructs achieved positive Q^2predict values—OI (Q^2predict = 0.381) and PF (Q^2predict = 0.484)—supporting predictive relevance for both outcomes. Beyond Q^2predict, the CVPAT results indicated that the PLS-SEM model achieved significantly lower prediction loss than (a) an indicator average (IA) benchmark for

OI and PF (ps < .001) and (b) a linear model (LM) benchmark for OI and PF (ps < .001). Collectively, these findings indicate that leadership styles and organizational identification provide not only explanatory value (R^2) but also meaningful predictive capability for the study's key outcomes.

Table.3: PLSpredict Results (Q^2predict) and Prediction Error for Endogenous Constructs

Endogenous construct	Q^2predict	RMSE	MAE
Organizational identification (OI)	0.381	0.790	0.635
Employee performance (PF)	0.484	0.721	0.591

Note. Q^2predict values > 0 indicate predictive relevance. RMSE and MAE are prediction-error indices (lower values indicate better predictive accuracy). Values were obtained using the SmartPLS PLSpredict/CVPAT procedure.

4.4. Goodness-of-Fit (GOF)

In the current study, the mean AVE across constructs was computed from the convergent validity results (OI = 0.631, PF = 0.587, SL = 0.638, TFL = 0.580, TSL = 0.598), yielding $\bar{AVE} = 0.6068$. The mean R^2 across endogenous constructs was based on OI (0.391) and PF (0.553), yielding $\bar{R^2} = 0.4720$. Using these values, the model GOF was 0.535, indicating acceptable overall model performance when viewed as a combined index of measurement quality and explanatory power. This GOF value is reported here as supportive evidence and should be interpreted alongside the primary PLS-SEM criteria (R^2, f^2, Q^2) rather than as a stand-alone decision metric.

Table 4: Goodness-of-Fit (GOF) Calculation

Step / Component	Statistic	Value
Panel A: Average Variance Extracted (AVE)	AVE (OI)	0.631
	AVE (PF)	0.587
	AVE (SL)	0.638
	AVE (TFL)	0.580
	AVE (TSL)	0.598
	Sum of AVE values	3.034
	Mean AVE, $\bar{AVE}$= Sum ÷ 5	0.6068
Panel B: Coefficient of Determination (R^2)	R^2 (OI)	0.391
	R^2 (PF)	0.553
	Sum of R^2 values	0.944
	Mean R^2, $\bar{R^2}$= Sum ÷ 2	0.4720
Panel C: GOF computation	Product = $\bar{AVE} \times \bar{R^2}$	0.2864
	GOF = $\sqrt{0.2864}$	0.535

Note. $\bar{AVE}$is the average AVE across all constructs (OI, PF, SL, TFL, TSL). $\bar{R^2}$is the average of R^2 values for endogenous constructs (OI and PF).

4.5. Path Analysis and Research-Hypothesis Testing

As presented in Table 4.4, all hypothesized direct relationships in the model were positive and statistically significant (p < .001). Leadership styles significantly predicted organizational identification, with TFL → OI (β = 0.314, t = 8.304) representing the strongest leadership predictor of identification, followed by TSL → OI (β = 0.286, t = 7.967) and SL → OI (β = 0.244, t = 6.398). Additionally, leadership styles demonstrated significant direct effects on employee performance, with TSL → PF (β = 0.362, t = 10.158) being the strongest direct predictor of performance, followed by SL → PF (β = 0.154, t = 4.871) and TFL → PF (β = 0.146, t = 4.186). Finally, organizational identification showed a significant positive effect on employee performance (OI → PF: β = 0.313, t = 8.212), confirming that employees who identify more strongly with their organization tend to report higher performance levels. Collectively, these results support the hypothesized positive relationships among leadership styles, organizational identification, and employee performance in the current study and provide the empirical basis for evaluating mediation in the subsequent subsection.

Table 4: Structural Model Path Coefficients and Hypothesis Testing

Structural path	β	t	p	95% CI	Decision
SL → OI	0.244	6.398	< .001	[0.169, 0.318]	Supported
TFL → OI	0.314	8.304	< .001	[0.243, 0.391]	Supported
TSL → OI	0.286	7.967	< .001	[0.214, 0.357]	Supported
OI → PF	0.313	8.212	< .001	[0.237, 0.385]	Supported
SL → PF	0.154	4.871	< .001	[0.091, 0.214]	Supported
TFL → PF	0.146	4.186	< .001	[0.079, 0.217]	Supported
TSL → PF	0.362	10.158	< .001	[0.293, 0.430]	Supported

4.6. Assessment of the Mediating Variable Organizational Identification

As shown in Table 4.5, the indirect effects of leadership styles on employee performance through

organizational identification were significant for all three leadership constructs: SL → OI → PF: β = 0.076, t = 4.703, p < .001, 95% CI [0.047, 0.111]; TFL → OI → PF: β = 0.098, t = 6.170, p < .001, 95% CI [0.069, 0.131]; and TSL → OI → PF: β = 0.090, t = 5.612, p < .001, 95% CI [0.059, 0.122]. Importantly, the direct effects of SL, TFL, and TSL on employee performance remained significant in the presence of the mediator (Table 4.20), indicating partial mediation rather than full mediation. To quantify the magnitude of mediation, the variance accounted for (VAF) was computed as (indirect effect ÷ total effect) × 100. The VAF values indicated that organizational identification accounted for approximately 33.0% of the total effect of servant leadership on performance, 40.0% of the total effect of transformational leadership on performance, and 20.0% of the total effect of transactional leadership on performance. Collectively, these results support H8-H10, confirming that organizational identification is a statistically significant mediator linking leadership styles to employee performance in the current study.

Table 5: Mediation Effects of Organizational Identification (OI) on employee performance.

Predictor	Direct effect (β)	Indirect effect via OI (β)	t	p	95% CI (indirect)	Total effect (β)	VAF (%)	Mediation type
SL → OI → PF	0.154	0.076	4.703	< .001	[0.047, 0.111]	0.230	33.0	Partial
TFL → OI → PF	0.146	0.098	6.170	< .001	[0.069, 0.131]	0.245	40.0	Partial
TSL → OI → PF	0.362	0.090	5.612	< .001	[0.059, 0.122]	0.451	20.0	Partial

Note. Indirect effects are based on bootstrapping (5,000 subsamples; two-tailed). VAF = variance accounted for = (indirect ÷ total) × 100. SL = servant leadership; TFL = transformational leadership; TSL = transactional leadership; OI = organizational identification; PF = employee performance.

5. DISCUSSION

5.1. Effect of transformational leadership on employee performance

The empirical findings supported H1, indicating that transformational leadership is positively associated with employee performance in the National Guard hospital context. The study shows that leaders who create a strong vision through their leadership practices will improve organizational performance because their employees will work harder and collaborate better while managing the complexities of their clinical work. The research demonstrates that transformational leadership creates better nursing work environments which lead to better healthcare results through its effects on empowerment and commitment and satisfaction that create better performance at both individual and unit levels (Ystaas et al., 2023).

5.2. Impact of transactional leadership on employee performance

The findings supported H2 by indicating that transactional leadership shows a comparatively stronger association with performance in this study context. Interpretively, this suggests that performance in National Guard hospitals—where safety, timeliness, and adherence to protocols are central—may be especially responsive to leadership behaviors that clarify expectations, reinforce standards through contingent reward, and correct deviations through management-by-exception.

From a theoretical standpoint, transactional leadership can shape performance via reinforcement-based and expectancy-based mechanisms: employees are more likely to meet performance requirements when goals are explicit, feedback is immediate, and consequences are predictable. In hospital operations, such mechanisms are particularly relevant for tasks anchored in standard operating procedures and audit-sensitive requirements (e.g., documentation accuracy, medication rights, and risk assessments). Supporting this interpretation, evidence from hospital nursing settings indicates that transactional leadership can be linked to greater adherence to standardized care protocols, demonstrating that exchange-based leadership may improve compliance-driven performance elements in high-reliability environments (Al-Rjoub et al., 2024).

5.4. Influence of servant leadership on employee performance

the findings indicated that transformational leadership exerted a positive and statistically significant effect on OI and emerged as the strongest leadership predictor of identification in the structural model. Theoretically, Social Identity Theory posits that identification develops when organizational membership becomes self-definitional and emotionally meaningful, such that "who the organization is" becomes integrated into "who the employee is" (Ashforth & Mael, 1989; Tajfel & Turner, 1979). Transformational leadership is well positioned to activate these identity processes because it communicates a collective purpose, elevates shared values, and frames performance as contribution to a meaningful "we," thereby increasing perceived belongingness and pride in membership.

The Saudi Arabian hospital system requires transformational leadership to achieve operational improvement through its capacity to provide a

unifying framework which enables staff members to understand their challenging work as fulfilling their duty to the esteemed organization. The research based in Saudi nursing environments demonstrates that different leadership styles influence both employee engagement and their commitment to work (Al-Dossary, 2022; Alluhaybi et al., 2024), which lead to identification development through their relationship to each other.

5.5. Impact of Transactional Leadership on Organizational Identification

The organization uses transactional leadership to establish employee identity through its systems which acknowledge employee contributions while recognizing outstanding performance and maintaining mutual standards of organizational conduct.

In Saudi hospital environments—characterized by strict clinical governance, protocol adherence, and continuous quality requirements—transactional leadership may be particularly salient for shaping OI because it reinforces clarity regarding roles and collective expectations. When accountability systems are enacted transparently, they can strengthen employees' perception that they are reliable members of a high-performing institution, thereby supporting identification through reputational alignment. This interpretation is consistent with Saudi evidence indicating that transactional and transformational leadership styles are associated with engagement and organizational commitment among nurses (Al-Dossary, 2022; Alluhaybi et al., 2024), which are psychologically adjacent to identification and may represent complementary pathways through which employees develop stronger organizational attachment.

5.6. Influence of Servant Leadership on Organizational Identification

servant leadership appears to foster OI through ethically grounded belonging and community orientation, whereas transformational leadership primarily strengthens OI through shared vision and meaning, and transactional leadership does so through clarity and recognition signals. These distinctions provide a coherent basis for the subsequent discussion of how OI mediates leadership–performance relationships in the study model. (Demeke et al., 2024).

5.7. Influence of Organizational Identification on Employee Performance

The tribal emphasis on identification, reputation, and loyalty within Saudi Arabian healthcare institutions could augment OI's motivational driving force, especially in highly prominent public-sector entities where institutional identity bestows societal honor. However, the linkage is not of determinative nature, with the identification most prone to become stronger when the inimitable features of the organizational structure embody fairness, inclusion, and meaningful contribution and whose weakening is invariably associated with chronic tempering resulting from lack of job-valued membership. Identity-related dynamics in nursing performance are enhanced by empirical evidence that the introduction of identity-based constructs, such as professional identity, had a positive relationship with the very performance of the nurses discussed. Therefore, this articulation is essential in understanding the continued work performance among nurses in clinical situated environments (Jiang et al., 2024). On a broader note, the results clearly underscore the practical findings that organization identification (OI) complements hospital performance. Logical theories speak to a further OI that could be used as mediatory factor in future analyses

5.7. Mediating Role of Organizational Identification in relationship between Transformational Leadership Style and Employee Performance

In Saudi hospital contexts, the mechanism seems highly plausible; in hospitals-where mission-critical sensitivity is forcibly linked with reputation, and where performance is derived from functioning that is coherent and mitigates the clinical volatility of its clinical environment-a transformational leader who communicates a compelling "service image" will contribute to the attachment and membership pride desirable, particularly in collectivist cultures, valued so highly for group affiliation and institutional loyalty. The evidence supporting this route lies extensively within: "Organizational identification is positively related to performance among nurses and drives action within resource pathways enhancing task and contextual performance" (Ma et al., 2023). In this sense, longitudinal evidence has shown that organizational identification has the potential to mediate the relationship between leadership and performance-the evidence in favor of linking identity processes and leadership directions to concrete performance outputs (Wang et al., 2025).

5.8. Mediating Role of Organizational Identification in relationship between Transactional Leadership and Employee Performance

A mediated pathway has the justifiable limit. Transactional leadership can improve compliance without fostering real value internalization; therefore, identity-related effects could hinge on the perception that contingent reward and corrective feedback are signs of inclusion/respect than mere blame. Such boundary finds support in empirical propositions that suggest that the contingent reward-punishment behavior has effects on compliance-related behavior through emotional pathways, suggesting at least that part of an individual's performance behavior is construed from within the motivational and emotional states by which they interpret the work relationship and social norms (Zhu et al., 2024). Evidence from healthcare employee groups adds to the growing belief that the mere contingent reward-punishment approach does not necessarily translate to actual performance behavior unless it is coupled by motivational states of engagement going back to the inherent risks of overemphasizing mere transactional control (Layek & Koodamara, 2024).

5.9. Mediating Role of Organizational Identification in relationship between Servant Leadership Style and Employee Performance

The analysis of the mediated relationship shows that servant leadership functions as both an enabling leadership approach and a leader who helps people develop their identity. The mechanism operates according to Social Identity Theory which states that people behave according to their group identity when they consider that identity to be fundamental to their self-definition and when they see it as valuable (Ashforth & Mael, 1989; Tajfel & Turner, 1979).

In Saudi healthcare organizations—where service ethics, collective responsibility, and institutional reputation are culturally salient—servant leadership may resonate strongly as an identity signal, particularly because it frames the organization as a community committed to staff welfare and patient-centered mission. Recent healthcare scholarship supports the relevance of servant leadership for workforce and organizational outcomes and highlights that servant leadership operates through mediators and relational processes consistent with identity-based mechanisms (Demeke et al., 2024).

6. CONCLUSIONS

This study concluded that leadership style is a substantive determinant of employee performance and organizational identification within Saudi Arabian hospitals. The structural model evidence indicates that transformational, transactional, and servant leadership each contribute positively to organizational identification, and each also contributes positively to employee performance; additionally, organizational identification contributes positively to employee performance.

A key conclusion is that the leadership styles operate through both direct and indirect pathways. Specifically, organizational identification significantly mediates the relationships between each leadership style and employee performance, while the direct leadership–performance relationships remain significant, supporting partial (rather than full) mediation. This pattern is consistent with Social Identity Theory, which posits that leadership shapes employees' self-definition and in-group attachment, and that identification subsequently motivates performance aligned with collective goals (Ashforth & Mael, 1989; Tajfel & Turner, 1979).

In terms of relative influence, the results support the conclusion that transactional leadership is the strongest direct predictor of employee performance in this setting, whereas transformational leadership is the strongest predictor of organizational identification. This finding is theoretically plausible in high-reliability hospital environments where performance is shaped by standardization, accountability, and monitoring alongside meaning-making and identity-building processes.

Finally, because the study was conducted in five National Guard hospitals across major regions in Saudi Arabia, the conclusions are directly relevant to large public-sector healthcare organizations characterized by complex, interdependent clinical work and strong institutional missions.

REFERENCES

Alanazi, N., Alshamlani, Y., & Baker, O. (2022). The association between nurse managers' transformational leadership and quality of patient care: A systematic review. *International Nursing Review, 70*(2), 175-184. https://doi.org/10.1111/inr.12819

Al-Anezi, F. M. (2025). Challenges of healthcare systems in Saudi Arabia to delivering Vision 2030: An empirical study from healthcare workers perspectives. *Journal of Healthcare Leadership, 17*, 173–187. https://doi.org/10.2147/JHL.S516159

Alasiri, A. A., & Mohammed, V. (2022). Healthcare transformation in Saudi Arabia: An overview since the launch of Vision 2030. *Health Services Insights, 15*,

11786329221121214. https://doi.org/10.1177/11786329221121214

Al-Dossary, R. N. (2022). Leadership style, work engagement and organizational commitment among nurses in Saudi Arabian hospitals. *Journal of Healthcare Leadership, 14*, 71–81. https://doi.org/10.2147/JHL.S365526

Alharbi, A. A., Dahinten, V. S., & MacPhee, M. (2020). The relationships between nurses' work environments and emotional exhaustion, job satisfaction, and intent to leave among nurses in Saudi Arabia. *Journal of Advanced Nursing, 76*(11), 3026–3038. https://doi.org/10.1111/jan.14512

Al-Hanawi, M. K., & Makuta, I. F. (2022). Changes in productivity in healthcare services in the Kingdom of Saudi Arabia. *Cost Effectiveness and Resource Allocation, 20*(1), 3. https://doi.org/10.1186/s12962-022-00338-3

Allen, G., Attoh, P., & Gong, T. (2017). Transformational leadership and affective organizational commitment: Mediating roles of perceived social responsibility and organizational identification. *Social Responsibility Journal, 13*(3), 585-600. https://doi.org/10.1108/srj-11-2016-0193

Alluhaybi, A., Usher, K., Durkin, J., & Wilson, A. (2024). Clinical nurse managers' leadership styles and staff nurses' work engagement in Saudi Arabia: A cross-sectional study. *PLoS ONE, 19*(3), e0296082. https://doi.org/10.1371/journal.pone.0296082

Al-Mansour, K. (2021). Stress and turnover intention among healthcare workers in Saudi Arabia during the time of COVID-19: Can social support play a role? *PLoS ONE, 16*(10), e0258101. https://doi.org/10.1371/journal.pone.0258101

Al-Rjoub, S., Alsharawneh, A., Alhawajreh, M. J., & Othman, E. H. (2024). Exploring the impact of transformational and transactional style of leadership on nursing care performance and patient outcomes. *Journal of Healthcare Leadership, 16*, 557–568. https://doi.org/10.2147/JHL.S496266

Alshahrani, I., Al-Jayyousi, O., Aldhmour, F., & Alderaan, T. (2023). Towards understanding the influence of innovative work behavior on healthcare organizations' performance: The mediating role of transformational leaders. *Arab Gulf Journal of Scientific Research, 42*(1), 198-216. https://doi.org/10.1108/agjsr-09-2022-0167

Alzailai, N., Barriball, L., & Xyrichis, A. (2021). Burnout and job satisfaction among critical care nurses in Saudi Arabia and their contributing factors: A scoping review. *Nursing Open, 8*(5), 2331–2344. https://doi.org/10.1002/nop2.843

Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of Management Review, 14*(1), 20–39. https://doi.org/10.2307/258189

Bajracharya, A. (2023). Transformational leadership and employees' job satisfaction in the educational sector of Nepal. *People's Journal of Management, 11*(1), 26–45. https://doi.org/10.3126/pjm.v11i1.63166

Barroga, E., & Matanguihan, G. J. (2022). A practical guide to writing quantitative and qualitative research questions and hypotheses in scholarly articles. *Journal of Korean Medical Science, 37*(16), e121. https://doi.org/10.3346/jkms.2022.37.e121

Bass, B. M. (1985). *Leadership and performance beyond expectations*. Free Press.

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage.

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Lawrence Erlbaum Associates. https://doi.org/10.4324/9781410617095

Brún, A., & McAuliffe, É. (2022). "When there's collective leadership, there's the power to make changes": A realist evaluation of a collective leadership intervention (Co-Lead) in healthcare teams. *Journal of Leadership & Organizational Studies, 30*(2), 155-172. https://doi.org/10.1177/15480518221144895

Cai, M., Wang, M., & Cheng, J. (2024). The effect of servant leadership on work engagement: The role of employee resilience and organizational support. *Behavioral Sciences, 14*(4), 300. https://doi.org/10.3390/bs14040300

Demeke, G. W., van Engen, M. L., & Markos, S. (2024). Servant leadership in the healthcare literature: A systematic review. *Journal of Healthcare Leadership, 16*, 1–14. https://doi.org/10.2147/JHL.S440160

Dhaheri, A. (2022). Does being culturally intelligent make you a transformational and adaptable leader? *Journal for Multicultural Education, 16*(4), 387-398. https://doi.org/10.1108/jme-12-2021-0235

Dinc, M. S., Zaim, H., Hassanin, M., & Alzoubi, Y. I. (2022). The effects of transformational leadership on perceived organizational support and organizational identity. *Human Systems Management, 41*(6), 699-716. https://doi.org/10.3233/HSM-211563

Dinh, C., Pham, L., Le, T., & Le, T. (2022). Study on the impact of transformation leadership on performance of

small and medium enterprises in Can Tho City, Vietnam. *Science & Technology Development Journal - Economics - Law and Management*. https://doi.org/10.32508/stdjelm.v6i2.8660

Fahlevi, M., Aljuaid, M., & Saniuk, S. (2022). Leadership style and hospital performance: Empirical evidence from Indonesia. *Frontiers in Psychology, 13*, 911640. https://doi.org/10.3389/fpsyg.2022.911640

Farrington, S., & Lillah, R. (2019). Servant leadership and job satisfaction within private healthcare practices. *Leadership in Health Services, 32*(1), 148-168. https://doi.org/10.1108/lhs-09-2017-0056

Hamdan, M., Jaaffar, A., Khraisat, O., Issa, M., & Jarrar, M. (2024). The association of transformational leadership on safety practices among nurses: The mediating role of patient safety culture. *Risk Management and Healthcare Policy, 17*, 1687-1700. https://doi.org/10.2147/rmhp.s458505

Hanks, S., Cotton, D., & Spowart, L. (2020). Leadership in dental practice: A three stage systematic review and narrative synthesis. *Journal of Dentistry, 102*, 103480. https://doi.org/10.1016/j.jdent.2020.103480

Hayat, S., Wahab, S., Othman, N., & Subramaniam, N. (2024). The impact of servant leadership on trust, team efficacy, and intrinsic motivation in healthcare. *Journal of Accounting, Business and Management, 32*(1), 1. https://doi.org/10.31966/jabminternational.v32i1.1449

Henry, M., Osunsan, O., Joshua, A., Sylvia, N., Joseline, T., & Isabella, N. (2025). Transactional leadership style and employee performance in selected non-governmental organizations in Uganda. *Journal of Economics, Finance and Management Studies, 8*(3). https://doi.org/10.47191/jefms/v8-i3-06

Hu, D., Zhang, B., & Meng, W. (2015). A study on the relationship among transformational leadership, organizational identification and voice behavior. *Journal of Service Science and Management, 8*(1), 142-148. https://doi.org/10.4236/jssm.2015.81017

Hutama, A., Noermijati, N., & Irawanto, D. (2024). The effect of transactional leadership on employee performance mediated by job satisfaction, job stress and trust. *International Journal of Research in Business and Social Science, 13*(3), 151-166. https://doi.org/10.20525/ijrbs.v13i3.3297

Jiang, Z., Su, Y., Meng, R., Lu, G., Liu, J., & Chen, C. (2024). The effects of work readiness, organizational justice and professional identity on the work performance of new nurses: A cross-sectional survey. *BMC Nursing, 23*(1), 759. https://doi.org/10.1186/s12912-024-02420-y

Jiatong, W., Wang, Z., Alam, M., Murad, M., Gul, F., & Gill, S. A. (2022). The impact of transformational leadership on affective organizational commitment and job performance: The mediating role of employee engagement. *Frontiers in Psychology, 13*, 831060. https://doi.org/10.3389/fpsyg.2022.831060

Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89*(5), 755–768. https://doi.org/10.1037/0021-9010.89.5.755

Kim, J., Yang, J., & Lee, Y. (2023). The impact of transformational leadership on service employees in the hotel industry. *Behavioral Sciences, 13*(9), 731. https://doi.org/10.3390/bs13090731

Layek, D., & Koodamara, N. K. (2024). Impact of contingent rewards and punishments on employee performance: The interplay of employee engagement. *F1000Research, 13*, 102. https://doi.org/10.12688/f1000research.144019.2

Liden, R. C., Wayne, S. J., Meuser, J. D., Hu, J., Wu, J., & Liao, C. (2015). Servant leadership: Validation of a short form of the SL-28. *The Leadership Quarterly, 26*(2), 254–269. https://doi.org/10.1016/j.leaqua.2014.12.002

Liden, R. C., Wayne, S. J., Zhao, H., & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. *The Leadership Quarterly, 19*(2), 161–177. https://doi.org/10.1016/j.leaqua.2008.01.006

Lutfia, L., Kurniawati, K., & Afrizal, A. (2021). The effect of servant leadership on organizational stewardship. *Journal of Management and Business Review, 18*(2), 245-258.

Ma, H., Zhu, X., Huang, J., Zhang, S., Tan, J., & Luo, Y. (2023). Assessing the effects of organizational support, psychological capital, organizational identification on job performance among nurses: A structural equation modeling approach. *BMC Health Services Research, 23*(1), 806. https://doi.org/10.1186/s12913-023-09705-z

Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior, 13*(2), 103–123. https://doi.org/10.1002/job.4030130202

Notarnicola, I., Duka, B., Lommi, M., Grosha, E., Maria, M., Iacorossi, L., … & Stievano, A. (2024). Transformational leadership and its impact on job satisfaction and personal mastery for nursing

leaders in healthcare organizations. *Nursing Reports, 14*(4), 3561-3574. https://doi.org/10.3390/nursrep14040260

Page, L., & Grooms, L. (2020). Servant leadership: Characteristics and practices. *Journal of Leadership Studies, 14*(2), 45-58.

Pawar, A., Israel, D., & Muthuswamy, V. (2020). Dimensions of servant leadership: A conceptual framework. *International Journal of Management, 11*(8), 1234-1245.

Pencheva, M., & Ghinea, V. (2021). Transactional leadership: A review of the literature. *Management Research Review, 44*(6), 890-908.

Saleem, F., Zhang, Y. Z., Gopinath, C., & Adeel, A. (2020). Impact of servant leadership on performance: The mediating role of affective and cognitive trust. *SAGE Open, 10*(1). https://doi.org/10.1177/2158244019900562

Sethibe, T., & Steyn, R. (2018). The mediating effect of organizational climate on the relationship between leadership styles and their components on innovative behaviour. *Journal of Entrepreneurship and Innovation in Emerging Economies, 4*(1), 22-32. https://doi.org/10.1177/2393957517747313

Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology, 61*(3), 261–264. https://doi.org/10.4103/0019-5154.182410

Sousa, M., & Dierendonck, D. (2021). Servant leadership and employee well-being: A systematic review. *Journal of Business Ethics, 174*(3), 543-568.

Spears, L. C. (1995). *Reflections on leadership: How Robert K. Greenleaf's theory of servant-leadership influenced today's top management thinkers*. John Wiley & Sons.

Springer, A., Walkowiak, K., & Bernaciak, A. (2020). Leadership styles of rural leaders in the context of sustainable development requirements: A case study of commune mayors in the Greater Poland province, Poland. *Sustainability, 12*(7), 2676. https://doi.org/10.3390/su12072676

Suleiman, A. K., & Ming, L. C. (2025). Transforming healthcare: Saudi Arabia's Vision 2030 healthcare model. *Journal of Pharmaceutical Policy and Practice, 18*(1), 2449051. https://doi.org/10.1080/20523211.2024.2449051

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks/Cole.

Tamata, A. T., & Mohammadnezhad, M. (2023). A systematic review study on the factors affecting shortage of nursing workforce in the hospitals. *Nursing Open, 10*(3), 1247–1257. https://doi.org/10.1002/nop2.1434

Tuna, R., Bacaksız, F. E., & Seren, A. K. H. (2018). The effects of organizational identification and organizational cynicism on employee performance among nurses. *International Journal of Caring Sciences, 11*(3), 1707-1714.

Wang, S., Zhang, T., & Liu, Y. (2025). Inclusive leadership and employee job performance: The mediating roles of leader–member exchange and organizational identification. *Frontiers in Psychology, 16*, 1615144. https://doi.org/10.3389/fpsyg.2025.1615144

Xenikou, A. (2017). Transformational leadership, transactional contingent reward, and organizational identification: The mediating effect of perceived innovation and goal culture orientations. *Frontiers in Psychology, 8*. https://doi.org/10.3389/fpsyg.2017.01754

Young, H. R., Glerum, D. R., Joseph, D. L., & McCord, M. A. (2021). A meta-analysis of transactional leadership and follower performance: Double-edged effects of LMX and empowerment. *Journal of Management, 47*(5), 1255-1280.

Yozgat, U., & Kamanli, A. (2016). The effects of leadership styles on employee performance: A study in healthcare sector. *Issues in Business Management and Economics, 4*(2), 15-24.

Ystaas, L. M. K., Nikitara, M., Ghobrial, S., Latzourakis, E., Polychronis, G., & Constantinou, C. S. (2023). The impact of transformational leadership in the nursing work environment and patients' outcomes: A systematic review. *Nursing Reports, 13*(3), 1271–1290. https://doi.org/10.3390/nursrep13030108

Zhu, N., Liu, Y., Zhang, J., & Wang, N. (2024). Contingent reward versus punishment and compliance behavior: The mediating role of affective attitude and the moderating role of operational capabilities of artificial intelligence. *Humanities and Social Sciences Communications, 11*, Article 590.