The Leadership Styles Employed by Nurse Managers and The Levels of Burnout Experienced by Nurses Working in Tertiary Hospitals in Medina, Saudi Arabia

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Abstract
Nurse burnout remains a significant challenge in tertiary healthcare settings, where high patient acuity and sustained workload demands place considerable pressure on nursing staff. Leadership style has been identified as an important organizational factor influencing nurses' psychological well-being; however, evidence from tertiary hospitals in Medina, Saudi Arabia remains limited. This paper examined the relationship between nurse managers' leadership styles and burnout among nurses working in tertiary hospitals in Medina, Saudi Arabia. A quantitative design incorporating a descriptive cross-sectional approach and a quasi-experimental component was employed. Data were collected from 279 nurses using the Multifactor Leadership Questionnaire and the Maslach Burnout Inventory. Descriptive statistics, regression analysis, and pre-post comparisons were conducted. Nurses reported moderate levels of burnout, with emotional exhaustion being the most prominent dimension. Transformational leadership was negatively associated with burnout, whereas laissez-faire leadership showed a strong positive association. Transactional leadership demonstrated weaker and non-significant associations. Following a six-week leadership-focused intervention, reductions in emotional exhaustion and depersonalization were observed. These findings suggest that leadership style is meaningfully associated with nurse burnout in tertiary hospital settings and highlight the potential value of leadership development initiatives.

1. Introduction

Burnout among nurses is widely recognized as a persistent challenge for healthcare systems, particularly in tertiary hospitals where nurses are routinely exposed to high patient acuity, complex clinical demands, and sustained emotional labor. Burnout is commonly described as a psychological syndrome comprising emotional exhaustion, depersonalization, and reduced personal accomplishment, arising from prolonged exposure to occupational stressors (Maslach & Leiter, 2016). Among nurses, burnout has been associated with a range of adverse outcomes, including reduced job satisfaction, diminished quality of patient care, increased absenteeism, and higher turnover intention, all of which may undermine workforce sustainability and healthcare quality (Alshurtan et al., 2024; Alzahrani et al., 2024). In Saudi Arabia, nurse burnout has received increasing attention in recent years, reflecting the rapid expansion of healthcare services and the growing demands placed on the nursing workforce. Empirical evidence from tertiary, emergency, and critical care settings suggests that nurses commonly experience moderate to high levels of burnout, with emotional exhaustion consistently reported

as the most prevalent dimension (Almezieny et al., 2024; Alkhattabi et al., 2024). These findings indicate that burnout in high-acuity healthcare environments may not be attributable solely to individual factors, but rather reflects broader organizational and managerial conditions.

Leadership within nursing management is considered a key organizational factor influencing nurses' work environments and psychological well-being. Nurse managers play an important role in shaping workload allocation, communication practices, support mechanisms, and team functioning, all of which are closely linked to burnout experiences. Previous studies have shown that leadership styles—particularly transformational, authentic, transactional, and laissez-faire leadership—are associated with nurses' stress levels, work engagement, and burnout outcomes (Niinihuhta & Häggman-Laitila, 2022; Roshida & Martiana, 2023). Supportive leadership behaviors, including empowerment, recognition, and effective communication, have been associated with lower burnout levels, whereas passive or avoidant leadership has been linked to increased emotional exhaustion and depersonalization. Evidence from Saudi healthcare settings further underscores the relevance of leadership style to nursing outcomes. Studies conducted in emergency, critical care, and tertiary hospital environments have reported that transformational and authentic leadership styles are associated with lower levels of burnout and work-related stress among nurses (Al Sabei et al., 2023; Alsalmi & Alilyyani, 2024). Conversely, laissez-faire leadership has been associated with unfavorable outcomes, including higher burnout, reduced job satisfaction, and increased turnover intention (Alzailai et al., 2023; Alsaleh et al., 2025). Despite these findings, leadership practices remain variable across healthcare institutions, and gaps in leadership preparation and development among nurse managers have been documented (Alshammari, 2024).

Although the literature on leadership styles and nurse burnout in Saudi Arabia continues to expand, limited attention has been directed specifically toward tertiary hospitals in Medina, where nurses may encounter compounded clinical and organizational pressures. Furthermore, relatively few studies have combined descriptive and intervention-oriented approaches to examine leadership as a potentially modifiable organizational factor. In response to these gaps, this paper aims to examine the leadership styles employed by nurse managers and their relationship with burnout among nurses working in tertiary hospitals in Medina, Saudi Arabia. A clearer understanding of this relationship may inform leadership development strategies and organizational initiatives aimed at supporting nurse well-being, improving retention, and enhancing the quality of patient care.

2. Literature Review

Burnout among nurses has been extensively examined in healthcare literature due to its implications for workforce stability, job satisfaction, and quality of patient care. Burnout is commonly conceptualized as a multidimensional syndrome comprising emotional exhaustion,

depersonalization, and reduced personal accomplishment, resulting from prolonged exposure to occupational stressors (Maslach & Leiter, 2016). Nurses working in high-acuity environments, including tertiary hospitals, are often considered particularly vulnerable because of heavy workloads, complex patient care requirements, time pressure, and sustained emotional demands. International evidence consistently reports moderate to high levels of burnout among nurses in acute and tertiary care settings, with emotional exhaustion frequently identified as the most prominent dimension (Niinihuhta & Häggman-Laitila, 2022). These patterns suggest that cumulative job demands and limited recovery opportunities contribute to persistent psychological strain. Within Saudi Arabia, similar trends have been reported across emergency departments, intensive care units, and tertiary hospitals, where nurses experience substantial emotional and physical workload pressures (Almezieny et al., 2024; Alzahrani et al., 2024; Alkhattabi et al., 2024). Collectively, these findings indicate that burnout represents an ongoing organizational challenge within high-intensity healthcare environments.

Leadership style has been widely identified as an important organizational factor shaping nurses' work experiences and psychological well-being. Nurse managers influence daily clinical practice through decision-making processes, communication patterns, workload coordination, and the availability of support and resources. Leadership styles commonly examined in nursing research include transformational, authentic, transactional, and laissez-faire leadership. Transformational leadership emphasizes inspiration, individualized consideration, and intellectual stimulation, whereas authentic leadership focuses on ethical conduct, transparency, and trust. Transactional leadership is largely task- and reward-oriented, while laissez-faire leadership is characterized by limited involvement and avoidance of managerial responsibility. A growing body of research suggests that transformational and authentic leadership styles are associated with more favorable nurse outcomes, including lower burnout levels, higher work engagement, and improved job satisfaction. Systematic and integrative reviews have reported that supportive and empowering leadership behaviors are associated with reduced emotional exhaustion and depersonalization, as well as enhanced personal accomplishment (Niinihuhta & Häggman-Laitila, 2022; Roshida & Martiana, 2023). In contrast, laissez-faire leadership has been consistently associated with higher stress and burnout, often attributed to role ambiguity, insufficient guidance, and lack of managerial support.

Evidence from Saudi healthcare settings further supports the relevance of leadership style to nurse burnout. Studies conducted in emergency, critical care, and tertiary hospital contexts have reported associations between transformational and authentic leadership styles and lower levels of burnout and work-related stress among nurses (Al Sabei et al., 2023; Alsalmi & Alilyyani, 2024). Conversely, laissez-faire and autocratic leadership styles have been linked to higher burnout, reduced job satisfaction, and increased turnover intention (Alzailai et al., 2023; Alsaleh et al., 2025). These findings suggest that leadership practices may play an important

role in shaping nurses' psychological experiences within Saudi healthcare institutions. Beyond burnout, leadership style has also been associated with broader organizational outcomes. Previous research indicates that ineffective or disengaged leadership is related to missed nursing care, absenteeism, and increased turnover intention, whereas supportive leadership behaviors are associated with improved retention and perceived quality of care (Alshammari et al., 2025; Olenga, 2024; Pattali et al., 2024). This recognition positions leadership as a potentially modifiable organizational factor with implications extending beyond individual well-being to overall healthcare system performance. Despite the expanding literature on leadership styles and nurse burnout, several gaps remain. Many existing studies focus on specific clinical units, such as emergency departments or intensive care units, rather than examining tertiary hospitals as integrated systems. Additionally, limited research has specifically explored leadership styles and burnout among nurses working in tertiary hospitals in Medina, Saudi Arabia. Addressing this gap is important to provide context-specific evidence that can inform leadership development initiatives and organizational strategies aimed at reducing burnout and supporting nurse well-being in tertiary healthcare settings.

3. Methodology

This paper employed a quantitative design comprising a descriptive analytical cross-sectional component complemented by a quasi-experimental component to examine the relationship between nurse managers' leadership styles and burnout among nurses working in tertiary hospitals in Medina, Saudi Arabia. The cross-sectional component was used to examine associations between leadership styles and burnout, while the quasi-experimental component explored changes in burnout following a leadership-focused intervention. Such designs are commonly applied in healthcare research to examine relationships and evaluate interventions where randomization is not feasible (Creswell & Creswell, 2018). The study was conducted at King Salman bin Abdulaziz Medical City, which includes three tertiary hospitals providing specialized and high-acuity healthcare services. The target population consisted of 1,923 registered nurses and 45 nursing heads employed across the three hospitals. Nurses were eligible to participate if they had at least six months of clinical experience and were directly involved in patient care. Nurses in purely administrative roles, interns, and students were excluded.

A stratified random sampling technique was used to select staff nurses, with stratification based on hospital affiliation to ensure proportional representation from each hospital. Stratified sampling is recommended for heterogeneous populations to enhance representativeness and reduce sampling bias (Polit & Beck, 2021). Sample size determination was guided by the Krejcie and Morgan (1970) table, resulting in a target sample of 320 nurses. For nursing heads, a census sampling approach was adopted, whereby all 45 nursing heads were invited to participate due to the limited size of this group, allowing for comprehensive assessment of

leadership practices. Data were collected using a structured self-administered questionnaire comprising three sections. Demographic information was collected to describe participant characteristics. Leadership styles were assessed using the Multifactor Leadership Questionnaire (MLQ Form 5X), which measures transformational, transactional, and laissez-faire leadership styles and has demonstrated established reliability and validity in nursing leadership research (Bass & Avolio, 2004). Burnout was measured using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS), which assesses emotional exhaustion, depersonalization, and personal accomplishment and is widely used in healthcare research (Maslach & Leiter, 2016).

In addition to the cross-sectional analysis, a quasi-experimental pre-test–post-test design was implemented to examine the impact of a leadership-focused intervention. Baseline measures of leadership perceptions and burnout were obtained prior to the intervention. The intervention was delivered over a six-week period and focused on enhancing supportive leadership behaviors, communication practices, and managerial engagement among nursing heads. Post-intervention measurements were then collected to assess changes in burnout levels. Quasi-experimental designs are appropriate in organizational and healthcare contexts where random allocation is impractical and allow for evaluation of interventions under real-world conditions (Shadish et al., 2002). Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used to summarize demographic characteristics, leadership styles, and burnout levels. Pearson correlation analysis and multiple regression analysis were applied to examine associations and predictive relationships between leadership styles and burnout. For the quasi-experimental component, paired-sample t-tests were used to assess pre- and post-intervention differences. Statistical significance was set at $p < .05$. Ethical approval was obtained prior to data collection. Participation was voluntary, and informed consent was obtained from all participants. Confidentiality and anonymity were maintained throughout the study in accordance with established ethical guidelines for research involving human participants (World Medical Association, 2013).

4. Findings

This section presents the empirical findings of the study, including the response rate, descriptive statistics, assessment of data normality, evaluation of the measurement model, and results of the structural model and hypothesis testing. The findings are reported objectively to address the study objectives. Prior to data analysis, the response rate was examined to assess the adequacy and representativeness of the collected data. A total of 320 questionnaires were distributed to nurses working in the three hospitals of King Salman bin Abdulaziz Medical City in Medina, Saudi Arabia. Of these, 279 questionnaires were completed and deemed usable for analysis, resulting in a response rate of 87.2%. This response rate exceeds commonly recommended thresholds for survey-based healthcare research and indicates a high level of

participant engagement. The obtained response rate suggests that the sample is adequate for statistical analysis and reduces the potential risk of non-response bias.

To provide an initial overview of nurses' perceptions of leadership styles and burnout, descriptive statistics were calculated for all main study variables. As presented in Table 1, nurses reported a moderate level of burnout (M = 3.09, SD = 0.95). With respect to leadership styles, transformational leadership (M = 2.47, SD = 0.65) and transactional leadership (M = 2.48, SD = 0.66) were perceived at moderate levels, while laissez-faire leadership recorded the lowest mean score (M = 2.03, SD = 0.73).

Table 1: Descriptive Analysis of Leadership Styles and Nurse Burnout (N = 279)

Variable	Mean	Std. Deviation
Nurse Burnout (MBI)	3.09	0.95
Transformational Leadership (TF)	2.47	0.65
Transactional Leadership (TS)	2.48	0.66
Laissez-Faire Leadership (LF)	2.03	0.73

The descriptive results indicate that burnout is present at a moderate level among nurses, reflecting notable emotional and work-related strain in tertiary healthcare environments. The moderate perception of transformational and transactional leadership suggests that nurse managers demonstrate a mix of motivational and task-oriented behaviors, while passive leadership behaviors are perceived less frequently. Data normality was assessed using skewness and kurtosis statistics to ensure the suitability of parametric analysis and structural equation modeling. As presented in Table 2, all variables exhibited skewness and kurtosis values within acceptable thresholds, indicating no substantial deviation from normal distribution.

Table 2: Normality Test Using Skewness and Kurtosis (N = 279)

Variable	Skewness	Kurtosis
Nurse Burnout (MBI)	0.201	1.006
Transformational Leadership (TF)	−0.022	0.218
Transactional Leadership (TS)	0.021	0.182
Laissez-Faire Leadership (LF)	0.068	−0.239

The results support the appropriateness of parametric statistical techniques and Partial Least Squares Structural Equation Modeling (PLS-SEM) for subsequent analyses.

The reflective measurement model was evaluated to assess construct reliability and validity prior to examining structural relationships. Following the removal of low-loading indicators, the final measurement model demonstrated acceptable psychometric properties. As shown in Table 3, Cronbach's alpha and composite reliability values exceeded recommended thresholds for all constructs, while Average Variance Extracted (AVE) values met acceptable levels for applied behavioral research.

Table 3: Construct Reliability and Convergent Validity – Final Measurement Model

Construct	Cronbach's α	Composite Reliability	AVE
Nurse Burnout (MBI)	0.872	0.892	0.467
Transformational Leadership (TF)	0.732	0.684	0.444
Transactional Leadership (TS)	0.733	0.740	0.415
Laissez-Faire Leadership (LF)	0.826	0.830	0.455

Figure 1 presents the evaluation of the first-order reflective measurement model, illustrating standardized indicator loadings and internal consistency for Transformational Leadership (TF), Transactional Leadership (TS), Laissez-faire Leadership (LF), and Nurse Burnout (MBI).

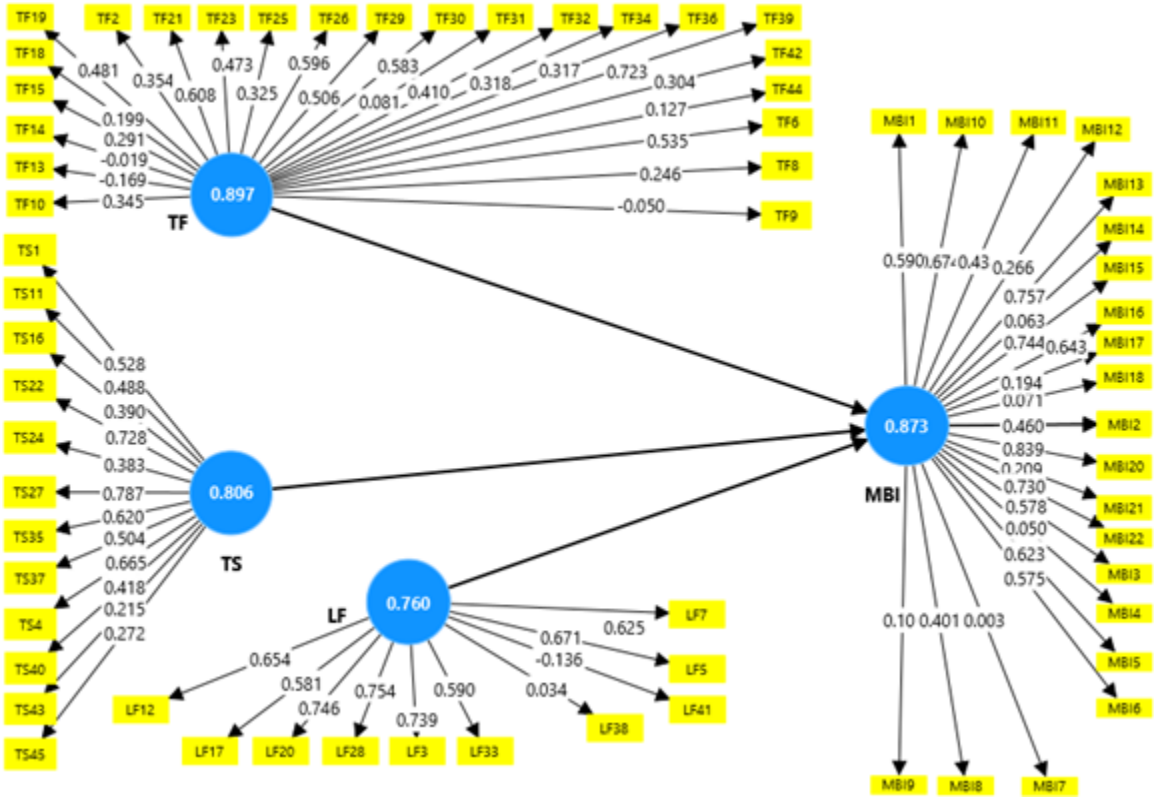

Figure 1: Evaluation of Model measurements (First Order)

As shown, indicator loadings varied considerably across constructs. For Transformational Leadership, several indicators exhibited weak or negative loadings, indicating inconsistent contributions to the latent construct. Despite a high internal consistency estimate (Cronbach's α = 0.897), the dispersion of loadings suggested inadequate convergent validity at the initial stage. Transactional Leadership demonstrated comparatively more stable loadings, with several indicators contributing moderately to strongly; internal consistency was acceptable (Cronbach's α = 0.806), though some items displayed marginal loadings. Laissez-faire Leadership showed mixed performance, with loadings ranging from weak to moderate,

reflecting variability in how passive leadership behaviors were captured. For Nurse Burnout, indicator loadings ranged from very weak to strong, with certain items demonstrating robust relationships with the construct, while others contributed minimally, despite high internal consistency (Cronbach's α = 0.873). Overall, the first-order model indicated acceptable reliability for most constructs but insufficient convergent validity for several, necessitating item refinement. These results informed the subsequent removal of low-performing indicators and re-estimation of the final measurement model, which demonstrated improved psychometric properties.

Figure 2 illustrates the final-order reflective measurement model after the removal of low-loading and non-contributing indicators.

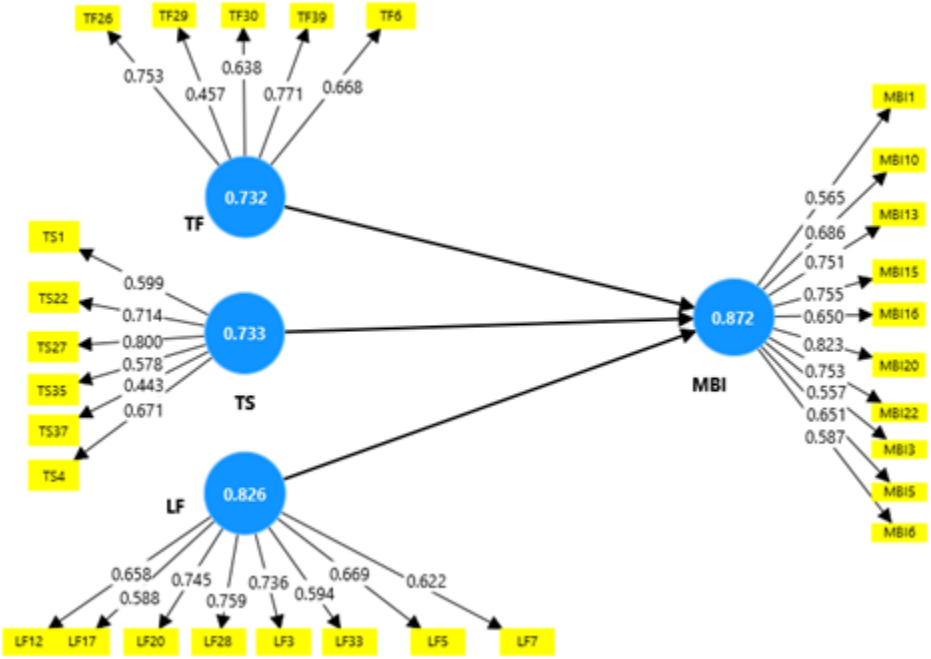

Figure 2: Evaluation of Model measurements (Final Order)

The refined model demonstrates a substantial improvement in indicator performance, construct reliability, and convergent validity across all latent variables. For Transformational Leadership (TF), the retained indicators exhibit standardized loadings ranging from 0.457 to 0.771, reflecting consistent and meaningful contributions to the construct. Internal consistency reliability for TF is acceptable (Cronbach's α = 0.732), indicating a stable measurement structure following item refinement. Transactional Leadership (TS) shows improved indicator stability, with standardized loadings between 0.443 and 0.800. The retained indicators demonstrate adequate representation of the construct, supported by satisfactory internal consistency (Cronbach's α = 0.733). These results indicate that the transactional leadership construct is reliably measured in the final model. For Laissez-faire Leadership (LF), all

retained indicators load positively and moderately to strongly on the construct, with loadings ranging from 0.588 to 0.759. The construct demonstrates strong internal consistency (Cronbach's α = 0.826), indicating that the refined indicators adequately capture passive leadership behaviors in the study context. The Burnout (MBI) construct exhibits robust measurement properties in the final model. Indicator loadings range from 0.557 to 0.823, with the strongest contributions observed for items reflecting emotional exhaustion and reduced personal accomplishment. The construct demonstrates high internal consistency (Cronbach's α = 0.872), confirming the reliability of the retained burnout indicators.

Overall, the final-order measurement model demonstrates acceptable reliability and improved convergent validity for all constructs, confirming that the refined model provides a coherent and psychometrically sound representation of leadership styles and nurse burnout. These results support the suitability of the measurement model for subsequent structural model evaluation and hypothesis testing.

Discriminant validity was examined using the heterotrait–monotrait ratio (HTMT). As shown in Table 4, all HTMT values were below the conservative threshold of 0.85, confirming that the constructs are empirically distinct.

Table 4: Heterotrait–Monotrait Ratio (HTMT)

Construct	LF	MBI	TF	TS
LF	—			
MBI	0.814	—		
TF	0.596	0.321	—	
TS	0.542	0.421	0.701	—

The structural model was then evaluated to examine the relationships between leadership styles and nurse burnout. Path coefficient analysis revealed that laissez-faire leadership had a strong positive and statistically significant effect on burnout (β = 0.756, p < .001), while transformational leadership demonstrated a significant negative effect (β = −0.197, p = .006). Transactional leadership showed a positive but non-significant relationship with burnout (β = 0.153, p = .056). These results are presented in Table 5.

Table 5: Structural Path Coefficients

Path	β	*t* value	*p* value
LF → MBI	0.756	19.149	< .001
TF → MBI	−0.197	2.752	.006
TS → MBI	0.153	1.913	.056

The explanatory power of the model was assessed using the coefficient of determination. As shown in Table 6, leadership styles collectively explained 55.2% of the variance in nurse burnout (R^2 = 0.552; adjusted R^2 = 0.547), indicating moderate to substantial predictive accuracy.

Table 6: Coefficient of Determination for Nurse Burnout

Endogenous Variable	R^2	Adjusted R^2
Nurse Burnout (MBI)	0.552	0.547

Finally, hypothesis testing results are summarized in Table 7. The findings support the hypotheses proposing a negative effect of transformational leadership on burnout and a positive effect of laissez-faire leadership on burnout, while the hypothesis related to transactional leadership was not supported.

Table 7: Direct Hypothesis Testing Results

Hypothesis	Relationship	β	*p* value	Decision
H1	TF → MBI	−0.197	.006	Supported

Overall, the findings demonstrate that leadership style plays a significant role in shaping burnout outcomes among nurses in tertiary hospitals, with passive leadership behaviors exerting the strongest adverse effect.

5. Discussion

This paper examined the relationship between nurse managers' leadership styles and the levels of burnout experienced by nurses working in tertiary hospitals in Medina, Saudi Arabia. The findings indicate that leadership style is meaningfully associated with nurse burnout, with distinct patterns observed across transformational, transactional, and laissez-faire leadership styles. Collectively, these results extend existing evidence on the role of leadership in shaping nurses' psychological well-being and provide a basis for leadership-focused organizational strategies. The most prominent finding was the strong positive association between laissez-faire leadership and nurse burnout. Nurses who reported higher exposure to passive, avoidant, and disengaged leadership also reported higher burnout levels. This finding is consistent with prior studies suggesting that laissez-faire leadership is associated with role ambiguity, limited managerial support, and insufficient guidance in healthcare settings (Alzailai et al., 2023; Qedair et al., 2022). In tertiary hospital environments, where nurses are routinely exposed to complex clinical demands and sustained emotional labor, the absence of active leadership may intensify emotional exhaustion and depersonalization (Alshurtan et al., 2024). These findings suggest that minimizing passive leadership behaviors may be an important consideration for healthcare organizations seeking to address burnout.

In contrast, transformational leadership demonstrated a significant negative association with burnout, suggesting a potential protective role. Nurses working under leaders who exhibit inspirational motivation, individualized consideration, and supportive communication reported lower burnout levels. This finding aligns with previous research indicating that

transformational leadership is associated with enhanced resilience, psychological well-being, and professional fulfillment among nurses (Hall et al., 2022; Alluhaybi et al., 2024). Evidence from Saudi Arabia and similar healthcare contexts further supports the association between transformational and authentic leadership styles and reduced emotional exhaustion in high-acuity settings (Al Sabei et al., 2023; Alsalmi & Alilyyani, 2024). These findings highlight the potential value of strengthening transformational leadership competencies within nursing management.

The results related to transactional leadership indicated a positive but statistically non-significant relationship with burnout. While transactional leadership emphasizes structure, performance monitoring, and contingent rewards, it may have limited influence on nurses' emotional experiences when applied in isolation. This finding is consistent with earlier literature suggesting that transactional leadership can support task clarity and operational efficiency but may not sufficiently address the emotional and psychological demands inherent in nursing work unless combined with more supportive leadership behaviors (Niinihuhta & Häggman-Laitila, 2022; Pishgooie et al., 2019). Accordingly, transactional leadership may be more effective when integrated with transformational approaches rather than relied upon as a primary leadership strategy.

The structural model further indicated that leadership styles collectively explained a substantial proportion of variance in nurse burnout. This level of explanatory capacity is comparable to findings from previous studies conducted in tertiary and critical care settings, which have identified leadership behavior as an important predictor of burnout, job satisfaction, and turnover intention (Opoku et al., 2023; Alzailai et al., 2023). These results reinforce the view that leadership represents a potentially modifiable organizational factor with implications for nurse well-being and workforce sustainability.

From a contextual perspective, the findings are particularly relevant to tertiary hospitals in Medina, Saudi Arabia, where nurses operate in demanding clinical environments characterized by high patient acuity and sustained occupational stress. In such settings, leadership behaviors that promote clarity, engagement, and emotional support may play an important role in mitigating burnout. The observed associations between laissez-faire leadership and higher burnout, alongside the protective association of transformational leadership, underscore the importance of organizational policies that encourage active and supportive leadership practices rather than reliance on individual leadership traits alone.

6. Conclusion and Recommendations

This paper examined the relationship between nurse managers' leadership styles and the levels of burnout experienced by nurses working in tertiary hospitals in Medina, Saudi Arabia. The findings indicate that leadership style is meaningfully associated with nurse burnout, with

differing patterns observed across transformational, transactional, and laissez-faire leadership styles. In particular, laissez-faire leadership was positively associated with higher burnout levels, transformational leadership showed a negative association with burnout, and transactional leadership did not demonstrate a statistically significant relationship with burnout. These results highlight the relevance of leadership behavior as an organizational factor influencing nurses' psychological well-being in high-acuity healthcare environments.

The strong association between laissez-faire leadership and burnout underscores the potential risks associated with passive and disengaged leadership practices. In tertiary hospital settings, where nurses are exposed to sustained workload demands, emotional labor, and complex patient care, limited managerial involvement may contribute to emotional exhaustion and depersonalization. Conversely, the observed association between transformational leadership and lower burnout levels suggests that leadership behaviors characterized by support, motivation, and individualized consideration may help foster resilience and professional fulfillment among nurses. Although transactional leadership may support task coordination and performance management, its lack of association with burnout in this study suggests that task-focused leadership alone may be insufficient to address nurses' emotional and psychological needs.

Based on the findings of this paper, several recommendations are proposed for nursing leadership and healthcare management. First, healthcare organizations may consider prioritizing leadership development initiatives that emphasize transformational leadership competencies, including effective communication, emotional intelligence, empowerment, and individualized support. Strengthening these competencies may enhance nurse managers' capacity to foster supportive work environments and mitigate burnout. Second, healthcare institutions may benefit from systematic approaches to identifying and addressing laissez-faire leadership behaviors. This could include leadership performance evaluations, structured feedback mechanisms, and accountability processes designed to encourage active managerial engagement and reduce leadership disengagement. Third, while transactional leadership practices may contribute to operational efficiency and role clarity, they may be more effective when integrated with transformational leadership behaviors rather than applied in isolation. Balancing task-oriented leadership with relational and supportive practices may help address both organizational objectives and nurses' well-being. Fourth, organizational policies may support leadership practices that promote psychological safety, staff engagement, and workload management, particularly in tertiary hospital settings where burnout risk is elevated. Providing access to leadership coaching, mentoring, and ongoing professional development may further strengthen leadership effectiveness and nurse retention. Finally, future research is recommended to employ longitudinal and multi-center designs to examine the long-term relationships between leadership styles and burnout, as well as related outcomes such as job satisfaction, turnover intention, and quality of patient care. Expanding research across different

regions and healthcare contexts within Saudi Arabia may enhance the generalizability of findings and inform broader leadership strategies.

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