

Correlation Between Head Nurses Leadership Styles and Staff Nurses Job Performance

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ABSTRACT

This study examined the correlation between head nurses' leadership styles and staff nurses' job performance in two selected hospitals in Masbate Province. It assessed transformational, transactional, and laissez-faire leadership and evaluated job performance in terms of knowledge, skills, and attitude. A descriptive quantitative correlational design was used, involving 150 staff nurses assigned to inpatient units and selected through purposive sampling. Data were gathered using a structured, expert-validated questionnaire and analyzed through frequency and percentage, weighted mean, standard deviation, Pearson product-moment correlation, and multiple linear regression at the .05 significance level. Transformational leadership was the most strongly perceived style ($M = 4.36$, $SD = 0.40$), followed by transactional leadership ($M = 4.16$, $SD = 0.43$), while laissez-faire leadership was least observed ($M = 2.24$, $SD = 0.92$). Staff nurses reported favorable performance in knowledge ($M = 4.18$, $SD = 0.41$), skills ($M = 4.15$, $SD = 0.43$), and attitude ($M = 3.99$, $SD = 0.50$). Transformational leadership was positively related to skills ($r = .303$, $p < .001$), whereas transactional leadership was positively related to knowledge ($r = .227$, $p = .005$). Laissez-faire leadership was not significantly related to any performance dimension. Regression analysis identified transformational leadership as the only significant predictor of overall job performance ($B = 0.151$, $p = .009$). The findings indicate that active, motivating, and supportive leadership is important in strengthening nursing performance and provide a basis for leadership development, mentoring, continuing professional education, and institutional performance-management initiatives.

Keywords: *head nurses, job performance, leadership styles, nursing management, staff nurses, transformational leadership*

INTRODUCTION

Leadership is central to the organization of nursing care because head nurses coordinate staff, allocate responsibilities, monitor standards, and shape the working climate of clinical units. In hospital settings, their daily decisions influence how staff nurses understand expectations, respond to patient needs, and sustain safe and efficient practice. Nursing leadership is therefore not limited to administrative control; it is a practical mechanism for aligning professional behavior with service and patient-care goals (Huber, 2021). Job performance, in turn, reflects the behaviors and outcomes through which employees contribute to organizational objectives (Campbell & Wiernik, 2015).

Recent nursing research has increasingly emphasized transformational leadership because it encourages a shared vision, individualized support, intellectual stimulation, and professional motivation. An integrative review found that transformational leadership was associated with higher job satisfaction and favorable nursing outcomes (Gebreheat et al., 2023), while a study among intensive care nurses linked transformational leadership

with psychological empowerment, work engagement, and job performance (Zhou et al., 2025). These findings suggest that leadership behaviors can affect not only how nurses feel about their work but also how effectively they apply their competencies in practice.

The relationship is nevertheless shaped by organizational conditions. Transformational leadership may produce stronger performance when staffing, work systems, resources, and psychological empowerment support nurses in carrying out their responsibilities (Al Khawaldeh et al., 2024). Job performance is also influenced by individual competence and the quality of the work environment (Aydın & Karadağ, 2021). Consequently, leadership should be examined together with specific performance dimensions rather than treated as a single, universal explanation for clinical effectiveness.

Existing studies commonly focus on job satisfaction, engagement, commitment, burnout, or intention to remain in the organization. Fewer studies directly compare transformational, transactional, and laissez-faire leadership with measurable dimensions of staff nurses' performance. Reviews indicate that active leadership styles tend to be associated with more favorable staff outcomes, whereas passive or avoidant leadership is less consistently beneficial (Qtait, 2023). Evidence is particularly limited in provincial Philippine hospital contexts, where resource conditions, organizational culture, and leader–staff interactions may differ from those reported in larger health systems.

This study addressed this gap by determining the correlation between head nurses' leadership styles and staff nurses' job performance in selected hospitals in Masbate Province. Specifically, it described respondents' demographic characteristics; assessed transformational, transactional, and laissez-faire leadership as perceived by staff nurses; evaluated job performance in terms of knowledge, skills, and attitude; tested the relationships between leadership styles and performance dimensions; and determined which leadership styles predicted overall job performance. The findings were intended to inform leadership development, nursing management, and performance-enhancement initiatives within hospital settings.

Literature Review

Nursing Knowledge and Job Performance

Professional knowledge enables nurses to interpret clinical information, follow evidence-based standards, communicate care decisions, and respond appropriately to changes in patient condition. In emergency settings, knowledge and skills were associated with better job performance, although workload, staffing, feedback, and available resources also affected how effectively nurses used what they knew (Daba et al., 2024). This indicates that knowledge is a necessary foundation of performance but becomes most useful when the organization supports its consistent application.

Cognitive abilities such as critical thinking also connect knowledge with clinical action. Ateş (2023) reported a significant relationship between critical-thinking ability and nurses' job performance, particularly in decision-making and the management of complex situations. Continuous learning, updated clinical information, and opportunities to reflect on practice can therefore strengthen the knowledge component of nursing performance and improve the quality and safety of care.

Clinical Skills and Job Performance

Clinical performance depends on the accurate and timely use of technical, interpersonal, and organizational skills. Operating-room nurses' performance competencies vary across stages of professional experience, and less experienced nurses often require more focused practical education (Jung et al., 2020). Comparative evidence has likewise shown gaps between educational preparation and the practical competencies expected in hospital work, underscoring the importance of structured transition, supervision, and mentoring programs (Shin et al., 2020).

Competency-oriented training can improve theoretical understanding, operational skills, and professional readiness among newly employed nurses (Xu et al., 2021). These findings show that nursing skill is not static; it develops through practice, feedback, coaching, and access to continuing professional education.

Professional Attitude and Job Performance

Professional attitude includes commitment to quality care, ethical conduct, cooperation, resilience, and constructive responses to workplace pressure. Among Filipino nurses, attitudes and practices during the COVID-19 pandemic were associated with the quality of nursing work life, indicating that preparedness, role clarity, and positive professional behavior support performance under demanding conditions (Navales et al., 2021). Psychological resilience has also been positively related to job performance, suggesting that nurses who can adapt to stress are better able to sustain effective practice (Hoşgör & Yaman, 2022).

Autonomy, job satisfaction, and perceptions of patient-safety culture influence nurses' safety-management activities (Koak et al., 2023). Work engagement is similarly associated with satisfaction, perceived quality of care, and intention to remain in nursing work (Wei et al., 2023). In addition, nurses' attitudes toward patient safety affect reporting and adverse-event-related behaviors (Almanhali et al., 2024). These studies demonstrate that professional attitude has observable implications for teamwork, safety, and continuity of care.

Head-Nurse Leadership Styles and Staff Performance

The Full Range Leadership Model distinguishes transformational, transactional, and laissez-faire leadership. Transformational leaders communicate purpose, inspire improvement, encourage new ideas, and provide individualized support. Transactional leaders clarify expectations and use monitoring, feedback, rewards, or corrective action to maintain standards. Laissez-faire leadership is characterized by limited involvement, delayed decisions, and minimal guidance. These styles create different conditions for staff motivation, learning, accountability, and role performance (Bass & Avolio, 1994).

Transformational leadership is frequently associated with stronger work engagement and favorable performance outcomes among nurses (Alluhaybi et al., 2024). Its effects may occur through motivation, satisfaction, psychological empowerment, and professional confidence (Labrague, 2024). Supportive leadership can also reduce burnout and strengthen self-efficacy, which may improve the consistency and quality of employees' task performance (Yuanli et al., 2024).

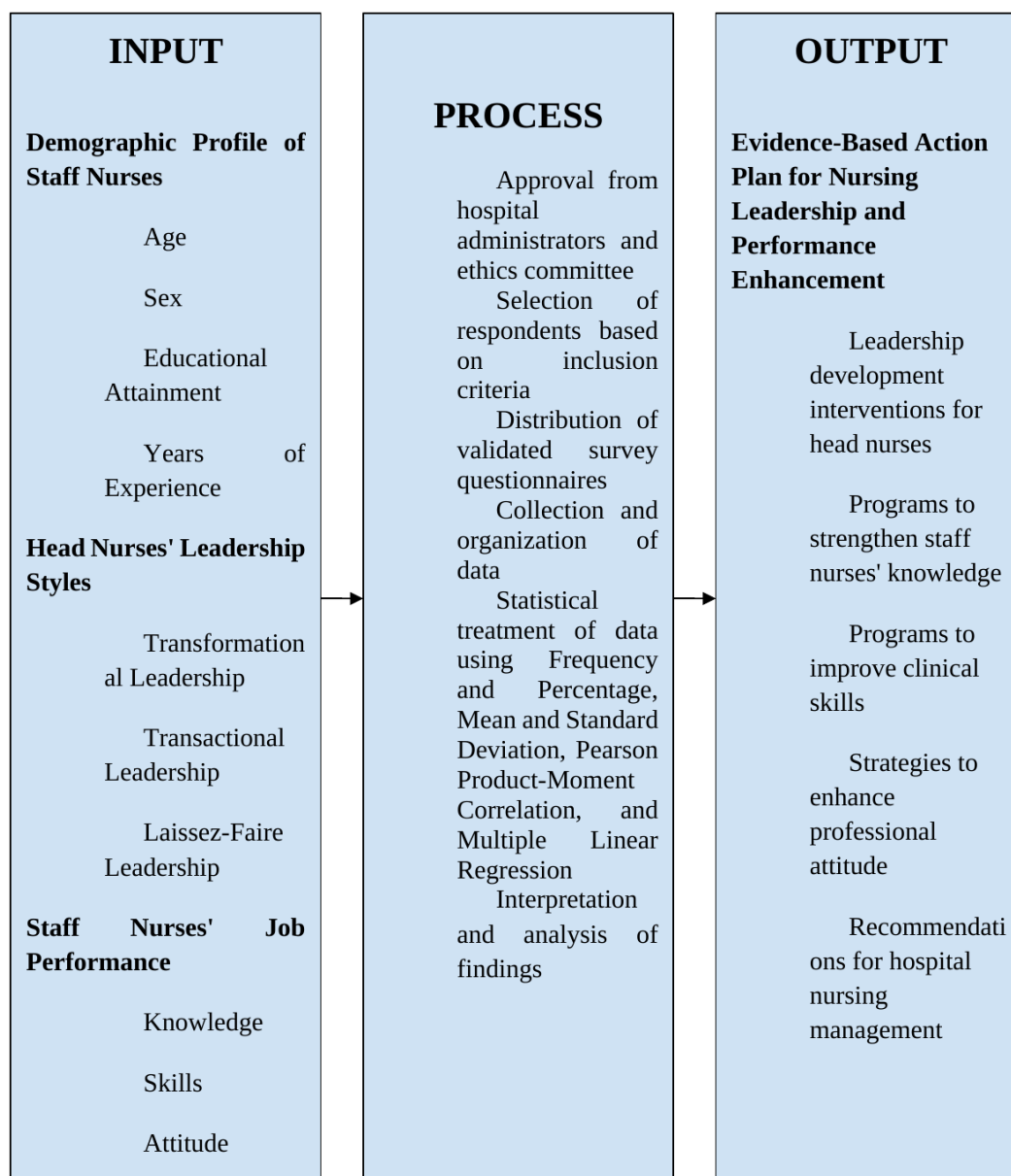
Transactional leadership may be useful where clear standards, close monitoring, and immediate feedback are essential, but it may be less effective than transformational leadership in sustaining broader professional growth. Passive or avoidant leadership generally provides fewer opportunities for guidance, learning, and performance improvement. Integrative evidence therefore supports active leadership approaches while emphasizing that leadership effects differ according to the outcome measured and the organizational context (Gebreheat et al., 2023; Qtait, 2023).

Theoretical and Conceptual Integration

The study was anchored primarily in the Full Range Leadership Model and complemented by Benner's Novice to Expert perspective. The leadership model explains how transformational, transactional, and laissez-faire behaviors influence staff motivation and performance, whereas Benner's framework emphasizes the development of nursing competence through experience, guidance, and practice (Bass & Avolio, 1994; Benner, 1984). Together, these perspectives support the assumption that head nurses can influence how staff nurses develop and demonstrate knowledge, clinical skills, and professional attitudes.

The conceptual framework used an Input–Process–Output model. Inputs included staff nurses' demographic characteristics, perceived head-nurse leadership styles, and job-performance dimensions. The process comprised ethical and administrative approval, respondent selection, validated questionnaire administration, data organization, and statistical analysis. The intended output was an evidence-based action plan for leadership and nursing-performance enhancement. The framework guided the analysis of whether leadership styles were related to, and predictive of, staff nurses' job performance.

Figure 1. *Conceptual Framework of the Study*



METHODS

Research Design

The study used a descriptive quantitative correlational design. This design was appropriate because it described the perceived leadership styles of head nurses and the job performance of staff nurses and tested the direction and strength of relationships among the variables without manipulating the clinical environment. Multiple linear regression was also used to determine whether the three leadership styles predicted overall job performance.

Research Locale

The study was conducted in the Diocesan Hospital of San Antonio de Padua and Masbate Provincial Hospital in Masbate Province. Data were gathered from inpatient units, including Internal Medicine, Pediatrics, Obstetrics and Gynecology, Surgery, and Orthopedics. These units were selected because staff nurses provided continuous direct patient care and interacted regularly with head nurses, making leadership behaviors and performance expectations observable in routine practice.

Participants and Sampling Technique

The respondents were 150 staff nurses assigned to inpatient units of the participating hospitals. Purposive sampling was used to recruit nurses who were directly involved in bedside care and had sufficient exposure to their head nurses' leadership practices. Staff nurses were required to have worked in their current inpatient assignment for at least six months. Nurses in administrative, supervisory, managerial, or non-inpatient positions were excluded because their roles differed from the frontline clinical focus of the study.

Research Instrument

Data were gathered through a structured questionnaire composed of three parts. The first part collected age, sex, educational attainment, and years of nursing experience. The second part contained 15 statements measuring transformational, transactional, and laissez-faire leadership, with five items for each style. The third part contained 15 statements assessing job performance in terms of knowledge, skills, and attitude, with five items for each dimension. Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The instrument was based on established leadership constructs and nursing-performance literature and was adapted to the local hospital context. It underwent content validation by nurse leaders, hospital administrators, and nursing research experts. A pilot test involving respondents outside the final sample was conducted to examine clarity, appropriateness, and internal consistency before the final administration.

Data Gathering Procedure

Before data collection, the researcher secured ethics-review clearance, institutional permission from the participating hospitals, and approval from the research adviser. Nursing administrators assisted in scheduling questionnaire distribution so that participation would not interfere with patient-care duties. Eligible nurses received an explanation of the study's purpose, procedures, potential risks and benefits, confidentiality safeguards, and voluntary nature before signing informed consent.

Questionnaires were completed during available break periods and collected immediately after completion. Respondents were assigned codes rather than names. Hard-copy records were stored in a locked cabinet, and electronic files were password protected and accessible only to the researcher and adviser. The thesis specified that records would be retained for three years and then securely destroyed.

Data Analysis

Frequency and percentage were used to summarize demographic characteristics. Weighted mean and standard deviation were used to describe perceived leadership styles and job-performance dimensions. Pearson product-moment correlation tested the relationships between each leadership style and knowledge, skills, and attitude. Multiple linear regression determined whether transformational, transactional, and laissez-faire leadership predicted overall job performance. All inferential tests used a .05 significance level.

Ethical Consideration

The study observed autonomy, beneficence, non-maleficence, justice, veracity, informed consent, and confidentiality. Participation was voluntary, withdrawal was allowed without penalty, and no compensation was provided. Data collection was arranged to minimize disruption and burden, and no personally identifying information was attached to the responses. Ethical clearance and institutional approvals were obtained before recruitment, and data handling followed the confidentiality principles of the Philippine Data Privacy Act of 2012.

RESULTS AND DISCUSSION

Respondent Profile

The respondent group was predominantly female and composed mainly of early- to mid-career nurses. The largest age category was 26–30 years (27.33%), followed by 31–35 years (26.67%) and 20–25 years (24.00%). Women represented 75.33% of the sample. Almost all respondents held a bachelor's degree (98.00%), and the largest experience group had four to six years of nursing practice (43.33%).

These characteristics indicate that the findings largely reflect the perceptions of bachelor's-prepared nurses with substantial exposure to day-to-day inpatient practice. The distribution of experience also provided a reasonable basis for assessing leadership because most respondents had sufficient time in clinical work to observe supervision, communication, decision-making, and performance expectations within their units.

Table 1. *Demographic Profile of Respondents*

Characteristic	Category	f	%
Age	20–25 years	36	24.00
	26–30 years	41	27.33
	31–35 years	40	26.67
	36–40 years	13	8.67
	41 years and above	20	13.33
Sex	Male	37	24.67
	Female	113	75.33
Educational attainment	Bachelor's degree	147	98.00
	Master's degree units	3	2.00
Years of experience	Less than 1 year	31	20.67
	1–3 years	22	14.67
	4–6 years	65	43.33
	7–10 years	13	8.67
	More than 10 years	19	12.67

Perceived Leadership Styles

Transformational leadership received the highest rating ($M = 4.36$, $SD = 0.40$), interpreted as strongly agree. Respondents therefore perceived that their head nurses commonly inspired staff, communicated direction, recognized performance, considered staff input, and modeled professional behavior. Transactional leadership was also favorably rated ($M = 4.16$, $SD = 0.43$), indicating that monitoring, feedback, standards, and performance-based responses were regularly used.

Laissez-faire leadership had the lowest mean ($M = 2.24$, $SD = 0.92$), interpreted as disagree, showing that head nurses were generally not viewed as passive or disengaged. The pattern is consistent with evidence that transformational leadership is prevalent in nursing management and is associated with engagement, satisfaction, and performance-supportive work environments (Alluhaybi et al., 2024; Gebreheat et al., 2023). The overall leadership rating of agree ($M = 3.59$, $SD = 0.38$) indicates that respondents generally observed active leadership practices in their units.

Table 2. *Respondents' Perception of Head Nurses' Leadership Styles*

Leadership Style	Mean	SD	Interpretation
Transformational leadership	4.36	0.40	Strongly agree
Transactional leadership	4.16	0.43	Agree
Laissez-faire leadership	2.24	0.92	Disagree
Overall leadership style	3.59	0.38	Agree

Legend: 1.00–1.80 = Strongly disagree; 1.81–2.60 = Disagree; 2.61–3.40 = Neutral; 3.41–4.20 = Agree; 4.21–5.00 = Strongly agree.

Staff Nurses' Job Performance

Staff nurses reported favorable job performance across all three dimensions. Knowledge obtained the highest mean ($M = 4.18$, $SD = 0.41$), followed closely by skills ($M = 4.15$, $SD = 0.43$). These results indicate that respondents perceived themselves as able to apply nursing principles, follow hospital procedures, carry out clinical tasks, document care, use equipment, and maintain infection-control practices.

Attitude obtained the lowest of the three performance means but remained favorable ($M = 3.99$, $SD = 0.50$). Respondents generally reported compassion, cooperation, commitment to quality, constructive stress management, and professional conduct. The overall performance mean was 4.11 ($SD = 0.28$). This pattern supports the view that performance emerges from the combined use of professional knowledge, practical competence, and constructive work attitudes (Ateş, 2023; Koak et al., 2023).

Table 3. *Staff Nurses' Job Performance*

Performance Dimension	Mean	SD	Interpretation
Knowledge	4.18	0.41	Agree
Skills	4.15	0.43	Agree
Attitude	3.99	0.50	Agree
Overall job performance	4.11	0.28	Agree

Legend: 1.00–1.80 = Strongly disagree; 1.81–2.60 = Disagree; 2.61–3.40 = Neutral; 3.41–4.20 = Agree; 4.21–5.00 = Strongly agree.

Relationship Between Leadership Styles and Job Performance

Transformational leadership had a significant positive relationship with skills ($r = .303$, $p < .001$). Although the association was weak, it indicates that nurses who perceived more inspirational, supportive, and development-oriented leadership also reported stronger clinical and practical skills. Transformational leaders may promote skill development by encouraging learning, innovation, confidence, and professional growth. This interpretation agrees with evidence linking transformational leadership to empowerment, engagement, and performance (Al Khawaldeh et al., 2024; Zhou et al., 2025).

Transactional leadership had a significant positive relationship with knowledge ($r = .227$, $p = .005$). Clear expectations, monitoring, corrective feedback, and accountability may reinforce awareness of policies, procedures, and clinical standards. However, transactional leadership was not significantly associated with skills or attitude. Transformational leadership was likewise not significantly related to knowledge or attitude, suggesting that leadership styles may influence selected components of performance rather than all dimensions equally.

Laissez-faire leadership was not significantly related to knowledge, skills, or attitude. Passive leadership therefore did not provide a measurable contribution to the performance dimensions assessed in this study. The generally weak correlations also show that job performance is multifaceted and may depend on workload, work environment, professional experience, motivation, staffing, and organizational support in addition to leadership (Aydın & Karadağ, 2021; Daba et al., 2024; Qtait, 2023).

Table 4. *Correlations Between Leadership Styles and Job-Performance Dimensions*

Leadership Style	Knowledge	Skills	Attitude
Transformational	$r = .088$; $p = .284$	$r = .303$; $p < .001$	$r = .080$; $p = .327$
Transactional	$r = .227$; $p = .005$	$r = .061$; $p = .461$	$r = .101$; $p = .218$
Laissez-faire	$r = -.011$; $p = .897$	$r = .047$; $p = .569$	$r = .123$; $p = .133$

Note. Pearson product-moment correlations; significance was evaluated at $\alpha = .05$.

Leadership Styles as Predictors of Overall Job Performance

Multiple linear regression identified transformational leadership as the only significant predictor of overall job performance ($B = 0.151$, $SE = 0.057$, $t = 2.645$, $p = .009$, 95% CI [0.038, 0.264]). The positive coefficient indicates that stronger transformational leadership behaviors were associated with higher overall performance when the other leadership styles were considered in the model. This result strengthens the interpretation that motivation, trust, empowerment, and developmental support are especially important in clinical leadership.

Transactional leadership had a positive but non-significant coefficient ($B = 0.092, p = .086$). Its significant bivariate association with knowledge suggests that transactional practices may be useful for reinforcing standards and specific performance requirements, but they did not independently predict overall performance. Laissez-faire leadership was also not a significant predictor ($B = 0.027, p = .276$), consistent with the absence of significant correlations across the performance dimensions.

The regression findings support the Full Range Leadership Model by distinguishing the broader performance contribution of transformational leadership from the more limited influence of transactional and passive styles. They also align with evidence that transformational leadership supports work satisfaction, engagement, self-efficacy, and patient-care outcomes (Labrague, 2024; Yuanli et al., 2024). At the same time, the modest relationships indicate that leadership development should be combined with adequate staffing, supportive work systems, continuing education, and fair performance-management practices.

Table 5. *Multiple Linear Regression of Leadership Styles on Overall Job Performance*

Leadership Style	B	SE	t	p	95% CI
Transformational	0.151	0.057	2.645	.009	[0.038, 0.264]
Transactional	0.092	0.053	1.727	.086	Not reported
Laissez-faire	0.027	0.024	1.094	.276	Not reported

Note. Dependent variable: overall job performance. Statistical significance was set at $p < .05$.

CONCLUSION

Head nurses in the selected hospitals were perceived to practice transformational leadership most strongly, while laissez-faire behaviors were generally uncommon. Staff nurses reported favorable job performance, with knowledge rated highest, followed by skills and attitude. The findings indicate that active leadership has specific rather than uniform relationships with performance: transformational leadership was associated with nurses' skills, transactional leadership was associated with knowledge, and neither style had a significant relationship with attitude. Laissez-faire leadership had no significant relationship with any performance dimension.

Transformational leadership was the only significant predictor of overall job performance. The study therefore concludes that head nurses who inspire, support, mentor, communicate direction, and empower staff contribute meaningfully to stronger nursing performance. Leadership is not the sole determinant of performance, but it is an important organizational mechanism through which hospitals can strengthen professional competence, engagement, accountability, and the delivery of quality patient care.

Recommendation

Hospital administrators, nursing service departments, and human resource units should prioritize transformational leadership development for head nurses. Training should focus on communication, motivation, mentoring, empowerment, team building, and constructive feedback. Consistent with the thesis recommendations, hospitals may target completion of at least two leadership-development sessions by most head nurses within six months and evaluate improvement through pre- and post-assessments, leadership evaluations, and staff feedback.

Nursing management should establish structured mentoring and coaching for newly hired and less experienced nurses, conduct regular competency-enhancement programs, and integrate quarterly performance discussions with documented feedback and individualized development plans. Transactional practices such as clear standards, monitoring, and corrective feedback may be retained where they support knowledge and protocol compliance, but they should be balanced with transformational behaviors that encourage learning, confidence, and initiative.

Hospital leaders should also assess workload, staffing, work environment, job satisfaction, work engagement, psychological empowerment, and organizational culture because leadership explained only part of the variation in performance. Future researchers should use larger samples, multiple institutions, objective or supervisor-rated performance indicators, and mixed-methods or longitudinal designs to clarify how leadership interacts with organizational and individual factors in different healthcare settings.

References

- Al Khawaldeh, A., Algunmeeyn, A., & Bani-Melhem, S. (2024). Transformational leadership and nurses' performance: The mediating role of work environment and psychological empowerment. *Journal of Nursing Management*, 32(2), 345–354. <https://doi.org/10.1111/jonm.13729>
- 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>
- Almanhali, R., Al Sabei, S. D., & Matua Amandu, G. (2024). Nurses' attitudes towards patient safety and their relationship to adverse patient events in Oman. *Journal of Research in Nursing*. Advance online publication. <https://doi.org/10.1177/17449871241278860>
- Ateş, N. (2023). The relationship between critical thinking and job performance among nurses: A descriptive survey study. *International Journal of Nursing Practice*. Advance online publication. <https://doi.org/10.1111/ijn.13173>
- Aydın, A., & Karadağ, A. (2021). The effect of individual, professional and work environment characteristics on job performance of nurses: A cross-sectional study. *Journal of Nursing Management*, 29(7), 2110–2118. <https://doi.org/10.1111/jonm.13343>
- Bass, B. M., & Avolio, B. J. (Eds.). (1994). *Improving organizational effectiveness through transformational leadership*. SAGE Publications.
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley.
- Campbell, J. P., & Wiernik, B. M. (2015). The modeling and assessment of work performance. *Annual Review of Organizational Psychology and Organizational Behavior*, 2(1), 47–74. <https://doi.org/10.1146/annurev-orgpsych-032414-111427>
- Daba, L., Beza, L., Kefyalew, M., Teshager, T., Wondimneh, F., Bidiru, A., & Ketema, I. (2024). Job performance and associated factors among nurses working in adult emergency departments at selected public hospitals in Addis Ababa, Ethiopia: A facility-based cross-sectional study. *BMC Nursing*, 23, Article 312. <https://doi.org/10.1186/s12912-024-01979-w>
- Gebreheat, G., Teame, H., & Costa, E. I. (2023). The impact of transformational leadership style on nurses' job satisfaction: An integrative review. *SAGE Open Nursing*, 9, 1–12. <https://doi.org/10.1177/23779608231197428>
- Hoşgör, H. K., & Yaman, M. (2022). Investigation of the relationship between psychological resilience and job performance in Turkish nurses during the COVID-19 pandemic in terms of descriptive characteristics. *Journal of Nursing Management*, 30(1), 44–52. <https://doi.org/10.1111/jonm.13477>
- Huber, D. (2021). *Leadership and nursing care management* (7th ed.). Elsevier.
- Jung, J. H., Kim, H. J., & Kim, J.-S. (2020). Comparison of nursing performance competencies and practical education needs based on clinical careers of operating room nurses: A cross-sectional study. *Healthcare*, 8(2), 136. <https://doi.org/10.3390/healthcare8020136>
- Koak, B., Seo, J., Song, E., Shin, H., & Jeon, J. (2023). The effects of professional autonomy, job satisfaction, and perceived patient-safety culture on nurses' patient-safety management activities: A cross-sectional study. *Korean Journal of Adult Nursing*, 35(2), 117–126. <https://doi.org/10.7475/kjan.2023.35.2.117>
- Labrague, L. J. (2024). Transformational leadership, work satisfaction, and patient care outcomes among nurses: A cross-sectional study. *Journal of Nursing Management*, 32(5), 1012–1020. <https://doi.org/10.1111/jonm.13987>
- Navales, J. V., Jallow, A. W., Lai, C. Y., Liu, C. Y., & Chen, S. W. (2021). Relationship between quality of nursing work life and uniformed nurses' attitudes and practices related to COVID-19 in the Philippines: A cross-sectional study. *International Journal of Environmental Research and Public Health*, 18(19), 9953. <https://doi.org/10.3390/ijerph18199953>
- Qtait, M. (2023). Head nurses' leadership styles and nurse performance: An integrative review. *International Journal of Africa Nursing Sciences*, 18, 100564. <https://doi.org/10.1016/j.ijans.2023.100564>
- Shin, H., Park, J. H., & Kim, J. H. (2020). Performance competence of pregraduate nursing students versus hospital nurses: A comparative study. *Nurse Education Today*, 92, 104495. <https://doi.org/10.1016/j.nedt.2020.104495>
- Wei, H., Horsley, L., Cao, Y., Haddad, L. M., Hall, K. C., Robinson, R., Powers, M., & Anderson, D. G. (2023). The associations among nurse work engagement, job satisfaction, quality of care, and intent to leave: A national survey in the United States. *International Journal of Nursing Sciences*, 10(4), 476–484. <https://doi.org/10.1016/j.ijnss.2023.09.010>

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- Xu, H., Ma, L., Wang, L., Zhang, X., & Wang, Y. (2021). Effects of an innovative training program for new graduate registered nurses: A randomized controlled trial. *SAGE Open*, 11(1), 1–10.
<https://doi.org/10.1177/2158244020988542>
- Yuanli, G., Chen, X., Zhao, Y., & Zhang, L. (2024). The impact of head nurses' leadership on research burnout, self-efficacy, and performance among postgraduate nurses. *BMC Medical Education*, 24, 78.
<https://doi.org/10.1186/s12909-024-05144-y>
- Zhou, X., Li, Y., & Wang, J. (2025). Transformational leadership, psychological empowerment, work engagement, and intensive care nurses' job performance: A cross-sectional study using structural equation modeling. *BMC Nursing*, 24, 55. <https://doi.org/10.1186/s12912-025-03685-7>