

Hospital Work Environment and Nursing Performance: Insight from

Hospital Work
Environment and
Nursing Performance

Mosul, Iraq

Atheer Abd Ahmed

ABSTRACT

Objective: To examine the relationship between the hospital work environment and nursing performance and to identify the key environmental factors associated with variations in nurses' effectiveness and productivity.

Study Design: Cross-sectional study

Place and Duration of Study: This study was conducted at the Department of Nursing Clinical Sciences, University of Mosul, College of Nursing, Mosul, Iraq from 13th October 2024 to 4th May 2025.

Methods: This cross-sectional study was conducted at in Mosul city, the Governorate of Nineveh, Iraq, in four large hospitals namely the Al-Salam Teaching Hospital, Ibn-Sena Teaching Hospital, Ibn Al-Atheer Teaching Hospital, and Mosul General Hospital from 13th October 2024 to 4th May 2025 among 250 nurses selected using a convenience sampling technique.

Results: More than 75% of nurses agreed or strongly agreed that they perform their duties efficiently, emphasize quality of care, and are willing to work overtime. Nursing performance demonstrated a positive correlation with all dimensions of the work environment, with the highest correlation observed for the overall work environment scale ($r=0.660$). Additionally, training ($r=0.497$), incentives ($r=0.449$), and technological empowerment ($r=0.468$) were identified as significant predictors of performance.

Conclusion: The significant influence of the work environment on nursing performance. While training and technological empowerment appear to be adequately supported, improvements in incentives and nurses' involvement in decision-making are necessary to enhance job satisfaction and overall performance.

Key Words: Work Environment, Nurses, Performance

Citation of article: Ahmed AA. Hospital Work Environment and Nursing Performance: Insight from Mosul, Iraq. Med Forum 2026;37(6):97-102. doi:10.60110/medforum.370619.

INTRODUCTION

The hospital work environment is a key determinant of nursing performance, nurse wellbeing, and healthcare quality. Nurses, as the largest group of healthcare providers, perform complex roles that include clinical care, decision-making, coordination, and patient support. A supportive work environment enhances efficiency and job satisfaction, whereas poor conditions contribute to burnout and reduced care quality.¹

The work environment includes structural, organizational, and psychosocial factors such as staffing levels, leadership, workload, teamwork, and resource availability.

Department of Nursing Clinical Sciences, University of Mosul, College of Nursing, Mosul, Iraq.

Correspondence: Author: Atheer Abd Ahmed, Department of Nursing Clinical Sciences, University of Mosul, College of Nursing, Mosul, Iraq.

Contact No: +9647708208087

Email: atheer.ahmed@uomosul.edu.iq

Received: December, 2025

Reviewed: January-February, 2026

Accepted: March, 2026

These elements significantly influence nurses' professional experience and performance. Evidence shows that unfavorable environments are linked to job dissatisfaction and turnover, while positive environments improve both nurse outcomes and patient care.²

Nursing performance is a multidimensional aspect that includes clinical competence, standard compliance, patient satisfaction, and teamwork, psychological aspects such as stress and involvement.³ The studies continuously prove that the sufficient staffing, favorable leadership, and professional autonomy are linked to the improved performance, and the workload and insufficient resources have adverse consequences.⁴

Also, training, technological empowerment, incentives, and decision-making are also some of the key factors that are predictive of nursing performance especially within the Middle Eastern context in healthcare.⁵ The work conditions in hospitals should be improved to increase the performance of nurses and improve the quality of healthcare. Specific leadership, resource, and staff assistance are essential, particularly where the resources are limited, like in Mosul, Iraq.⁶

METHODS

This cross-sectional study was conducted in Mosul city, the Governorate of Nineveh, Iraq, in four large hospitals namely the Al-Salam Teaching Hospital, Ibn-Sena Teaching Hospital, Ibn Al-Atheer Teaching Hospital, and Mosul General Hospital from 1st November 2024 to 4th May 2025 vide letter No. 3434/QM/Approval/EFEF3 dated 22nd October 2024 among 250 nurses selected using a convenience sampling technique who were actively involved in direct patient care were eligible to be enrolled. Such hospitals offer full-fledged medical care and have a high number of nursing personnel. The questionnaire is based on the instrument employed by Althobaiti et al⁷ in their study The Impact of the Work Environment on the Performance of Nurses in the Saudi Healthcare Sector. Some small changes were also done to fit it in the context and goals of the present study. This tool was divided into three parts; sociodemographic factors (20 items), work environment (25 items that included training, incentives, technological empowerment, work conditions, and decision-monitoring), and nursing performance (15 items). The ratings were done on a five-point Likert scale with results of higher scores reporting a more positive perception. The content and face validity were determined by the review of the experts, a panel of ten specialists, and the reliability was determined by Cronbachs alpha after pilot test that was done on a sample of 25 nurses. The data was analyzed with SPSS-26. Pearson correlation coefficient was used to test the relationship with statistical significance of $p \leq 0.05$.

RESULTS

The mean age was 26.89 ± 5.95 years with a mean experience of 3.40 ± 4.94 years, indicating a relatively

young and less-experienced workforce. The average number of training courses was 2.31 ± 2.37 . Females slightly predominated (52.4%). Most participants had institute-level education (47.6%), followed by bachelor’s degree holders (41.6%). The majority were employed at Al-Salam Teaching Hospital (53.2%). Regarding work units, the highest proportion worked in the emergency department (28.8%), followed by intensive care (14.4%) and neurology units (14.8%) [Table 1].

Table No. 1: Demographic characteristics of the participants (n=250)

Variable	No.	%
Gender		
Male	119	47.6
Female	131	52.4
Education level		
Nursing preparatory	18	7.2
Institute	119	47.6
Bachelor	104	41.6
Master	9	3.9
Hospital name		
Al-Salam	133	53.2
Ibn Senna	81	32.4
Mosul General	20	8.0
Ibn Al-Atheer	16	6.4
Hospital unit		
Emergency	72	28.8
Surgical	23	9.2
Medical	32	12.8
Paediatric	34	13.6
Intensive care unit	36	14.4
Physiotherapy	7	2.8
Insulation	9	3.6
Neurology	37	14.8

Table No. 2: Distribution of nurse performance measure (N = 250)

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I strive to provide healthcare services with the highest efficiency, productivity, and quality	1.8%	4.5%	11.7%	40.5%	41.4%
I perform my duties at the hospital according to the highest international quality standards	-	8.1%	11.7%	45.9%	34.2%
I perform my duties at the hospital according to national quality standards	-	9%	12.6%	46.8%	31.5%
I ensure the quality of medical services and patient satisfaction	-	4.5%	16.2%	46.8%	32.4%
I am willing to work outside regular hours if necessary	-	4.5%	22.5%	40.5%	32.4%
I have sufficient experience to resolve problems at work	0.9	6.3%	18%	43.2%	31.5%
I provide guidance and answer patients’ questions	0.9%	4.5%	10.8%	46.8%	36.9%
I have the ability and willingness to assume responsibility	0.9%	3.6%	15.3%	39.6%	40.5%
I communicate effectively with patients and staff	0.9%	5.4%	12.6%	43.2%	37.8%

I follow hospital rules and policies	-	4.5%	17.1%	39.6%	38.7%
I receive training on modern medical technologies	-	8.1%	12.6%	38.7%	40.5%
I complete tasks on time with high productivity	1.8%	4.5%	11.7%	40.5%	41.4%
I pursue personal development and improve my skills	-	8.1%	11.7%	45.9%	34.2%
Incentives increase my motivation and productivity	-	9%	12.6%	46.8%	31.5%
Productivity evaluation helps determine incentives	-	4.5%	16.2%	46.8%	32.4%

Table No. 3: Description of work environment scale scoring

Variable	Category	No.	%
First Dimension: Training	Very weak	-	-
	Weak	-	-
	Moderate	27	10.8
	Strong	147	58.8
	Very strong	76	30.4
Second Dimension: Incentives	Very weak	9	3.6
	Weak	52	20.8
	Moderate	61	24.4
	Strong	86	34.4
	Very strong	42	16.8
Third Dimension: Technical Empowerment	Weak	20	8.0
	Moderate	65	26.0
	Strong	131	52.4
	Very strong	34	13.6
	Very weak	2	0.8
Fourth Dimension: Nature and Conditions of Work	Weak	32	12.8
	Moderate	65	26.0
	Strong	101	40.4
	Very strong	50	20.0
	Very weak	36	14.4
Fifth Dimension: Participation in Decision-Making	Moderate	65	26.0
	Strong	104	41.6
	Very strong	45	18.0

Table 4: Pearson correlation matrix between nurses' performance and work environment variables (N = 250)

Variable	Nurses' performance	Training	Incentives	Tech. Empowerment	Participation	Nature & Conditions	Work Environment
Nurses' Performance Scale	1						
Training Score	.497**	1					
Incentives	.449**	.375**	1				
Technological Empowerment	.468**	.549**	.393**	1			
Participation in Decision Making	.465**	.437**	.401**	.556**	1		
Nature & Conditions of Work	.478**	.385**	.363**	.583**	.625**	1	
Work Environment Scale	.660**	.674**	.692**	.727**	.767**	.765**	1

The self-reported performance of the nurses, based on the 15 items, which indicates that most nurses feel that they are trying to give high quality care, conform to the policies and standards within the hospital, have positive communication skills, and are focused on professional development, also shows that the overall performance perceptions are positive. A high level of nursing performance, with most participants selecting “agree” or “strongly agree” across all items were indicated. Nurses reported strong commitment to quality care, task completion, communication, and professional responsibility. High agreement was also observed regarding adherence to standards, training, and personal development. Nonetheless, there was also a certain amount of neutral answers concerning the workload, experience, and incentive systems. The results in general are good with some areas of improvement required (Table 2).

The greatest proportion of nurses had positive views about the work environment, especially training, technical empowerment and work conditions where most of them were rated strong. The involvement in decision-making was moderate to high. But incentives were rated comparatively low in nature. In general, the results reveal that the working environment is rather positive and that incentives need improvement in some cases (Table 3, Figs. 1-2).

The performance of nurses showed significant positive correlations with each one of the work environment dimensions, with the highest correlation being noted with the overall work environment scale ($r = .660, p \leq 0.01$) [Table 4]

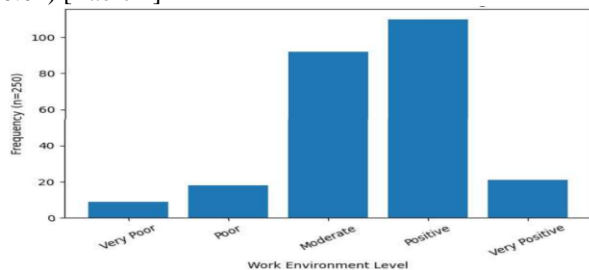


Figure No. 1: Work environment scale

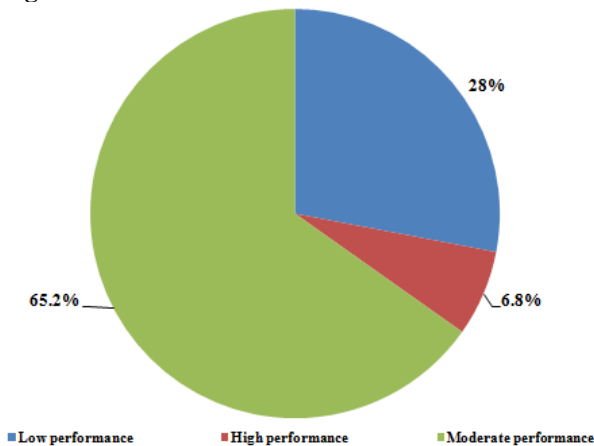


Figure No. 2: Nurses' performance scale

DISCUSSION

The current study revealed an overall positive hospital workplace and moderate high nursing performance among respondents. In particular, 44.1% of the nurses noted the positive working environment, and 36.9% noted the moderate one. Performance wise, most of the nurses showed moderate performance (65%), with the only 7% reporting high performance. These results can be used to conclude that despite the relatively favorable working conditions, these conditions do not immediately result in high performance rates, so some improvements are necessary. It also indicated that there were positive, significant relationships between nursing performance and all the work environment dimensions with the highest correlation coefficient to the overall work environment scale ($r = .660, p \leq 0.01$). This has been in line with past researchers that have insisted on the direct effects of working environment on nursing performance and patient outcomes.^{8,9} Research have indicated that positive working conditions that are typified by sufficient staffing, leadership, and collaboration contribute positively to the productivity of nurses and burnout.^{10,11}

Regarding specific dimensions, training was associated positively with performance ($r = .497$) and this evidence confirms the results of previous studies in which continuous education and professional development were deemed the key elements of clinical competence and efficiency.^{12,13} Similarly, performance was positively correlated with technological empowerment ($r = .468$), as was identified in the research that emphasizes the role of access to modern equipment and digital systems in enhancing healthcare delivery and decision-making.^{14,15}

There was also a significant relationship between performance with participation in decision-making ($r = .465$). This observation has been reinforced by past studies that reveal that giving nurses authority to participate in the decision making process of an organization increases job satisfaction, independence and responsibility, which in turn boosts performance.^{16,17} In addition, the nature and conditions of work ($r = .478$) were positively associated with performance and this is in line with the literature that reports that workplace under safe and well-organized and resource-sufficient conditions reduces stress and enhances productivity.¹⁸

Conversely, incentives had a comparatively low correlation with performance ($r = .449$) and the descriptive outcomes revealed that a significant percentage of nurses held incentives as being weak or moderate. It is also consistent with the previous studies in the low-resource context, in which inadequate financial and non-financial rewards have been found to impede motivation and the ability to boost performance.^{19,20}

The high interrelationships that were found between the work environment dimensions especially between involvement in decision-making and nature of work conditions ($r = .625$) further affirm the holistic nature of organizational determinants to nursing performance. The same trends have been documented in past research and it has been noted that when one is improved in the working environment, the rest of the dimensions are most likely to be positively influenced.²¹

Overall, the current results confirm the available evidence that a favorable working environment in the hospital is a crucial factor of nursing performance. Nevertheless, under the overall positive situation, the situation with moderate performance levels is the most common, which proves the necessity of special actions, especially the improvement of incentive systems and the number of nurses who are involved in decision-making. These results, in particular, are applicable to the situation in the city of Mosul, Iraq, where the challenge of healthcare resources and workforce persists, and the significance of organizational changes to streamline the work of nurse professionals and healthcare delivery is especially high.

CONCLUSION

The hospital work environment significantly influences nursing performance. Despite generally positive conditions, performance remained mostly moderate. Strong associations were found between performance and all work environment dimensions, particularly the overall environment. Improving incentives and involvement in decision-making is essential to enhance nursing performance and healthcare quality.

Author’s Contribution:

Concept & Design or acquisition of analysis or interpretation of data:	Atheer Abd Ahmed
Drafting or Revising Critically:	Atheer Abd Ahmed
Final Approval of version:	The above author
Agreement to accountable for all aspects of work:	The above author

Conflict of Interest: The study has no conflict of interest to declare by any author.

Source of Funding: None

Ethical Approval: No. 3434/QM/Approval/EFEF3
Dated 22.10.2024

REFERENCES

1. Aiken LH, Sloane DM, Bruyneel L, Van den Heede K, Griffiths P, Busse R, et al. Nurse staffing and education and hospital mortality in nine European countries: a retrospective

observational study. *Lancet* 2014;383(9931):1824-30.

2. Lake ET. Development of the Practice Environment Scale of the Nursing Work Index. *Res Nurs Health* 2002;25(3):176-88.

3. Laschinger HKS, Leiter MP. The impact of nursing work environments on patient safety outcomes. *J Nurs Adm* 2006;36(5):259-67.

4. Van Bogaert P, Clarke S, Willems R, Mondelaers M. Nurse practice environment, workload, burnout, job outcomes, and quality of care in psychiatric hospitals. *J Adv Nurs* 2013;69(7):1515-26.

5. Warshawsky NE, Havens DS. Global use of the Practice Environment Scale of the Nursing Work Index. *Nurs Res* 2011;60(1):17-31.

6. Kutney-Lee A, Wu ES, Sloane DM, Aiken LH. Changes in hospital nurse work environments and nurse job outcomes: an analysis of panel data. *Int J Nurs Stud* 2013;50(2):195-201.

7. Althobaiti KM, Altherwi AH, Almbrook HA, Alfayz AF, Aljaloud FS, Alkhairi OA, Alrajhi BMA. The impact of the work environment on the performance of nurses in the saudi healthcare sector. *JMPS* 2024; 8(1): 1-16.

8. Kelly LA, McHugh MD, Aiken LH. Nurse outcomes in Magnet® and non-Magnet hospitals. *J Nurs Adm* 2011;41(10):428-33.

9. Lu H, Barriball KL, Zhang X, While AE. Job satisfaction among hospital nurses revisited: a systematic review. *Int J Nurs Stud* 2012;49(8):1017-38.

10. Boev C. The relationship between nurses’ perception of work environment and patient satisfaction. *MedSurg Nurs* 2012;21(1):9-14.

11. Duffield C, Roche M, Blay N, Stasa H. Nursing unit managers, staff retention and the work environment. *J Clin Nurs* 2011;20(1-2):23-33.

12. Salmond SW, Echevarria M. Healthcare transformation and changing roles for nursing. *Orthop Nurs* 2017;36(1):12-25.

13. Benner P. From novice to expert: Excellence and power in clinical nursing practice. *Am J Nurs* 1984;84(12):1480.

14. Top M, Akdere M, Tarcan M. Examining transformational leadership, job satisfaction, organizational commitment and organizational trust in Turkish hospitals. *Public Pers Manage* 2015;44(2):1-23.

15. Carayon P, Gurses AP. Nursing workload and patient safety—A human factors engineering perspective. *Patient Saf Qual Healthc* 2008;5(1):24-8.

16. Wong CA, Cummings GG, Ducharme L. The relationship between nursing leadership and patient outcomes. *J Nurs Manag* 2013;21(5): 709-24.

17. Spence Laschinger HK, Finegan J, Shamian J, Wilk P. Impact of workplace empowerment on nurse burnout. *J Nurs Adm* 2001;31(5):260-72.
18. Hayes B, Bonner A, Pryor J. Factors contributing to nurse job satisfaction. *J Adv Nurs* 2010;66(4):804-14.
19. Franco LM, Bennett S, Kanfer R. Health sector reform and public sector health worker motivation. *Soc Sci Med* 2002;54(8):1255-66.
20. Willis-Shattuck M, Bidwell P, Thomas S, Wyness L, Blaauw D, Ditlopo P. Motivation and retention of health workers in developing countries. *BMC Health Serv Res* 2008;8:247.
21. Squires A, Tourangeau A, Laschinger HK, Doran D. The link between leadership and safety outcomes in hospitals. *J Nurs Manag* 2010; 18(8):914-25.