

Original Article

Nurses' Work Environment, Staffing, and Quality of Care in Public and Private Hospitals

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Abstract. A satisfactory work environment and staffing are vital elements to a fulfilling professional life of a nurse. Failure to provide a beneficial work environment and staffing issues, such as an imbalanced nurse-to-patient ratio, significantly affect nurses' performance in providing healthcare. This study aims to investigate the extent of the relationship between the variables of work environment, staffing, and quality of care. This study utilized a descriptive-correlational design, involving 150 registered nurses from 4 public and private hospitals in the municipality of Iligan, using the Practice Environment Scale of the Nursing Work Index (PES-NWI) and the Karen-Personnel Instrument for data collection. Multiple linear regression was used as the statistical tool in this study. Results showed that nurses agreed that they had a good work environment ($m=4.18$, $sd=0.80$), staffing ($m=3.59$, $sd=1.31$), and quality care ($m=3.96$, $sd=1.05$). Also, the work environment ($r=0.746$, $p=0.000$) and staffing ($r=0.515$, $p=0.000$) positively correlate with quality care. Lastly, the best predictor of quality care is staffing ($B=0.299$, $p=0.021$), followed by work environment ($B=0.291$, $p=0.025$). The development of the nurses' work environment and staffing holds promise in improving the delivery of quality care. This study enables registered nurses and nursing service administrators to become consciously aware of the importance of a healthy work environment and adequate staffing as factors that improve the quality of care delivery.

Keywords: Nurse work environment; Practice environment; Quality of care; Registered nurse; Staffing.

The delivery of high-quality nursing care remains a fundamental priority in healthcare systems worldwide. Nurses, as frontline healthcare providers, play a critical role in ensuring patient safety, positive health outcomes, and overall satisfaction with care. As a registered nurse, the researcher has observed firsthand the increasing complexity of healthcare demands, particularly in relation to workforce challenges, resource limitations, and varying organizational conditions across public and private hospitals. These realities highlight the importance of examining key structural and organizational factors—specifically nurse work environment and staffing—as determinants of the quality of care delivered.

The nurse work environment encompasses organizational characteristics such as leadership support, collegial relationships, resource adequacy, and institutional policies that influence nursing practice. Evidence consistently demonstrates that a favorable work environment improves nurse performance and patient outcomes. For instance, Sariköse and Göktepe (2022) found a significant positive relationship between work environment and nurses' job performance, emphasizing the role of leadership, staffing adequacy, and organizational support. Similarly, Dutra

and Guirardello (2021) reported that better work environments are associated with reduced missed care, improved safety climate, and increased job satisfaction. In the Philippine context, Falguera et al. (2021) further confirmed that a positive nurse practice environment significantly enhances perceived quality of care while reducing burnout and stress.

Staffing, particularly nurse-to-patient ratios and resource adequacy, is another critical factor influencing care quality. Inadequate staffing has been strongly linked to adverse patient outcomes, increased mortality, and decreased patient satisfaction. Aiken et al. (2021) demonstrated that higher patient loads significantly increased the likelihood of mortality, readmissions, and longer hospital stays. Supporting this, Nantsupawat et al. (2022) identified that poor staffing contributes to missed nursing care, which in turn negatively affects the quality of care and increases adverse events. These findings underscore staffing as a pivotal determinant of both patient outcomes and nursing effectiveness.

Moreover, the interplay between work environment and staffing further amplifies their impact on care quality. Labrague et al. (2022) highlighted that a supportive work environment improves patient safety outcomes and quality of care, both directly and indirectly through interprofessional collaboration. Additional evidence suggests that improvements in work conditions and staffing levels can reduce missed care, enhance safety culture, and improve overall care delivery (Amjad et al., 2023; Labrague et al., 2022). Post-pandemic challenges have further intensified these issues, with Boudreau and Rhéaume (2024) noting that poor work environments contribute to emotional exhaustion and increased intent to leave among nurses, thereby threatening workforce sustainability and care quality.

Despite the growing body of international and local evidence, several critical gaps remain. First, while many studies have examined nurse work environment, staffing, and quality of care independently or in pairs, there is limited research that simultaneously assesses these three variables within a single framework, particularly in comparative settings. Second, although studies such as Aiken et al. (2021) included both public and private hospitals, there remains insufficient context-specific evidence directly comparing these sectors, especially in developing countries like the Philippines, where disparities in resources, staffing, and organizational support are pronounced. Third, existing Philippine-based studies have largely focused on work environment and outcomes such as burnout or job satisfaction, with fewer investigations explicitly examining staffing alongside quality of care in a unified model. Fourth, while global studies have established associations, contextual variations in healthcare systems necessitate localized evidence to inform policy and management decisions.

Given these gaps, there is a need to generate empirical evidence that captures the current state of nurses' work environment, staffing conditions, and quality of care across both public and private hospitals, and to determine how these variables interact within the local healthcare context. Addressing these gaps is essential for informing evidence-based interventions, improving workforce conditions, and ultimately enhancing patient care outcomes.

Thus, this study aims to determine the level of nurse work environment, staffing, and quality of care among registered nurses in public and private hospitals, and to examine whether there is a significant relationship between quality of care and nurse work environment and staffing. By doing so, the study seeks to contribute to the growing body of knowledge and provide actionable insights for nursing management, policy development, and healthcare system improvement.

Methodology

Research Design

The study utilized the descriptive-correlational research design. It is descriptive because it studies a particular phenomenon in which the investigator considers variability a nursing phenomenon that warrants a solution achieved only by applying the scientific body of nursing research. The descriptive quantitative method is a common research methodology used to translate numeric data or explain raw data to answer research questions or test hypotheses (Polit & Beck, 2008). Descriptive quantitative research is appropriate for researching a large population to generate the same study's outcomes (Mohajan, 2020).

Research Locale

The research was conducted at Gregorio T. Lluch Memorial Hospital (GTLMH), a public hospital in Iligan City. In the same city, the private hospitals include Dr. Uy Hospital Inc., Mercy Community Hospital, Iligan Medical

Center Hospital, St. Mary's Maternity and Children's Hospital, Inc., E and R Hospital, and Adventist Medical Center College Iligan, Inc. However, only four out of the seven hospitals have permitted the investigator to conduct the study in their institutions.

Research Participants

The study's participants were nurses in various areas of the study hospitals who provided direct patient care daily, or at least 5 days a week. The study utilized the proportionate stratified random sampling. Stratified sampling is a probability-based approach in which the researcher categorizes the entire population into specific subgroups (strata) and then randomly selects participants from each group to form the final sample (Polit & Beck, 2008). The entire population was stratified by participants' working institutions. The investigator then meticulously chose the participants in a way that proportionally represents the size of each stratum within the overall population. The Raosoft application was utilized to calculate the appropriate sample size from the population. 61 nurses were randomly selected from Hospital A, 31 nurses from Hospital B, 37 nurses from Hospital C, and 21 nurses from Hospital D. A total of 150 participants. These institutions are all secondary hospitals with over 100-bed capacity.

Research Instrument

This study adopted and modified two questionnaires: the Practice Environment Scale of the Nursing Work Environment (PES-NWI) to evaluate nurses' work environment and staffing, and the Karen-Personnel Instrument to assess quality of care. The PES-NWI comprises 29 items, divided into five subscales. Specifically, questions regarding nurses' work environment are included in subscales 1, 2, 4, and 5: nurse manager ability, collegial nurse-physician relations, nurse participation in hospital affairs, and nursing foundations of quality care, respectively (Falguera et al., 2021; Shanty, 2011). Meanwhile, staffing was assessed using subscale 3, namely staffing and resource adequacy (Lake et al., 2020), and 8 additional questions formulated by the investigator based on interviews with staff from the different study hospitals were added. Furthermore, the Karen-Personnel Instrument is a 35-question instrument focusing on three content areas: structure, process, and outcome quality (Alkorashy & Al-Hothaly, 2022).

Moreover, a 5-point Likert-like scale was used to rate the instrument responses. Higher scores indicate agreement, and vice versa, except for some items on the Karen Personnel Instrument, which yield a negative interpretation (Malak & Abu Safieh, 2022).

Data Gathering Procedure

The following steps were used to gather data from participants. First, the investigator sought approval from his institution to conduct the study. Then, a letter of consent was presented to the human resources department or any other personnel responsible for research and studies in the different study hospitals. Attached to the consent was a sample questionnaire. Moreover, the investigator ensured that the human resource officer understood everything written in the consent form. Afterward, the letter was endorsed to the president or medical director of the institution.

To facilitate data collection, a scheduled meeting with the participants and a timetable were created. Data were gathered at Hospital A from February 11-12, 2019; at Hospital B on February 13; at Hospital C on February 14; and at Hospital D on February 15, 2019. On the day of the survey, the participants were gathered in the venue. Then the investigator distributed the questionnaires, along with a consent form, to confirm participation and ensure anonymity. To encourage further analysis by the participants, the time limit for completing the survey was 20 minutes. The investigator's role during this event was that of a proctor, to whom participants could ask questions if anything was unclear. Afterward, the investigator ensured that the information the nurses provided was kept confidential.

Ethical Considerations

Before answering the survey, the participants were informed that their identities and shared information would be treated with anonymity and confidentiality (Dougherty, 2021). Additionally, the investigator ensured that all participation was voluntary, allowing participants to withdraw from the study at any time. The study duration, risks, and benefits were also discussed.

Results and Discussion

Nurses' Work Environment

Table 1 presents the descriptive analysis of nurses' work environment across selected dimensions. The overall mean score of 4.18 (SD = 0.80) indicates that respondents generally "Agree," interpreted as a Good Work Environment. This finding suggests that, from the perspective of registered nurses, the organizational conditions in their respective hospitals are generally supportive of professional nursing practice. Such a result reflects a relatively favorable practice environment, which is critical in sustaining quality care delivery, staff retention, and positive patient outcomes. Among the subscales, collegial nurse-physician relations obtained the highest mean score. This indicates that nurses perceive strong collaboration and mutual respect between nurses and physicians. Interprofessional collaboration is a key component of effective healthcare delivery, and this result suggests that communication and teamwork across disciplines are well-established in the study setting.

Table 1. Descriptive analysis of the nurses' work environment

Indicator	Mean	SD	Description	Interpretation
Subscale 1: Nurse Manager Ability, Leadership and Support for nurses	4.22	0.75	Agree	Good Work Environment
Subscale 2: Collegial Nurse-Physician Relations	4.34	0.62	Agree	Good Work Environment
Subscale 4: Nurse Participation in Hospital Affairs	4.05	0.94	Agree	Good Work Environment
Subscale 5: Nursing Foundations of Quality Care	4.09	0.88	Agree	Good Work Environment
Overall Mean	4.18	0.80	Agree	Good Work Environment

Legend:

Range	Verbal Description	Interpretation
4.51 – 5.00	Strongly Agree	Very Good Work Environment
3.51 – 4.50	Agree	Good Work Environment
2.51 – 3.50	Neutral	Average Work Environment
1.51 – 2.50	Disagree	Poor Work Environment
1.00 – 1.50	Strongly Disagree	Very Poor Work Environment

This finding is consistent with Dutra and Guirardello (2021), who identified collegial nurse-physician relationships as one of the strongest indicators of a positive work environment, contributing to reduced missed nursing care and improved safety climate. Similarly, Labrague et al. (2022) emphasized that collaborative practice enhances patient safety outcomes and overall quality of care, as teamwork facilitates better coordination and clinical decision-making. From a clinical standpoint, strong interprofessional relationships minimize errors, improve continuity of care, and enhance patient satisfaction.

On the other hand, nurse participation in hospital affairs yielded the lowest mean score, though it remained within the "Good Work Environment" category. This suggests that while nurses generally perceive the environment positively, their involvement in organizational decision-making, policy formulation, and governance may be comparatively limited. This finding aligns with Sarıköse and Göktepe (2022), who highlighted that organizational factors, including leadership support and involvement in institutional processes, significantly influence job performance. Limited participation may reduce nurses' sense of autonomy and professional empowerment. Furthermore, Boudreau and Rhéaume (2024) emphasized that insufficient engagement in organizational matters can contribute to emotional exhaustion and increased intent to leave, particularly in post-pandemic healthcare settings.

Overall, the findings indicate that nurses perceive their work environment as generally favorable, particularly regarding interprofessional relationships and leadership support. This supports existing literature that a positive work environment is associated with improved nurse outcomes, reduced missed care, and enhanced quality of care (Nantsupawat et al., 2022; Falguera et al., 2021). However, the relatively lower score in nurse participation highlights a critical area for organizational development. Studies have consistently shown that when nurses are actively involved in decision-making processes, there is improved job satisfaction, reduced turnover, and better patient outcomes (Wei et al., 2023).

Staffing Levels

Table 2 presents the descriptive analysis of nurses' staffing, with an overall mean of 3.59 (SD = 1.31), interpreted as "Agree" or a Good Work Environment. This finding indicates that, in general, nurses perceive staffing conditions as adequate but not optimal, suggesting a moderately favorable staffing situation with noticeable variability across indicators. From a systems perspective, this result indicates that while staffing structures are functionally sufficient to support care delivery, inconsistencies in workforce adequacy and resource allocation persist, potentially affecting efficiency and quality.

Table 2. Descriptive analysis of the nurses' staffing

Indicator	Mean	SD	Description	Interpretation
1. Adequate support services allow me to spend time with my patients.	4.04	0.99	Agree	Good Work Environment
2. Enough time and opportunity to discuss patient care problems with other nurses.	4.07	1.04	Agree	Good Work Environment
3. Enough registered nurses to provide quality patient care.	3.44	1.37	Neutral	Average Work Environment
4. Enough staff to get the work done.	3.16	1.48	Neutral	Average Work Environment
5. Enough time and opportunity to provide bedside care to patients.	3.73	1.22	Agree	Good Work Environment
6. Enough registered nurses to respond to urgent patient situations.	3.58	1.30	Agree	Good Work Environment
7. Enough registered nurses to handle all the nursing workload and finish it on time.	3.54	1.38	Agree	Good Work Environment
8. Balanced patient assignments.	3.69	1.39	Agree	Good Work Environment
9. Balanced nurse-to-patient ratio to avoid committing medication errors and negligence.	3.54	1.34	Agree	Good Work Environment
10. Enough staff to assist patients during discharge.	3.66	1.34	Agree	Good Work Environment
11. Enough staff to receive a heavy number of admissions.	3.40	1.45	Neutral	Average Work Environment
12. Enough floaters/relievers available when the need arises.	3.29	1.45	Neutral	Average Work Environment
Overall Mean	3.59	1.31	Agree	Good Work Environment

The highest-rated indicator, “Enough time and opportunity to discuss patient care problems with other nurses” ($M = 4.07$), highlights strong peer communication and collaborative support among nurses. This suggests that, despite workload demands, nurses can engage in professional dialogue, which is essential for clinical decision-making and continuity of care. This finding aligns with Dutra and Guirardello (2021), who reported that supportive work environments characterized by effective communication are associated with reduced missed nursing care, improved safety climate, and higher job satisfaction. Similarly, Labrague et al. (2022) emphasized that interprofessional collaboration mediates the relationship between work environment and patient safety outcomes, reinforcing the importance of teamwork even in resource-constrained settings. Additionally, the relatively high mean for *adequate support services* ($M = 4.04$) suggests that ancillary systems are functioning sufficiently, allowing nurses to allocate more time to patient-centered care.

The lowest-rated indicator, “Enough staff to get the work done” ($M = 3.16$), is interpreted as Neutral (Average Work Environment) and indicates a perceived staffing insufficiency. This is further supported by other low-scoring indicators, such as: “Enough floaters/relievers available” ($M = 3.29$), “Enough staff to receive a heavy number of admissions” ($M = 3.40$), and “Enough registered nurses to provide quality patient care” ($M = 3.44$). These results collectively point to systemic staffing challenges, particularly in handling workload surges, admissions, and maintaining adequate nurse coverage. This finding is strongly supported by Aiken et al. (2021), who demonstrated that increased nurse workload (higher patient-to-nurse ratios) significantly raises the risk of mortality, readmissions, and prolonged hospital stay. Similarly, Nantsupawat et al. (2022) found that inadequate staffing is directly associated with missed nursing care, which in turn leads to adverse events and reduced quality of care.

Further, Twigg et al. (2021) emphasized that appropriate staffing methodologies, particularly maintaining safe nurse-to-patient ratios, are essential in improving both nurse and patient outcomes. Peng et al. (2023) also highlighted that inadequate staffing contributes to increased nurse turnover and compromised care quality, especially in high-acuity settings. From a workforce sustainability perspective, Boudreau and Rhéaume (2024) noted that poor working conditions, including staffing shortages, contribute to emotional exhaustion and intent to leave, thereby exacerbating staffing issues.

Overall, while the staffing dimension is interpreted as a “Good Work Environment,” the presence of multiple “Neutral” indicators reveals underlying vulnerabilities in staffing adequacy. This suggests that the system is operationally functional but not resilient, particularly in responding to fluctuations in patient volume and care demands. Consistent with Sarıköse and Göktepe (2022), staffing and resource adequacy are among the strongest predictors of nurses' job performance, highlighting that even if other aspects of the work environment are favorable, insufficient staffing can limit performance outcomes. Furthermore, Falguera et al. (2021) emphasized that a positive practice environment improves care quality and reduces burnout; however, such benefits may not be fully realized if staffing constraints persist.

Quality of Care

Table 3 presents the descriptive analysis of nurses' quality of care, yielding an overall mean of 3.96 (SD = 1.05), which is interpreted as "Agree" or "Good Quality Care". This indicates that nurses generally perceive the quality of care delivered in their units as consistently positive, reflecting favorable interpersonal dynamics, patient-centered practices, and professional fulfillment.

Table 3. Descriptive analysis of the nurses' quality of care

Indicator	Mean	SD	Description	Interpretation
1. We (nurses) are able to talk to each other.	4.09	1.06	Agree	Good Quality Care
2. We (nurses) all get on well together.	4.16	0.93	Agree	Good Quality Care
3. The staff collaborates.	4.18	0.89	Agree	Good Quality Care
4. There is a positive atmosphere.	4.05	0.10	Agree	Good Quality Care
5. There is no enviousness.	3.85	1.07	Agree	Good Quality Care
6. The patients receive individual treatment.	4.19	0.81	Agree	Good Quality Care
7. The staff is nice, kind, happy, and good.	4.26	0.75	Agree	Good Quality Care
8. The patients get to know the staff.	4.15	0.89	Agree	Good Quality Care
9. The staff shows no interest. (R)	3.93	1.14	Agree	Poor Quality Care
10. The staff shows no commitment. (R)	3.98	1.13	Agree	Poor Quality Care
11. The staff shows no consideration. (R)	3.96	1.13	Agree	Poor Quality Care
12. The staff has the ability to feel for the patient.	4.13	0.89	Agree	Good Quality Care
13. The staff isn't able to motivate the patients. (R)	4.01	1.11	Agree	Poor Quality Care
14. The work develops me as a human being.	4.24	0.79	Agree	Good Quality Care
15. The work gives me a lot as a human being.	4.20	0.90	Agree	Good Quality Care
16. I feel harmony in the work.	4.10	0.80	Agree	Good Quality Care
17. The work gives me satisfaction.	4.20	0.79	Agree	Good Quality Care
18. There is orderliness in the unit.	3.98	0.93	Agree	Good Quality Care
19. Nurses find out what's wrong with the patient.	4.13	0.87	Agree	Good Quality Care
20. We do not consider each other. (R)	3.83	1.30	Agree	Poor Quality Care
21. The staff is claimed, assured.	4.07	0.90	Agree	Good Quality Care
22. We cannot talk about problems. (R)	3.91	1.14	Agree	Poor Quality Care
23. We do not listen to each other. (R)	3.96	1.15	Agree	Poor Quality Care
24. Economic savings affected the care of patients. (R)	3.64	1.30	Agree	Poor Quality Care
25. We never learn anything new. (R)	3.93	1.14	Agree	Poor Quality Care
26. The patient is not involved in the treatment. (R)	3.94	1.14	Agree	Poor Quality Care
27. No one is responsible. (R)	4.05	1.14	Agree	Poor Quality Care
28. The patient has no say. (R)	4.04	1.14	Agree	Poor Quality Care
29. Everyone doesn't see the general picture. (R)	3.57	1.27	Agree	Poor Quality Care
30. I do not feel secure in my work. (R)	3.63	1.23	Agree	Poor Quality Care
31. So many staff categories. (R)	3.53	1.20	Agree	Poor Quality Care
32. I feel no work fellowship. (R)	3.47	1.41	Neutral	Acceptable Quality Care
33. I do not have the strength for the nursing task. (R)	4.06	0.96	Agree	Poor Quality Care
34. No personal contact with the patients. (R)	3.41	1.45	Neutral	Acceptable Quality Care
35. The staff does not make the patients calm. (R)	3.93	1.13	Agree	Poor Quality Care
Overall Mean	3.96	1.05	Agree	Good Quality Care

Legend:

(R) Utilizes Reverse Scoring

Range	Verbal Description	Interpretation
4.51 - 5.00	Strongly Agree	Very Good Quality Care
3.51 - 4.50	Agree	Good Quality Care
2.51 - 3.50	Neutral	Acceptable Quality Care
1.51 - 2.50	Disagree	Poor Quality Care
1.00 - 1.50	Strongly Disagree	Very Poor Quality Care

However, despite this overall positive evaluation, the presence of several reverse-coded indicators (R), interpreted as poor-quality care, suggests latent issues within the care environment, particularly related to engagement, communication barriers, and organizational constraints. The highest-rated indicator, "The staff is nice, kind, happy, and good" (M = 4.26), underscores the importance of affective and relational components of nursing care. This reflects a workforce that demonstrates positive attitudes, emotional support, and therapeutic presence, which are critical elements of high-quality nursing care. Closely related high scores include: "Patients receive individual treatment" (M = 4.19), "Staff collaborates" (M = 4.18), and "Staff get along well together" (M = 4.16). These findings highlight that team cohesion, collaboration, and individualized care are key strengths in the clinical setting. This is consistent with Stavropoulou et al. (2022), who emphasized that quality care is fundamentally holistic and interpersonal, involving empathy, communication, and teamwork. Similarly, Labrague et al. (2022) found that interprofessional collaboration significantly enhances patient safety outcomes and care quality, reinforcing the central role of teamwork in achieving high standards of care. Furthermore, Sarıköse and Göktepe (2022) identified

colleague solidarity and supportive work environments as strong predictors of nurses' job performance, suggesting that the positive interpersonal climate observed contributes directly to effective care delivery.

The lowest-rated indicators include: “No personal contact with patients” (R) (M = 3.41, Neutral), “I feel no work fellowship” (R) (M = 3.47, Neutral), “So many staff categories” (R) (M = 3.53), and “Everyone doesn’t see the general picture” (R) (M = 3.57). Although still within acceptable levels, these results indicate gaps in relational continuity, team cohesion, and organizational clarity. The relatively lower scores suggest that some nurses experience fragmentation in teamwork, reduced time spent with patients, and a lack of shared understanding of care goals. These findings may be indirectly linked to staffing and workload issues, as limited time and high patient loads can reduce opportunities for meaningful patient interaction and team engagement. Supporting this, Nantsupawat et al. (2022) found that inadequate staffing leads to missed nursing care, particularly in relational and communicative aspects of care. Similarly, Aiken et al. (2021) demonstrated that higher workloads reduce patient satisfaction and perceived quality of care, largely due to decreased nurse–patient interaction. Moreover, Amjad et al. (2023) highlighted that poor work environments are associated with increased missed care and weakened patient safety culture, particularly when teamwork and communication are compromised.

Relationship Between Quality of Care, Work Environment, and Staffing

The results in Table 4 reveal that both work environment and staffing have statistically significant positive relationships with quality of care. Specifically, work environment demonstrates a strong positive correlation with quality care ($r = 0.746$, $p < 0.01$), while staffing shows a moderate positive correlation ($r = 0.515$, $p < 0.01$). These findings indicate that improvements in organizational conditions and human resource adequacy are associated with higher-quality nursing care. The stronger correlation between the work environment and quality of care suggests that environmental and organizational factors play a more substantial role than staffing alone. This aligns with Sariköse and Göktepe (2022), who identified the work environment—particularly leadership support, staffing adequacy, and foundations for quality care—as a major determinant of nurses’ job performance. Since job performance is closely linked to care delivery, the present findings reinforce the notion that a supportive, well-structured work environment directly contributes to higher-quality patient care.

Table 4. Correlation of quality care, work environment, and staffing

Variables	Quality Care		
	Pearson Coefficient	P-Value	Interpretation
Work Environment	**0.75	<.001	Significant
Staffing	**0.52	<.001	Significant

Legend:

** $p < 0.01$

* $p < 0.05$

Similarly, the findings are consistent with Dutra and Guirardello (2021), who reported that a better nurse work environment is associated with improved safety climate, higher job satisfaction, and reduced missed nursing care. The strong correlation observed in this study may be explained by the ability of positive work environments to minimize errors, enhance coordination, and foster accountability—key components of quality care delivery. Furthermore, Labrague et al. (2022) emphasized that the work environment influences quality care both directly and indirectly through interprofessional collaboration. This provides a plausible mechanism for the strong relationship observed in the current study: a favorable work environment promotes teamwork and communication, which, in turn, enhances patient safety outcomes and overall care quality.

About staffing, the moderate yet significant correlation with quality care is consistent with prior evidence that adequate nurse-to-patient ratios are essential for safe and effective care. Aiken et al. (2021) demonstrated that increased nurse workloads are associated with higher mortality, readmissions, and longer hospital stays. Likewise, Nantsupawat et al. (2022) found that poor staffing leads to increased missed care, which subsequently reduces care quality and increases adverse events. The present findings are congruent with these studies, indicating that insufficient staffing may compromise the thoroughness and timeliness of nursing interventions. Additionally, Labrague et al. (2022) (Philippine context) and Falguera et al. (2021) highlighted that staffing levels, together with safety culture and work conditions, significantly predict both missed nursing care and perceived quality of care. This reinforces the interpretation that staffing does not operate in isolation but interacts with broader environmental factors, which may explain why its correlation is weaker than that of the work environment.

The results also support Amjad et al. (2023) and Aiken et al. (2021), who identified that poor work environments and inadequate staffing contribute to increased missed nursing care, ultimately diminishing patient satisfaction and care outcomes. In this context, the strong correlation between the work environment and quality care may reflect its broader influence across multiple dimensions, such as leadership, teamwork, communication, and resource availability.

Predictors of Quality of Care

The multiple regression analysis revealed that both work environment and staffing are statistically significant predictors of quality care. The overall regression model was significant ($F = 21.09$, $p < 0.001$), indicating that the combination of predictors reliably explains variations in perceived quality of care. The model accounted for 30.3% of the variance (Adjusted $R^2 = 0.303$), suggesting a moderate explanatory power. Individually, the work environment emerged as a significant predictor ($B = 0.333$, $\beta = 0.291$, $t = 2.284$, $p = 0.025$), indicating that improvements in the work environment are associated with higher-quality care. Similarly, staffing was also a significant predictor ($B = 0.157$, $\beta = 0.299$, $t = 2.347$, $p = 0.021$), suggesting that better staffing conditions contribute positively to care quality.

Table 5. Multiple regression analysis of predicting quality care by work environment and staffing

Predictors	Unstandardized Coefficients		Stand. Coeff.	t-value	p-value	Remarks
	B	Std. Error				
Constant	2.02	0.46	--	**4.46	<.001	Significant
Work Environment	0.33	0.15	0.29	*2.28	.025	Significant
Staffing	0.16	0.07	0.29	*2.35	.021	Significant

Note: Adjusted $R^2 = 30.3\%$, ANOVA for Regression: $F = 21.09$, p -value < .001

Comparatively, staffing ($\beta = 0.299$) demonstrated a slightly stronger standardized effect than work environment ($\beta = 0.291$), although both variables contributed almost equally to predicting quality care. The constant term was also significant ($B = 2.027$, $p < 0.001$), indicating a baseline level of quality care even in the absence of the predictors. The findings confirm that both work environment and staffing are critical determinants of quality care, aligning with a substantial body of nursing and healthcare management literature.

The significant positive effect of the work environment supports the findings of Sarıköse and Göktepe (2022), who reported a strong correlation ($r = 0.65$) between work environment and job performance. Their study further identified key dimensions such as leadership support and nursing foundations for quality care as influential factors. This suggests that a supportive, resource-rich, and collaborative work environment enhances nurses' ability to deliver high-quality care. Similarly, Dutra and Guirardello (2021) found that better work environments are associated with improved safety climate, higher job satisfaction, and reduced missed care, all of which are closely linked to care quality.

The results are also consistent with those of Labrague et al. (2022), who demonstrated that the work environment directly and indirectly influences the quality of care through interprofessional collaboration. This implies that the mechanism through which the work environment affects care quality may extend beyond individual performance to include team dynamics and collaboration. Additionally, Falguera et al. (2021) emphasized that a favorable practice environment reduces burnout and stress, further enabling nurses to maintain high standards of care.

Regarding staffing, the findings reinforce extensive empirical evidence highlighting its central role in healthcare outcomes. Aiken et al. (2021) showed that inadequate staffing significantly increases mortality, readmissions, and length of hospital stay, while better staffing improves patient satisfaction and care quality. Likewise, Nantsupawat et al. (2022) found that poor staffing is associated with increased missed care, which, in turn, leads to adverse events and lower-quality care.

The slightly stronger effect of staffing ($\beta = 0.299$) compared to work environment suggests that adequate nurse-to-patient ratios and resource availability may have a more immediate and direct impact on care delivery. This is further supported by Labrague et al. (2022) and Amjad et al. (2023), who identified staffing levels as key predictors of missed nursing care and overall care quality. During high-demand periods such as the COVID-19 pandemic, Labrague et al. (2022) also highlighted staffing as a critical determinant of maintaining care standards.

Moreover, the moderate explanatory power (30.3%) of the model indicates that while work environment and

staffing are significant, other factors—such as leadership, safety culture, nurse engagement, and professional characteristics—also contribute to quality care. This is supported by Wei et al. (2023), who linked work engagement and job satisfaction to perceived care quality, and by Boudreau and Rhéaume (2024), who emphasized the role of emotional exhaustion and organizational conditions.

Conclusion

The findings indicate that nurses generally perceive their work environment, staffing, and quality of care as good, reflecting a relatively supportive and functional healthcare setting. Strong collegial nurse–physician relationships and positive interpersonal dynamics contribute to this favorable perception. However, gaps remain in nurse participation in decision-making and staffing adequacy, particularly in managing workload surges and ensuring sufficient personnel coverage.

Correlation and regression results confirm that both work environment and staffing are significant predictors of quality care, with staffing showing a slightly stronger influence. This underscores that while organizational culture and professional relationships are important, adequate human resource capacity is equally—if not slightly more—critical in sustaining high-quality care delivery. Overall, the study highlights that improvements in both structural (staffing) and organizational (work environment) factors are essential to optimize patient care outcomes.

Healthcare institutions may strengthen mechanisms that promote nurses' involvement in decision-making, policy development, and hospital affairs. Shared governance models can improve engagement, accountability, and organizational commitment. Moreover, hospitals may implement evidence-based staffing strategies, including appropriate nurse-to-patient ratios, availability of float staff, and surge-capacity planning, to address workload variability and prevent care delays. Although collaboration is already strong, continuous team-building initiatives and communication training may be sustained to further enhance coordination and reduce fragmentation in care delivery. In addition, interventions may focus on reducing excessive workload to allow nurses more time for meaningful patient interaction, thereby improving relational continuity and patient-centered care.

Additionally, nurse managers may receive leadership training to foster supportive environments, improve staff morale, and address workplace concerns effectively. Institutions should regularly assess work environment and staffing conditions as part of quality assurance systems to identify gaps and implement timely improvements. Overall, while the study provides meaningful insights into the roles of work environment and staffing in shaping quality care, future research incorporating longitudinal designs and additional variables is recommended to achieve a more comprehensive understanding.

Contributions of Authors

The author of this research article is solely responsible for the study's conceptualization, data gathering, analysis, data presentation, and finalization of the paper.

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