

PENGARUH KOMPETENSI DAN DISIPLIN TERHADAP MUTU PELAYANAN MELALUI KINERJA PERAWAT DI RSAU DR. SUKIRMAN

THE INFLUENCE OF COMPETENCE AND DISCIPLINE ON SERVICE QUALITY THROUGH NURSE PERFORMANCE AT DR. SUKIRMAN AIR FORCE HOSPITAL

Indah Sri Mulyani^{1*}, Budi Hartono², Reno Renaldi³, Hetty Ismainar⁴, Abdurrahman Hamid⁵

^{1,2,3,4,5}Hang Tuah University, Pekanbaru

Corresponding author*: indahsrimulyani91@gmail.com

ABSTRAK

Latar Belakang: Mutu pelayanan rumah sakit merupakan indikator penting dalam menilai kualitas pelayanan kesehatan dan kepuasan pasien. Pencapaian mutu pelayanan keperawatan dipengaruhi oleh berbagai faktor, terutama kompetensi, disiplin, dan kinerja perawat sebagai tenaga kesehatan yang berinteraksi langsung dengan pasien. Tujuan: Menganalisis pengaruh kompetensi dan disiplin terhadap mutu pelayanan melalui kinerja perawat di RSAU dr. Sukirman Lanud Roesmin Nurjadin Pekanbaru. Metode: Penelitian ini menggunakan desain deskriptif kuantitatif dengan pendekatan kausalitas yang dilaksanakan pada Januari–Juli 2025. Populasi sekaligus sampel penelitian berjumlah 41 perawat yang dipilih menggunakan teknik purposive sampling. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan Structural Equation Modeling berbasis Partial Least Squares (SEM-PLS) melalui pengujian outer model dan inner model dengan aplikasi SmartPLS. Hasil: Kompetensi berpengaruh signifikan terhadap mutu pelayanan ($p=0,003$) dan kinerja perawat ($p=0,000$). Kinerja perawat juga berpengaruh signifikan terhadap mutu pelayanan ($p=0,000$). Sebaliknya, disiplin tidak berpengaruh signifikan terhadap mutu pelayanan ($p=0,722$) maupun kinerja perawat ($p=0,769$). Pengaruh tidak langsung kompetensi terhadap mutu pelayanan melalui kinerja perawat signifikan ($p=0,000$), sedangkan pengaruh tidak langsung disiplin melalui kinerja perawat tidak signifikan ($p=0,767$). Kesimpulan: Kompetensi merupakan faktor penting dalam peningkatan mutu pelayanan, baik secara langsung maupun melalui kinerja perawat. Oleh karena itu, pengembangan kompetensi secara berkelanjutan melalui pelatihan, evaluasi kinerja, penguatan komunikasi, dan dukungan organisasi diperlukan untuk meningkatkan kualitas pelayanan keperawatan. Temuan ini dapat menjadi dasar pertimbangan bagi manajemen rumah sakit dalam merumuskan strategi peningkatan mutu pelayanan yang berorientasi pada kompetensi dan kinerja perawat.

Kata Kunci: Competence; Discipline; Nurse; Performance; Service Quality

ABSTRACT

Background: Hospital service quality is an important indicator of healthcare quality and patient satisfaction. The achievement of quality nursing services is influenced by several factors, particularly nurses' competence, discipline, and performance, as nurses interact directly with patients. Objective: To analyze the effects of competence and discipline on service quality through nurse performance at RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru. Methods: This study employed a quantitative descriptive design with a causal approach and was conducted from January to July 2025. The study population and sample consisted of 41 nurses selected using purposive sampling. Data were collected through questionnaires and analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS), involving outer model and inner model assessments using SmartPLS software. Results: Competence had significant effects on service quality ($p=0.003$) and nurse performance ($p=0.000$). Nurse performance also had a significant effect on service quality ($p=0.000$). Conversely, discipline had no significant effect on service quality ($p=0.722$) or nurse performance ($p=0.769$). The indirect effect of competence on service quality through nurse performance was significant ($p=0.000$), whereas the indirect effect of discipline through nurse performance was not significant ($p=0.767$). Conclusion: Competence is an important factor in improving service quality, both directly and through nurse performance. Therefore, continuous competency development through training, performance evaluation, enhanced communication, and consistent organizational support is necessary to improve the quality of nursing services. These findings may serve as a basis for hospital management to formulate service quality improvement strategies that prioritize nurses' competence and performance.

Keywords: Competence; Discipline; Nurse; Performance; Service Quality

INTRODUCTION

Service quality is an important indicator for assessing a hospital's success in meeting patients' needs effectively, safely, promptly, and in a patient-centered manner. Service quality is determined not only by the availability of facilities and medical technology but also by healthcare professionals' competence, adherence to procedures, service coordination, and the organization's ability to maintain service standards. In nursing care, nurses play a strategic role because they are directly and continuously involved in meeting patients' needs, providing nursing interventions, monitoring clinical conditions, delivering health education, and coordinating care with other healthcare professionals. Zaitoun et al. (2023), through a systematic review, highlighted the importance of nurses' competence in supporting a patient safety culture. These findings emphasize that nursing competence is an important aspect of delivering safe and high-quality healthcare services.

Service quality is also associated with patients' experiences during healthcare delivery. These experiences may be reflected in the accuracy of interventions, responsiveness, clear communication, professional attitudes, and the fulfillment of patients' needs. Goodrich and Lazenby (2023) explained that patient satisfaction is a multidimensional concept influenced by various aspects of the service experience and the methods used to measure satisfaction. Meanwhile, Li et al. (2024), through a systematic review and meta-analysis, examined the relationship between nurse burnout and patient safety, patient satisfaction, and service quality. These studies indicate that service quality assessments should consider not only the outcomes received by patients but also the nursing workforce and the underlying service delivery processes. Therefore, improving hospital service quality requires an approach that considers nurses' capabilities, work behaviors, and performance in delivering nursing care.

Nurses' competence is one factor that may conceptually influence service quality. Competence encompasses the knowledge, clinical skills, decision-making abilities, professional communication, and attitudes required to perform duties according to established standards. Competent nurses are expected to identify patients' needs, determine appropriate interventions, implement procedures accurately, and evaluate patients' responses to nursing interventions. Ylimäki et al. (2024) examined evidence-based healthcare competence among advanced practice nurses and the factors associated with it. This review is relevant to explaining the importance of competence in implementing evidence-based healthcare services. However, nurses' competence does not automatically guarantee optimal service quality. The application of competence in daily practice may be influenced by task allocation, workload, organizational support, resource availability, and opportunities to apply professional skills. Therefore, the relationship between competence and service quality needs to be analyzed by considering nurse performance as a potential mechanism explaining this relationship.

In addition to competence, work discipline is an important aspect of nursing service delivery. Work discipline relates to compliance with work schedules, service procedures, standard operating procedures, assigned responsibilities, nursing documentation requirements, and patient safety regulations. In hospitals that provide continuous care, discipline is necessary to ensure timely task completion and continuity of information between healthcare professionals. Nevertheless, work discipline should not be assessed solely in terms of administrative compliance, as its contribution to service quality should also be evaluated through consistent task implementation and work outcomes. Suasnawa et al. (2023) examined the effects of supervision and work discipline on inpatient nurses' performance. This study provides an empirical comparison for understanding the relationships among supervision, discipline, and performance in hospital services. However, these relationships still need to be tested in different organizational contexts because nursing workforce characteristics, supervision systems, and management policies may influence research findings.

Nurse performance is an important variable in explaining how competence and work discipline may contribute to service quality. Performance reflects the achievement of assigned duties and responsibilities according to established standards, including the accuracy of interventions, completeness of documentation, communication, responsiveness to patients' needs, and delivery of nursing care. Competence provides the capabilities required to perform nursing duties, whereas

discipline supports the consistent application of these capabilities in accordance with professional standards and responsibilities. Gutiérrez-Fernández et al. (2024) examined the effectiveness of intervention programs designed to improve the nursing work environment. Their review highlighted the importance of considering the work environment in efforts to improve nurses' work performance. Similarly, Kiptulon et al. (2024) examined the relationship between organizational culture and work-related stress among nurses through a systematic review. These studies provide a basis for understanding nursing performance within a broader context that includes organizational support and working conditions rather than viewing it solely as an outcome of individual capabilities.

The importance of nursing workforce management is further emphasized by the World Health Organization (WHO, 2025) in its State of the World's Nursing 2025 report, which highlights the importance of investment in education, employment opportunities, leadership, and nursing service delivery. The report indicates that strengthening the nursing workforce requires systematic support at both individual and organizational levels. In this study, competence and work discipline are positioned as factors potentially associated with service quality, while nurse performance is considered a mediating variable. Treating performance as a mediating variable enables the study to examine whether competence and work discipline are associated with service quality directly or indirectly through nurses' performance. This approach is important because the effects of different factors on service quality may operate through different pathways.

Although previous studies have examined nurses' competence, work discipline, work environment, performance, and service quality, further empirical investigation is needed to integrate these variables into a single research model. This gap does not imply that no previous studies have examined the relationships among these variables; rather, it indicates the need to investigate direct and indirect effects within a specific research context. Zaitoun et al. (2023) focused on competence and patient safety culture, whereas Li et al. (2024) examined the relationships between burnout, patient safety, patient satisfaction, and service quality. Goodrich and Lazenby (2023) focused on aspects of patient satisfaction, while Suasnawa et al. (2023) investigated the effects of supervision and work discipline on nurse performance. These differences in research focus indicate that each study contributes to a particular aspect of the topic but cannot directly establish the relationships among competence, work discipline, performance, and service quality at RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru.

The research gap also concerns the possibility that competence and work discipline may have different relationships with performance and service quality. Competence may enhance nurses' ability to provide appropriate nursing care, whereas discipline may promote consistency in task implementation. However, these factors may not have the same magnitude of effect on performance or service quality. Similarly, nurse performance cannot automatically be assumed to fully mediate the relationships between these two factors and service quality. Therefore, examining the direct effects of competence and work discipline on service quality, as well as their indirect effects through nurse performance, is necessary to obtain a more comprehensive empirical explanation. Putry et al. (2026), who examined the effects of organizational culture and work discipline on nurse performance at a general hospital in Kediri Regency, may serve as a comparative reference for understanding the relationship between discipline and performance in an empirical setting. However, the findings cannot be directly generalized to other hospitals without further investigation.

In the context of RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru, examining these relationships is important for obtaining empirical evidence that reflects the characteristics of the organization and its local nursing service delivery. Findings from other hospitals may not adequately represent the conditions, supervision mechanisms, task allocation, and implementation of service standards at this hospital. Therefore, this study focuses on examining the relationships among competence, work discipline, nurse performance, and service quality within an integrated framework. To strengthen the local rationale, the study should ideally be supported by verified preliminary data, such as nursing quality indicators, patient satisfaction survey results, or nurse performance evaluations, when available. Such data can illustrate the actual conditions underlying the research and help

distinguish local empirical problems from theoretical arguments. This study aims to analyze the effects of competence and work discipline on service quality through nurse performance at RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru.

METHODS

Research Design: This study employed a quantitative descriptive design with a causal approach. **Study Setting and Period:** The research was conducted at RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru, from January to July 2025. **Population and Sample:** The study population consisted of all 41 nurses, and the sample included all 41 respondents. Total sampling was used to select the participants. **Research Instrument:** Data were collected using a questionnaire with a four-point Likert scale (1–4) to measure competence, work discipline, nurse performance, and service quality. **Data Collection Procedures:** Primary data were obtained through questionnaire administration, while secondary data were derived from literature reviews, previous theses, and relevant documents. **Data Analysis:** Descriptive and inferential analyses were performed using SmartPLS software, involving the evaluation of the outer model and inner model. **Ethical Clearance:** Ethical approval was obtained under reference number 199/KEPK/UHTP/VI/2025.

RESULTS

Table 1. Respondent Characteristics

Characteristics	Category	n	%
Gender	Male	25	61
	Female	16	39
Age	<25 years	7	17
	26–30 years	11	27
	31–40 years	18	44
	>41 years	5	12
Highest Level of Education	D1/D2/D3	13	32
	Senior High School	28	68
Length of Employment	<1 year	7	17
	1–5 years	11	27
	6–10 years	18	44
	>10 years	5	12

Sumber: Data penelitian 2025

Based on Table 1, the majority of respondents were male (25; 61%). The largest age group was 31–40 years (18; 44%). Most respondents had completed senior high school (28; 68%), and the most common length of employment was 6–10 years (18; 44%).

Table 2. Descriptive Summary of Variables

Variable	Number of Item	Mean	Interpretation
Competence	16	3,54	High
Nurse Discipline	14	3,69	High
Nurse Performance	17	3,54	High
Service Quality	26	3,55	High

Sumber: Hasil tanggapan responden melalui kuesioner.

Based on Table 2, all research variables had mean scores within the high category: competence (3.54), nurse discipline (3.69), nurse performance (3.54), and service quality (3.55).

Table 3. Results of the Intervariable Effect Analysis

Relationship	p-value	Keputusan
Competence → Service Quality	0,003	Significant
Discipline → Service Quality	0,722	Not Significant

Nurse Performance → Service Quality	0,000	Significant
Competence → Nurse Performance	0,000	Significant
Discipline → Nurse Performance	0,769	Not Significant
Competence → Service Quality through Nurse Performance	0,000	Significant
Discipline → Service Quality through Nurse Performance	0,767	Not Significant

Based on Table 3, competence had a significant effect on service quality ($p = 0.003$) and nurse performance ($p = 0.000$). Nurse performance also had a significant effect on service quality ($p = 0.000$). Conversely, nurse discipline had no significant effect on service quality ($p = 0.722$) or nurse performance ($p = 0.769$). Competence had a significant indirect effect on service quality through nurse performance ($p = 0.000$), whereas the indirect effect of nurse discipline on service quality through nurse performance was not significant ($p = 0.767$).

Overall, respondents rated competence, nurse discipline, nurse performance, and service quality in the high category. The relationship analysis indicated that competence and nurse performance had significant effects on service quality, whereas discipline had no significant effect. The indirect effect of competence on service quality through nurse performance was significant, while the indirect pathway from discipline through nurse performance was not significant.

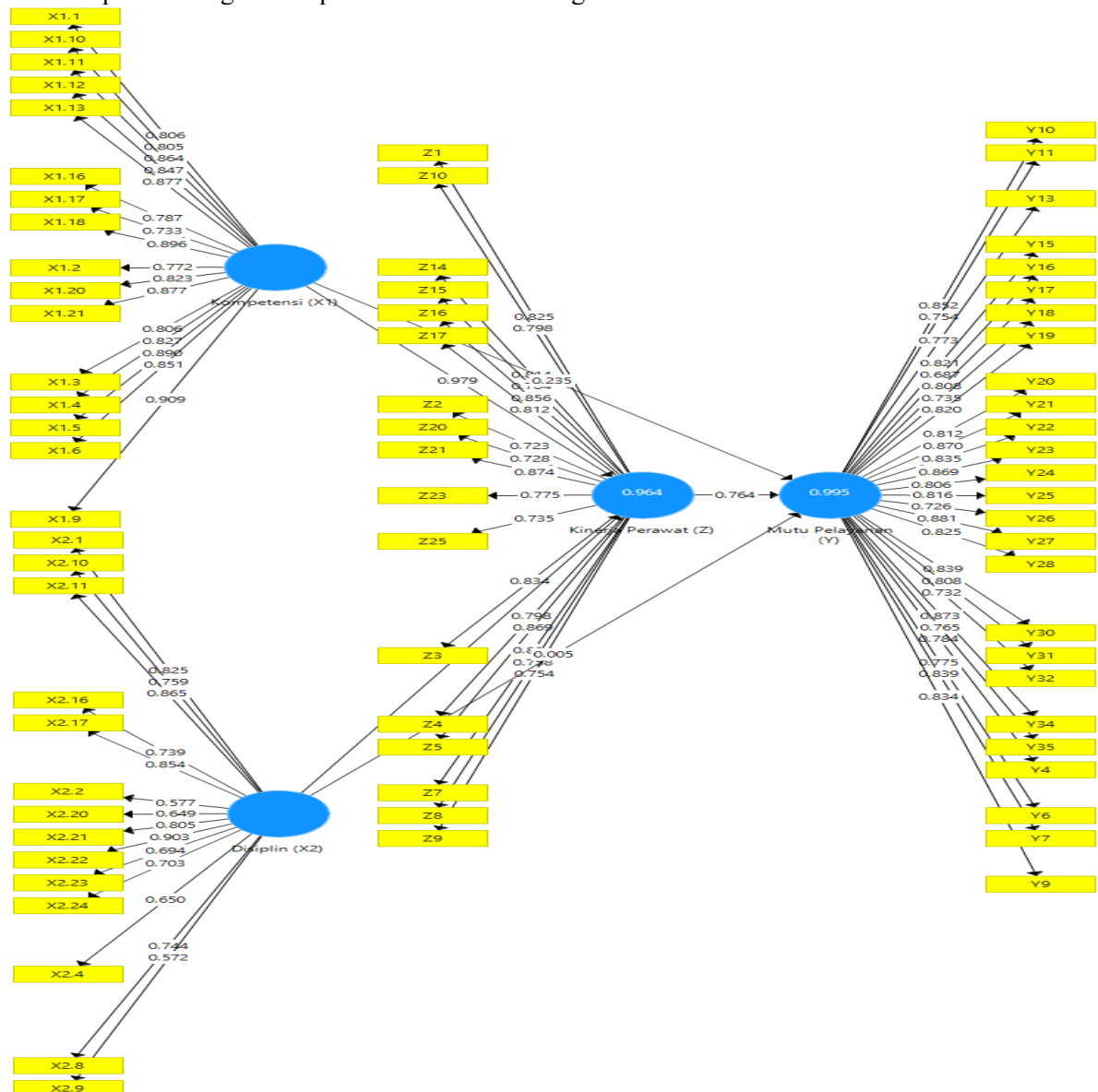


Figure 1. Outer Model Framework

DISCUSSION

Nurse Competence and Service Quality

The findings indicate that nurse competence has a significant relationship with service quality at RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru. This finding suggests that nurses' professional capabilities are an important aspect of nursing service delivery. Competence encompasses not only clinical knowledge and skills but also the ability to assess patients' conditions, determine appropriate interventions, communicate effectively, and implement procedures in accordance with professional standards. In practice, competence enables nurses to integrate their knowledge with patients' needs, thereby ensuring that the care provided is more focused and aligned with the objectives of nursing care.

These findings are consistent with the systematic review by Zaitoun et al (2023), which demonstrated a positive relationship between nursing competence and patient safety culture. Patrician et al (2024) also emphasized the importance of evidence-based recommendations for improving quality and safety in nursing. Both publications support the view that nurses' professional capabilities should be considered an essential component of healthcare quality improvement systems. However, service quality is not determined solely by individual competence. Guan et al (2024), through a systematic review of factors influencing patient experiences in inpatient settings, found that patient experiences are associated with various factors at the individual, interpersonal, organizational, and policy levels. Therefore, nurse competence should be understood as one contributing factor within the broader healthcare delivery context. The findings of this study support the importance of competency development but do not establish competence as the sole determinant of service quality.

Nurse Competence and Nurse Performance

The significant relationship between competence and nurse performance indicates that professional capabilities are associated with the implementation of nursing duties. Competence provides the knowledge and skills required for nursing practice, whereas performance reflects how these capabilities are applied in the workplace. Nurses who demonstrate proficiency in clinical procedures, conduct accurate assessments, communicate effectively with patients, and collaborate with healthcare teams have the capabilities needed to perform their duties effectively.

Ylimäki et al. (2024) examined evidence-based healthcare competence among advanced practice nurses and identified several competency areas that require further development, particularly in generating and synthesizing scientific evidence. These findings indicate that professional competency development should be continuous and should not be limited to formal education or initial training. In the context of this study, the relationship between competence and performance provides a basis for hospital management to develop targeted training programs, skills assessments, clinical supervision, and feedback on work performance.

Nurse Performance and Service Quality

The significant relationship between nurse performance and service quality highlights the importance of daily work practices in delivering high-quality healthcare services. Performance involves not only task completion but also the accuracy of interventions, responsiveness to patients' needs, communication, coordination, documentation, and consistent adherence to service standards. Good competence can provide greater benefits when it is applied consistently throughout the service delivery process.

Li et al. (2024), through a systematic review and meta-analysis of 85 studies involving 288,581 nurses, found that nurse burnout was associated with poorer patient safety, lower patient satisfaction, and lower ratings of service quality. These findings indicate that service quality is associated not only with individual capabilities but also with the working conditions of nursing professionals.

Drennan et al. (2024) also found that lower nurse staffing levels in emergency departments were associated with delays in care and several less favorable service outcomes. Although the emergency department setting differs from the overall healthcare services provided at RSAU dr. Sukirman, this

study highlights the importance of considering organizational factors when evaluating the relationship between performance and service quality. Therefore, efforts to improve service quality should focus on strengthening nurse performance while ensuring that adequate working conditions and resources are available to support the delivery of nursing care.

The Role of Nurse Performance in the Relationship Between Competence and Service Quality

The significant indirect effect of competence on service quality through nurse performance indicates that the mediation pathway was statistically significant in the tested model. Substantively, this finding supports the possibility that competence is associated with service quality through its application in daily work. Nurses may possess adequate knowledge and skills, but the contribution of competence to service quality can only be realized when these capabilities are applied in the service delivery process.

This relationship has practical implications for nursing management. Competency development programs should not be evaluated solely based on the number of training sessions attended but also on improvements in skills and their application in the workplace. Evaluation may include competency assessments before and after training, observation of clinical skills, supervision, and monitoring of relevant quality indicators. This approach helps connect professional development activities with expected work outcomes.

Li et al. (2025), in a systematic review and meta-analysis of the effectiveness of nursing interventions on patient experience, discussed the importance of nursing-led or nursing-focused interventions in improving patients' experiences. These findings are relevant to supporting the development of quality improvement programs centered on nursing practice. However, the study did not directly examine the competence–performance–service quality mediation model used in this article. Therefore, the literature provides support for the practical implications rather than direct evidence of the mediation mechanism identified in the present study.

Work Discipline and Its Nonsignificant Relationships with Performance and Service Quality

In contrast to competence, work discipline did not demonstrate a significant relationship with either nurse performance or service quality in the research model. These results indicate that the study data did not provide sufficient statistical evidence to establish significant relationships between discipline and the two variables. However, nonsignificant findings should not be interpreted as evidence that discipline has no value in nursing service delivery.

Discipline remains necessary to support compliance with standard operating procedures, punctuality, complete documentation, and the fulfillment of professional responsibilities. Nevertheless, compliance with rules does not always translate into statistically detectable improvements in service quality, particularly when other factors contribute more substantially to variations in performance or service quality within a particular organizational context.

Suasnawa et al. (2023), through their study of the effects of supervision and work discipline on inpatient nurse performance, provide an empirical comparison for examining the relationship between discipline and performance in hospital organizations. Differences in organizational characteristics, supervision systems, variable measurements, and respondent characteristics should be considered when comparing research findings.

One possible explanation is the limited variation in discipline scores. In this study, the mean discipline score was categorized as high. If most respondents provided relatively similar ratings, the ability of this variable to explain variations in performance and service quality might have been reduced. However, this explanation remains hypothetical because the score distribution, indicator variability, and potential ceiling effects have not been presented in detail. Other explanations, including the influence of supervision, leadership, workload, and organizational support, also cannot be confirmed without further testing.

Gutiérrez-Fernández et al. (2024) examined the effectiveness of intervention programs designed to improve the nursing work environment, while Kiptulon et al. (2024) investigated the relationship between organizational culture and work-related stress among nurses. Both studies support the

importance of considering the organizational environment in nursing workforce management. Therefore, the nonsignificant relationship involving discipline in this study should provide a basis for evaluating how discipline is implemented and supported by the work system rather than a reason to disregard compliance with established standards.

The Indirect Effect of Work Discipline on Service Quality Through Nurse Performance

The indirect pathway from work discipline to service quality through nurse performance was also nonsignificant. Thus, this study did not obtain statistical evidence supporting the mediating role of nurse performance in the relationship between discipline and service quality in the sample studied. This result differs from the competence pathway, which demonstrated a significant indirect effect.

This difference indicates that competence and discipline should not be assumed to operate through identical mechanisms in their relationships with service quality. Conceptually, competence concerns the ability to perform professional duties, whereas discipline relates to compliance with established rules and procedures. Both may contribute to service delivery through different mechanisms. However, because the relationship between discipline and nurse performance was also nonsignificant, the proposed mediation pathway through performance was not supported by the findings.

This interpretation should nevertheless consider path coefficients, bootstrap confidence intervals, and the adequacy of construct measurement rather than relying solely on p-values. In management practice, discipline should be maintained as part of service governance, while quality improvement interventions should also incorporate competency development, constructive supervision, team communication, and performance evaluation.

The World Health Organization (WHO, 2025) emphasizes the importance of investment in nursing education, employment, leadership, and service delivery. Accordingly, nursing workforce development policies should be implemented in an integrated manner, taking into account both professional capabilities and organizational support.

Study Limitations and Managerial Implications

The interpretation of the findings should consider the limited number of respondents, namely 41 nurses from a single hospital. Although total sampling enabled the inclusion of all members of the defined study population, it does not automatically ensure sufficient statistical power to detect small effects. Guenther et al. (2023) emphasized that the application of PLS-SEM should be supported by clear methodological justification, appropriate model assessment, and consideration of sample size requirements. Jhantasana (2023) also demonstrated that sample size determination based on rules of thumb may result in inadequate statistical power. Therefore, the nonsignificant findings for the discipline pathways should be interpreted cautiously, particularly because statistical power analysis was not reported.

The main managerial implication of this study is the need to integrate competency development with performance monitoring and service quality evaluation. Hospitals can develop training programs based on identified competency needs, evaluate the application of skills in the workplace, and use supervision findings to improve nursing practices. At the same time, discipline should be maintained through clear procedures, well-defined responsibilities, and supervision that supports learning and professional development.

Future research should involve larger samples or multiple hospitals, use validated instruments, and conduct statistical power analysis before data collection. Additional testing of leadership, motivation, workload, and work environment may also help explain variations in nurse performance and service quality more comprehensively.

CONCLUSION

Nurse competence had significant effects on service quality and nurse performance, while nurse performance had a significant effect on service quality. Work discipline did not have significant effects on either service quality or nurse performance. The indirect effect of competence on service quality

through nurse performance was significant, whereas the indirect effect of discipline through nurse performance was not significant. Therefore, enhancing nurses' competence through continuous professional development is an important strategy for supporting nurse performance and improving service quality.

ACKNOWLEDGEMENTS

The researcher would like to express sincere gratitude to RSAU dr. Sukirman, Roesmin Nurjadin Air Force Base, Pekanbaru, for granting permission and providing support for the implementation of this research.

REFERENCES

- Abu Zaitoun, R., Said, N. B., & de Tantillo, L. (2023). Clinical nurse competence and its effect on patient safety culture: A systematic review. *BMC Nursing*, 22, Article 173. <https://doi.org/10.1186/s12912-023-01305-w>
- Drennan, J., Murphy, A., McCarthy, V. J. C., Ball, J., Duffield, C., Crouch, R., Kelly, G., Loughnane, C., Murphy, A., Hegarty, J., Brady, N., Scott, A., & Griffiths, P. (2024). The association between nurse staffing and quality of care in emergency departments: A systematic review. *International Journal of Nursing Studies*, 153, 104706. <https://doi.org/10.1016/j.ijnurstu.2024.104706>
- Goodrich, G. W., & Lazenby, J. M. (2023). Elements of patient satisfaction: An integrative review. *Nursing Open*. <https://doi.org/10.1002/nop2.1437>
- Guan, T., Chen, X., Li, J., et al. (2024). Factors influencing patient experience in hospital wards: A systematic review. *BMC Nursing*, 23, Article 527. <https://doi.org/10.1186/s12912-024-02054-0>
- Guenther, P., Guenther, M., Ringle, C. M., Zaefarian, G., & Cartwright, S. (2023). Improving PLS-SEM use for business marketing research. *Industrial Marketing Management*, 111, 127–142. <https://doi.org/10.1016/j.indmarman.2023.03.010>
- Gutiérrez-Fernández, E., Amo-Setién, F., Leal-Costa, C., Salcedo-Sampedro, C., Martín-Melón, R., Molina-Mula, J., & Ortego-Maté, C. (2024). Effectiveness of intervention programs aimed at improving the nursing work environment: A systematic review. *International Nursing Review*, 71(1), 148–159. <https://doi.org/10.1111/inr.12826>
- Hosseini, S. J., Sadeghi, T., & Heydari, A. (2023). Patient satisfaction with nursing care in Iran: A systematic review and meta-analysis. *Annals of Medicine and Surgery*, 85(11), 5611–5620. <https://doi.org/10.1097/MS9.0000000000001309>
- Jhantasana, C. (2023). Should a rule of thumb be used to calculate PLS-SEM sample size? *Asia Social Issues*, 16(5), Article e254658. <https://doi.org/10.48048/asi.2023.254658>
- Kiptulon, E. K., Elmadani, M., Limungi, G. M., Simon, K., Tóth, L., Horvath, E., et al. (2024). Transforming nursing work environments: The impact of organizational culture on work-related stress among nurses: A systematic review. *BMC Health Services Research*, 24, Article 1526. <https://doi.org/10.1186/s12913-024-12003-x>
- Li, L. Z., et al. (2025). Effectiveness of nursing interventions on patient experiences with health care: A systematic review and meta-analysis. *International Nursing Review*, 72(3), Article e13075. <https://doi.org/10.1111/inr.13075>
- Li, L. Z., Yang, P., Singer, S. J., Pfeffer, J., Mathur, M. B., & Shanafelt, T. (2024). Nurse burnout and patient safety, satisfaction, and quality of care: A systematic review and meta-analysis. *JAMA Network Open*, 7(11), e2443059. <https://doi.org/10.1001/jamanetworkopen.2024.43059>
- Ma, et al. (2025). Assessing the impact of burnout on nurse safety behaviors and patient safety competence: A latent profile analysis study. *Journal of Nursing Management*. <https://doi.org/10.1155/jonm/3793927>
- Patrician, P. A., Campbell, C. M., Javed, M., Williams, K. M., Foots, L., Hamilton, W. M., House, S., & Swiger, P. A. (2024). Quality and safety in nursing: Recommendations from a systematic review. *Journal of Healthcare Quality*, 46(4), 203–219. <https://doi.org/10.1097/JHQ.0000000000000430>

- Sibuea, Z. M., Sulastiana, M., & Fitriana, E. (2024). Factor affecting the quality of work life among nurses: A systematic review. *Journal of Multidisciplinary Healthcare*, 17, 491–503. <https://doi.org/10.2147/JMDH.S446459>
- Suasnawa, I. G., Nurhaeni, A., & Wardhana, Z. F. (2023). The influence of supervision and work discipline on the performance of inpatient nurses at “X” General Hospital. *JUDICIOUS*, 4(2), 334–339. <https://doi.org/10.37010/jdc.v4i2.1478>
- World Health Organization. (2025). State of the world's nursing report 2025: Investing in education, jobs, leadership and service delivery. <https://www.who.int/publications/i/item/9789240110236>
- Ylimäki, S., Oikarinen, A., Kääriäinen, M., Pölkki, T., Mikkonen, K., Holopainen, A., Kaakinen, P., Kanste, O., Meriläinen, M., Jansson, M., Immonen, K., & Tuomikoski, A.-M. (2024). Advanced practice nurses' evidence-based healthcare competence and associated factors: A systematic review. *Journal of Clinical Nursing*, 33(6), 2069–2083. <https://doi.org/10.1111/jocn.17075>