

Determinants of Nurses Performance at H. Padjonga Dg. Ngalle Hospital in Takalar Regency – A Cross Sectional Study

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ABSTRACT

Nursing services in hospitals are a critical component, requiring reliable nurses with strong motivation to perform their duties, which include providing nursing care. The higher the desired demands, the heavier the burden felt by nurses in providing safe and effective care. Therefore, evaluating nurse performance is essential and should always be carried out through a standardized system to ensure more objective results and evaluations. This study to identify the determinants of nurses performance at H. Padjonga Dg. Ngalle hospital. This is a quantitative research study with a cross-sectional approach. The sample consists of 149 professional nurses. Data were collected using questionnaires and analyzed using chi-square and logistic regression tests. The study results indicate that workload affects nurse performance with a p-value of $0.000 < 0.05$, shift work affects nurse performance with a p-value of $0.005 < 0.05$ and dual roles affect nurse performance with a p-value of $0.000 < 0.05$. Multivariate analysis indicates that the primary factor affecting nurse performance is workload. Hospitals are encouraged to ensure that all nurses maintain a balanced workload to sustain nurse productivity.

Keywords: Performance, Nurses, Workload, Shift, Dual Roles, Hospital

INTRODUCTION

Health services play a crucial role in our society, particularly those provided by hospitals (Alinejad et al., 2023). The quality of hospital services is defined by the level of excellence in meeting the needs of the community as patients (Kalaja et al., 2023). These services must be delivered safely and satisfactorily, adhering to norms, ethics, laws, and social culture, while utilizing resources reasonably, effectively, and efficiently (Okuhara et al., 2021).

Nurses comprise the largest segment of the healthcare workforce, and their performance significantly impacts the productivity of health services (Daba et al., 2024). The number of nurses is nearly four times greater than the total number of doctors and surpasses all other health professions. Therefore, optimizing nurse performance is essential for hospital efficiency and achieving better patient health outcomes (Kalsum et al., 2024), (Khamidah et al., 2024).

Based on data from the Medical Records of H. Padjonga Dg. Ngalle Regional General Hospital, there has been a year-to-year increase in the number of patients. In 2021, there were 62,363 patients, which rose to 82,316 in 2022. Patient visits continued to increase, reaching 85,799 by November 2023. Meanwhile, according to interviews with staff from the Department of Medical Services at the hospital, the number of nurses in 2023 remained nearly the same as the previous year, at 243. The rising number of patients, combined with the static number of nurses, has led to an excessive workload for the staff at H. Padjonga Dg. Ngalle Regional General Hospital.

Nurse performance can be assessed through performance evaluations conducted by the hospital. The evaluations at H. Padjonga Dg. Ngalle Regional General Hospital from January to March 2024 showed that 79% of nurses performed within standard expectations, while 18% of nursing care fell below these standards. Based on interviews and observations, several issues were identified related to nurse performance in both inpatient and outpatient departments at H. Padjonga Dg. Ngalle Regional General Hospital. These issues contribute to the

suboptimal performance of nurses in providing nursing care (Sophiana Enjellin Anathasia & Dety Mulyanti, 2023). Therefore, health care institutions should optimize its benefits and reduce the risks by providing continuity of care, and improving service outcomes, leading to increased patient's satisfaction as well as hospital profits (Hidayat et al., 2020). Patient safety needs effort from the whole team, the team most effectively has the same purpose in the work, and their work ineffective teams have the same goal in work and their work ineffective teams created opportunities for error/error (Utari & Nasri, 2021).

Addressing the persistent challenge of healthcare staff's work performance remains crucial in hospital management. Healthcare services are expected to deliver high-quality nursing care, particularly as health needs become increasingly complex (Suprpto et al., 2021). Given these challenges, the researcher aims to investigate the factors influencing nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency.

MATERIALS AND METHODS

Study Settings and Data Collection

This type of research is analytical observational with a cross sectional study design, which is a design or design that examines the dynamics of correlation or association between independent variables and dependent variables at the same time (point time approach). The population in this study were all nurses at H. Padjonga Dg. Ngalle Takalar Regency as many as 243 nurses. The sample in this study were nurses at H. Padjonga Dg. Ngalle who met the inclusion and exclusion criteria. The sample consists of 149 nurses at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency, selected using Proportionate Stratified Random Sampling method. Data collection was conducted using a questionnaire.

Analysis

Data processing was performed using SPSS software, with univariate and bivariate analyses using chi-square test and multivariate analysis using Multiple Logistic Regression. Univariate analysis was used to determine the frequency distribution or magnitude of each research variable. Bivariate analysis was used to determine the relationship between two variables, namely the independent variable and the dependent variable in the form of cross tabulation (cross tab) using the help of the SPSS computerised program facility with the Chi-Square statistical test. Multivariate analysis was conducted to analyse the complex relationship between the dependent variable and the independent variable. The multivariate analysis used was the multiple logistic regression test with the provision of categorical data.

Ethical Considerations

This study has obtained ethical approval with reference number: 1212/UN4.14.1/TP.01.02/2024. Informed written consent was collected from respondents before completing the survey. Further, we did not include any minors in this study.

RESULT

The characteristics of the respondents, including gender, age, and marital status, are presented in the following table.

Table 1: Frequency Distribution of Respondent Characteristics at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency in 2024

Characteristics	Frequency (n=149)	Percent (%)
Gender		
Female	132	88.6
Male	17	11.4
Age		
22-35 Year	73	49.0
36-60 Year	76	51.0
Marital Status		
Unmarried	34	22.8
Married	115	77.2
Total	149	100.0

Source: Primary Data 2024

Table 1 shows that the majority of respondents are female, with 132 nurses (88.6%). The largest age group is 36-60 years old, comprising 76 nurses (51.0%). In terms of marital status, the majority are married, with 115 nurses (77.2%)

Table 2. Distribution of Respondents Based on the Variables Studied at RSUD H. Padjonga Dg.Ngalle Regional General Hospital in Takalar In 2024

Variabel	Frequency (n=94)	Percent (%)
Workload		
Light	95	63.8
Heavy	54	36.2
Shift Work		
Rotating shift system	77	51.7
Non- rotating shift system	72	48.3
Dual Roles		
High	44	29.5
Low	105	70.5
Nurses Performance		
Good Performance	118	79.2
Poor Performance	31	20.8
Total	149	100

Source: Primary Data 2024

Table 2 indicates that most nurses have a light workload (63.8%), work under a rotating shift system (51.7%), and have low dual roles (70.5%). The completeness of nursing care data based on documentation exhibits a good performance category (79.2%).

Table 3. Bivariate Analysis of Influencing Variables on Nurses Performance at Regional General Hospital in Takalar In 2024

Variable (Workload, Shift Work, Dual Roles)	Nurses Performance				Total		P-Value
	Good		Poor		N	%	
	N	%	n	%			
Light	93	97.9	2	2.1	95	100	0.000
Heavy	25	46.3	29	53.7	54	100	
Rotating shift system	54	70.1	23	29.9	77	100	0.005
Non-rotating shift system	64	88.9	8	11.1	72	100	
High	18	40.9	26	59.1	44	100	0.000
Low	100	95.2	5	4.8	105	100	

Source: Primary Data 2024

Table 3 shows that the results of the bivariate statistical test indicate that the workload variable has a p-value of $0.000 < 0.05$, the shift work variable has a p-value of $0.005 > 0.05$, and the dual role variable has a p-value of $0.000 < 0.05$. These results indicate that workload, shift work, and dual roles have an impact on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency, while interpersonal relationships and organizational culture do not.

Table 4. Binary Logistic Regression Analysis of Influencing Variables on Nurses Performance at Regional General Hospital in Takalar In 2024

Variable	B	S.E	Wald	Df	Sig.	Exp (β)
Workload	4.913	1.302	14.234	1	.000	136.039
Shift Work	2.463	1.228	4.021	1	.045	11.741
Dual Roles	-2.859	.676	17.874	1	.000	.057

Source: Primary Data 2024

Table 4 demonstrates that the workload variable has the greatest impact on nurse performance, as indicated by the exp β value of the workload being higher than the other variables, such as shift work and dual roles.

DISCUSSION

The Influence of Workload on Nurse Performance

According to Koesomowidjojo, workload refers to the tasks or responsibilities assigned to all available human resources to be completed within the designated time (Chandra, 2023). The effect of workload on nurse performance is considerably important in healthcare management. Workload can significantly impact nurse performance, both directly and indirectly (Bolado et al., 2024).

The results of this study indicate a significant influence of workload on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital. This is evidenced by a p-value of 0.000, which is less than 0.05, indicating rejection of the null hypothesis (Ho). The impact of workload on nurse performance shows that 118 nurses (79.2%) demonstrated good performance, with 93 individuals (97.9%) experiencing a light workload and 25 nurses (46.3%) experiencing a heavy workload. Meanwhile, 31 nurses (20.8%) exhibited poor performance, with 2 nurses (2.1%) experiencing a light workload and 29 nurses (53.7%) experiencing a heavy workload.

This study proves that an excessive workload can negatively impact nurse performance. The lighter the workload, the better the performance, and vice versa. Nurses with heavy workloads who still maintain good performance exhibit positive attitudes and high dedication to their job, helping them remain productive and provide quality care to patients. Torkaman's research shows that to have efficient human resources in the health sector, highly professional nurses can enhance performance and the quality of care provided (Torkaman et al., 2020). This finding is consistent with Kristanti's research, which states that workload negatively affects performance: the higher the workload, the lower the performance. Workloads that do not match the employees' capabilities can potentially decrease their performance, and vice versa (Kristanti et al., 2024).

The Influence of Shift Work on Nurse Performance

Shift scheduling is a system implemented by hospital management that allows nurses to alternate between different time periods after a certain interval, rotating between different groups within the same department (Ilahi et al., 2023). H. Padjonga Dg. Ngalle Regional General Hospital has three shift schedules: morning, afternoon, and night shifts.

The results of this study indicate a significant influence of shift work on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. This is supported by a p-value of 0.005, which is less than 0.05, indicating rejection of the null hypothesis (Ho). The impact of shift work on nurse performance shows that 118 nurses (79.2%) exhibited good performance, with 54 nurses (70.1%) working in a rotating shift system and 64 nurses (88.9%) working in a non-rotating shift system. Meanwhile, 31 nurses (20.8%) showed poor performance, with 23 nurses (29.9%) working in a rotating shift system and 8 nurses (11.1%) working in a non-rotating shift system.

The study also indicates that nurses working in rotating shifts have poorer performance compared to those on fixed schedules. Shift work significantly affects performance by influencing their ability to carry out duties and has long-term impacts on their health and well-being. Despite various negative effects of shift work, sleep disturbances can particularly influence workers' physical and mental health, contributing to fatigue, cognitive performance, and overall quality of life (Booker et al., 2024). At H. Padjonga Dg. Ngalle Regional General Hospital, night shifts typically last for 12 hours, whereas the optimal daily work duration for most individuals is generally 6-10 hours (Laili & Susilawati, 2024).

These findings align with the findings of Arini's research, which showed that the variable of shift work affects nurse performance at Moslem Baby Day Care in Timoho, Yogyakarta, with a significance value of $0.010 < 0.05$. This indicates that shift work plays a role in determining nurse performance (Arini, 2021).

However, these findings differ from those of Syahrizal, which stated that shift work does not affect performance at PT Matahari Department Store Tbk in Bengkulu. It suggests that poorly managed and unfair shift work conditions perceived by an individual or group of employees do not enhance employee performance (Syahrizal et al., 2023).

The results of this study highlight the importance of adjusting work demands and minimizing extended work durations to mitigate the impacts of rotating shift work, particularly sleep disturbances among night shift workers (AL-hrinat et al., 2024).

The Influence of Dual Roles on Nurse Performance

Dual roles refer to the condition where an individual must balance workplace responsibilities with household responsibilities or other roles in their personal life (Suri, 2023). This study shows a significant impact of dual roles on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. This is indicated by a p-value of $0.000 < 0.05$, meaning the null hypothesis (Ho) is rejected. The results indicate that 118 nurses (79.2%) have good performance, with 18 nurses (40.9%) having high dual roles and 100 nurses (95.2%) having low dual roles. Meanwhile, 31 nurses (20.8%) exhibit poor performance, with 26 nurses (59.1%) having high dual roles and 5 nurses (4.8%) having low dual roles. Thus, it can be concluded that dual

roles negatively affect nurse performance, with nurses managing dual roles performing worse compared to those without dual roles.

This finding aligns with research results from Hanafiah Hospital in Batusangkar, which showed that dual role conflicts significantly affect the performance of female nurses (Suri, 2023). This is evident from the obtained t-value of 3.264 and a significance value of $0.001 > 0.005$, with a coefficient of 0.301, indicating that the higher the dual role conflict, the lower the performance of female nurses at Hanafiah Hospital. The demands of multiple roles can lead to high stress, fatigue, and burnout if not managed well.

Based on the distribution of respondents' answers, the majority agreed on the aspect of Behavior-based Conflict. Families expect holidays to be spent together, but most respondents also work in a rotating shift system that requires them to work on holidays. As previously explained, one factor influencing work-family conflict is time pressure. This factor can make it difficult to balance work and family life due to the shift work (Jacobus et al., 2024). This situation does not meet family expectations, making it harder for nurses to maintain a balance between their professional and personal lives (Evodius Nasus et al., 2023).

This finding contrasts with Astuti's research, which showed a statistical test result of 0.881 ($0.881 > 0.05$), indicating no significant relationship (Astuti et al., 2024). Dual roles have a complex impact on nurse performance (Rahmanita, 2022). With effective time management, social support, a focus on personal well-being, and proper training, nurses can better manage their dual roles, maintaining high performance and quality care.

CONCLUSION

There is an influence of workload on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. These results indicate that a light workload will improve nurse performance. Shift work affects the nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. These results indicate that nurses who work without a rotational shift system will increase nurse performance, while nurses who work with a rotational shift system will reduce nurse performance. And there is an influence of dual roles on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. The results show that low dual roles will increase nurse performance, while high dual roles will reduce nurse performance. Workload is the most influential variable on nurse performance at H. Padjonga Dg. Ngalle Regional General Hospital in Takalar Regency. This research shows that the variable with the strongest influence on nurse performance is the workload variable because it has the largest Exp^(β)/odds ratio value.

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Author's Contribution

Syukma Ekawati conceived the study, undertook the data collection, assisted with the statistical analysis and interpretation of the results. Indar and Balqis Nazaruddin assisted with the design of the study and study tools and a significant contribution in data analysis and development of the journal paper. Muhammad Alwi Arifin, Aminuddin Syam and Stang reviewed the manuscript and provided valuable feedback. All authors approved the final version of the manuscript for publication.

Declaration of Conflicting Interests

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REFERENCES

1. AL-hrinat, J., Al-Ansi, A. M., Hendi, A., Adwan, G., & Hazaimah, M. (2024). The impact of night shift stress and sleep disturbance on nurses quality of life: Case in Palestine Red Crescent and Al-Ahli Hospital. *BMC Nursing*, 23(1), 24. <https://doi.org/10.1186/s12912-023-01673-3>
2. Alinejad, V., Parizad, N., Almasi, L., Cheraghi, R., & Piran, M. (2023). Evaluation of occupational stress and job performance in Iranian nurses: The mediating effect of moral and emotional intelligence. *BMC Psychiatry*, 23(1). Scopus. <https://doi.org/10.1186/s12888-023-05277-8>
3. Arini, B. P. (2021). Pengaruh Shift Kerja Dan Beban Kerja Terhadap Kinerja Perawat Pada Moslem Baby Day Care Di Timoho Yogyakarta (Studi Pada Moslem Baby Day Care). *Jurnal Amenika*, 18(1).

4. Astuti, R., Permina, Y., Intening, V. R., & Sudarta, I. W. (2024). Hubungan Peran Ganda Dengan Kinerja Perawat Pada Asuhan Keperawatan Mahasiswa Rekognisi Pembelajaran Lampau (RPL). *STIKES Bethesda Yakkum*, 3(1), 395–402.
5. Bolado, G. N., Ataro, B. A., Gadabo, C. K., Ayana, A. S., Kebamo, T. E., & Minuta, W. M. (2024). Stress level and associated factors among nurses working in the critical care unit and emergency rooms at comprehensive specialized hospitals in Southern Ethiopia, 2023: Explanatory sequential mixed-method study. *BMC Nursing*, 23(1), 341. <https://doi.org/10.1186/s12912-024-02004-w>
6. Booker, L. A., Mills, J., Bish, M., Spong, J., Deacon-Crouch, M., & Skinner, T. C. (2024). Nurse rostering: Understanding the current shift work scheduling processes, benefits, limitations, and potential fatigue risks. *BMC Nursing*, 23(1), 295. <https://doi.org/10.1186/s12912-024-01949-2>
7. Chandra, L. D. (2023). Pengaruh Beban Kerja Dan Kepuasan Kerja Terhadap Kinerja Perawat. *Jurnal Ekonomi dan Ilmu Sosial (JEIS)*, 02(01), 86–93.
8. Daba, L., Beza, L., Kefyalew, M., Teshager, T., Wondimneh, F., Bidiru, A., & Ketema, I. (2024). Job performance and associated factors among nurses working in adult emergency departments at selected public hospitals in Ethiopia: A facility-based cross-sectional study. *BMC Nursing*, 23(1), 312. <https://doi.org/10.1186/s12912-024-01979-w>
9. Evodius Nasus, Ekawati Saputri, & Grace Tedy Tulak. (2023). Pengaruh Konflik Peran Ganda terhadap Kinerja Perawat Wanita: The Effect of Multiple Role Conflict on the Performance of Women Nurses. *Jurnal Kolaboratif Sains*, 6(7), 657–663. <https://doi.org/10.56338/jks.v6i7.3746>
10. Hidayat, N., Ahsan, A., Rahayu, M., & Lestari, R. (2020). Response time, waiting time and service quality in emergency department. *International Journal of Public Health Science (IJPHS)*, 9(3), 199. <https://doi.org/10.11591/ijphs.v9i3.20435>
11. Ilahi, N. K., Yenni, M., & Suroso, S. (2023). Hubungan Beban Kerja dan Shift Kerja dengan Gejala Stres Kerja Perawat di Rumah Sakit Jiwa Daerah Provinsi Jambi. *Environmental Occupational Health And Safety Journal*, 3(2), 141. <https://doi.org/10.24853/eohjs.3.2.141-152>
12. Jacobus, I. L., Yahya, I. M., & Riu, S. D. M. (2024). Hubungan Konflik Peran Ganda Dengan Stres Kerja Pada Perawat Wanita Di Rumah Sakit Bhayangkara TK.III Manado. *Jurnal Riset Rumpun Ilmu Kesehatan*, 3(1), 27–34. <https://doi.org/10.55606/jurrikes.v3i1.2363>
13. Kalaja, R., Kurti, S., & Myshketa, R. (2023). Service quality and patient satisfaction with private health care services in Albania. *International Journal of Public Health Science (IJPHS)*, 12(1), 460. <https://doi.org/10.11591/ijphs.v12i1.22240>
14. Kalsum, U., Rivai, F., Maidin, A., As, A. I., Zulkifli, A., & Thamrin, Y. (2024). Job and personal resources: Boosting work engagement and job satisfaction in hospitals. *International Journal of Public Health Science (IJPHS)*, 13(1), 239. <https://doi.org/10.11591/ijphs.v13i1.23551>
15. Khamidah, I. N., Muchsin, S., & Sekarsari, R. W. (2024). Peningkatan Kualitas Pelayanan Kesehatan Di Rsd Kota Malang (Studi Kasus Tentang Pelayanan Kesehatan Dan Kepuasan Pasien Dalam Menggunakan Program BPJS). *Jurnal Respon Publik*, 18(3).
16. Kristanti, R., Bastian, A., & Amdanata, D. D. (2024). Analisa Pengaruh Beban Kerja, Kepuasan Kerja, dan Motivasi Kerja terhadap Kinerja Perawat dan Tenaga Kesehatan di Lingkungan Rumah Sakit Umum Daerah Kabupaten Rokan Hulu. *South East Asian Management Concern*, 1(2), 51–59. <https://doi.org/10.61761/seamac.1.2.51-59>
17. Laili, H., & Susilawati, S. (2024). Hubungan Antara Shift Kerja, Kelelahan Kerja Dengan Stres Kerja Pada Perawat di Rumah Sakit Literature Review. *Indonesian Journal of Innovation Multidisipliner Research*, 2(4), 51–60. <https://doi.org/10.31004/ijim.v2i4.95>
18. Okuhara, M., Sato, K., & Kodama, Y. (2021). The nurses' occupational stress components and outcomes, findings from an integrative review. *Nursing Open*, 8(5), 2153–2174. <https://doi.org/10.1002/nop2.780>
19. Rahmanita, F. (2022). Analisis Pengaruh Peran Ganda pada Perawat Wanita terhadap Kinerja pada Masa Pandemi Covid-19. *Scientia Sacra: Jurnal Sains, Teknologi dan Masyarakat*, 2(1).
20. Sophiana Enjellin Anathasia & Dety Mulyanti. (2023). Faktor-Faktor yang mempengaruhi peningkatan kualitas pelayanan kesehatan di Rumah Sakit: Tinjauan Teoritis. *Jurnal Ilmiah Kedokteran dan Kesehatan*, 2(2), 145–151. <https://doi.org/10.55606/klinik.v2i2.1289>
21. Suprpto, S., Mulat, T. C., & Lalla, N. S. N. (2021). Nurse competence in implementing public health care. *International Journal of Public Health Science (IJPHS)*, 10(2), 428. <https://doi.org/10.11591/ijphs.v10i2.20711>
22. Suri, A. (2023). Pengaruh Konflik Peran Ganda Dan Stres Kerja Terhadap Kinerja Pada Perawat Wanita Di RSUD Prof.DR.M.A Hanafiah, SM Batusangkar. *Jurnal Salingka Nagari*, 02(2), 664–674.
23. Syahrizal, A., Hidayati, A., & Wali Amin, J. (2023). Pengaruh Shift Kerja, Lingkungan Kerja Dan Beban Kerja Terhadap Kinerja Karyawan Di Matahari Departement Store TBK Kota Bengkulu. *Primanomics : Jurnal Ekonomi & Bisnis*, 21(3), 168–179. <https://doi.org/10.31253/pe.v21i3.2248>

24. Torkaman, M., Heydari, N., & Torabizadeh, C. (2020). Nurses' perspectives regarding the relationship between professional ethics and organizational commitment in healthcare organizations. *Journal of Medical Ethics and History of Medicine*. <https://doi.org/10.18502/jmehm.v13i17.4658>
25. Utari, D., & Nasri, S. M. (2021). Work environment affects patient safety climate in a government hospital. *International Journal of Public Health Science (IJPHS)*, 10(1), 61. <https://doi.org/10.11591/ijphs.v10i1.20629>