



Research Paper

The Effect of Work Environment and Workload on the Performance of Medical Personnel at TK II Iskandar Muda Hospital, Banda Aceh City

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Abstract

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This study aims to analyze the influence of the work environment and workload on the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh. The research method used is quantitative, with questionnaires distributed to the entire population of medical personnel, totaling 76 respondents. Data analysis techniques were conducted using SPSS version 25 through validity tests, reliability tests, classical assumption tests (normality, multicollinearity, and heteroscedasticity), and hypothesis testing through multiple linear regression analysis. The results indicate that both work environment and workload partially and simultaneously have a significant effect on the performance of medical personnel. Therefore, hospital management is expected to create a conducive work environment and manage workloads effectively to enhance the performance of medical staff. Moreover, the study emphasizes that improving medical personnel performance cannot be separated from organizational support, adequate facilities, and proportional task distribution. A comfortable and supportive work environment can increase motivation and job satisfaction, while excessive workloads tend to cause stress and decrease productivity. The findings of this study are expected to contribute to the development of human resource management practices in hospitals, particularly in formulating strategies to balance job demands with the physical and psychological capacities of medical personnel.

Keywords: Work environment; Workload, Medical personnel performance

1. Introduction

The performance of medical personnel is a crucial factor in determining the success of hospital services. As a healthcare institution, a hospital relies heavily on the quality and productivity of its medical staff to deliver optimal services to the public. However, in practice,



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performance decline is often observed due to an uncondusive work environment and excessive workloads. These conditions may lead to stress, fatigue, and even decreased work motivation, which in turn affect the quality of healthcare services. Therefore, improving medical personnel performance has become one of the main focuses in human resource management within the healthcare sector [1].

Previous studies have shown that work environment and workload significantly influence employee performance. Research conducted by several scholars suggests that a good work environment can enhance motivation, comfort, and work effectiveness [2], [3], [4]. Meanwhile, other studies found that excessive workloads could reduce employee performance by causing pressure and job stress [5], [6]. However, most of these studies were conducted in industrial and governmental sectors, while hospital settings—with their unique job characteristics—remain less explored.

From the perspective of research development (state of the art), most previous studies discussed work environment and workload variables separately or only examined non-medical employees. In contrast, medical personnel have complex and high-risk job characteristics, such as responsibility for patient safety, fast-paced work demands, and long working hours. These conditions highlight the importance of analyzing the simultaneous influence of the work environment and workload on the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh.

Based on this background, this study aims to examine the effect of work environment and workload on the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh. The results are expected to provide valuable insights for hospital management in creating a conducive work environment and managing workload effectively, thereby improving the performance and service quality of medical personnel for patients.

2. Method

This study employs a quantitative approach as it aims to measure the influence of work environment and workload on the performance of medical personnel. The research was conducted at TK II Iskandar Muda Hospital, Banda Aceh. The population in this study consists of all medical personnel totaling 76 individuals, who were also used as the research sample through a saturated sampling technique (census). Data were collected by distributing questionnaires to respondents. The analytical method used is multiple linear regression analysis with the assistance of SPSS version 25. Before hypothesis testing, several stages of analysis were conducted, including: a) validity and Reliability Tests to ensure the accuracy and consistency of the instruments; b) classical Assumption Tests (normality, multicollinearity, and heteroscedasticity); c) multiple Linear Regression Analysis to determine the influence of independent variables (work environment and workload) on the dependent variable (performance of medical personnel); d) t-test and F-test to examine partial and simultaneous effects. The regression model used in this study is as follows:

$$Y = a + b^1x^1 + b^2x^2 + e$$

Where:

Y = Performance of Medical Personnel

X₁ = Work Environment

X₂ = Workload

e = Error term

This approach was chosen to enable the researcher to identify both the direct and combined effects of work environment and workload on the performance of medical personnel in a measurable manner.

3. Result

This section presents the research findings and their explanations, describing the results of data analysis regarding the influence of work environment and workload on the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh.

3.1 Presentation of research findings

Descriptive analysis. The descriptive analysis of respondents explains their characteristics, which include gender, age, marital status, and educational background.

Table 1. Characteristics of respondents

Gender	Frequency	Percentage
Male	49	64.5%
Female	27	35.5%
Total	76	100%
Age	Frequency	Percentage
< 30 Years	10	13.2%
31 - 40 Years	41	53.9%
41 - 50 Years	19	25%
> 50 Years	6	7.89%
Total	76	100%
Marital Status	Frequency	Percentage
Married	71	93.4%
Single	5	6.6%
Divorced	-	-
Total	76	100%
Education	Frequency	Percentage
General Practitioner	15	19.7%
Dentist	3	3.9%
Specialist Doctor	58	76.3%
Total	76	100%

Source: processed data, 2025

Based on **Table 1**, most respondents are male, accounting for 64.5% (49 respondents), while female respondents represent 35.5% (27 respondents). Most respondents are aged between 31–40 years (53.9%), followed by 41–50 years (25%), under 30 years (13.2%), and over 50 years (7.89%). Most respondents are married (93.4%), while only 6.6% are unmarried. Based on Table 4, most respondents are specialist doctors (76.3%), followed by general practitioners (19.7%), and dentists (3.9%).

3.2 Validity and reliability tests

Validity test. The validity test was conducted to determine whether the collected data were valid based on the measurement instrument used, namely the questionnaire. A measurement scale is considered valid if it accurately measures what it is intended to measure. Therefore, the research results are valid if they correctly reflect the phenomena being studied [7], [8].

Table 2. Results of the validity test

Item	Variable	R-Count	R-Table	Status
Item A1	X1	0.662	0.226	Valid
Item A2		0.804	0.226	Valid
Item A3		0.728	0.226	Valid
Item A4		0.745	0.226	Valid
Item A5		0.736	0.226	Valid
Item B1	X2	0.855	0.226	Valid
Item B2		0.879	0.226	Valid
Item B3		0.721	0.226	Valid
Item C1	Y	0.845	0.226	Valid
Item C2		0.771	0.226	Valid
Item C3		0.897	0.226	Valid
Item C4		0.826	0.226	Valid
Item C5		0.844	0.226	Valid

Based on **Table 2**, all items have r-count values greater than r-table (0.226), indicating that all measurement items are valid. Reliability test. The reliability test was used to determine whether the instrument consistently measures the same phenomenon. A variable is considered reliable if Cronbach's Alpha > 0.6 [9].

Table 3. Results of the reliability test

Variable	Alpha Value	Criteria	Status
Work Environment (X1)	0.787	0.60	Reliable
Workload (X2)	0.753	0.60	Reliable
Medical Personnel Performance (Y)	0.892	0.60	Reliable

Based on **Table 3**, all variables have Alpha values above 0.6, indicating that the instruments are reliable.

3.3 Classical assumption tests

Normality Test. The normality test was performed to determine whether the residuals were normally distributed. A good regression model has normally distributed residuals [10].

Table 4. Results of the normality test

Normality	Residual
Kolmogorov-Smirnov Z	0.200
Sig.	0.940

Since the significance value (0.940) is greater than 0.05, the data are normally distributed.

3.4 Multicollinearity test

The multicollinearity test checks whether there is a high correlation among independent variables [11].

Table 5. Results of the multicollinearity test

Variable	Kolinearitas statistik	
	Tolerance	VIF
Work Environment (X1)	0.463	2.158
Workload (X2)	0.463	2.158

Source: processed data, 2025

As all tolerance values exceed 0.10 and VIF values are below 10, there is no indication of multicollinearity in the model.

Table 6. Results of multiple linear regression

Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.270	2.322		0.547	0.586
1 Work Environment	0.660	0.154	0.513	4.286	0.000
Workload	0.459	0.219	0.251	2.096	0.040

a. Dependent Variable: Medical Personnel Performance

3.5 Regression analysis

The regression equation derived from SPSS is $Y = 1.270 + 0.660X_1 + 0.459X_2$

- Constant (1.270): When both independent variables remain constant, the average performance score of medical personnel is 1.270.
- Work Environment (0.660): A 100% improvement in work environment increases performance by 66.0%.
- Workload (0.459): A 100% increase in workload improves performance by 45.9%, assuming work environment remains constant.

Among the two variables, the work environment has a more dominant effect on performance.

4. Discussion

The findings reveal that both work environment and workload significantly influence the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh. These results support previous research, which states that a comfortable, safe, and well-equipped work environment enhances productivity and job satisfaction among employees [12], [13]. Theoretically, this relationship can be explained by Herzberg's Two-Factor Theory, which distinguishes between motivator factors and hygiene factors. The work environment is categorized as a hygiene factor, which does not directly motivate employees but can cause dissatisfaction when inadequate. Hence, a supportive work environment helps maintain the psychological stability of medical personnel, thereby improving their performance.

Meanwhile, the study also reveals that a high workload has a negative impact on the performance of medical personnel. Excessive workloads—such as many patients, extended working hours, and high job pressure—can cause work-related stress as well as physical and mental fatigue, which potentially reduces the quality of healthcare services. This finding supports previous studies that found excessive workloads decrease work effectiveness and lead to emotional exhaustion [14], [15], [16]. This result is also consistent with work stress theory,

which explains that excessive pressure can trigger stress responses that negatively affect employee productivity and well-being [17].

Therefore, hospital management needs to pay attention to maintaining a balance between a supportive work environment and a proportional workload distribution to ensure optimal performance of medical personnel. Efforts such as creating a comfortable workspace, improving medical facilities, and implementing fair work schedules can serve as effective strategies to enhance the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh [18], [19], [20].

5. Conclusion

Based on the results of the research, it can be concluded that the work environment and workload have a significant influence on the performance of medical personnel at TK II Iskandar Muda Hospital, Banda Aceh. The work environment has a positive and significant effect on the performance of medical personnel, meaning that the better the working conditions, the higher the performance achieved. Conversely, workload has a negative and significant effect on the performance of medical personnel, indicating that the heavier the workload, the lower the performance tends to be. The findings of this study contribute to the development of human resource management, particularly in the context of healthcare services. A comfortable work environment, adequate facilities, and proportional workload distribution have been proven to enhance the effectiveness and productivity of medical personnel. For future research, it is recommended to include additional variables such as work motivation, job satisfaction, and leadership, which may also influence the performance of medical personnel. Furthermore, future studies could be conducted in other hospitals with a broader regional scope to enable the findings to be generalized more comprehensively.

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Authors' contributions and responsibilities

Cut Sona Qonita: conceptualization, methodology, investigation, formal analysis, visualization, and writing – original draft. Tuwisna: supervision and writing – review & editing. Suryani Murad: supervision and writing – review & editing.

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Competing interests

The authors declare no competing interest.

Additional information

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References

- [1] T. H. Handoko, *Manajemen personalia dan sumber daya manusia*. 2020.
- [2] A. H. Adha, R. N., Qomariah, N., & Hafidzi, "Pengaruh motivasi kerja, lingkungan kerja, budaya kerja terhadap kinerja karyawan Dinas Sosial Kabupaten Jember," *J. Pendidik. Ipteks*, vol. 4, 2019.
- [3] Eric Hermawan, "Pengaruh lingkungan kerja, stres kerja dan beban kerja terhadap Kinerja PT. Sakti Mobile Jakarta," *J. Kaji. Ilm.*, vol. 22, 2022.
- [4] Rizal Nabawi, "Pengaruh lingkungan kerja, kepuasan kerja dan beban kerja terhadap kinerja pegawai," *J. Ilm. Magister Manaj.*, vol. 2, 2019.
- [5] R. M. Rohman, M. A., & Ichsan, "Pengaruh beban kerja dan stres kerja terhadap kinerja karyawan PT. Honda anugerah mandiri cabang Sukabumi," *J. Mhs. Manaj.*, vol. 2, p. 10, 2021.
- [6] M. Jannah, "Pengaruh beban kerja dan stres kerja terhadap kinerja perawat di Rumah Sakit Umum Daerah," *J. Kesehat. Masy.*, vol. 12, pp. 5–8, 2021.
- [7] Sugiyono, *Metode penelitian kuantitatif, kualitatif, kombinasi, dan R&D*. 2020.
- [8] I. Ghozali, *Aplikasi penelitian multivariate dengan program IBM SPSS 25*, Semarang: Badan Penerbit Universitas Diponegoro. 2018.
- [9] J. C. Nurmally, *Pshychometric Theory (2nded.)*. New york: McGraw-Hill. 1978.
- [10] S. Santoso, *Menguasai statistik dengan SPSS 23*. Jakarta: PT Elex Media Komputindo. 2015.
- [11] D. C. Gurajati, D.N., & Porter, *Basic economics (5th ed.)*. New York: McGraw-Hill. 2009.
- [12] P. Afandi, "Pengaruh disiplin kerja, lingkungan kerja terhadap kinerja karyawan pada PT. Hazara Cipta Pesona," *J. Ilm. Nas.*, vol. 3, 2018.
- [13] Sri Wahyuningsih, "Pengaruh lingkungan kerja terhadap produktivitas kerja," *J. War. Ed.* 57, vol. 12, 2018.
- [14] A. R. Vanchapo, *Beban Kerja dan Stres Kerja*. 2020.
- [15] I. K. Budiasa, *Beban kerja dan kinerja sumber daya manusia*. Jawa Tengah: CV Pena Persada. 2021.
- [16] Agung Aditya, "Pengaruh kompensasi, lingkungan kerja dan beban kerja terhadap kepuasan kerja karyawan," *Technomedia J.*, vol. 7, pp. 68–77, 2022.
- [17] T. A. Robbins, S. P., & Judge, *Organizational behavior*. 2019.
- [18] M. S. R. Nurul Magfirah, "Pengaruh lingkungan kerja dan beban kerja terhadap kinerja tenaga medis rumah sakit bhayangkara TK III Ambon," *J. Econ. Dev. Stud.*, vol. 1, 2023.
- [19] A. Syamsuri, S., & Halim, "Analisis pengaruh lingkungan kerja terhadap kinerja karyawan," *J. Manaj. dan bisnis*, vol. 9, pp. 14–16, 2021.
- [20] T. Herlambang, T., & Haryono, "Pengaruh lingkungan kerja dan kompensasi terhadap kinerja karyawan pada PT. Londaria Group Makassar," *J. Ilmu Manaj. dan Bisnis*, vol. 10, pp. 26–28, 2022.