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The Influence of Work Shifts, Workload, and Work Stress on the Performance of Nurses in Inpatient Ward I at Dr. Saiful Anwar General Hospital, Malang City

Titin Susanti[1], Miriam Baersady[2], Joko Prasetyo[3], Ratna Wardani[4]
Universitas STRADA Indonesia
Corresponding author: titin@strada.ac.id

ABSTRACT

The aim of this study is to determine how the performance of nurses in the inpatient ward I at RSUD Dr. Saiful Anwar Malang is influenced by work shifts, workloads, and work stress. This study uses a quantitative design with a cross-sectional approach. The population of this study is 242 nurses, with a sample of 151 nurses selected using Probability Sampling techniques. The data analysis method used is SPSS with Multiple Linear Regression tests. This study found that among the morning, afternoon, and night shifts, the morning shift has the greatest influence, with a t-value of 2.164 > t-table 1.655 and a significance level of 0.032 < 0.05, indicating that the morning shift positively affects nurse performance. The influence of workload is indicated by a t-value of 9.855 > t-table 1.655 with a significance level of 0.000 < 0.05, meaning that workload negatively affects nurse performance.

Keywords: nurse performance, workload, work shifts, work stress

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BACKGROUND

Healthcare services provide a significant and dominant contribution to patient recovery and offer highly complex services in line with the duties and responsibilities of nurses in inpatient care (Budiyanto, 2019). All inpatient wards provide nursing care, which is both a professional demand and a major responsibility that requires good performance. Good performance can assist the curative process of patient recovery, and with the provision of good nursing care (Ministry of Health of the Republic of Indonesia, 2020), good nurse performance will also enhance and maintain the quality of healthcare services for patients. Behavior, competence, and nursing processes that align with nursing care standards are indicators of nurse performance evaluation (Nursalam, 2014).

According to World Health Organization (WHO) data from 2021, there are 28 million nurses worldwide. Specifically in Indonesia, according to the Ministry of Health of the Republic of Indonesia (2023), there are 1.26 million healthcare workers, with nurses being the largest group, numbering 563,739. Data from the East Java Health Office (2022) indicates that there are 71,849 nurses in East Java, with 3,591 of them in Malang City.

According to Keweuan (2016), five factors influence performance: personal/individual factors, including knowledge, skills, and self-confidence; leadership factors, such as the quality of managers and team leaders in providing encouragement, motivation, and support; team factors, including team cohesion and solidarity; system factors, including the work system, organizational processes, and performance culture; and contextual/situational factors, including pressures and changes in the external and internal environment. One of the factors influencing nurse performance is the system factor, which includes the working conditions where nurses perform their tasks. One way to measure working conditions is through the shift system and regular working hours. An imbalanced shift system relative to the number of patients can affect the workload experienced by nurses, including both physical and mental workloads (Henni, Nurina & Abbas, 2014).

Factors influencing nurses' workload include mental tasks and work organization. Mental tasks involve heavy work, numerous patient complaints, family demands, and the inability of nurses' skills to match the difficulty of the tasks, thus becoming a workload burden (Fresty Africia, 2017). Generally, the inability to manage a high workload results in limitations in completing assigned tasks, leading to work stress (Staranks, 2005). A survey conducted by the Indonesian National Nurses Association (PPNI) reported that approximately 50.9% of nurses in Indonesia experience significant work stress, often feeling dizzy, less friendly to patients, tired, and lacking rest due to high workloads (Rhamdani & Wartono, 2019). If work stress among nurses is not properly addressed, it will lead to decreased productivity in providing nursing care, consequently affecting nurse performance (Nurcahyani, 2016).

Given this background, the researcher is interested in studying the influence of work shifts, workload, and work stress on the performance of nurses in Inpatient Ward I at Dr. Saiful Anwar General Hospital, Malang City.

METHODS

The research design used is quantitative with a cross-sectional method. The independent variables in this study are work shifts, workload, and work stress, while the dependent variable is nurse performance. The research instrument used is a questionnaire. The population in this study consists of nurses working in Inpatient Ward I, with a sample of 151 respondents selected using the Simple Random Sampling technique. The study was conducted from April 29 to May 14, 2024. The statistical test used is Multiple Linear Regression.

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RESULTS

Respondent Characteristics

The following research data describes the distribution and characteristics of respondents, including age, gender, work tenure, marital status, and last education, presented in the table below.

Table 1. Respondent Characteristics

Age	**n**	**%**
23 – 33 Years	58	38,4%
34 – 44 Years	83	55,0%
>44 Years	10	6,6%
Amount	**151**	**100%**
Gender		
Male	49	32,5%
Female	102	67,5%
Amount	**151**	**100%**
Years of Service		
1 – 10 Years	96	63,6%
11 – 20 Years	49	32,5%
>20 Years	6	4,0%
Amount	**151**	**100%**
Mariage Status		
Married	134	88,7%
Not Married	17	11,3%
Amount	**151**	**100%**
Last Education		
DIII	84	55,6%
S1 + Ners	67	44,4%
Amount	**151**	**100%**

Based on Table 1, it is known that the majority of respondents are aged 34-44 years, totaling 83 people (55.0%), with 102 respondents being female (67.5%). The work tenure of 1-10 years accounts for 96 respondents (63.6%), while 134 respondents (88.7%) are married. Lastly, the highest level of education is a Diploma III (DIII), held by 84 respondents (55.6%).

Multiple Linear Regression Analysis Test

The following is the Multiple Linear Regression Analysis Test:

Table 2. Multiple Linear Regression Analysis Test

Variable	Sig	R^2	β	t	sig
Constant	.000	.396	34.806	15.652	.000
Morning Shift			1.729	2.164	.032
Day Shift			.044	0.49	.961
Workload			-.388	-9.855	.000
Work Stress			-.023	-2.277	.024

$$Y = 34{,}303 + 1{,}729 + 0{,}044 + -0{,}388 + -0{,}023$$

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Based on the equations above, it can be explained as follows:

1. The constant of 34.303 indicates that if the variables morning shift (X1), afternoon shift (X2), workload (X2), and work stress (X3) are assumed to be zero, then the nurse's performance (Y) would be 34.303.
2. The regression coefficient for the morning shift variable (X1) of 1.792 means that if the morning shift increases by one unit, the nurse's performance (Y) will increase by 1.792 units, assuming workload (X2) and work stress (X3) remain constant.

The regression coefficient for the afternoon shift variable (X2) of 0.044 means that if the afternoon shift increases by one unit, the nurse's performance (Y) will increase by 0.044 units, assuming workload (X2) and work stress (X3) remain constant.

1. The regression coefficient for the workload variable (X2) of 0.388 means that if the workload increases by one unit, the nurse's performance (Y) will increase by 0.388 units, assuming morning shift (X1) and afternoon shift (X2) remain constant.
2. The regression coefficient for the work stress variable (X3) of 0.023 means that if work stress increases by one unit, the nurse's performance (Y) will increase by 0.023 units, assuming morning shift (X1) and afternoon shift (X2) remain constant.

F Test

Based on Table 2, the significance value is 0.000, which is less than the significance level (alpha) of 0.05, and the computed F value is 25.626. The critical F value from the table is 2.67 (obtained from the sample size minus the number of variables, 147). Therefore, the computed F value of 25.626 is greater than 2.67. Hence, it can be concluded that the variables morning shift (X1), workload (X2), and work stress (X3) have a significant effect on nurse performance (Y).

T Test

Based on Table 2, the hypothesis testing results are as follows:

1. First hypothesis testing (Morning, Afternoon, and Night shifts)

The significance value for the influence of morning shift (X1) on nurse performance (Y) is 0.032, which is less than 0.05, and the computed t value is 2.164, greater than the critical t value of 1.655 (obtained from the 0.05 significance level for 95% confidence). Therefore, it can be concluded that the morning shift (X1) has a significant positive effect on nurse performance (Y).

The significance value for the influence of afternoon shift (X1) on nurse performance (Y) is 0.961, which is greater than 0.05, and the computed t value is 0.049, less than the critical t value of 1.655 (obtained from the 0.05 significance level for 95% confidence). Therefore, it can be concluded that the afternoon shift (X1) does not significantly affect nurse performance (Y).

2. Second hypothesis testing (Workload)

The significance value for the influence of workload (X2) on nurse performance (Y) is 0.000, which is less than 0.05, and the computed t value is 9.855, greater than the critical t value of 1.655 (obtained from the 0.05 significance level for 95% confidence). Therefore, it can be concluded that workload (X2) significantly negatively affects nurse performance (Y).

3. Third hypothesis testing (Work Stress)

The significance value for the influence of work stress (X3) on nurse performance (Y) is 0.024, which is less than 0.05, and the computed t value is 2.277, greater than the critical t value of 1.655 (obtained from the 0.05 significance level for 95% confidence). Therefore, it can be concluded that work stress (X3) significantly negatively affects nurse performance (Y).

Coefficient of Determination (R squared)

Based on Table 2, the correlation coefficient (R) of 0.642 indicates that morning shift (X1), workload (X2), and work stress (X3) collectively influence nurse performance at

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RSUD Dr. Saiful Anwar Kota Malang. The adjusted R-squared (R^2) of 0.395 explains that 39.5% of nurse performance can be explained by the variables morning shift (X1), workload (X2), and work stress (X3), while 60.5% is attributed to unobserved variables such as personal factors including compensation, motivation, self-confidence, organizational commitment, and others

DISCUSSION

The Influence of Shift Work on Nurse Performance

The research results demonstrate that among the morning, afternoon, and night shifts, the morning shift significantly influences nurse performance. The magnitude of the morning shift's impact on nurse performance can be assessed from the t-value of 2.164, which is greater than the critical t-value of 1.655 at a significance level of 0.05 ($t(147) = 2.164$, $p < 0.05$), indicating that the morning shift significantly affects nurse performance. Based on the checklist of morning, afternoon, and night shifts from the questionnaire on shift work variables, it was found that 82 respondents, accounting for 54.3%, worked the morning shift, 39 respondents, accounting for 25.8%, worked the afternoon shift, and 30 respondents, accounting for 19.9%, worked the night shift.

According to Suma'mur (2019), health and work efficiency are closely related to the work system implemented. To achieve fair distribution of work hours and prevent employee fatigue due to shift work, the choice of work schedule or shift by a company significantly impacts human productivity. These research findings align with a study conducted by Fatonah (2015) on the impact of shift work on nurses in the inpatient ward of RS PKU Aisyiyah Boyolali, which analyzed data from nurses across morning, afternoon, and night shifts.

The implementation of shift work at RSUD Dr. Saiful Anwar is well-organized, with a majority of nurses in the inpatient ward 1 adhering to the predetermined shift schedules.

The Influence of Workload on Nurse Performance

The research findings demonstrate that workload has a significant negative impact on nurse performance at RSUD Dr. Saiful Anwar, Malang City. The extent of this impact can be gauged from the calculated t-value of 9.855, which exceeds the critical t-value of 1.655 at a significance level of 0.05 ($t(147) = 9.855$, $p < 0.05$), indicating that workload significantly and negatively affects nurse performance. This implies that as workload increases, nurse performance decreases.

This study is supported by Muslimah (2015), who emphasized that quantitative workload primarily involves the number of tasks required to meet patient health needs, while qualitative workload pertains to the high level of responsibility in providing patient care. Nurse performance is influenced by perceived excessive workload. Workload assigned to nurses should be evenly distributed to avoid situations where some nurses experience excessive or insufficient workload. However, even distribution of workload does not imply uniformity in workload across all nurses within an organization (Apilia F, et al., 2017).

Based on the research results, it is evident that among the 13 questionnaire items and 4 workload indicators, the most prominent responses relate to insufficient nursing staff compared to the number of patients and the types of tasks performed. Many nurses feel burdened by tasks such as transporting patients to rooms, catheter insertion, wound dressing, and other non-nursing duties. It is crucial to ensure that nurses' workload does not exceed their capacity and that they can consistently deliver optimal performance in patient care through effective human resource planning, particularly aimed at enhancing the quality of inpatient nursing services

The Influence of Job Stress on Nurse Performance

The research findings demonstrate that job stress has a significant negative impact on

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nurse performance. The extent of this impact can be seen from the calculated t-value of 2.277, which exceeds the critical t-value of 1.655 at a significance level of 0.05 ($t(147) = 2.277$, $p < 0.05$), indicating that job stress significantly and negatively affects nurse performance. This implies that as job stress increases, nurse performance decreases.

Job stress is defined as the feeling of pressure experienced by employees in dealing with their work (Litjan, 2016). High levels of physical and behavioral stress are short-term outcomes of job stress that can result in low employee performance (Roboth JY, 2015). This study is consistent with research conducted by Kurnia (Wayan AP, et al., 2020), which states that job stress negatively affects performance because stress is a response to adjustments, channeled through individual differences or psychological processes that are consequences of excessive psychological or physical demands placed on individuals.

It is known that among the 57 questionnaire items and 5 job stress indicators, the most prominent responses relate to doctors not being present during medical emergencies, staff shortages to meet unit needs, and working during rest hours. Therefore, hospitals can re-evaluate situations where doctors are absent during medical emergencies, as such situations can cause panic among nurses. Hospitals can also conduct visits to each inpatient ward to assess staffing shortages and promptly recruit staff to meet unit needs

CONCLUSION

Based on the research findings and discussion, the conclusions drawn from this study are as follows:

1. There is an influence of morning shift work on nurse performance, indicating a positive effect, meaning that the more or the better the morning shifts, the better the nurse performance.
2. There is an influence of workload on nurse performance, indicating a negative effect, meaning that higher workload leads to decreased nurse performance.
3. There is an influence of job stress on nurse performance, indicating a negative effect, meaning that higher job stress leads to decreased nurse performance.

REFERENCES

Africia, F. (2017). The Relationship between Nurse Workload and Nurse Performance in the Inpatient Ward of RSUD Mardi Waluyo Kota Blitar. Nursing Journal.

Aprilia, F. (2017). The Influence of Workload, Job Stress, and Work Motivation on Nurse Performance at RSI Ibnu Sina Pekanbaru. JOM Fekon Journal.

Budiyanto, Rattu & Umboh. (2019). Factors Related to Nurse Job Stress in the Inpatient Ward of Bethesda GMIM General Hospital Tomohon.

East Java Provincial Health Office. (2022). Number of Health Workers by District / City in East Java.

Fatona L. (2015). Differences in Fatigue Levels between Morning, Afternoon, and Night Shifts among Inpatient Nurses at RS PKU Asyiyah Boyolali. Surakarta.

Henni, Nurina, & Syifa Fauziah Abbas. (2014). Analysis of the Influence of Shift Work on Mental Workload using the SWAT Method (Subjective Workload Assessment Technique). Industrial Engineering, Y.A.I. Persada University, Jakarta.

Kewuan, N. (2016). Nursing Performance Management. Jakarta: EGC.

Ministry of Health Republic of Indonesia. (2023). Number of Health Workers by Type in Indonesia. Jakarta: Directorate General of Health Human Resources.

Muslimah, F. (2015). Relationship between Workload and Nurse Performance in the Inpatient Ward of RSUD Dr. Rasidin Padang. Thesis. Nursing Management Program, Andalas University.

DOI: https://doi.org/10.30994/sjik.v13i2.1133
ISSN: 2252-3847 (print); 2614-350X (online) Vol.13 No.2 November 2024 Page. 125-131

Nurcahyani, E., Widodo, D., & Rosdiana, Y. (2016). Relationship between Job Stress Level and Nurse Performance in the Inpatient Ward of Panti Waluya Sawahan Hospital Malang. Care: Journal of Health Sciences.

Nursalam. (2014). Nursing Management: Applications in Professional Nursing Practice. Jakarta: Salemba Media.

Rhamdani, I., & Wartono, M. (2019). Relationship between Shift Work, Work Fatigue, and Job Stress in Nurses. Biomedical and Health Journal.

Roboth JY. (2015). Analysis of Work-Family Conflict, Job Stress, and Dual Role Performance of Women at Compassion East Indonesia Foundation. Journal of Business and Management Research.

Sinambela, Litjan Poltak. (2016). Human Resource Management: Building a Solid Team for Improved Performance. Jakarta: Bumi Aksara.

Stranks, J. (2005). Stress at Work Management and Prevention. Elsevier Butterworth Heineman.

Suma'mur PK. (2019). Company Hygiene and Occupational Health (Occupational Health). Jakarta: Sagung Seto.

Wayan, AP., Ni Putu KD. (2020). Employee Engagement and Job Stress: Their Influence on Job Satisfaction and Turnover Intention at Aman Villas Nusa Dua Bali.

World Health Organization. (2021). Depression.