
**THE INFLUENCE OF MOTIVATION, WORK ENVIRONMENT, AND
TRANSFORMATIONAL LEADERSHIP ON THE PERFORMANCE OF
OPERATING ROOM NURSES**



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Abstract

The purpose of this study is to determine the influence of motivation, work environment, and transformational leadership on the performance of operating room nurses. The data collection method in this study was by using questionnaires. The total number of respondents was 48 nurses at Cengkareng Hospital. This study is a census study. Data analysis method with Partial Least Squares Modeling approach. The results showed that motivation, work environment, and transformational leadership positively affect nurse performance.

Keywords: Motivation, Work Environment, Transformational Leadership, Nurse Performance

INTRODUCTION

Human resources are the main asset of a company. Management can use the quality of human resources to help the company achieve its goals. Employee performance will increase if human resources are good and their needs are met. Motivation, work environment, and transformational leadership are several factors that can improve employee performance (Triastuti et al., 2021, Ariani & Ahmadi, 2023; Siregar et al, 2021).

A public hospital is a place of activity that offers medical services 24 hours a day to both emergency and inpatient patients, whether suffering from serious or minor illnesses. Nurses as one of the important professions in providing health services in hospitals always strive to improve the quality of their professionalism. Thus, the performance of nurses must be considered when they carry out their duties and functions to provide health services to patients (Basalamah et al., 2022; Tambunan & Rahmatia, 2024).

The operating room is a part of the hospital where elective or emergency surgery is carried out which requires sterile conditions inside. Various suspected causes of high levels of stress in the operating room are long working hours, lack of sleep, fatigue, demands on interpersonal relationships and teamwork, the complexity of tasks, the need for constant vigilance, the uncertainty of work and results, the occurrence of side effects and complications, fear of litigation and violence, competence, and production pressures (Biresaw et al., 2020; Safari & Foroutanfar, 2020; Jacobs, 2024). Meng et al.'s study (2021) explained that nurse anesthetists are in danger of job stress and burnout which urges managers to pay attention to the situation. It is also recommended that health workers in the operating room be stress-free to be able to provide optimal care and ensure infection control (Masia et al., 2020; Mavroudis et al., 2021).

The high workload of medical personnel, especially in the operating room, and the high number of patient arrivals are problems that hospitals face. On the other hand, medical personnel must provide maximum service which is the focus of this research. Previous studies analyzed the influence of motivation, work environment and transformational leadership on the performance of employees or nurses in general (Nurhuda, 2019; Hairudinor and Humaidi, 2020; Ilham, 2021; Basalamah et al., 2022; Kusuma and Fikri, 2022; Ariani and Ahmadi, 2023; Lopes, 2023), there are no studies that analyze the influence of

motivation, work environment, and transformational leadership on operating room nurses. Studies (Safari, Y. and Foroutanfar, F., 2020, Meng, et al., 2021) state that workload affects employee performance, and operating room nurses are one of the jobs with a high workload, so this research aims to know the influence of motivation, work environment, and transformational leadership on the performance of operating room nurses.

LITERATURE REVIEW

Nurse Performance

Performance is a result of work that a person successfully achieves because of a person's skills, experience, and sincerity in accordance with the requirements of the work being done. Nurses' performance is assessed based on principles and evaluation of professional standards so that they can describe the results of nurses' activities (Nilawati, 2020). Many factors influence employee performance, including motivation, work discipline, job satisfaction, work environment, workload, and leadership style (Lukito, 2018; Ilham, 2021; Basalamah et al., 2022; Ariani and Ahmadi, 2023; Rizikianto, 2023). Good performance from employees means that employees put more effort into their work which ultimately greatly influences the employee's contribution to a company.

The Relationship between Motivation and Nurse Performance

Motivation is an impulse from within oneself so that someone takes action and decides on something to fulfill their needs (Navy, 2020). Having work motivation helps nurses increase work productivity, and welfare and improve discipline so that they can increase employee enthusiasm, satisfaction, and responsibility at work. The results of this research are supported by previous studies that stated that motivation has a positive effect on nurse performance (Ilham, 2021; Nurpratomo et al., 2024). Other studies also state that motivation has a positive effect on the performance of nurses in inpatient rooms (Prima, 2020; Sultan and Peristiowati, 2023). Thus, the hypothesis that can be proposed is as follows: H1: Motivation has a positive effect on the performance of operating room nurses.

The Relationship between Work Environment and Nurse Performance

The work environment is the environment in which a person works, including tools (objects used for work), work methods, and work settings where a person or group of people

work (Sedarmayanti, 2017). A poor work environment causes employee workload to increase, which can reduce employee performance (Lukito and Alriani, 2018). The high workload, especially for operating room nurses, will affect their performance because nurses not only work physically but also ensure good service to sick individuals (Yunaspi, et al., 2020). Previous studies stated that the work environment has a positive effect on nurse performance (Yosiana et al., 2020; Arsyad et al., 2021; Raya and Hendarwan, 2022). Thus, the following hypothesis can be proposed:

H2: The work environment has a positive effect on nurse performance.

The Relationship between Transformational Leadership and Nurse Performance

Transformational leadership is a leadership style where the leader realizes the need for change in a job, creates a vision, and guides and inspires his followers to achieve that vision, and the leader puts aside personal interests for the good of the organization (Hairudinor, et al., 2020; Kusuma and Fikri, 2022). Transformational leadership is believed to be good leadership; can encourage employees to work better and produce better results (Rizkianto and Laela, 2022). With transformational leadership, leaders can motivate and raise the enthusiasm of employees so that employee performance increases (Patarru et al., 2020; Solehudin et al., 2022). Thus, the following hypothesis can be proposed:

H3: Transformational leadership has a positive effect on nurse performance.

RESEARCH METHOD

The research was conducted at Cengkareng Regional Hospital in March 2024. The subjects studied were operating room nurses at Cengkareng Regional Hospital. This research is a census research, namely all nurses in the operating room at Cengkareng Regional Hospital are the research subjects, totaling 48 people. The data collection technique uses a questionnaire in Google form format. Then, the analysis method uses the partial least squares-structural equation model (PLS-SEM) approach through the SmartPls 4.0 program. Measurement of construct items uses a 5-point Likert scale, namely (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

Testing of the measurement model (outer model) and structural model (inner model) was applied in this research. The measurement model (outer model) was evaluated based on validity tests with convergent validity and discriminant validity, and reliability tests with Cronbach's alpha and composite reliability. The instrument is said to be valid if the loading factor value is > 0.7 (Ghozali I. and Kusumadewi K., 2023), and the discriminant analysis is based on the heterotrait-monotrait correlation ratio < 0.9 . Then test the reliability by calculating Cronbach's alpha value and the composite reliability must be greater than 0.7. The structural model (inner model) was evaluated using multicollinearity and R-square tests. The multicollinearity test is fulfilled if the Variance Inflation Factor (VIF) value for each variable is < 10 . The influence of the contribution of the independent variable on the dependent variable is assessed using R-square (Gaskin, 2023).

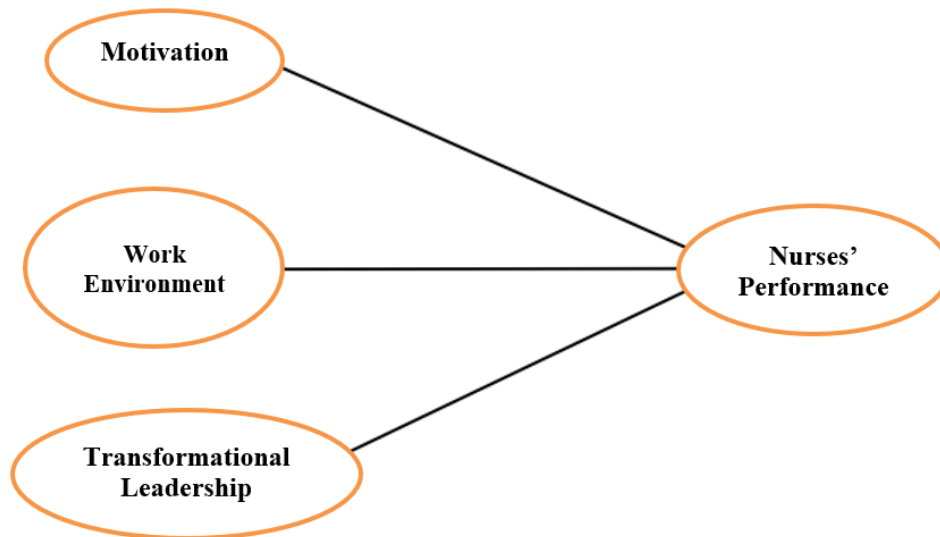


Figure 1.
Research Model

RESULTS AND DISCUSSION

Respondent Profile

Table 1 shows the profile of respondents, namely all operating room nurses at Cengkareng Regional Hospital, totaling 48 people. Most of the respondents were male, aged

30 - 40 years, duration of work at Cengkareng Regional Hospital > 2 years, and their most recent education was a diploma in nursing.

Table 1.
Respondent Profile

Variable	Amount	Percent
Gender		
- Woman	21	43.75
- Man	27	56.25
Age		
- < 30 years	4	8.33
- 30 - 40 years old	33	68.75
- 41 - 50 years old	11	22.92
Duration of work at Cengkareng Regional Hospital		
- 12 years old	1	2.08
- > 2 years	47	97.92
Last education		
- Nursing Diploma	33	68.75
- Bachelor of Nursing	15	31.25

Analysis

Outer Model

Table 2.

Shows the Outer Loading Value of Each Indicator in the Range 0.656 – 0.934

Constructs and Items		Outer loading
Motivation/M (AVE= 0.838, CR= 0.765)		
M1	I try to achieve the best performance	0.647
M2	I am willing to work longer hours to get a good job	0.661

M3	I love learning to improve myself	0.739
M4	Giving awards to nurses who excel will increase work motivation	0.717
M5	I can work with other nurses	0.669
M6	I received appreciation from my superiors for my work achievements	0.647

Work Environment/LK(AVE= 0.530, CR=0.863)

LK1	The hospital provides adequate equipment to carry out the work	0.678
LK2	Air circulation in the hospital work unit where I work is good	0.871
LK3	The hospital building is safe from danger	0.691
LK4	The location of the hospital is in an environment that is conducive to patient treatment	0.652
LK5	My coworkers really help me in my work	0.776
LK6	I feel a family atmosphere at this hospital	0.774
LK7	Every task given always receives direction from superiors	0.694

Transformational Leadership/ Kindergarten (AVE= 0.833, CR= 0.970)

TK1	The head nurse made me feel comfortable being around them	0.879
TK2	I am proud to work with my head nurse	0.924

TK3	The head nurse encouraged me to be able to solve old problems in new ways	0.922
TK4	The head nurse encouraged me to explore ideas I had never thought of	0.886
TK5	The head nurse gave me feedback on my work	0.946
TK6	The head nurse helped my career	0.918
Nurse/KP Performance (AVE= 0.652, CR= 0.875)		
KP1	I can complete tasks according to the expected target	0.794
KP2	I always want to work beyond the hospital's expected targets	0.754
KP3	I can complete work according to hospital standards	0.872
KP4	I consistently carry out the tasks given by the hospital where I work	0.845
KP5	I can divide my rest time into work	0.767

Table 3.
Outer Model

Variables/Indicators	Cronbach's Alpha	Composite Reliability	Conclusion
Motivation	0.773	0.838	Reliable
Work environment	0.853	0.887	Reliable
Transformational leadership	0.960	0.968	Reliable
Nurse Performance	0.866	0.903	Reliable

All indicators on the four variables are valid because they are greater than 0.7. All variables are also reliable because they have met the cutoff used in this research (Cronbach's alpha for motivation 0.773, work environment 0.853, transformational leadership 0.960, and nurse performance 0.866 greater than 0.7; while the composite reliability of motivation is 0.838, work environment 0.887, transformational leadership 0.968, and nurse performance 0.903 greater than 0.7).

Table 4.
Discriminant Validity Test

	Transformational Leadership	Nurse Performance	Work Environment
Nurse Performance	0.632		
Work environment	0.743	0.812	
Motivation	0.366	0.666	0.541

The discriminant analysis test is based on the heterotrait-monotrait correlation ratio < 0.9 , meaning that the convergent consistency is good and can be differentiated from other constructs. The results of the inner test used for the multicollinearity test are presented in Table 5.

Table 5.
Variance Inflation Factor (VIF) Value

	Nurse Performance
Transformational Leadership	2,013
Nurse Performance	-
Work Environment	2,232
Motivation	1,266

The Variance Inflation Factor (VIF) value for each variable is < 10 (motivation 1.266, work environment 2.232, transformational leadership 2.013) so it can be concluded that there is no multicollinearity. Structural model testing was also carried out by evaluating the R-square value to explain the extent to which the independent variable explains the dependent

variable and obtained an R-square of 0.626 which shows that the influence of the independent variable on the dependent variable simultaneously contributes 58.2% of it is classified as a medium model because it is larger. from 0.50 but smaller than 0.75.

Estimates from indicators to variables and the relationships between variables can be seen in Figure 2. All indicators have contributed to forming their respective variables. The main indicator that forms motivation is M3, LK2 is the main indicator of the work environment, TK5 is the main indicator of transformational leadership, and KP 3 is the main indicator of nurse performance.

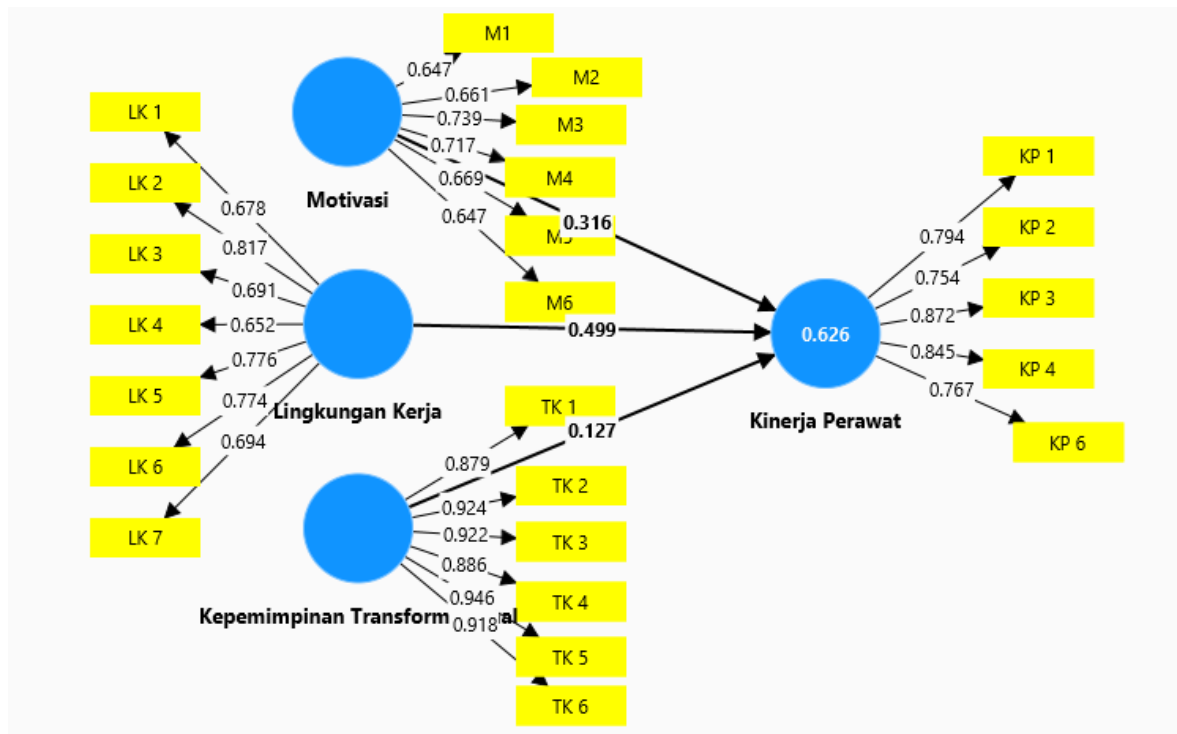


Figure 2.
Analysis Results

Table 6 shows the results of the research hypothesis where the standardized path coefficient is positive (motivation 0.316; work environment 0.499; and transformational leadership 0.127) which means that the three hypotheses have a positive effect.

Table 6.
Hypothesis Results

Hypothesis	Standardized Path Coefficient	Decision
H1: Motivation has a positive effect on the performance of operating room nurses.	0.316	Supported
H2: The work environment has a positive effect on the performance of operating room nurses	0.499	Supported
H3: Transformational leadership has a positive effect on the performance of operating room nurses	0.127	Supported

Discussion

The results of the first hypothesis state that motivation has a positive effect on nurse performance. These results are following the theory that motivation is an important measure in the response of health workers to the increasing challenges and demands currently in the world of work. Nurses' work motivation has an impact on well-being, organizational performance, satisfaction, retention, involvement, and commitment. The results of this research are in accordance with several previous studies (Prima, 2020; Ilham, 2021; Sultan and Peristiowati, 2023; Nurpratomo et al., 2024) which stated that there is a positive influence between motivation and nurse performance. In conclusion, the higher the nurse's motivation, the more the nurse's performance will increase.

The results of the second hypothesis state that the work environment has a positive effect on nurse performance, which is following the previous theory which states that the work environment is everything around the work that can influence workers in carrying out their assigned tasks. These results are in line with previous research (Yosiana et al., 2020; Arsyad et al., 2021; Raya and Hendarwan, 2022) which states that the work environment has a positive influence on nurse performance so that if the hospital work environment is conducive then nurse performance will be better.

The results of the third hypothesis state that transformational leadership has a positive effect on nurse performance. The influence of transformational leadership variables can be

assessed through increasing self-confidence, implementing vision, creativity, comfort working with superiors, increasing personal potential, motivating subordinates, personal attention, and encouraging subordinates.

CONCLUSION

Motivation, work environment, and transformational leadership positively affect the performance of operating room nurses. The limitation of this research is that it was only conducted on operating room nurses at Cengkareng Regional Hospital with a total of 48 respondents. It is hoped that this research can be used as a basis or evaluation material in the application of motivation, work environment, and transformational leadership, as well as material for consideration in decision-making regarding the variables studied. Future researchers are expected to add other variables to get better results.

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