

The relationship between workload and nurses' performance in carrying out nursing care in inpatient at Hospital, Riau Province, Indonesia

La relación entre la carga de trabajo y el desempeño de las enfermeras en la realización de cuidados de enfermería en pacientes hospitalizados, Provincia De Riau, Indonesia

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SUMMARY

Introduction: *The workload is the amount of work required in a job. The heavy workload on nurses can affect their performance. Nurse performance is a skill or ability related to the job description of a professional nurse based on the nursing process. This study aimed to know the relationship between workload and nurses' performance in nursing care.*

Methods: *This study used a descriptive correlation method with a cross-sectional design. The sample in this study were nurses who worked inpatients at a hospital and had scheduled the morning, afternoon, and night shifts with 36 total respondents. This study*

used a consecutive sampling technique. In collecting the data for this study used the observation sheets. Then the data analysis with univariate and bivariate analysis using the Chi-Square statistical test.

Results: *Most nurses (61.1 %) have a high workload in the morning shift, and 52.8 % also have an increased workload in the afternoon shift. While on the night shift, most nurses (63.9 %) have a low workload. Amount of 55.6 % of nurses had less performance in the morning shift. At the same time, most nurses performed well in the afternoon shift (52.8 %) and the night shift (58.3 %). The result of this study showed a correlation with a p-value of 0.024 in the morning shift, a p-value of 0.018 in the afternoon shift, and a p-value of 0.030 in the evening shift.*

Conclusion: *A significant relationship exists between workload and nurses' performance in nursing care.*

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RESUMEN

Introducción: *La carga de trabajo es la cantidad de trabajo requerido en un puesto de trabajo. La gran carga de trabajo de las enfermeras puede afectar su desempeño. El desempeño de la enfermera es una habilidad o habilidad relacionada con la descripción del trabajo de una enfermera profesional basada en el proceso de enfermería. Este estudio tuvo como objetivo conocer la relación entre la carga de trabajo*

y el desempeño de los enfermeros en el cuidado de enfermería.

Métodos: Este estudio utilizó un método de correlación descriptivo con un diseño transversal. La muestra en este estudio fueron enfermeras que trabajaban con pacientes internados en un hospital y tenían turnos de mañana, tarde y noche, con un total de 36 encuestados. Este estudio utilizó una técnica de muestreo consecutivo. En la recolección de datos se utilizaron las fichas de observación. Luego el análisis de datos se realizó con el análisis univariado y bivariado, utilizando la prueba estadística Chi-cuadrado.

Resultados: La mayoría de los enfermeros (61,1 %) tienen carga de trabajo alta en el turno de la mañana, y 52,8 % también tienen carga de trabajo aumentada en el turno de la tarde. Mientras que, en el turno de noche, la mayoría de los enfermeros (63,9 %) tienen una baja carga de trabajo. El 55,6 % de los enfermeros tuvieron menor desempeño en el turno de la mañana. Al mismo tiempo, la mayoría de las enfermeras se desempeñaron bien en el turno de la tarde (52,8 %) y en el turno de noche (58,3 %). El resultado de este estudio mostró una correlación con un valor de p de 0,024 en el turno de la mañana, un valor de p de 0,018 en el turno de la tarde y un valor de p de 0,030 en el turno de la noche.

Conclusión: Existe una relación significativa entre la carga de trabajo y el desempeño de las enfermeras en el cuidado de enfermería.

Palabras clave: Enfermera, desempeño, carga de trabajo.

INTRODUCTION

The hospital is a health organization full of human and scientific resources. Hospitals are also an important part of the health system's development and support the provision of health services for the community (1). The hospital is an institution that provides comprehensive health services for individuals who provide services, including inpatient, outpatient, and emergency services (2-4). As a health service center, hospitals must provide safe, effective, and quality health services for their patients (5-7).

Improving the quality of hospital services depends on the quality of nursing services provided to patients because nursing services are one of the factors that affect the image of the institution in the eyes of the community. This happens because nurses are the most professional,

foremost, and closest to suffering, as well as the pain felt by patients and their families (8-10). In addition, nurses have many duties and responsibilities in hospitals, so the work carried out by nurses can cause a workload with many tasks and pressures (11). The workload is the high volume of work given or charged to workers, both in the form of physical and mental burdens for which they are responsible (12,13).

Based on the results of research by Myny et al., in 2012 showed that the factors that most influence the workload of nurses are the increasing number of interruptions in work, the increasing number of incoming patients compared to outgoing patients, the work schedule that is carried out, and the lack of agreement among organizations to help the ward which a shortage of nurses (14). Amount of 80 nurses, 83.8 % have a high workload as measured by the NASA Task Load Index (NASA-TLX) questionnaire, which is obtained from six dimensions of workload. The highest is physical work (78.00 ± 19.97) (15).

Based on the study of Rizkyet al., 32 (78 %) respondents stated that they experienced a high workload, while nine other (22 %) respondents stated that they experienced a moderate workload (16). The workload is one of the factors affecting work productivity or performance (17). Performance is the quality or quantity of work results or work achievements produced by groups or individuals in certain activities on the abilities possessed from the results of the learning process and the desire to achieve work performance (18). Performance appraisal in hospitals focuses on monitoring the performance of healthcare providers that focuses on improving the quality of practice in nursing services (19).

Nursing services are a part that plays an important role in improving the quality of health services through the implementation of nursing care based on nursing care practice standards, where nursing care standards are a description of the expected performance (20). However, based on the results of research conducted by Ball et al., in 2014 showed that most nurses, as many as 86 %, did not provide comprehensive nursing care to patients due to insufficient shift time. In addition, nursing activities often unresolved are establishing communication with patients or entertaining patients 66 %, educating 52 %, and developing or evaluating nursing care plans for

patients, 47 % (21). Based on this, the researcher was interested in assessing the relationship between workload and the performance of nurses in carrying out nursing care in the inpatient room.

METHODS

This type of research was quantitative with a descriptive correlation design and a cross-sectional approach. The sample in this study was nurses who worked in a class III inpatient room at a hospital in Riau Province, Indonesia. This hospital has an official schedule of 3 shifts (morning, afternoon, and night). The sampling technique in this study was consecutive sampling. The inclusion criteria are nurses who work in class III inpatient rooms and have an official schedule of 3 shifts. This study's exclusion criteria were nurses on leave, the head of the room, and the team leader. The data collection of this research used a work sampling form for the workload of nurses and an observation sheet on the performance of nurses in carrying out nursing care which consisted of 19 statement items that had been tested for validity. The variables studied in this study were the independent variable, namely workload, and the dependent variable, namely the performance of nurses in carrying out nursing care. In this study, the data analysis used was univariate and bivariate data analysis and used the Chi-Square statistical test. This research conducted an ethical review with the ethics test number 248/KEPK/STIKes-HTP/IV/2022 by the Sekolah Tinggi Ilmu Kesehatan Hang Tuah Ethics Committee, Pekanbaru.

RESULTS

Based on Table 1, it is known that the average age of the respondents was 33.94 years. Most nurses were female, namely 77.8 %, with the most education being Bachelor of Nursing + Profession of Nursing as much as 52.8 %. Most nurses had a working period of > 5 years, which was 63.9 %, and the majority did not have training experience related to nursing care, much as 58.3 %. Most nurses on the morning shift had a high workload of 22 people (61.1 %). In

the afternoon shift, most nurses also had a high workload of 19 people (52.8 %), and a minority of nurses had a low workload of 2 people (5.6 %). While on the night shift, most nurses had a low workload of as many as 23 people (63.9 %). Most nurses, as many as 20 people (55.6 %), had poor performance on the morning shift. Meanwhile, in the afternoon shift, the majority of nurses had a good performance, as many as 19 people (52.8 %), and the majority of nurses also had a good performance on the night shift, as many as 21 people (58.3 %) (Table 2).

Table 1

Frequency Distribution of Respondents by Age

Variable	Mean	Median	Std. Deviation	Min-max
Age	33.94	33.50	6.118	25-46

Table 2

Frequency Distribution of Respondents

Respondents Characteristic	f	%
Sex		
Female	28	77.8
Male	8	22.2
Education		
Associate Degree of Nursing (D3)	17	47.2
Bachelor of Nursing (S1) + Professional Nurse	19	52.8
Duration of work		
≤5 years	13	36.1
>5 years	23	63.9
Training Experience related to Nursing Care		
Experienced	15	41.7
Inexperienced	21	58.3
The workload on the Morning Shift		
High	22	61.1
Moderate	14	38.9
Low	0	0
The workload on the Afternoon Shift		
High	19	52.8
Moderate	15	41.7
Low	2	5.6
The workload on Night Shift		
High	0	0
Moderate	13	36.1
Low	23	63.9
Nurse Performance on Morning Shift		
Good	16	44.4
Not Good	20	55.6
Nurse Performance Afternoon Shift		
Good	19	52.8
Not Good	17	47.2
Nurse Performance Night Shift		
Good	21	58.3
Not Good	15	41.7
Total	36	100.0

THE RELATIONSHIP BETWEEN WORKLOAD AND NURSES' PERFORMANCE

Table 3 shows that of the 22 respondents with a high workload, six people (27.3 %) with good performance, and 16 people (72.7 %) with poor performance. While the 14 respondents had a moderate workload, there were ten people (71.4 %) with good performance and four (28.6 %) with poor performance. Based on the results of statistical tests, Chi-Square obtained a p-value of 0.024, which indicated a relationship between workload and the performance of nurses in carrying out nursing care in the morning shift. Table 3 also showed that of the 19 respondents with a high workload, there were six people (31.6 %) with good performance and 13 people (68.4 %) with poor performance. Meanwhile, 17 respondents have medium and low workloads. There were 13 people (76.5 %) with good performance and

four people (23.5 %) with poor performance. Based on the results of statistical tests carried out with the Chi-Square test on cell mergers, a p-value of 0.018 was obtained, indicating a relationship between workload and nurse performance in nursing care on the afternoon shift. There were 13-night shift respondents with a moderate workload, four people (30.8 %) with good performance, and nine people (69.2 %) with poor performance. While the other 23 respondents who have a low workload found 17 people (73.9 %) with good performance and six people (26.1 %) with poor performance. Based on the results of statistical tests with Chi-Square obtained a p-value of 0.030, there was a relationship between workload and the performance of nurses in carrying out nursing care on the night shift.

Table 3

The Relationship Between Workload and Nurse Performance in Performing Nursing Care in The Morning, Afternoon, and Evening Shifts

Work Load	Nurse Performance		Total	p-value
	Good	Poor		
Morning Shift				
High	6 (27.3 %)	16 (72.7 %)	22 (100 %)	0.024
Moderate	10 (71.4 %)	4 (28.6 %)	14 (100 %)	
Total	16 (44.4 %)	20 (55.6 %)	36 (100 %)	
Afternoon Shift				
High	6 (31.6 %)	13 (68.4 %)	19 (100 %)	0.018
Moderate + Low	13 (76.5 %)	4 (23.5 %)	17 (100 %)	
Total	19 (52.8 %)	17 (47.2 %)	36 (100 %)	
Night Shift				
Moderate	4 (30.8 %)	9 (69.2 %)	13 (100 %)	0.030
Low	17 (73.9 %)	6 (26.1 %)	23 (100 %)	
Total	21 (58.3 %)	15 (41.7 %)	36 (100 %)	

DISCUSSION

The results of this study indicate that most respondents have a high workload in the morning and afternoon shifts. While most respondents have a low workload on the night shift. The results of this study found that most respondents had poor performance on the morning shift. The workload in nursing is defined as the amount

of performance required in a job (22). The workload can be measured by calculating how much time nurses use to provide nursing services to patients, including direct and indirect nursing actions (23). The results of this study are in line with research by Romadhoni and Pudjirahardjo in 2016, which stated that the workload of morning shift nurses in inpatient installations was high (90.70 %), and the afternoon shift was also high (85.56 %) (24). However, the workload of night

shift nurses was 84.13 %. The previous research stated that the nurses' workload in the inpatient room would show significant differences in each shift (25). These differences theoretically can occur due to different working hours. Based on the description above, the researcher concludes that the workload is the amount of time used in productive activities during the work shift, both in direct nursing actions and indirect nursing actions. The higher the time nurses use in productive activities, the higher the workload experienced by nurses. Vice versa, if the less use of time in productive activities utilized by nurses, the lower the workload experienced by nurses will be.

The study's results found that most respondents had poor performance on the morning shift. While most respondents have a good performance on the afternoon shift, most of the others have a good performance on the night shift. Nurse performance is a skill or ability related to the job description of a professional nurse based on nursing care standards (26). The results of this study are not in line with the results of Irawan in 2017 (27), which stated that the performance of nurses on the morning shift has the highest average of 4.18 compared to the day shift, which has an average of 4.00 and the night shift which has an average of 3.73. This study explains that this can happen because the morning shift is when nurses have high morale to perform better than the night shift.

On the other hand, it is the time when nurses should rest. Thus, they are not optimal in providing nursing care. Patient satisfaction in the hospital depends on the suitability of patient expectations about the services provided and the perceived performance of nurses (28). Therefore, the high performance of nurses in providing nursing care will improve the quality of health services. Based on the description above, the researcher concludes that performance is the result of the work of nurses based on their skills or abilities in carrying out the task of providing comprehensive nursing care based on nursing process standards. Based on the researcher's analysis of the results of this study, it was found that most nurses had good performance on the afternoon and night shifts. However, most nurses have poor performance in the morning shift. This can happen because it is influenced by the number of nursing actions nurses must complete.

The many productive activities of nurses can illustrate this during the morning shift compared to the afternoon and evening shifts.

The results showed a relationship between workload and the performance of nurses in carrying out nursing care in the morning, afternoon, and evening shifts. Several factors affect nurses' workload, including internal factors that come from workers, such as body health conditions, nutritional status, perceptions, motivation, and job satisfaction, as well as external factors that affect nurses' workload (17). Factors affecting the workload are the number of tasks accepted to be completed. Besides that, other factors are the work's difficulty level, the length of time given, and the work environment. While the factors that can affect the performance of nurses consist of internal factors in the form of high abilities and hard workers who can produce quality performance (26). External factors that can affect performance are derived from the environment in the form of behaviour and attitudes of co-workers, organizational climate, work facilities, and subordinates or leaders. This study is supported by the results of Purwanti and Ediyono's 2022 research (29), which stated that excessive workload has a significant relationship to the performance of nurses in public health services. Therefore, two factors affect the performance of nurses: internal and external factors. External factors that affect the performance of nurses in this study are the imbalance between the workload of nurses and the demands of the public health science, which require nurses to perform non-nursing activities such as completing administrative tasks and managing Health Operational Assistance (BOK) and the imbalance in the number of nurses, while internal factors that can affect performance the nurse is the ability possessed by the nurses in performing their responsibilities.

CONCLUSION

Based on the results of the study, it was found that there was a relationship between workload and the performance of nurses in carrying out nursing care. However, a further researcher could conduct a study by adding other variables such as training experience and work environment

facilities. Besides that, other factors which can be added are using different methods and designs and a larger number of samples.

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