

ISSN 2354-8428
e-ISSN 2598-8727

JURNAL KEPERAWATAN

KOMPREHENSIF

COMPREHENSIVE NURSING JOURNAL

Published by :

**Sekolah Tinggi Ilmu Keperawatan
PPNI Jawa Barat**

Vol. 9 No. 4, October 2023



JURNAL KEPERAWATAN KOMPREHENSIF	VOL. 9	NO. 4	Bandung October 2023	ISSN 2354-8428	e-ISSN 2598-8727
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Research Article

Nurse Mental Workload and Completeness of Documentation in COVID-19 Isolation Rooms

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Received : 19/05/2023

Revised : 07/07/2023

Accepted : 25/07/2023

Online : 31/10/2023

Published : 31/10/2023

Abstract

Aims: This study is to find out the relationship between nurse mental workload and completeness of documentation in isolation rooms during the COVID-19 pandemic.

Design: This research was correlational with a cross-sectional approach.

Methods: The design of this study was a quantitative study with a cross-sectional approach. This study used primary data obtained through direct observation using a questionnaire consisting of patient demographic data, the mental workload was measured by NASA-TLX (*National Aeronautics and Space Administration Task Load Index*) validity test obtained the value of $r = 0,690 - 0,775$ and reliability test Cronbach's Alpha value of $0,797$ and the completeness of documentation was measured using the standard instrument for standard documentation evaluation of the Ministry of Health. The research population was nurses who treated COVID-19 patients in Pontianak. Sampling was done using non-probability sampling using a purposive sampling technique with inclusion criteria, nurses who treat Covid-19 patients for at least 5 months. The number of samples was 30 nurses and 24 nursing care documents. Data analysis in this study used the bivariate Spearman's Rho test

Results: The results of Spearman's rho analysis showed a significant value or Sig. (2-tailed) of 0.026. Because the value of Sig (2-tailed) 0.026 was $<$ less than 0.05, there was a significant relationship between mental workload and the completeness of nursing care documentation.

Conclusions: The increase in the number of patients makes the workload higher because it is not proportional to the ratio of nurses to patients.

Keywords:

COVID-19, Nurse Mental Workload, Nursing Documentation

INTRODUCTION

The global pandemic condition has been announced by World Health Organization (WHO) in March 2020. Severe Acute Respiratory Syndrome Coronavirus (SARS-COV 2) has infected the whole world with a

total of 228,807,631 infected people, causing changes in various life arrangements in the world (1). Indonesia occupies the 13th position of positive COVID-19 accumulation of 4,195,958 people, the highest number of infected countries in Southeast Asia (2). During the

COVID-19 pandemic, working condition in hospitals has high demands and stress, this condition increases burnout for health service providers (3). The spread of the Coronavirus requires serious action and handling. This condition is a challenge for nurses in carrying out nursing care. They are professionals in the health sector who must work and serve during the COVID-19 pandemic. Those who are at the forefront of dealing with cases of confirmed COVID-19 patients make them have an important role in carrying out nursing care (4)

During the COVID-19 pandemic condition, nurse belongs to the job category that is most subject to burnout as indicated by high emotional exhaustion and depersonalization scores compared to other job categories. This happens according to many other studies done in Japan. Japanese studies showed that burnout criteria were met by more than 40 percent of nurses and more than 30 percent of technologists and pharmacists (5)

Nurses have a duty to carry out nursing care, whose role is to make assessments, minimize complications by closely monitoring patients, carry out airway management, make position changes, education, and collaboration, in drug administration. In providing nursing care, they also assist in meeting the patients' daily needs, screening, emergency measures, isolation care to handling critical cases that are carried out in collaboration (4). As a health service provider in the COVID-19 pandemic condition as written in Law Number 38 of 2004 concerning nursing, the role of nurses in the form of nursing care is a series of interactions between nurses and patients and their environment to achieve the goal of meeting the patients' needs and independence (6).

For intensive care unit nurses, the nurse workload will increase significantly with an increase in patients. The psychological response experienced by nurses to the COVID-19 pandemic is increasing along with anxiety about their health and the spread to their families. With high job

demands, long working hours, and increasing number of patients, it is increasingly difficult to get social support due to community stigma against COVID-19 nurses (7).

The workload felt by a worker is not only a physical workload, but a collection of physical workload, mental workload, and social workload (8)

Performance theory states that individual behavior and performance are influenced by individual, organizational, and psychological variables. These variables are very influential on the group of nurses, which in turn affects their performance. Work-related actions need to be taken to achieve goals according to job duties (9).

Organizational support is very much needed by nurses in carrying out their duties as this greatly affects their performance. Thus, the researcher wanted to know the relationship between the nurse workload and the completeness of nursing care documentation during the COVID-19 pandemic.

METHODS

This research used quantitative research with cross sectional approach as the research design. The research population was nurses who treated COVID-19 patients in Pontianak. The sampling technique used non-probability sampling with purposive sampling method with a total sample of 30 respondents. The research took place from 10-24 August 2021. The data collection technique used a closed questionnaire to nurses to break the chain of COVID-19 transmission. The variable characteristics of respondents included sex, age, last education, length of treatment for COVID-19 patients, and training participation. The variable of nurse mental workload was measured using the instrument called NASA-TLX (*National Aeronautics and Space Administration Task Load Index*), a method used to analyze the mental workload faced by nurses in providing nursing care for COVID-19 patients. The use of NASA-TLX

method is a multi-dimensional weighting and rating procedure that provides an overall workload assessment based on the average rating of six indicators, which are Mental Demands, Physical Demands, Temporal Demands, Own Performance, Effort & Frustration (10). Test the validity of the Nasa TLX questionnaire which was conducted on 20 respondents with an *r* table value of 0,4338. The results of the validity test obtained the value of $r = 0,690 - 0,775$ and the results of the reliability test Cronbach's Alpha value of 0,797 so that the questionnaire was declared valid and reliable (11). The variable of nursing care documentation was measured by a checklist

sheet using the standard instrument for standard documentation evaluation of the Ministry of Health. The standard instrument for standard documentation evaluation of the Ministry of Health was measured retrospectively. The document sample selection was carried out by consecutive sampling for the April – September 2020 period and obtained a total of 24 patient documents. Data analysis in this study used the bivariate Spearman's Rho test. The data collection was carried out after receiving an ethics pass letter from the research ethics committee with No. 08/RSUD/KEPK/VI/2021.

RESULTS

Based on the results, the characteristics of nurses which included sex, education, age, length of treatment for COVID, and training participation are as follows.

Table 1. Frequency distribution of characteristics of respondents (n: 30)

Characteristics	Frequency	Percentage
Sex		
Male	18	60%
Female	12	40%
Education		
Diploma 3	20	66,7%
Bachelor	10	33,3%
Age		
17 – 25 (Adolescence)	4	13,33%
26 – 35 (Early Adulthood)	22	33,33%
36 – 45 (Late Adulthood)	4	13,33%
Length of treatment for COVID-19 patients		
< 6 Months	18	60%
6– 12 Months	6	20%
>1 Year	6	20%
Training participation		
Yes	18	60%
No	12	40%
Nurse Mental Workload		
Very Low	0	0%
Low	0	0%
Moderate	8	26,7%
High	18	60%
Very High	4	13,3%
Completeness of Documentation		
Incomplete	14	46,7%
Complete	16	53,3%

Based on Table 1, most respondents were female with 18 people, the highest level of education was D3, the most age was 26-35 years with a total of 22 people, the length of treatment for COVID-19 patients was less than 6 months with a total 18 people, and the most training participation was attending training by 18 people. The COVID-19 pandemic has caused an increase in the workload experienced by female nurses. Increasing multiple roles can trigger a high workload (12).

Distribution of nurse mental workload in the COVID-19 isolation rooms, most respondents stated that they were high (60%), the completeness of writing documentation was mostly complete (53.3%) and almost half were incomplete (46.7%).

Table 2. Test Results of Nurse Mental Workload and Completeness of COVID-19 Nursing Documentation Correlations

			Nurse Mental Workload	Nursing Documentat ion
Spearman's rho	Nurse Mental Workload	Correlation Coefficient	1.000	-.406*
		Sig. (2-tailed)	.	.026
	N		30	30
	Nursing Documentation	Correlation Coefficient	-.406*	1.000
		Sig. (2-tailed)	.026	.
		N		30

Table 2. The results of Spearman's rho analysis showed a significant value or Sig. (2-tailed) of 0.026. Because the value of Sig (2-tailed) 0.026 was < less than 0.05, there was a significant relationship between mental workload and the completeness of nursing care documentation. In addition, the correlation coefficient was 0.406, meaning that the level of strength of the relationship (correlation) between mental workload and nursing documentation was 0.406 or sufficient. The correlation coefficient number in the above results was negative, so the relationship between the two variables was not unidirectional, meaning that a high mental load could make nursing documentation incomplete.

DISCUSSION

The findings showed that the characteristics of the respondents involved in this research were male with the age of 26-30 and during the COVID-19 pandemic, the nurse mental workload was mostly high (60%).

Mental workload has the potential to be a source of stress in the workplace. The surge in patients caused by the COVID-19 pandemic requires hospitals to add more inpatient rooms, and medical equipment, thus influencing hospital management policies. The limited number of nurses make the perceived workload to be excessive, which can affect their performance. The workloads faced by nurses during the COVID-19 pandemic, that the number of patients who must be treated is increasing all the time, the work capacity is by their education, and the workload is carried out unevenly, worries about being exposed to the virus and very little rest time (13).

The global COVID-19 pandemic has put pressure on the entire community, including health workers. The pressure that occurs can be caused by various things including direct contact with COVID-19 patients, risk of dangerous infections, inadequate personal protective equipment, loss of disease control, lack of experience in

dealing with disease, increased workload, negative feedback from patients, stigma in society, lifestyle changes, quarantine, and lack of social support from family (14). A similar study conducted by Purba (2015) showed that nurses had a high mental workload of 15 respondents (37.5%). Excessive workload on nurses could trigger stress and burnout. Those who often experienced the most stress were aged under 40. This showed that workers aged under 40 experienced more work stress in handling COVID-19 patients than those aged over 40. However, it did not mean that those aged over 40 did not feel stressed or anxious, but they could control their level of anxiety in dealing with stress. Those who experienced stress and burnout allowed them to be unable to perform effectively and efficiently because their physical and cognitive abilities were reduced which might occur due to an imbalance between the number of patients and nurses working in the hospital, so they got a workload that was more than their maximum ability, so they experienced a mental workload and caused unsafe actions (15).

Research on the nurse condition during the COVID-19 pandemic was also conducted by Almaghrabi (2020) which showed that 77.8% of health workers felt stressed and had the desire to stop working during the COVID-19 pandemic (16).

The high mental workload that occurred in the research respondents could be caused by the COVID-19 pandemic which put pressure, especially on health workers. Those who had direct contact with COVID-19 patients felt at risk of contracting it. Lack of experience in handling disease and increasing workload in services could add to their mental workload x.

The findings on the documentation showed that 46.7% were incomplete while 53.3% were complete. The results showed that the difference between complete and incomplete documentation was only 6.6%.

Nursing documentation has been defined as records of nursing care planned and

provided to individual patients and clients by a nurse or other person with direction from a qualified nurse (17). It is considered an important indicator for developing nursing care. According to patient safety laws, one of which is that nurses must document nursing interventions (18)

Proper nursing documentation has various principles, including objectivity, specificity, clarity and consistency, comprehensiveness, respect for confidentiality, and recording errors (19). During the COVID-19 outbreak, the nurse is one of the most important professionals on the front lines (20). Exposure to epidemics and outbreaks can affect their workflows and routines because they need additional time and resources to cope with situations encountered while working (21)

Nursing documentation as a coordinating tool for nurses and team members describing nursing services provided to patients. Nursing documentation provides information about the current condition and the patient's response to nursing care (12). The findings on the documentation showed that 46.7% were incomplete while 53.3% were complete. The results showed that the difference between complete and incomplete documentation was only 6.6%. This was in line with the research conducted by Fikri, which proved that there was no relationship between mental workload and documentation compliance. In doing their work, nurses have a high responsibility because it is related to human life. Those with a high mental workload still have to complete nursing documentation (22).

The completeness of nursing documentation remains complete even though their mental workload is high since they are adults. Adulthood is a time when humans can control the stressors they experience. Nurses often treat patients individually since the number of nurses and patients is still not proportional. Individual work activities can increase the mental workload (13).

Nursing documentation should reflect the nurses' critical thinking that leads to decisions or interventions in care, considering a theme that reflects the importance of documentation. The nurses in the office emphasize the importance of documentation for patient care. When they understand the relationship between patients and nurses, they are expected to be able to provide an understanding that proper documentation contributes to the quality of care provided to patients (23)

When nurses understand the importance of nursing care documentation which is an effort to present problems that occur in the nursing process and information that leads to the decision-making on assessment, nursing diagnosis enforcement, intervention preparation, implementation, and progress evaluation, they will always strive to provide complete data since documentation is considered a communication tool for exchanging information between nurses because quality documentation can encourage consistent and effective communication between health workers and facilitate continuity of care and patient safety.

Analysis of the relationship between the mental workload and completeness of documentation showed significant results with the Spearman's Rho (ρ) 0.026 and Correlation Coefficient @; -0.046.

The workload is defined as something that exists as a consequence of the interrelationships that involve workers' work demands, responsibilities, work environment, perception, behavior, skills, and the workplace (24). Negative perceptions that arise in health workers due to the COVID-19 pandemic can increase work stress because they cannot control the negative perceptions that arise, thus making them anxious in carrying out their work, so every job they do is very difficult and makes them get sick easily (25). Many nursing staff has mental health problems because they are not only burdened with work overload but also are at high risk of

infection and prolonged fatigue that leads to an increased risk of infection. As a result, health workers and policymakers must pay attention to protection factors and a successful adaptation process in the COVID-19 pandemic conditions for health workers (26)

The workload is too high because it is not proportional to the ratio of nurses to patients. They do work that should not be their responsibility and that is not by their ability, and work under pressure. This will affect their performance in documenting nursing care. They will tend to be in a hurry in the documentation process, and can also forget to document which in the end its completeness is not fulfilled, or its quality is not good (27)

The findings on the sex of the respondents revealed that most of them were female. Sex can have an impact on the mental workload. In general, male nurses are more likely to cause higher levels of physician burnout, so it affects psychological conditions such as stress and decreased concentration. As for female nurses, the activities that are usually carried out are related to nursing documentation, such as patient data entry and action recording. This action requires high precision and concentration which causes the level of mental workload of female nurses tends to be high (28)

The advantages of this study describe the state of the mental workload of nurses in the isolation room while caring for COVID-19 patients, which is a respiratory disease that is easily transmitted to many victims. The measured mental workload of nurses includes mental demand, physical demand, temporal demand, effort, performance, and frustration. Meanwhile, the weakness of this study was that not many respondents were used due to the limited number of nurses involved in caring for COVID-19 patients and nursing care documents that were not easy to access due to hospital policies regarding the administration system that applies at the study site.

CONCLUSION

The COVID-19 pandemic condition is a challenge for nurses. The increase in the number of patients makes the workload higher because it is not proportional to the ratio of nurses to patients. They do work that should not be their responsibility and that is not by their ability, and work under pressure. This will affect their performance in documenting nursing care. They will tend to be in a hurry in the documentation process, and can also forget to document which in the end its completeness is not fulfilled, or its quality is not good.

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