

The Mental Workload Of Nurses In The Role Of Nursing Care Providers

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Abstract

The responsibility of nurses as nursing care providers is a factor that affects the mental workload. The mental workload of nurses as caregivers who have to work and interact with patients professionally for 24 hours would arise. It may be because of continuous adaptation of time constraints in providing nursing care for 24 hours, unclear job demands, limited ability, lack of motivation and mood, and the psychological burden of the nurse. This study aimed to describe the mental workload in carrying out their role as the nursing care provider at eight inpatient wards, Sumedang public hospital. This research applied descriptive quantitative design. The mental workload was measured using the NASA-TLX instrument. The samples were 94 who works inpatient rooms, they were randomly selected through cluster sampling techniques. Analysis of the data was descriptive analysis. The results of the study showed that 67% of nursing nurses had a mental workload that was in the role of providing nursing care. Nurses have a high mental workload in providing nursing care in special surgical wards (53.8%) and child wards (50%). It is recommended that hospitals evaluate the work system of nurses to examine the physical, psychological and behavioral changes that occur to nurses. It is expected that nurses show good performance in carrying out their role as nursing care providers.

Keywords: mental workload, nursing care provider, nurse

Introduction

Hospitals have a role in providing quality health services as providers of medical services, nursing services, and rehabilitation services. One of the roles of the hospital is to provide quality inpatient services. One of the services provided at inpatient services is nursing services carried out by nurses (Easter, Wowor, & Pondaag, 2017).

The role of nurses in inpatient wards is very vital (Mubin & Jalal, 2014). Nurses are the main sources of nursing services and are health workers who have the longest contact with patients (Apriani & Aini, 2018). The role of nurses is important. The role of nurses as providers would encourage nurses to understand the needs of patients in hospital and to achieve patient satisfaction. As a provider of nursing care, nurses provide care and interact with patients for 24 hours from the patient's arrival, patient care process and preparing patients returning home (Amir, 2018). The role of nurses as providers is influenced by mental workloads (Manuho, Warouw, & Hamel, 2015).

The mental workload of nurses who have to work and interact with patients professionally for 24 hours would arise. It may be because of continuous adaptation in providing 24-hour nursing care, obscurity of task demands, limitations of nurses' ability during care, the lack of motivation, and the mood of the nurse with the psychological burden (Mediawati, 2014). A high mental workload would harm nurses, and causing physical, psychological and behavioral changes (Mediawati, 2014).

Behavior changes that may occur include burnout and decreased performance. Burnout due to the high mental workload can be characterized by delaying work, speeding up work, delegating tasks to others, and often using applications in mobile phones that are not related to work (Maharani & Triyoga, 2012). Meanwhile, the performance can be seen from the decline in performance in providing nursing care that may affect patients' satisfaction (Khamida & Mastiah, 2015) and a decrease in documenting nursing care performance (Sari, 2013).

The nurse's mental workload would also have an impact on patient safety. Patient safety incidents occurred in Wates public hospital,

there were 35.9% of nurses not identifying patients before the administration of drugs, even though identification of patients is an application of the seven principles of drug administrations (Fatimah, Sulistiarini, & Fatimah, 2018). According to Retnaningsih and Fatmawati (2016), the implementation of patient safety in identifying patients that have not been optimal due to nurses' workloads. The workloads would affect the implementation of patient safety.

Previous research on mental workload has been examined by Aprilia, Somantri, and Mirwanti (2019), the results showed that the mental workload of nurses in critical wards (PICU, ICU, and NICU) showed moderate mental workloads. Another study on mental workload was examined by Dewi, Suryani, and Yamin (2019) on lecturers at the Faculty of Nursing of Universitas Padjadjaran, they found that lecturers had a high mental workload.

This research was carried out in the inpatient wards of Sumedang public hospital. Data from Sumedang public hospital states that the patient safety incident number was 3 miss identification from 101 cases of near-injury in 2017. In the inpatient room of Sumedang public hospital, it can be seen that many nurses use mobile phones while working, late for work, and documentation was incomplete. In addition, in the inpatient installation of Sumedang public hospital, there has never been a study of the mental workload of nurses. Based on this background, this study aimed to describe the mental workload of nurses as nursing care providers in the inpatient wards.

Methods

This study applied a descriptive quantitative design. The population in this study were 123 nurses who work in eight wards, the samples were 94 nurses that randomly selected through cluster sampling techniques. The instrument used in this study was the NASA-TLX instrument developed by Sandra Hart from NASA Ames Research Center and Lowell E. Staveland from San Jose State University in 1981. The validity test of the NASA-TLX instrument in English showed a correlation coefficient of 0.86 and reliability

testing showed a correlation coefficient of 0.83 (Hart & Staveland, 1988). Validity and reliability tests of NASA-TLX instruments in Indonesian were conducted by Nina, Bagus, and Agustina (2011) with a validity value of 0.857 and a reliability value of 0.921. Interpretation of mental workload on nurses with NASA-TLX instruments divided into three categories; low: <50, moderate: 50-80 and high: > 80 (Hart & Staveland (1981), in Nurfajriah, Arifati, & Herlina, 2017).

Data collection in this study began with the licensing process. This study had received permission from the Universitas

Padjadjaran research ethics committee and a research permit from RSUD Sumedang. The Universitas Padjadjaran's research ethics committee was obtained under number 296 / UN6.KEP/EC/2019 and research permission from RSUD Sumedang was obtained under number 800/236 / Diklat / 2019. After the licensing is complete, researchers conducted data collection by visiting the inpatient room at RSUD Sumedang, asking for informed consent, and distributing questionnaires in the form of a print out so that if the respondent completes the questionnaire.

Results

Table 1: Characteristics of Respondents (n=94)

Characteristics	Frequency (f)	Percentage (%)
Age		
Early Adult	76	80.9
Middle Adult	18	19.1
Advanced Adults	0	0
Total	94	100
Gender		
Men	19	20.2
Women	75	79.8
Total	94	100
Length of Work		
<5 years	27	28.7
5-10 years	26	27.7
>10 years	41	43.6
Total	9	100
Last Education		
SPK/Equivalent	1	1.1
DIII Nursing	83	88.3
DIV Nursing	1	1.1
S.Kep/Ners	9	9.6
Total	94	100
Marital Status		
Married	88	93.6
Not Married	6	6.4
Total	94	100

Table 2: Frequency Distribution of Nurses' Mental Workloads (n=94)

Category	Frequency	Percentage (%)
Low	6	6.4
Medium	63	67
High	25	26.6
Total	94	100

Table 2 shows that the majority of respondents (67%) had a moderate mental workload

Table 3: Frequency Distribution of Nurses' Mental Workload Based on Wards (n=94)

Wards	Category	Frequency (f)	Percentage (%)
Internal Medicine Rooms Class 1 and 2	Low	0	0
	Medium	9	90
	High	1	10
Total		10	100
Internal Medicine Class 1 and Non-Class	Low	0	0
	Medium	10	100
	High	0	0
Total		10	100
Internal Medicine Room Class 3 Special for Men	Low	5	45.5
	Medium	4	36.4
	High	2	18.2
Total		11	100
Internal Medicine Room Class 3 for Women	Low	0	0
	Medium	10	90.9
	High	1	1.1
Total		11	100
Operation Room	Low	1	9.1
	Medium	8	72.7
	High	2	18.2
Total		11	100
ENT Special Surgery Rooms, Orthopedics and Eyes	Low	0	0
	Medium	6	46.2
	High	7	53.8
Total		13	100
Children's Room	Low	0	0
	Medium	8	50
	High	8	50
Total		16	100
Maternity Room	Low	0	0
	Medium	8	66.7
	High	4	33.3
Total		12	100

Discussion

The data showed that the majority of respondents (67%) had a moderate mental workload. Medium mental workload means the time it takes for individuals to complete their work according to the working hours provided (Hakiim, Suhendar, & Sari, 2018). The mental workload that currently shows that a person has a good self-awareness to be responsible for completing his work. This is in line with Silva (2014) which explains that a person with a moderate level of mental workload means that the individual can control the abilities possessed by the demands of the work provided without feeling the burden on his work.

The mental workload of nurses in inpatient rooms is influenced by the demands of the task (Hart & Staveland, 1988). The task demands on nurses in the inpatient room are

the task of carrying out the role as a nursing care provider. The nursing care provider is required to be professional in working on ten tasks. The ten tasks include conducting a holistic nursing assessment, establishing nursing diagnoses, planning nursing actions, carrying out nursing actions, evaluating the results of nursing actions, conducting referrals, providing actions in an appropriate emergency setting, providing nursing consultations and collaborating with doctors, conducting health advice, and counseling and management of drug administration that is following the prescription of medical personnel or drugs and limited drugs (UU No. 38 year 2014 about Nurses).

The number of tasks that must be done by nurses as providers in Sumedang hospital does not make nurses have a category of high mental workload. This may because of the ability of nurses to respond to the demands

of their duties, so tasks can be carried out properly even though the tasks are repetitive work (Yunita, Sinaga, & Ayu, 2015). In this case, the mental workload of nurses in providing nursing care in the moderate category will not interfere nurse's work, but if this is not considered, it would reduce the performance of nurses.

The results of this study are in line with the research conducted by Karima (2010) which states that the mental workload on inpatient nurses at Tasik Medika Citratama hospital is in the moderate category (84.38%). However, it is not in line with Werdani (2016) study which showed that nurses in the inpatient ward of the Surabaya Private Hospital had a very high mental workload. This may due to the level of total care dependence on patients that reaches 80% in the hospital. The level of dependence is a factor that influences the mental workload of nurses. The level of patient dependence would determine actions that taken by nurses while working (Sugiri, Suardana, & K, 2015). At the level of total care dependence, the nurse who observes the patient's vital signs should be done every 2 hours because the patient is in an unconscious condition or unstable psychological status (Douglas, in Nursalam, 2014).

A high mental workload would harm patients, which is related to patient safety. According to Retnaningsih dan Fatmawati (2016), the implementation of patient safety on the identification of patients who have not been optimal would occur because of the nurses' workload. In this study, the mental workload of nurses executing in the medium category means that negative impacts would be prevented. In the mental workload, nurses' role as the provider of nursing care is in the moderate category which means that negative impacts would be minimized. It was showed in data Sumedang hospital that in 2017, there were only 3 incidents of miss identification from 101 cases of near-injury.

The mental workload of nurses in each room would vary. This is because of the task demands in each room are not the same. In addition, the level of dependence and characteristics of patients in each inpatient room is also different. Nurses in orthopedic special surgical inpatient rooms, ENT and eyes are in the high category. This would happen

because, in the inpatient surgical room, the nurse is responsible for the preoperative period of the patient, including preparing the patient's condition before the surgery. After all, if this phase is not well prepared, it would a problem in the next phases. Nursing care given by nurses to patients in the preoperative phase of the surgical care room includes preparing physical and mental needs during the surgery, and identifying what risks might arise after surgery such as decreased patient confidence (Apipudin, Marliany, & Nandang, 2017). The research conducted by Rahmayati, Asbana, dan Aprina (2017) also found that one of the factors that influence the length of care for postoperative patients is nursing actions. This shows that nurses are also responsible for the care of postoperative patients who would determine the length of stay of patients.

Nurses in the orthopedic surgical ward, ENT and eyes in Sumedang hospital are not only responsible for the treatment before and after surgery, but also special things that must be considered to treat postoperative patients with the case. These include post-surgical pain management that requires a long time in orthopedic surgery wards (Pertwi, 2016), rehabilitation of air inhalation that requires special accuracy (Indiyana & Kentjono, 2016) and eye care to restore visual function (Waskitho, Sugiatno, & Ismiyati, 2017). This is in line with research conducted by Hidayat, Pujangkoro, and Anizar (2013) that as many as 56.7% of nurses in the operating room have a high workload.

Nurses in children ward have a category of high mental workload. Nursing care to children should adhere to the principle of atraumatic care or a treatment that does not cause trauma to children (Yuliastasti & Arnis, 2016). This would be a trigger for the mental workload of nurses because nurses are not only responsible for pediatric patients but also in the elderly. Other things would also aggravate the psychological condition of nurses when parents find it difficult to cooperate because they are too worried to see their child sick. However, Pratiwi, Karimah, dan Marpaung (2017) say that child nurses have good psychological conditions when working. This may be caused by the tension of nurses caring for pediatric patients is lower

than adult patients.

The mental workload as the next care provider was in the low category, especially the inpatient ward in grade 3 for men. This may because of nursing care in the ward is more complex and higher in the physical workload. The high physical workload in the inpatient ward is in line with the research conducted by Alhasanah (2016) which states that the physical workload in the inpatient ward of Tangerang City Hospital is high because there are many activities carried out by nurses.

Based on these results, low, moderate and high mental workloads have occurred in difference wards. At low mental workloads, the demand is lower than the ability of the time spent to complete work. The moderate mental workloads mean that the work volume and ability of workers are balanced between workloads and their working hours. While in a high mental workload, the volume of work exceeds a worker's ability or the time spent completing work is higher than the available work hours. A high mental workload would result in stress, frustration, tension, and the worst effects are health problems (Hakiim et al., 2018).

Conclusion

The result of this study indicates that the mental workload of nurses in the inpatient installation of Sumedang hospital as nursing care providers is mostly in the moderate category. This could happen because each sample taken for each room is only about 10-16 samples, resulting in a large percentage for each inpatient room. Meanwhile, the role as a provider of nursing care, nurses who have a high mental workload are nurses in child inpatient and orthopedic, ophthalmic and otolaryngology surgery. The low mental workload was identified in the inpatient ward of class 3 specifically for men. It is recommended that hospitals should evaluate the nurses' work system. The evaluation can be done by doing a group discussion forum that invite each head of the room. The evaluation aims to monitor the work system of each nurse, assessing the work performance achieved by nurses and to provide recreation

for nurses. It is expected that nurses should maintain good performance as nursing care providers.

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