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Occupational Stress towards Caring Behavior of Nurses in the Intensive Care Unit (ICU) during Pandemic Covid-19

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ABSTRACT

Introduction: The emergence of occupational stress in the intensive care unit (ICU) during pandemic covid-19 will impact nurses' physiological, psychological, and performance. The psychological condition of nurses may influence the caring behavior of nurses towards patients. This study aimed to determine the relationship between occupational stress and the caring behavior of nurses in the ICU.

Methods: This study was a cross-sectional research, conducted in a hospital in Lumajang District, East Java, Indonesia. There were twenty-eight nurses as the study sample obtained by a total sampling technique. The research instruments used Expanded Nursing Stress Scale (ENSS) and caring Behavior Inventory-24 (CBI-24). The data analysis using Kendall-Tau with 95 % CI.

Results: The results showed that most nurses experienced occupational stress with a median of 81 (min-max: 1-141) and caring behavior with a mean value of 132,11 (\pm SD: 4,864). There was a significant relationship between work stress and nurses' caring behavior ($p = <0.001$, $r = -0.636$, $\alpha: 0.05$). The correlation coefficient was -636, which means a strong relationship with a negative relationship between nurse work stress and nurses' caring behavior. Therefore, if the Nurse's work stress is low, the Nurse's caring behavior will be good, and vice versa.

Conclusions: The work stress will decrease the nurses' caring. Hence, it is crucial in managing the ICU's condition to reduce nurses' stress. Besides, nurses are expected to handle their stress to optimize their caring behavior.

Keywords: Occupational stress, caring behavior, Intensive Care Unit (ICU), Nurse

INTRODUCTION

Work stress is a phenomenon that often occurs in employees, so it can affect work productivity (Sucipto, 2013). Nurses, especially ICU nurses, may also experience stress (Badri, 2020). The high work stress on nurses can lead to moral distress, which is a situation where other people

believe the nurse can do the right thing, but the nurse is unable to take that action (Ettings et al., 2015).

The American National Association for Occupational Health (ANAHO) explains that work stress among nurses ranks first out of forty occurrences of work stress in the world (Fuada et al., 2017). The Indonesian National Nurses Association (PPNI) (2011) conducted a study with the results that 50.9% of nurses in Indonesia experienced work stress with symptoms of frequent dizziness, tiredness, heavy workload causing reduced rest time, and inadequate income (Febriani, 2019). Based on the Ministry of Health of the Republic of Indonesia, in 2014, it was stated that the number of nurses in Indonesia was 237,181 people, so the percentage of nurses' work stress in Indonesia was relatively high (Herqutanto et al., 2017).

Based on the results of research by Melaer (2007) showed, data from 230 ICU nurses, 54 nurses (24%) experienced Post Traumatic Stress Disorder (PTSD), while 121 general nurses who experienced Post Traumatic Stress Disorder were 17 nurses (14%). In a study conducted by Jusniar (2012) on ICU nurses at Dharmasis Cancer Hospital Depok with 33 respondents, 22 nurses experienced moderate work stress.

Nurses on duty in the Intensive Care Unit (ICU) have heavy duties and responsibilities. In dealing with critical patient conditions, mental, physical, and knowledge strength and high skills are needed (Badri, 2020). The condition of patients who require total care requires nurses to observe patients frequently, so ICU nurses must be nimble and prepared (Nur'aini, 2007).

Other research (Badri, 2020) states that nurses in the ICU must strictly observe patients and perform total care for patients during working hours. Besides, not all nurses master the Intensive Care Unit (ICU) competencies. This condition triggers stress on nurses who work in the Intensive Care Unit (ICU) (Badri, 2020). The emergence of work stress in ICU nurses will impact their physiological, psychological, and performance effects (Lestari, 2017).

Caring is an interpersonal relationship between nurses and patients who show empathy, concern, and security by nurses (Anggoro et al., 2019). Caring behavior aims to provide nursing care by paying attention to the patient's emotions, maintaining patient safety, and maintaining patient self-esteem by holistically accepting what is in the patient (Engebretson et al., 2014). Nurses are required to have a caring attitude toward patients in providing health services, especially in carrying out nursing care, because the caring behavior shown by nurses will give a feeling of comfort, security. They can motivate patients to recover quickly (Marrison and Burnard, 2009).

In the current phenomenon, most nurses only focus on nursing tasks that focus on the patient's physiological aspects or medical actions (Marrison and Burnard, 2009). According to Watson 1979 caring focuses on Human Science and Human Care based on ten factors, namely (1) building humanistic-altruistic values, (2) providing hope and trust, (3) increasing sensitivity to self and others, (4) building relationships, trust each other and help each other, (5) Receive and increase awareness of feelings in both good and bad situations, (6) Apply systematic methods in finding solutions to problems, (7) Increase knowledge and share information, (8) Provide support, protection, and change mental, physical states, sociocultural, and spiritual for the better, (9) Assist in meeting basic human needs, and (10) Appreciate existential power and phenomenology (Nurachman, 2001).

The hospital is a health service facility, which of course, must provide good quality health services for the community. Based on Law No. 44 of 2009, the hospital is a health service facility that provides outpatient, emergency, inpatient, and intensive care services. Regional General Hospital (RSUD) dr. Haryoto Lumajang is a referral hospital structurally under the auspices of the Regent and the Lumajang District Health Office. Based on researcher interviews with several families of patients treated in the Intensive Care Unit (ICU), most of them answered that they chose the Regional General Hospital (RSUD) dr. Hayato because it is a referral hospital that has complete facilities compared to other hospitals in Lumajang Regency.

Research conducted in the ICU of RSUD RAA Soewandi Pati (2017) revealed that as many as 15 nurses (75%) had good caring behavior, three nurses (15%) had good enough caring behavior. The rest (10 %) showed poor caring behavior. Furthermore, the cause of the negative caring behavior could occur due to the high psychological pressure on nurses because it was related to nursing care. Intensive care and total care for critically ill patients may cause work stress for ICU nurses (Wulan, Emma Setiyo, 2019). The coronavirus disease (COVID-19) pandemic has exposed nurses to conditions that threaten their health, well-being, and ability to work. Based on the problems and exposure to the background above, the authors are interested in conducting research titled "The Relationship between Nurse Work Stress and Nurse Caring Behavior in Patients in the Intensive Care Unit (ICU) Hospital in Lumajang Regency."

METHODS

Study Design

The research design used was an analytical observational study with a cross-sectional approach. This approach is a type of research approach where data collection on the dependent and independent variables is obtained at one time. The research takes place at the Hospital in Lumajang Regency from December 29, 2021, to January 05, 2022.

Population, Samples, and Sampling

The research sample used in this study was nurses who work at the Intensive Care Unit (ICU) RSUD Dr. Haryoto, Lumajang Regency, East Java, Indonesia with the total number of sample as 28 nurses. Sampling was obtained through a non-probability sampling technique with saturated sampling/total sampling based on inclusion and exclusion criteria. The inclusion criteria were: 1) The nurse at the ICU of RSUD Dr. Haryoto Lumajang with the Length of work at the hospital at least 3 months, and 2) Willing to be a research respondent. While the exclusion criteria were: 1) nurse on leave, or 2) nurses who were continuing their studies.

Instruments

The instrument used is a nurse's job stress questionnaire, namely the Expanded Nursing Stress Scale (ENSS), consisting of 57 questions, and a caring behavior questionnaire, namely the Caring Behavior Inventory-24 (CBI-24), consisting of 24 questions.

Procedure

The distribution of questionnaires to respondents was carried out directly. The researchers themselves collected data by giving job stress and caring behavior questionnaires to ICU nurses. The

researcher conveyed the aims and objectives of the study, and explained how to fill out the questionnaire.

Data Analysis

The data analysis method used the non-parametric Kendall Tau test with 95 % of CI to determine the significance of the two variables, the level of correlation (Correlation coefficient), and the direction of the relationship between the two variables.

Ethical Clearance

This research has met the ethical approval with No. 140/UN25.1.14/KEPK/2021 from the Ethical Board Faculty of Nursing, University of Jember

RESULTS

The results of this study displayed on the tables below.

Table I. Characteristics of Respondents (n=28)

Characteristics	Frequency (n)	Percentage (%)
Gender :		
Male	8	28,6
Female	20	71,4
Employment Status:		
Civil servant	18	64,3
honorary employee	10	35,7
Education Level :		
Nursing Diploma	10	35,7
Bachelor of Nursing (Nurse)	18	64,3
Total	28	100
Characterisrics		
	Median	Min-max
Age (years)	37.5	28-49
Working Period (months)	71	20-216

Research obtained the results that most of nurses were woman (71.4%), and the rest were male nurses as many as eight people (28.6%). There are two groups of employment status, namely civil servants and honorary. It is known that there are 64.3% of civil servant nurses and 35.7% of honorary

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nurses. Besides, most of nurses were graduated from Bachelor of Nursing (64.3 %). The age of the respondents ranged from 28 to 49 years, with the length of work from 20 - 216 months (18 years) with an average nurse working period of 87 months or seven years.

Table 2. Means and Indicators of Work Stress of ICU Nurses (n=28)

Variable	Median	Min-Max
Work stress	81	1-141

Table 3 Means and Indicators of the Expanded Nursing Stress Scale (ENSS) Questionnaire

Indikator	Median
Death and Dying	1,53
Conflict with Doctor	1,49
Treatment Vagueness	1,45
Not Enough Preparation	1,40
Problems with Supervisor	1,37

Table 3 showed that the work stress of ICU nurses out of a total of 28 nurses, had a median value of 81 (min-max: 1-141), with the highest median of stress indicator was death and dying (med: 1.53).

Table 4 Means of Caring Behavior of ICU Nurses (n=28)

Variable	Mean	SD
Caring behavior	132,11	4,86

Table 5 Means of the Indicators of the Caring Behaviors Inventory-24 Questionnaire (CBI-24)

Indicator	Mean
Professional knowledge and skills	5,9
Acknowledging Human Existence	5,57
Concern for What Others Experience	5,53
Responding With Respect	5,47
Creating Positive Relationships	5,28

Table 4 shows that the ICU nurse at RSUD Dr. Haryoto Lumajang Regency, on the caring behavior indicator, has a mean value of 132.11 (SD: 4.864), with the highest indicator is professional knowledge and skills, with an average value of 5.9 (Table 5)

Table 6 Analysis of the Relationship between Nurse Work Stress and Nurse Caring Behavior (n=28)

Variable	p	R
Work stress	0,000	-0,636
Caring behavior		

Table 6 showed the results of the Kendall's tau correlation test with a significance value of 0.001 ($< \alpha: 0.05$) or H_a was failed to be rejected. It means there is a relationship between nurse work stress and the caring behavior of nurses in patients in the Intensive Care Unit (ICU) Hospital in Lumajang Regency

DISCUSSION

Research obtained the results that most of nurses at the ICU RSUD dr. Haryoto Lumajang were woman (71.4%), and the rest were male nurses as many as eight people (28.6%). Women dominate the difference in sensitivity between men and women because they have a higher level of sensitivity than men (Anggoro et al., 2019). There are two groups of employment status, namely civil servants and honorary. It is known that there are 64.3% of civil servant nurses and 35.7% of honorary nurses. The nurse's employment status influences the rewards obtained so that it can be a motivation for nurses to improve their performance. Rewards in non-financial forms are also needed by a nurse because nurses will feel more valued to increase their caring behavior of nurses to patients (Supriatin, 2015).

The research results showed that most ICU nurse education in RSUD Dr. Haryoto is SI (64.3 %). Nurses with a high level of education will have broader knowledge than someone with a low level of education because different thinking processes impact a person's intellectual maturity to act in decision making (Kumajas et al., 2014). Nurses who have a high level of education can more easily understand their roles and carry out their responsibilities. Nurses will continue to behave caringly to patients (Kumajas et al., 2014).

The study results showed that the age of the respondents ranged from 28 years to 49 years, so it can be said that the respondents had entered the adult phase. In this phase, mental strength, the ability to think and understand a condition, has been maturely formed (Jannah et al., 2021). The age of the nurse has a strong influence on the caring behavior carried out on the patient. The older the nurse, the more responsible and experienced in doing a job will affect nurse performance, especially in caring behavior (Anggoro et al., 2019).

The data presented from the study results indicate the working period of the ICU nurse at a Hospital at Lumajang Regency, 20-216 months (18 years) with an average nurse working period of 87 months or seven years. Nurses with a working period of more than five years already have good knowledge to make the right decisions about their work (Sumarni, 2016). In line with research conducted by Supriatin (2015) which shows that there is a relationship between tenure and caring behavior of nurses with a p-value of 0.001 ($p\text{-value} < 0.05$), this occurs as seen in senior nurses who are used as role models by young nurses because they are increasingly The longer the nurse works, the more skilled and caring behavior will be.

The work stress of ICU nurses at the Hospital at Lumajang Regency, out of a total of 28 nurses, had a median value of 81 with a minimum value of 1 and a maximum value of 141 (table 3). Research conducted by Badri (2020) showed that most ICU nurses experienced severe work stress. The occurrence of work stress on nurses is caused by a high workload so that nurses cannot complete their duties correctly. Wollah (2017) states that work stress experienced by ICU nurses is caused by nurses' intrapersonal conflicts, lack of support from administrators and heads of care, ineffective communication patterns, monitoring and planning of staff, interdisciplinary politics in superiors such as doctors and managers, ethical issues related to the dying of the patient.

The caring behavior showed in the Table 4 has a mean value of 132.11 (SD: 4.864). Of the five indicators of caring behavior (Table 5), it was found that for most ICU nurses at the Hospital, the highest indicator is professional knowledge and skills, with an average value of 5.9. This happened because most of the nurses in the study were bachelor nursing, so they had better skills and knowledge in providing professional nursing care. Nurses with relevant skills and knowledge will be most consistent in caring (Aupia et al., 2018). According to Qomariah (2017), nurses with relevant skills and knowledge will also show an excellent, caring character. Factors included in nurses' ability include understanding of work, understanding tasks or procedures in carrying out work, understanding how to carry out tasks, appreciating duties, job responsibilities, and understanding of challenges in carrying out a task.

The statistical analysis showed that there is a relationship between nurse work stress and the caring behavior of nurses in patients in the Intensive Care Unit (ICU) Hospital in Lumajang ($p: 0,01$; $R: -0.636$, $\alpha:0.05$). The correlation coefficient value is -0.636 , which means the degree of relationship between the two variables is a strong correlation. The direction of the relationship between the two variables is negative, meaning that if the nurse's work stress is low, the nurse's caring behavior will be good. If the nurse's work stress is high, the nurse's caring behavior will be less good. This results relevant with the study by Murtono et al., (2019). Patients who are treated in the Intensive Care Unit (ICU) are patients with critical conditions who require total care so that they require intensive observation, long-term resuscitation measures, and definitive therapy to maintain vital functions such as the airway, breathing, circulating, brain, and other organ functions (Badri, 2020). Nurses on duty in the Intensive Care Unit (ICU) must have the ability to think critically to make clinical decisions in dealing with conditions in patients. Sources of work stress for Intensive Care Unit (ICU) nurses, such as workload and high work risk for nurses, difficulties in carrying out nursing care or taking action on patients with critical conditions, will have an impact on nurses' physical and psychological work stress (Vanchapo, 2020). Distress that nurses may experience is characterized by the emergence of dysfunctional organs that impact the quality of health services, including caring behavior (Olender, 2017). The Health Belief Model (HBM) Theory reveals that changes in a person's behavior are obtained from individual beliefs about the problem (Rachmawati, 2019). This theory is also related to work stress experienced by nurses in the Intensive Care Unit (ICU). Work stress experienced by nurses is a cognitive problem that impacts caring behavior that must be shown to patients. Work stress experienced by nurses on duty in the ICU requires good cognitive behavior so that in providing total care to patients in the Intensive Care Unit (ICU), nurses do their duties sincerely, not feeling burdened, and still think positively about what has been done in providing care can improve the health status of patients and improve the quality of life of nurses so that nurses can still perform caring behavior well despite experiencing work stress.

CONCLUSION

To conclude, there is a significant relationship between nurse work stress and the caring behavior of nurses in patients in the Intensive Care Unit (ICU), with a strong correlation and a negative relationship direction. This study has limitation on the number of sampling. Therefore, we suggest to do another study based on this issue with the larger sample size. Besides, it is also important to find the best strategy to reduce the work status in nurses and to improve their caring behavior in the pandemic era.

CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest’.

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