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RESEARCH

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The Ability of The Adaptation Process According to Callista Roy's Theory is Related to Work Stress in Nurses in The Operating Room

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Abstract

Nurses in the operating room feel that they lack concentration in carrying out surgery because fatigue during emergency operations can result in increased work stress. The process of adaptation is a way that affects behavior in managing stress. The purpose of the study was to prove that there is a relationship between the ability of the adaptation process according to Callista Roy's theory in nurses with work stress in the operating room of Mardi Waluyo Hospital Blitar. This research method is quantitative using a cross-sectional design. The study sample was 28 nurses in the operating room with the total sampling technique. The independent variable of adaptability of the adaptation process was measured with the questionnaire sheet and the dependent variable of work stress was measured with the DASS 42 questionnaire sheet. Data analysis using Spearman test. The research results show that the ability of the adaptation process was mostly moderate in 17 people (60.7%) and work stress was almost half that of normal stress in 12 people (42.9%). The conclusion is there is a significant relationship between the ability of the adaptation process and nurses' work stress with a p-value of $0.001 \leq 0.05$ meaning that there is a significant relationship between the ability of the adaptation process with work stress in nurses in the operating room, the direction of the relationship from r count -0.577^* is strongly correlated with the direction of negative relationships, meaning that the increasing adaptability the lower the level of work stress.

Keywords: Adaptability, Work Stress, Operating Room Nurse.

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1. INTRODUCTION

Nurses have a large burden of duties and responsibilities, far from light. The various situations and demands faced in the workplace by nurses can lead to potential job stress. Stress in the work of surgical nurses is due to the fact that they are under time pressure and require extensive experience in performing complex procedures, in addition to competence and mastery of new techniques (Saraswati, 2017). Nurses have strong memory, cognitive skills, and abilities. Operating room nurses at Mardi Waluyo Hospital are unfamiliar with adapting processes, such as learning the latest surgical technology or techniques. Nurses are required to improve their skills and continuously manage can cause stress (Maydinar, et al., 2020).

Pressures can cause work stress in the psychological response of the body, job demands that exceed the ability to have. Whether in the form of physical or environmental demands and social situations that interfere with the implementation of duties. Arises from the interaction between individuals and their work can change normal physical and psychological so that it is dangerous and unpleasant (Fitrianingrum, 2018). Nurses in the operating room of Mardi Waluyo Hospital feel less concentrated in performing surgery because fatigue during emergency surgery can quite a lot cause work stress.

Research conducted by (Ugurlu et al., 2015) revealed that among surgical room nurses, 48.6% experienced high levels of stress, 43.2% experienced moderate levels of stress, 6.8% experienced mild levels of stress, and 1.4% reported no stress at all. Work stress is a tense condition that impacts a person's feelings, ideas, and circumstances. In research Fuada, Wahyuni, & Kurniawan, (2017) stated that as many as 40% of nurses had conflicts with colleagues or superiors, especially doctors. In addition, 60% of nurses feel bored with their jobs and are dissatisfied with low salaries and lack of professional development in the nursing profession. Meanwhile, from preliminary studies at Mardi Waluyo Hospital, Blitar, surgical nurses, sometimes there are conflicts or differences of opinion between peer nurses or other health workers. Not to mention additional tasks that add to work stress, such as managing administration, maintaining or managing medical equipment, and delegation from doctors. Therefore, nurses must improve adaptability in the work environment so that cooperation is well-bound.

Stress can be overcome by adaptive coping adaptations so that they are able to adapt to factors that cause stress/stressors. Coping adaptation is an individual's defensive response to a problem, whether it responds positively or maladaptively. Application of adaptation nursing theory to nurses, one nursing theory that can describe the above problem is Callista Roy's adaptation theory (Senesac, & Roy, 2015). Callista Roy's theory explains how individuals are able to improve health by maintaining adaptive behavior and changing maladaptive behavior (Muzliyati et al., 2019). The theory emphasizes the ability of nurses who experience work stress to adapt to cope with stressors to avoid work stress. It is therefore important to explore the sources of operating room nurse stress as perceived by nurses to understand the nature of their stressors that may influence the development of context-specific interventions to reduce work-related stress among operating room nurses (Rofli, 2021). Based on this background, researchers have an interest in having an interest in conducting research on the ability of the adaptation process according to Callista Roy's theory on nurses with work stress in the operating room of Mardi Waluyo Hospital Blitar. It is important to analyze the ability of the adaptation process in nurses during work so that the prevalence of work stress experienced by nurses in the operating room can be known.

2. RESEARCH METHOD

This quantitative research method uses a correlational research design with a cross-sectional approach. The population in this study was all nurses in the operating room of Mardi Waluyo Hospital Blitar as many as 28 nurses. Using the total sampling technique. The number of samples was 28 nurses in the operating room of Mardi Waluyo Hospital Blitar. The research instrument in the form of an adaptation process ability questionnaire according to Callista Roy's

theory that has been tested for validity has a large r table (0.361) based on the number of respondents studied at a significance level of >0.05 to measure the ability of the adaptation process and a standard DASS 42 (Marsidi, 2021) questionnaire to measure stress levels. The analysis in this study used the Spearman Rank test with a significance level of -0.577 . This research has been declared an ethical test at Mardi Waluyo Hospital Blitar and received a research ethics feasibility letter with number 800/35.15.7/410.302.3/KEP/II/2024 has been received by researchers. The researcher asked permission from the relevant institution to conduct this study, and after obtaining permission, the researcher submitted a questionnaire to the subject, emphasizing ethical considerations such as (Nursalam, 2015).

3. RESULTS AND DISCUSSION

Table 1. Demographic characteristics of nurses working in the operating room of RSUD Mardi Waluyo Blitar on February 23 - March 23, 2024

Characteristics	Criterion	F	%
Age	Age 25-35	9	32.1
	Age 36-45	8	28.6
	Age 46-55	8	28.6
	Age 56-65	3	10.7
Gender	Male	21	75
	Female	7	25
Length of work	< 5 years	8	28.6
	> 5 years	20	71.4
Education	Diploma 3 in nursing	17	60.7
	Diploma 4 in nursing	3	10.7
	Bachelor of Applied Nursing profession	8	28.6
	Sum (n)	28	100.0

Based on table 1, the age demographic characteristics of nurses working in the operating room of Mardi Waluyo Hospital Blitar in March 2024 are almost half aged between 25-55 years, namely 9 people (32.1%), the gender of nurses is mostly male, there are 21 people (75%), the frequency of working in nurses is mostly >5 years, which is 20 (71.4%), and the last education in nurses is mostly Diploma III Nursing 17 people (60.7%).

Table 2. Frequency distribution of adaptation process ability in nurses in the operating room of Mardi Waluyo Hospital Blitar on February 23 - March 23, 2024

Adaptability of The Process	Frequency	Percentage (%)
Poor Adaptation	0	0
Medium Adaptation	17	60.7
Good adaptation	11	39.3
Total	28	100.0

Based on table 2, the frequency of adaptation process ability distributed to nurses in the operating room of Mardi Waluyo Hospital, Blitar on February 23 – March 23, 2024, most nurses have a medium adaptation process ability of 17 people (60.7%)

Table 3. Distribution of work stress levels in nurses in the operating Mardi Waluyo Hospital Blitar February 23 - March 23, 2024

Work Stress	Frequency	Percentage (%)
Normal	12	42.9
Mild Work Stress	5	17.9
Moderate Work Stress	9	32.1

Severe Work Stress	2	7.1
Very Severe Work Stress	0	0
Total	28	100.0

Based on table 3, the distribution of work stress frequency in nurses in the operating room of Mardi Waluyo Hospital Blitar on February 23 - March 23, 2024, almost half of them had normal or no work stress of 12 people (42.9%).

Table 4. Distribution of the relationship between the ability of the adaptation process and work stress in nurses in the operating room of Mardi Waluyo Hospital Blitar on February 23 - March 23, 2024.

Distribution of The Relationship	Information	Result
The ability of the adaptation process with work stress	Correlation value	-0.577
	p-value	0.001
	n	28

Table 4 the distribution of the relationship between the ability of the adaptation process with the level of work stress in nurses in the operating room, based on the level of significance tailed < 0.05 which means that there is a significant relationship between the ability of adaptation process with work stress in nurses in the operating room. In the variable adaptability associated with work stress, a correlation test was carried out with Spearman rank due to ordinal scale data with a p-value result of 0.001. The correlation value between the ability of the adaptation process with work stress in nurses in the operating room is -0.577 which means that the two variables have a strong relationship or level of closeness correlation. With a negative correlation coefficient value, the relationship is not unidirectional.

DISCUSSION

Ability of the Adaptation Process for Nurses in the Operating Room of Mardi Waluyo Hospital Blitar. Based on the results of the study, it was found that the frequency of adaptation process ability in the nurses in the operating room mostly had the ability to adapt to the medium adaptation of 17 nurses in the operating room of Mardi Waluyo Hospital Blitar. In fact, all respondents were able to adapt, while in emotional developmental differences to their environment and differences in communication and socialization (Wulandari, 2016).

Age affects a person's adaptation process, whereas respondents with a younger age are found to have better adaptability (Patriyani, et al., 2022). Nurses with old age have less adaptability due to the boredom experienced by nurses to the rules in the hospital. Older nurses have freedom in terms of deciding, while nurses with a younger age are more afraid of the surrounding environment not daring to decide for themselves (Astawa et al., 2024). The ability of a person's adapt to a new environment increases over time because they begin to accept new circumstances so that someone will have more to stay (Afiyah, 2018). So that the ability of the nurse adaptation processes in their environment is increasing or it is easier to cooperate or communicate with fellow nurses or other medical personnel (Bau, Kadir, & Abudi, 2022).

The factor of adaptability in nurses is not only from gender, age, and length of work but could be from ineffective stressors that will have an impact on bad responses (Pardede, 2018). This is because the stimulus faced by each individual is different which can affect a person's stressor level in the face of pressure. Individuals who cannot cope optimally will experience failure in adjusting to their environment (Lestari & Ramadhaniyati, 2018). A nurse with the ability and experience she has can know how to properly and correctly improve the ability of the process to adapt to a new scope (Qian et al., 2021). It increases over time because it begins to accept new circumstances so that someone will be easier to adapt to something.

Work Stress in Nurses in the Operating Room of Mardi Waluyo Hospital Blitar. Based on the results of the study, it was found that the frequency of work stress levels in nurses in the operating room almost half had normal work stress levels or did not experience stress, there

were 12 nurses in the operating room of Mardi Waluyo Hospital Blitar, many nurses sometimes complained of fatigue after working and complained about job demands that exceeded their abilities (Gilmartin et al., 2017).

The results of research that have been conducted show that almost half of nurses in the age category of 36-45 years experience work stress as many as 10 nurses. The older a person gets, the less likely they are to quit a job. Fakrot in Jacinta F. Rini's article states that the <40-year-old workforce is most at risk of stress-related disorders (Asih, 2018). This is because younger workers are influenced by unrealistic expectations when compared to those who are older. But keep in mind that women have a greater percentage of stress than men. Women have a tendency to get tired quickly so work stress is more experienced by women. Both male and female nurses have the same workload and responsibilities so gender is not always a trigger for work stress (Sudaryanti & Maulida, 2022).

Based on the results of research most nurses work for <5 years. The working period is the period of time people work from the first time they start entering until now they are still working (Barus, 2021). Longer work experience in nurses is thought to cause thoughts or perceptions about how to cope with work stress in the ability of the adaptation process in nurses in the operating room, young workers are often affected by irrational expectations. In addition to existing seniority in the surgical team, abusive and callous coworkers can add tension and create social stressors.

Workplace stress is a state of tension that disrupts emotions, mental processes, and general employee well-being by causing physical and psychological imbalances (Desima, 2016). When the pleasure of work from one's work is not achieved, stress among employees appears. Pressures can cause work stress in the psychological response of the body, work demands that exceed their abilities (Fitrianingrum, 2018). One of the causes of stress in nurses from environmental factors is economic, technological and political uncertainty. As well as the deteriorating economy, it causes anxiety about the continuity of nurses' work, which has a psychological impact (Falcon, 2020). The working environment conditions are also affected by low operating room temperatures and high humidity with central air conditioning ventilation, very bright room light, and electrocautery fumes that smell bad to make the surgical nurse uncomfortable. This nurses are expected nurses to explore the sources of stress felt to understand the nature of their stressors (Akbar et al., 2017).

The Relationship of Adaptation Process Ability According to Callista Roy Theory in Nurses with Work Stress in the Operating Room of Mardi Waluyo Hospital Blitar. Coping strategies ultimately lead to a state of adaptation, which is a new behavior resulting from changes made during the adaptation process (Jennings, 2017). The ability of nurses who experience work stress to adapt in overcoming stressors to avoid work stress (Gunawan, & Sriathi, 2019). Callista Roy's theory explains how individuals are able to improve health by maintaining adaptive behaviors and changing maladaptive behaviors. Stress in the work of surgical nurses is due to the fact that they are under time pressure and require extensive experience in performing complex procedures in addition to competence and mastery of new techniques (Natsir et al., 2015). Therefore, nurses must also establish good relationships with nurses, doctors, or other medical personnel to improve adaptability in the work environment (Pangetuti et al., 2019). Work stress experienced by nurses due to the ability of the adaptation process is fairly sufficient can affect the nurse's work capacity and can cause loss of motivation to work for the nurse (Ackah & Kwashie, 2023).

4. CONCLUSION

In this study, according to Callista Roy's theory, the adaptability of nurses in the operating room was mostly at a moderate adaptation level. The stress level is almost half the normal level. So the relationship between the ability of the adaptation process according to Callista Roy's

theory and work stress in nurses in the operating room. The correlation coefficient for the two variables has a strong relationship, not in the same direction, which means that the higher the ability of the adaptation process, the lower the work stress will be.

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