ORIGINAL ARTICLE

The Knowledge and Attitude Medical Surgical Nursing Relates to Alertness in Giving Care to Nursing COVID-19 Patients

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ABSTRACT

Introduction: The purpose of this study was to analyze the relationship between the knowledge and attitudes of medical-surgical nurses and preparedness in providing nursing care for COVID-19 patients. The long COVID-19 pandemic has exhausted nurses serving patients, resulting in a lack of preparedness for health workers. Nurse preparedness is strongly influenced by the knowledge and attitudes of nurses in dealing with problems that arise. The preparedness, knowledge, and attitudes of nurses in providing nursing care for COVID-19 patients are not yet known in detail. **Methods:** The research design that has been used is cross-sectional. The population that has been used in this study is nurses in the Emergency Department. The sample that has been recruited is 34 people using the purposive sampling technique. The independent variables that have been determined are nurses' knowledge and attitudes about COVID-19. The dependent variable that has been used is the readiness of nurses in providing care about COVID-19. The instrument to collect data that has been used is a modified knowledge, attitude, and preparedness questionnaire. The data analysis that has been used is Spearman's rho correlation test. **Results:** The results showed that the knowledge and attitudes of medical-surgical nurses were related to nursing preparedness in providing nursing care to COVID-19 patients ($p = 0.022$ and $p = 0.018$). **Conclusion:** Nurses' knowledge and attitudes in providing nursing care to COVID-19 patients can maintain nurse preparedness properly. Training and seminars about COVID-19 are highly recommended to be carried out frequently so that nurse preparedness remains good.

Keywords: Attitude; COVID-19; Emergency Room; Knowledge; Medical Surgical Nursing

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) (1,2). The characteristics of this disease can significantly increase the existing burden on healthcare facilities (3). Based on observations in the Emergency Room (ER) at Haji General Hospital, the long period of the COVID-19 pandemic made emergency room nurses experience work fatigue serving patients. This situation risks reducing the preparedness of nurses in caring for COVID-19 patients in the ER (4). Preparedness for the COVID-19 pandemic in Indonesia is considered to be lacking compared to several neighbouring countries such as Malaysia, Singapore, Thailand and the Philippines due to the infected cases exceeding the capacity of available medical equipment and personnel (5).

Research in Pakistan states that the lack of preparedness of health workers has an impact on reducing the ability to prevent, control, and manage COVID-19 patients. The data shown is that 20.13% don't know about prevention, 52.32% don't know about control programs, and 40.4% don't believe and don't know about COVID-19 control (6). Meanwhile, in Libya, the lack of preparedness resulted in reduced response speed and ability to diagnose and carry out early warnings in an organized manner. The data shows low self-confidence in dealing with suspected COVID-19 patients (83.8%) and 53.1% of doctors and nurses are not ready to face the outbreak (3). Another problem is that there is panic and confusion among Health workers in England, causing controversial decisions about who should receive treatment and

who should not (7). This bad situation seriously threatens patient safety, especially if the hospital does not strictly enforce the Hospital Disaster Plan, which is a mechanism and procedure for dealing with a pandemic in hospital services (8,9).

COVID-19 preparedness in hospitals, in general, is divided into three aspects, namely human resource readiness, logistical readiness, and financial readiness (9). The readiness of human resources includes knowledge, skills, and physical and mental readiness. Readiness of hospital logistics in the form of medical equipment, personal protective equipment, isolation rooms and medicines. While financial readiness is operational support in hospital services. Emergency preparedness is key in responding to any health crisis and refers to the knowledge and capacity to anticipate, respond to, and recover effectively from the impact of the current crisis (10).

Knowledge and attitudes of nurses as two internal factors within nurses will influence preparedness in caring for patients (11). Knowledge to identify and manage COVID-19 cases is an important component of nurse preparedness (12). Knowledge is a prerequisite for carrying out prevention efforts and forming positive attitudes and positive behavior, the greater the knowledge of health workers, the greater their confidence and readiness in treating COVID-19 (11). Other factors that affect the preparedness of clinical nurses in dealing with outbreaks or changes in the health environment include the level of education, special training, coordination skills, and professional development (11). Based on research from several countries related to preparedness for COVID-19, it has been found that all preparedness for facing COVID-19 is still in poor condition (13–15). Based on some of the statements above, the researcher wanted to find out how the relationship between the knowledge and attitudes of medical-surgical nurses and the readiness to care for COVID-19 patients in the emergency room could not be explained.

MATERIALS AND METHODS

Design

This research used descriptive analytics with a cross-sectional design. The study aimed to analyze the relationship between the knowledge and attitudes of medical-surgical nurses and the readiness to care for COVID-19 patients.

Sample

The population in this study were all nurses on duty in the Emergency Room. Sampling used a purposive sampling technique, using the sample criteria, namely active functional nurses, nurses who work according to shifts, and nurses who are not on leave or holidays. Nurses who are in the Emergency Room and are not taking action are given a questionnaire using the Google Form link. The size of the research sample obtained was 34 nurses. Data was collected for 1 month, namely from December 10 2020 to January 10 2021 at the IGD of RSU Haji Surabaya.

Research ethics

The research procedure was tested and declared ethically feasible by the Ethics Committee of RSU Haji Surabaya on December 8, 2020, with ethical certificate number No. 073/07/KOM. ETIK/2020. The ethical principles applied to this study included participants being given information and filling out informed consent before data collection. They have the right to the confidentiality of data by using their initials.

Research instrument

Data collection was carried out using a standardized knowledge and attitude questionnaire, then modified into knowledge and attitudes about COVID-19 (16). The standard preparedness questionnaire was modified to become a preparedness questionnaire about COVID-19 (4,17). The knowledge, attitude, and preparedness questionnaires each consist of 10 question items which have the types of Favorable and Unfavorable questions. The questionnaire was assessed using a Likert Scale (1-4) with the lowest score being 10 and the highest being 40. The modification of the questionnaire has been tested for validity and reliability. The results of the validity and reliability tests found that all question items were declared valid and reliable ($r \geq 0.25$ and Alpha-Cronbach ≥ 0.712). Questionnaires that are valid and reliable are compiled into online questionnaires using Google Forms. The Google Form link related to the knowledge, attitude, preparedness, and informed consent questionnaires was sent to the nurse on duty on the day of data collection.

Data analysis

The data is analyzed by looking at the frequency and percentage. Analysis of the main data using Spearman's rho correlation statistical test with a degree of significance $\rho \leq 0.05$.

RESULTS

The results of data collection show that the characteristics of medical-surgical nurses working in the emergency room are as follows (table I). More than half of the nurses were male (64.7%). The research subjects showed entry at an adult age, which was around 30 years old (44.1%). More than half of nurse education is diploma III (55.9%), with work experience of fewer than 3 years, namely 41.2%. Nurses get very diverse information related to COVID-19, and the most sources of information are

activities from professional Zoominar, namely 82.3%.

The results showed that medical-surgical nurses working in the emergency room had the same tendency (Table II). Nurses have sufficient knowledge, namely 67.9% and sufficient preparedness (58.8%), but most have a good attitude, namely 59%. There were still nurses who lacked preparedness even though their knowledge and attitudes were good, amounting to 14.7%. Knowledge with preparedness has a significant relationship with the value of $\rho = 0.022$. Attitude also has a significant relationship with preparedness with a value of $\rho = 0.018$ ($\alpha \leq 0.05$). The relationship found in knowledge and attitudes with preparedness is moderate, namely around 0.4 from the maximum value of relationship 1.

Table I : Characteristics Nurse Medical Surgery N= 34

Characteristics	n	%
Type gender :		
Man	22	64.7
Woman	12	35.3
Age :		
30 years	15	44.1
> 30 - 40 years	14	41.2
> 40 - 50 years	5	14.7
Education:		
Diploma III	19	55.9
Diploma IV	3	8.8
S1 Nurse	12	35.3
Working time :		
< 3 years	14	41.2
3 years - < 5 years	7	20.6
5 - < 10 years	5	14.7
10 years	8	23.5
Source Information :		
Hospital internal training	21	61.7
Discussion offline with the doctor	20	58.8
Social media	23	67.6
Zooming profession	28	82.3
TV/radio media	12	35.2

DISCUSSION

The preparedness of medical surgical nurses shows an alert attitude, where this situation is strongly supported by the knowledge and attitudes of nurses in providing nursing care to COVID-19 patients. The results of this study are in line with previous studies which state that preparedness for handling COVID-19 is influenced by the presence of knowledge, attitudes, skills, and mentality (15,18). The two studies look to have different subjects, but the conditions and situations in the bird flu and COVID-19 outbreaks can be said to be the same. This condition shows that the knowledge and attitude of a medical-surgical nurse are very important to always improve so that the nurse's preparedness is always good to deal with epidemic conditions.

The results of other studies show that the preparedness of medical-surgical nurses is mostly quite alert. The preparedness of medical surgical nurses is best reflected in the answers to the questionnaire regarding the application of the five moments of hand washing and managing the use of PPE (Personal Protective Equipment). Poor preparedness is reflected in the answers to the questionnaire about being active in participating in refreshments and training on the development of the COVID-19 disease and its treatment. Medical surgical nurses rely on available information based on the zooming of the profession they follow. This statement can be seen in the theory which states that alert behavior factors are influenced by experience, environment, and encouragement to avoid the threat of disease or minimize health risks that may occur (19). Standby behavior in applying the five moments of hand washing and PPE management is an effort to minimize the risk of contracting the disease. Another effort that must be increased is the activeness of seeking information on developments in the management of COVID-19 patient care.

The nurse's knowledge influences preparedness behavior because knowledge will last longer than that which is not based on knowledge (19). Knowledge is a factor that supports medical-surgical nurses in their readiness to treat COVID-19 patients. Knowledge about the management of COVID-19 patient care in the emergency department setting needs to be continuously improved in line with the development and characteristics of the disease that is experiencing

Table II : Relationship knowledge, attitude To COVID-19 preparedness N= 34

Indicator	Preparedness						Total		Spearman's Rho
	Standby		Enough standby		Less Alert				
	n	%	n	%	n	%	n	%	
Knowledge :									
Well	2	5.8	2	5.8	0	0	4	11.6	p=0.022
Enough	6	17.8	13	38.3	4	1.8	23	67.9	r = 0.391
Not enough	1	2.9	5	14.7	1	2.9	7	20.5	
Total	9	26.5	20	58.8	5	14.7	4	100	
Attitude :									
Positive	6	17.8	13	38.3	1	2.9	20	59	p=0.018
Negative	3	8.7	7	20.5	4	11.8	14	41	r=0.403
Total	9	26.5	20	58.8	5	14.7	34	100	

development. Emergency room nurses must open themselves up to increasing knowledge of the management of COVID-19 disease care (20).

A person's level of knowledge is influenced by age, education, and experience (21). Most of the medical surgical nurses are quite knowledgeable because most of the medical surgical nurses are young adults (22-30 years old) which means they have an immature mindset compared to late adulthood, most of them have Diploma III education which means they have broad insight and openness of thinking lower than educated Bachelor of nursing, Most have never handled and cared for patients in outbreak conditions before. Efforts to find complete information about COVID-19 and treatment management are also factors that affect the level of knowledge of medical surgical nurses. More sources of information learned by nurses will support the level of knowledge.

Most medical-surgical nurses have sufficient knowledge. this condition is possible because most of the sources of information about COVID-19 and treatment management come from online professional seminars held by the Indonesian National Nurses Association. The medical surgical nurse's knowledge of the mechanism of transmission of the COVID-19 disease is the best-answered question. These results indicate that training and seminars are very useful for increasing knowledge (22). The medical surgical nurse's knowledge of the choice of disinfectant for thermometer disinfection when measuring a patient's temperature is the question that is answered the least well. Poor answer choices are possible because there is an idea that the thermometer does not directly contact the patient, so they feel that as long as the disinfectant has been carried out it is enough.

The results of other studies show that the attitude of medical-surgical nurses is related to preparedness to care for COVID-19 patients in the IGD of RSU Haji Surabaya. This study is to previous studies which concluded that there was a relationship between nurses' attitudes and preparedness for handling malaria outbreaks (23). The attitude of a nurse is an important component that influences the behavior of preparedness to provide nursing services. A positive attitude allows for a direct impact on positive behavior, while a negative attitude almost certainly has an impact on negative behavior (19).

Attitude is a very important factor in a person's socio-psychology so it will influence the tendency to act and perceive (24). This theory indicates that attitude is a supporting factor for nurses in their readiness to care for COVID-19 patients. The attitude shown by nurses indicates an increase in knowledge, strengthening habits, strengthening a good work culture, and evaluating nurse performance which will contribute to the formation of positive attitudes in improving nursing services.

The attitude of most of the medical surgical nurses

has a positive attitude, which is possible because most of them have sufficient knowledge. The positive attitude of medical surgical nurses was shown by the answers to the questionnaire which stated that they were not afraid when caring for COVID-19 patients. This fearlessness is due to using PPE, which can control anger when the patient is uncooperative and can provide spiritual support for the patient's recovery (25). According to theory, attitudes are directly proportional to knowledge, namely the better one's knowledge will reflect his attitude in dealing with a situation that befalls him (19). Another theory states that the factors that influence attitudes are knowledge, experience, psychological conditions, personality, and the environment (26).

limitations in the study, namely variables regarding overcapacity, feelings of boredom, and the motivation of nurses to get closer to patients. This variable, according to several studies, greatly influences nurse preparedness. The variables that were not examined make the results of this study limited to knowledge and attitude factors.

CONCLUSION

The knowledge and attitudes of medical surgical nurses have a fairly strong relationship with preparedness in providing nursing care for COVID-19 patients. The nurse's knowledge is in the fairly good category, especially knowledge regarding the management and treatment of COVID-19 disease. Medical surgical nurses have a positive attitude in dealing with COVID-19 patients. Nurse preparedness is in the quite alert category when dealing with COVID-19 patients.

Based on the results and discussion of the research, the advice that can be given to medical-surgical nurses is that nurses must update information related to the care of COVID-19 patients by frequently participating in education and training. Hospitals are expected to improve services and development related to the Hospital disaster plan to achieve overall preparedness in terms of human, logistical and financial resources.

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