



Factors Influencing Psychological Problems for Emergency Nurses in Facing Emergency Situations during the Covid-19 Pandemic

Ida Ayu Agung Laksmi¹; I Made Dwie Pradnya Susila^{2*})

^{1,2} STIKES Bina Usada Bali

ARTICLE INFO

Article history:

Received 11 June 2021
Accepted 21 October 2021
Published 10 December 2021

Keyword:

Stress
Anxiety
Emergency Nurse
Covid-19

ABSTRACT

The emergence of COVID-19 is placing unforeseen pressure on the country's health care system and presenting various challenges for healthcare workers. Health care workers are at high risk of infection, while they have a large burden on clinical care and prevention of Covid-19 virus infection, including emergency room nurses. The emergency room nurse is one of the medical personnel who plays an important role in providing health services to patients. Several previous studies revealed that there were psychological problems experienced by emergency room nurses such as anxiety, work stress, fear, and depression. Therefore, it is necessary to conduct a study to find out what are the predictors of psychological problems for emergency room nurses in dealing with emergencies situation during the COVID-19 pandemic. This research is a correlational analytic study using a cross-sectional design involving 85 emergency room nurses who are members of the Indonesian Emergency and Disaster Nurses Association (HIPGABI Bali). The data collection process is carried out online to the respondents. The data were analyzed by Spearman-Rank test with a significance level of (0.05). The results of the study were that the majority of emergency room nurses had normal anxiety responses and moderate stress. The factors related to anxiety are the completeness of hospital facilities (p-value = 0.000) and the presence of comorbidities (p-value = 0.007), while the only factor related to stress was the completeness of hospital facilities (p-value = 0.050). This can be a consideration for hospital management and professional organizations to take strategic steps to prevent nurses' psychological problems.

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Kata kunci:

Stres
Ansietas
Perawat UGD
Covid-19

*) corresponding author

STIKES Bina Usada Bali
Kampus STIKES Bina Usada, Jalan Padang
Luwih Tegal Jaya-Dalung, 0361 9072036

Email: dwie.pradnya@binausadabali.ac.id

DOI: 10.30604/jika.v6i4.811

ABSTRAK

Munculnya COVID-19 memberikan tekanan yang tidak terduga pada sistem perawatan kesehatan negara dan menghadirkan berbagai tantangan bagi tenaga kesehatan. Petugas kesehatan sangat berisiko terinfeksi, sementara mereka memiliki beban yang besar dalam perawatan klinis dan pencegahan infeksi virus Covid-19, termasuk para perawat UGD. Perawat UGD merupakan salah satu tenaga medis yang berperan penting dalam memberikan pelayanan kesehatan terhadap pasien. Beberapa penelitian terdahulu mengungkapkan adanya masalah psikologis yang dialami oleh perawat UGD seperti ansietas, stress kerja, ketakutan, hingga depresi. Oleh karena itu perlu dilakukan sebuah penelitian untuk mengetahui apa saja yang menjadi faktor prediktor masalah psikologis perawat UGD dalam menghadapi situasi gawat darurat selama masa pandemic COVID-19. Penelitian yang dilakukan merupakan penelitian analitik korelasional dengan menggunakan rancangan potong lintang yang melibatkan 85 perawat UGD yang tergabung dalam Himpunan Perawat Gawat Darurat dan Bencana Indonesia (HIPGABI Bali). Proses pengumpulan data dilaksanakan secara online kepada responden. Data dianalisis dengan uji Spearman Rank dengan tingkat kemaknaan $\leq (0.05)$. Hasil penelitian mayoritas perawat

UGD memiliki respon ansietas normal dan stress sedang. Adapun faktor yang berhubungan dengan ansietas adalah kelengkapan fasilitas RS (p value = 0.000). dan adanya komorbid (p value = 0.007)., sedangkan satu-satunya faktor yang berhubungan dengan stress adalah kelengkapan fasilitas RS (p value = 0.050). Hal ini dapat menjadi pertimbangan bagi pihak manajemen RS dan organisasi profesi untuk mengambil langkah-langkah strategis sebagai upaya pencegahan masalah psikologis perawat.



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INTRODUCTION

Coronavirus Disease 2019 (COVID-19) has been declared by WHO as a global pandemic and in Indonesia, it was declared a type of disease that causes public health emergencies and non-natural disasters, which not only cause death but also cause considerable economic losses (Menteri Kesehatan Republik Indonesia, 2020). In a short time, COVID-19 has proven to be a deadly disease that causes serious damage to Indonesia's health and economy. Data analysis according to the Indonesian Covid-19 Handling Task Force as of October 11, 2020, it was found that the cumulative number of cases was 337,946 people infected with the percentage of active cases 19.97%, cases recovering 76.48%, and cases dying 3.55% in Indonesia, while in Bali the number of positive cases reported 10,228 cases with the percentage of active cases (10.46%), cure rate reached (83.37%), and mortality rate (3.17%) (Satuan Tugas Penanganan Covid-19, 2020).

The emergence of COVID-19 is placing unforeseen pressures on the country's healthcare system and presenting various challenges for healthcare workers (Labrague & De los Santos, 2020). Health care workers are at high risk of infection, while they have a severe burden on clinical care and prevention of Covid-19 virus infection, including emergency room nurses. (Cui et al., 2020). The emergency room nurse is one of the medical personnel who plays an important role in providing health services to patients. Most patients infected with COVID-19 will enter through the ER as the first access to get to the hospital. As a result, ED nurses are the first health care professionals to treat patients infected with a new infectious disease (Kim & Choi, 2016). The variety of nursing tasks that must be carried out as well as pressures and demands to always be ready to handle emergency patients whose number and severity cannot be predicted resulted in the workload of ER nurses being considered heavy (Mandasari et al., 2014).

Several studies have revealed psychological problems for emergency room nurses such as anxiety, work stress, fear, and depression experienced by emergency room nurses in handling patients during the COVID-19 pandemic situation (Labrague & De los Santos, 2020; Talaei et al., 2020; Wilson et al., 2020). During the service delivery process, nurses experience complex situations and are full of emotional burdens, such as dealing with uncooperative clients and dealing with patient suffering (Mandasari et al., 2014). Stress is a negative psychological, emotional, and physiological impact on a person from external or external sources characterized by muscle tension, emotional instability, and increased heart rate. The results of the research by Pasaribu & Ricky (2021) showed that the stress level of nurses related to the Covid-19 issue at the Bandar Lampung Adventist Hospital was in the high category. Another study found that

94% of ER nurses reported experiencing moderate PTSD (Iranmanesh et al., 2013).

Excessive anxiety factors will affect a person's attitude in dealing with the COVID-19 pandemic (Setiawan et al., 2020). Excessive anxiety can cause a person to experience stress. Of course, it can not be ignored, and preventive measures must be taken so that these psychological problems do not get worse. Therefore, it is necessary to conduct a study to find out what are the predictors of psychological problems for emergency room nurses in dealing with emergencies situations during the COVID-19 pandemic.

METHOD

This research is a correlational analytic study using a cross-sectional design and a quantitative approach, namely the measurements and observations of the variables are carried out in the same period time. The population in this study were all emergency room nurses who were members of the Himpunan Perawat Gawat Darurat (HIPGABI) Bali. The sample size was determined using the formula from Lemeshow et al. (1990) involving 85 respondents.

Sampling in this study used a simple random sampling technique where all of them were members of the HIPGABI Bali which are became referrals for Covid-19 patients. This study aims to analyze the factors that influence the psychological problems of emergency room nurses in dealing with emergencies situations during the Covid-19 pandemic. The variables studied included the level of stress and anxiety levels of emergency room nurses during the Covid-19 pandemic, and as independent variables included demographic factors such as age, gender, and marital status, as well as other characteristic factors of respondents such as length of work, comorbidities, completeness of hospital facilities, and experience caring for patients with infectious diseases.

The research instrument used a standardized questionnaire. Anxiety was identified using the Indonesian version of the Zung Self-Rating Anxiety Scale (SAS) questionnaire and nurses' stress levels using the Indonesian version of the Perceived Stress Scale (PSS) questionnaire. The Zung Self-Rating Anxiety Scale (SAS) is a measuring tool designed to examine anxiety levels quantitatively through 20 question items, where each statement is rated 1-4 (1: never, 2: sometimes, 3: often (some of the time).), 4: always (almost all the time). There are 15 statements towards increasing anxiety and 5 statements towards decreasing anxiety (Zung Self Rating Anxiety Scale in McDowell (2006)). Perceived Stress Scale (PSS) is the most widely used psychological instrument. used to measure the perception of stress, including several numbers of questions about the current level of stress by asking about feelings and thoughts

during the past 1 month. The PSS score ranges between 0-40, the higher the score indicates the higher the stress level (Purnami & Sawitri, 2019).

The data collection process was carried out online for 1 month using the Google Form application while maintaining ethical principles such as maintaining the confidentiality of names, not harming the respondents, and not forcing them to become respondents after giving informed consent. This research has been declared ethically feasible by Komisi Etik Penelitian Kesehatan (KEPK) STIKES Bina Usada Bali with the number 052/EA/KEPK-BUB-2021.

The data that has been collected is tabulated into a data matrix. Univariate analysis was conducted to describe the characteristics of respondents such as demographic factors such as age, gender, length of work, marital status, comorbid factors, hospital resources, support, and accommodation from the hospital. Bivariate analysis was carried out using the Spearman Rank test with a level of significance ($\alpha < 0.05$) to determine the relationship between the independent variables and each variable.

RESULT AND DISCUSSION

Table 1
Sociodemographic characteristics of emergency room nurses

Characteristics of Respondents	Mean (SD)	n (%)
Age	33 (5.540)	
Working Time	9.56 (5.868)	
Sex		
Male		42 (49.4%)
Female		43 (50.6%)
Level of education		
Diploma III Program		38 (44.7%)
Bachelor's degree		23 (27.1%)
Nurse Profession Education		20 (23.5%)
Postgraduate program		4 (4.7%)
Marital status		
Not married yet		15 (17.6%)
Married		69 (81.2%)
Divorce		1 (1.2%)
Position		
Head of Room		7 (8.2%)
Primary Nurse		17 (20%)
Team Leader		23 (27.1%)
Associate Nurse		38 (44.7%)
Having Comorbid		
Yes		13 (15.3%)
No		72 (84.7%)
Completeness of hospital facilities		
Yes		26 (30.6%)
No		59 (69.4%)
Experience Caring for Infectious Diseases		
Yes		58 (68.2%)
No		27 (31.8%)

Source: primary data

Based on table 1, it can be seen that the average age of the respondents in this study was 33 years and the length of work was 9 years. The number of men and women in this study was almost the same. When viewed from the level of education, most (44.7%) are nurses with D3 Nursing

graduates. Most (81.2%) of the respondents in this study were married. Among the 85 respondents in this study, most (44.7%) were associate nurses. Only 15.3% of the 85 respondents had comorbidities. Most of the respondents (69.4%) in this study worked in hospitals with complete facilities and most of the respondents (68.2%) in this study had previous experience in treating infectious diseases.

Table 2
Psychological Problems of Emergency Nurses During the Covid-19 Pandemic

Psychological Problem Variables	Mean (SD)	N (%)
Nurse Anxiety	43.85 (4.185)	
Normal Anxiety		52 (61.2 %)
Mild Anxiety		33 (38.8 %)
Moderate Anxiety		-
Severe Anxiety		-
Nurse Stress	42.66 (9.447)	
Mild Stress		38 (44.7 %)
Moderate Sedang		47 (55.3 %)
Severe Berat		-

Source: primary data

The condition of the Covid-19 pandemic that strikes suddenly and takes place progressively has a psychological impact on nurses in the form of anxiety and stress. Anxiety is a feeling of worry, an unpleasant emotional state, and feelings of anxiety, while stress is a physiological and psychological reaction resulting from the inability to overcome the threats faced by mental, physical, emotional, and spiritual humans, which at one time can affect the physical state that human (Tobing & Wulandari, 2021).

Table 2 shows that most (61.2%) ER nurses experienced normal anxiety and none experienced moderate to severe anxiety, while for the stress level, most (55.3%) nurses experienced moderate stress and none of the ER nurses experienced severe stress during the pandemic. Covid-19. The results of this study are in line with Muliantino (2021) that the majority of nurses experienced anxiety and stress responses on a normal scale during the Covid-19 pandemic.

In contrast to the results of the research by Sihombing & Elon (2021) that the description of nurses in providing care to COVID-19 patients, most of them experienced severe anxiety, namely 78.7%, and only 14.2% had mild stress levels. The difference in the results of this study is due to the different characteristics of the respondents. Respondents in the Sihombing dan Elon (2021) study were nurses in isolation rooms so that they had direct contact with Covid-19 patients every day, while in this study they were emergency room nurses. One of the phenomenological studies by Marwiati et al. (2021) revealed that in the ER the patient will be screened for Covid, if there are clinical signs that lead to suspected COVID 19, the patient will be entered into the Cohorting Room then laboratory support examinations, Thorax X-rays, PCR swabs and consultations with Lung Specialists will be carried out. So it can be said that emergency room nurses are not in constant contact with Covid-19 patients, unlike nurses in isolation rooms.

Table 2 shows that more than 50% of the respondents in this study had moderate stress levels and none experienced severe stress. Stress is defined as an interaction system that involves physical, psychological, and social aspects that cause tension, anxiety, and needs in psychological and physiological aspects, especially during the Covid-19

pandemic (Musu et al., 2021). Nurses who are at moderate stress levels can manage their emotions to achieve a balance

between work and their lives (Oktari et al., 2021).

Table 3
Correlation of Respondents Characteristics with Stress and Anxiety

	Stress		Anxiety	
	p-value	r	p-value	r
Age	0.968	0.004	0.076	-0.194
Working Time	0.933	0.009	0.386	-0.095
Sex	0.163	0.153	0.393	-0.094
Level of education	0.396	-0.093	0.312	-0.111
Marital Status	0.717	0.040	0.464	0.080
Position	0.820	0.025	0.313	0.111
Having Comorbid	0.083	0.189	0.000*	0.196
Completeness of hospital facilities	0.050*	-0.213	0.007*	-0.116
Experience Caring for Infectious Diseases	0.530	-0.069	0.190	-0.143

Source: primary data *p-value (0.05)

Based on table 3, it can be seen that there is no significant relationship between the factors of age, length of work, gender, education level, marital status, position, comorbid and experience factors caring for infectious diseases with stress levels. Sociodemographic factors in this study were identified as not having a significant correlation with the anxiety level of emergency room nurses in dealing with emergencies situations during the Covid-19 pandemic. The results of this study are in line with Yuslina dan Yunere (2020), that there is no relationship between individual characteristics of nurses such as gender and education level with the anxiety of the Covid-19 pandemic.

Characteristics of respondents based on age, the average emergency room nurse in this study was at the age of 33 years. This finding is in line with the research of Musu et al. (2021) that the majority of emergency room nurses are in the age range of 30 years. Age is an important factor, the higher the age, the easier it is to experience stress. This is partly due to physiological factors that have experienced a decline in various abilities such as visual abilities, thinking, remembering, and hearing. However, the results of the study found that there was no significant correlation between age and the stress of ER nurses in dealing with emergencies situations during the Covid-19 pandemic. This could be because the nurses in this study were on average at a young age.

The working period of ER nurses in this study was an average of 9 years. According to Musu et al. (2021) a longer working period is closely related to experience and a better understanding of the job description. This experience and understanding will help in overcoming the problems (stressors) that exist in stress prevention efforts.

The characteristics of respondents based on gender in this study were comparable. Based on the results of the analysis, it was found that there was no significant relationship between the sexes with either the stress or anxiety variables. In contrast to the findings of Musu et al. (2021) most emergency room nurses are women and experience severe stress.

The results also found that marital status was not significantly correlated with the stress and anxiety of ER nurses in dealing with emergencies situations during the Covid-19 pandemic. In contrast to the research results of Musu et al. (2021) who found that the majority of emergency room nurses who experienced severe stress were married nurses. A married worker does not only think about his own life needs but also has to think about the needs of his

family's life as well, as is the case with the Covid-19 pandemic, negative events and situations as stress triggering factors will be very vulnerable to causing a married status to become more stressful.

The level of education and position of ER nurses in this study was also found not to be significantly correlated with stress and anxiety. The majority of respondents in this study had the last educational level of D3 nursing and were implementing nurses.

The only variable that has a significant relationship with the stress level of ER nurses during the Covid-19 pandemic is the factor of completeness of hospital facilities. The results also showed that the completeness of hospital facilities was significantly correlated with the anxiety level of emergency room nurses. Another factor that correlates with the level of anxiety is the presence of comorbid diseases.

The completeness of hospital facilities is statistically significantly correlated with the stress and anxiety of emergency room nurses when facing an emergency during the Covid-19 pandemic. One of the completeness of hospital facilities during the Covid-19 pandemic that is of concern is Personal Protective Equipment (PPE) such as masks, goggles, hazmats, hair cap gloves, aprons, and safety shoes. Research Wang et al. (2020) also found that the stressor experienced by nurses in Wuhan, China was the fear of being infected with Covid-19 and transmitting the infection to family members. This can happen due to the lack of complete PPE during the Covid-19 pandemic. The lack of availability of complete PPE according to the WHO protocol, will cause health workers to have a higher tendency to experience anxiety disorders (Sinaga et al., 2021). Complete PPE consisting of gloves, medical mask, goggles or face shield, and protective clothing, as well as special procedures, boots, respirator (e.g. N95 or standard FFP2 or equivalent), and apron, is a precautionary measure against airborne transmission, droplets, and general contact Covid-19 (Siahaan et al., 2021).

The results of this study showed that the majority of emergency room nurses had normal levels of anxiety. One of the phenomenological studies revealed that the majority of nurses in caring for patients during the Covid-19 pandemic were still filled with anxiety if they were infected or transmitted to family and others, but empathy and responsibility motivated nurses in carrying out their duties (Santoso et al., 2021).

Statistically, comorbid factors correlated significantly with the level of anxiety of emergency room nurses in

dealing with emergencies during the Covid-19 pandemic. Comorbidity is a comorbid or congenital disease that can worsen Covid-19 patients. According to Daud (2020), having a weak immune system and having comorbid diseases are the most dominant factors for the transmission of the Covid-19 virus.

Based on the results of the research above, it can be said that comorbidities and completeness of hospital facilities are stressors for emergency room nurses in dealing with emergencies during the Covid-19 pandemic. Stressors can cause disturbances to the body's physiological functions, which can reduce the performance of nurses in providing nursing care to patients which at the same time can have an impact on the quality of health services (Muliantino, 2021).

LIMITATION OF THE STUDY

The limitation of this research is that there are several other factors such as nurses' external stressors which were not examined in this study.

CONCLUSION AND SUGGESTION

Covid-19 has an impact on the psychology of emergency room nurses in dealing with emergencies including anxiety and stress responses. The majority of emergency room nurses had normal anxiety responses and moderate stress. The factors related to anxiety are the completeness of hospital facilities and the presence of comorbidities, while the only factor related to stress is the completeness of hospital facilities. This can be a consideration for hospital management and professional organizations to take strategic steps to prevent nurses' psychological problems.

Acknowledgment

This research is supported and funded by the Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi, Direktorat Jendral Pendidikan Tinggi, Riset dan Teknologi. Appreciation and thanks from researchers to the Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi, Direktorat Jendral Pendidikan Tinggi, Riset dan Teknologi for their support, and to the HIPGABI Bali nurses for their participation as respondents in the research.

Ethical Considerations

This research has received ethical approval from the Komisi Etik Penelitian Kesehatan STIKES Bina Usada Bali on 7 May 2021.

Funding Statement

The authors did not receive support from any organization for the submitted work and No funding was received to assist with the preparation of this manuscript.

Conflict of Interest statement

The author declares that there is no potential conflict of interest in relation to the authorship and publication of this article.

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