JURNAL PENDIDIKAN KEPERAWATAN INDONESIA

Journal Homepage: http://ejournal.upi.edu/index.php/JPKI

STRESS AND FEAR OF COVID-19 INFECTION AMONG NURSES DURING THE COVID-19 PANDEMIC IN BENGKALIS DISTRICT

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ABSTRACT

Nurses who provided care for patients infected with Covid-19 have experienced significant mental health issues due to increase workload, transfer infection, and limited psycho-social support access. This study aimed to analyse the stress and fear of Covid-19 among nurses. This study was an analytic correlation study that utilizes a cross-sectional approach. Between June and August of 2022, 70 nurses providing nursing care to Covid-19 patients were recruited from one referral hospital in Bengkalis, Riau. The DASS-S 42 and Fear of COVID-19 questionnaires were used to assess stress and fear of Covid-19 infection. The data were primarily analysed using multiple linear regression. The nurse's mean fear of Covid-19 score is 18.87. The nurse's mean stress score is 8.6. This study found that stress is a predictor of fear of COVID-19 among nurses (p-value = 0.040). The stress variable affected 23.1 percent of the fear of the Covid-19 infection variable. Stress is a predictor of fear of Covid 19 among nurses. Therefore, appropriate intervention to reduce stress is needed in order to decrease the fear of covid-19 among nurses.

ARTICLE INFO

1. INTRODUCTION

Coronavirus disease 2019 (COVID-19) is a disease caused by infection with Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). This disease was first detected in December 2019 in the city of Wuhan, China. Since then, this disease has spread to various countries. On January 30, 2020, the World Health Organization (WHO) declared this outbreak a Public Health Emergency of International Concern (PHEIC), then on March 11, 2020, the disease was declared a pandemic (WHO, 2020).

The number of COVID-19 sufferers is increasing every day. Based on data from the WHO as of April 11, 2020, the number of confirmed COVID-19 sufferers in the world totalled 1,610,909, with a death rate of 99,960. Meanwhile, in Indonesia, the incidence of COVID-19 based on data obtained from the COVID-19 task force, the number of positive COVID-19 patients as of January 2021 was 4,272,421 confirmed cases with an increase in the spread to health workers of 6.5% (WHO, 2020; Latifa, 2022).

Nurses as the foremost health workers in treating COVID-19 patients are not free from the risk of infection. The increasing number of patients, limited personal protective equipment, skills and adjustments to new diseases, and high workloads are stressful for nurses. In addition, inadequate coping and lack of support systems put nurses at high risk for mental health problems such as stress, anxiety, depression, and PTSD. A recent study in the UK proved that during the Covid-19 pandemic, the prevalence of adults suffering from mental health problems increased by 27.8%. However, this health problem is not only suffered by the general public, nurses as health workers on the main line in treating Covid-19 patients are also at high risk of mental health problems. High workload, psychological changes related to anxiety and fear, room rotation, and limited skills in carrying out certain clinical actions for COVID-19 patients as well as social discrimination and stigma obtained from the community due to their fear of the spread of the virus brought by nurses, pose a burden, mental attitude toward nurses (Conti et al, 2020; Pierce et al, 2020; Shanafelt et al, 2020).

Based on the results of research conducted by Fernandez et al (2021) it was found that the prevalence of anxiety and depression in health workers showed that almost 19% of nurses experienced anxiety and 28% experienced depression where anxiety in nurses was higher than other health workers. In Indonesia, based on research conducted by Iskandarsyah et al (2021) found that mental problems greatly affect the quality of life of health workers. This study also explored qualitatively the fears of nurses during this pandemic, obtained 5 themes of nurses' fears, namely fear of virus transmission, fear of the effects of COVID-19 on family life, fear of death and isolation, fear of self-safety and fear of social stigma from society. This research is supported by previous research which proves that COVID-19 is an independent risk factor that triggers stress in nurses (Spoorthy et al, 2020).

The results of research conducted by Zhang et al (2020) that the precipitating factors for mental problems in nurses are young age, female gender, lack of social support, limited access to the use of personal protective equipment, and working in hospitals. If this problem is left unchecked, various negative consequences will arise such as decreasing the quality of care carried

out by nurses, increasing medical errors during treatment, and high nurse turnover (Jung et al, 2020). Therefore, the mental health stability of nurses should be the main focus.

Based on the study literature shows that mental health problems in nurses are something that must be considered during the COVID-19 pandemic. Based on the results of a literature search, until now no research has been found that examines the mental health of nurses, the coping strategies used, and the quality of life of nurses during the COVID-19 pandemic in Riau Province. This is the basis for researching to see the stress and fear of COVID-19 on nurses at the Mandau Hospital. This research aimed to analyse stress and Fear of Covid-19 among nursing in RSUD Mandau.

2. METHOD
Research Design

This research was quantitative research with a cross-sectional design. The variables in this study included the characteristics of the respondents, the dependent variable was fear of Covid-19, and the independent variable was the stress score on nurses.

Population and Sample

The number of samples in this study was 70 nurses providing nursing care to Covid-19 patients in one referral hospital Bengkalis, Riau. The sampling technique was purposive sampling. The inclusion criteria in this study were nurses who were involved in caring for Covid-19 patients, and who were willing to be respondents. The exclusion criteria in this study were nurses who had a history of mental health disorders. Respondents who were selected and willing to become respondents were asked to sign the research informed consent first.

Instrument

The questionnaire used in this study was The DASS-S 42 and Fear of COVID-19 questionnaires was also used to assess stress and fear of Covid-19 infection.

Research Procedure

This research was conducted at one of referral hospital in Bengkalis Riau. After receiving approval from the hospital, the researchers collected data on nurses who were willing to be respondents and had signed the informed consent.

Data Analysis

Data were analysed using univariate and multivariate analysis. Univariate analysis was used to assess respondent characteristics, average stress score, and Fear of Covid-19's score. Multivariate analysis were used to explore the predictors of fear of COVID-19. The data were then primarily analysed using multiple linear regression.

Ethical Approval

Ethical clearance in this study was obtained from the ethics committee of health and nursing research, Faculty of Nursing, University of Riau, with certificate No: 430/

UN.19.5.1.8/KEPK.FKp/ 2022. All respondents in this study agreed to become respondents and have filled out the informed consent given.

3. RESULT

Characteristics of respondents

This research was conducted on 70 nurses. The results of data analysis related to the characteristics of respondents were shown in table 1.

Table 1. Characteristic of Respondents (n=70)

No	Characteristic of Respondent	Frequency (n)	Percentage (%)
1	Age		
	a. Early adult (18-40)	61	87,1
	b. Middle adult (41-60)	9	12,9
	c. Advance adult (>60)	0	19,1
2	Gender		
	a. Man	26	37,1
	b. Women	44	62,9
3	Marital status		
	a. Unmarried	10	14,3
	b. Married	60	85,7
4	Education		
	a. Diploma	48	68.6
	b. Registered nurse	22	31.4
5	Religion		
	a. Muslim	65	92,9
	b. Christian	5	7,1
6	Workspace		
	a. Inward care unit	18	25,7
	b. Emergency ward	19	27,1
	c. Policlinic ward	1	1,4
	d. Hemodialysis ward	8	11,4
	e. COVID-19 isolation ward	6	8,6
	f. Tuberculosis isolation ward	4	5,7
	g. High care unit ward	5	7,1
	h. The operating room	6	8,6
	i. Perinatology ward	3	4,3
7	Employment status		
	a. Honorary	62	88,6
	b. Civil servant	7	10
	c. Volunteer	1	1,4
8	Length of Work		
	a. < 5 years	31	44.3
	b. 5-10 years	32	45.7
	c. >10 years	7	10

Based on the results of this study, it was found that the majority of age respondents were early adults 61 people (87.1%), female 44 people (62.9%), married 60 people (85.7%). The results of this study also showed that the majority of respondents had a diploma education: 46 people (65.7%), Muslim: 65 people (92.9%), and honorary: 62 people (88.6%). The majority Length of working time is 5-10 years (45.7%).

Table 2 provide information regarding the mean score of stress and fear of Covid 19 among nurses. According to this table, it could be found that the mean of nurses'stress score was 8.6 with a standard deviation of 7.77. The minimum score of 0, and a maximum score of 28. The average score of nurses' fear of COVID-19 was 18.8 with a standard deviation of 4.99. The minimum score for the fear of covid 19 among nurses was 8 and the maximum score was 30.

The mean score of stress among nurse

Table 2. The mean score stress among nurses N=70)

Variable	N	Mean	SD	Median	Min	Max
Stress at nurse	70	8.6	7.7	7	0	28
Fear of Covid-19	70	18.8	4.99	18	8	30

Stress and Fear Covid-19 among Nurses

Table 3. The Regression Coefficient for Predicting Fear of COVID-19 among Nurses (n=70)

Variable	B	95% CI	B	T	*p*
Gender	0.845	-2.014 - 3.703	0.074	0.591	0.557
Religion	-4.276	-9.480 – 0.927	-0.199	-1.644	0.105
Education	0.050	-1.145 – 1.246	0.010	0.084	0.933
Marital status	-3.088	-7.287 – 1.112	-0.196	-1.471	0.147
Length of work	-0.020	-0.511 – 0.470	-0.014	-0.083	0.934
Workspace	-0.225	-0.754 – 0.305	-0.106	-0.848	0.400
Employment status	-0.694	-4.720 – 3.332	0.047	-0.345	0.731
Age	-0.67	0.420 – 0.287	-0.063	-0.378	0.707
Stress	0.197	0.009 – 0.386	0.275	2.097	0.040*

R square= 0.231, *p value <0.05*

Table 3 showed that stress is a predictor of fear of COVID-19 among nurses (p-value = 0.040). The stress variable affected 23.1 percent of the fear of the Covid-19 infection variable.

4. DISCUSSION

Based on this research found that stress is a predictor of fear of Covid-19 among nurses. Nurses caring for COVID-19 patients often face a variety of stressors. Sometimes a stressor is seen as a burden or something that cannot be controlled or is beyond his control. Since the beginning of the pandemic, with all the limited skills, new knowledge about the new virus, stigma, and the fear of being infected and transmitting it to those closest to them, it has become a challenge and

stressor for nurses. The fear of COVID-19 triggers various problems for nurses. the results of this study indicate that the majority of respondents are women, early adults, with the majority being married, the results of this study are in line with research conducted by Hu et al (2020), where the majority of nurses who are at the forefront in dealing with COVID-19 are women, with a median age of 30.99 years, and married.

Based on the results of this study, stress was a predictor of nurses' fear of COVID-19. This is not in line with the research conducted by Kumar et al (2020), where marital status and perceived risk of transmission to loved ones are the main predictors of fear of COVID-19 in nurses. The results of research conducted by Taylor et al (2020) state that the triggering factor for fear of COVID-19 is the stigma that appears in society, the stigma that causes nurses to be afraid of being contaminated with COVID-19. Based on the results of research conducted by Muller et al (2021) and Tzur Bitan et al (2020) it was found that anxiety and depression trigger fear of COVID-19. In stressful conditions, good coping is needed to deal with stressors that arise. Coping in individuals is not consistent, but more volatile. And it changes over time depending on the individual's interaction with the environment. Coping can be said to be functional if a person can adapt to the stressor and vice versa, coping becomes dysfunctional if the individual finally falls into a stressful stage. Therefore, maintaining individual coping abilities by choosing appropriate coping is a very important nursing intervention.

Research conducted by Bakioglu et al. (2020) showed that fear of COVID-19 had a significant positive relationship with anxiety, depression, and stress. According to Gorman (2004), fear can motivate individuals to respond more effectively to threats or stimuli given, but extreme and persistent fear can trigger negative reactions such as depression and anxiety. Therefore, this study proved the relationship between stress and fear of Covid-19 has existed. The stress faced by nurses makes nurses experience fear in caring for Covid-19 patients. This can result in the provision of nursing care services to Covid-19 patients not being optimal. Based on research conducted by Labrague et al (2020) shows that fear of Covid-19 reduces job satisfaction.

5. CONCLUSION

The majority of PHC nurses encounter high obstacles in carrying out monitoring tasks, while the majority of them experience low barriers in carrying out tracing tasks and education & counseling tasks. However, in the conduct of the referral selection tasks, the number of PHC nurses who experienced high obstacles and low obstacles was equal. There are several characteristics of PHC nurses that are associated with various obstacles in preventing and handling the transmission of the COVID-19 outbreak. The age group, educational level, and nurses' upgrading knowledge all significantly affect PHC nurses' hurdles to carrying out monitoring tasks. Additionally, there is a significant correlation between the age variable and the obstacles PHC nurses face when performing referral selection tasks. The attributes of nurses that are most associated with the obstacles experienced by PHC nurses in preventing and handling the COVID-19 outbreak are the correlation between the nurses' updating knowledge through workshops and seminars related to the COVID-19 outbreak and the obstacles encountered by PHC nurses in performing monitoring

tasks.

6. ACKNOWLEDGEMENT

REFERENCES

Bakioğlu, F., Korkmaz, O., & Ercan, H. (2021). Fear of COVID-19 and Positivity: Mediating Role of Intolerance of Uncertainty, Depression, Anxiety, and Stress. International journal of mental health and addiction, 19(6), 2369–2382.

Conti, C., Fontanesi, L., Lanzara, R., Rosa, I., & Porcelli, P. (2020). Fragile heroes. The psychological impact of the COVID-19 pandemic on health-care workers in Italy. PloS one, 15(11), 1-17.

Fernandez, R., Sikhosana, N., Green, H., Halcomb, E. J., Middleton, R., Alananzeh, I., ... & Moxham, L. (2021). Anxiety and depression among healthcare workers during the COVID-19 pandemic: A systematic umbrella review of the global evidence. BMJ open, 11(9). 1-17.

Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., Wan, S. W., Liu, Z., Shen, Q., Yang, J., He, H. G., & Zhu, J. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. EClinicalMedicine, 24, 100424. 1-10.

Iskandarsyah A, Shabrina A, Djunaidi A, Siswadi A. (2021). Mental health, work satisfaction and, quality of life among healthcare professionals during the COVID-19 Pandemic in an Indonesian sample. Psychol Res Behav, 14, 1437–1446.

Jung, H., Jung, S. Y., Lee, M. H., & Kim, M. S. (2020). Assessing the Presence of Post-Traumatic Stress and Turnover Intention Among Nurses Post-Middle East Respiratory Syndrome Outbreak: The Importance of Supervisor Support. Workplace health & safety, 68(7), 337–345.

Kumar, J., Katto, M. S., Siddiqui, A. A., Sahito, B., Ahmed, B., Jamil, M., & Ali, M. (2020). Predictive Factors Associated With Fear Faced by Healthcare Workers During COVID-19 Pandemic: A Questionnaire-Based Study. Cureus, 12(8). 1-5.

Muller, A. E., Himmels, J. P. W., & Van de Velde, S. (2021). Instruments to measure fear of COVID-19: a diagnostic systematic review. BMC medical research methodology, 21(1), 82. 1-14.

Pierce M, Hope H, Ford T, Hatch S, Hotopf M, John A, et al. (2020). Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. Lancet Psychiat, 7(10), 883–892.

Shanafelt T, Ripp J, Trockel M. (2020). Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic. JAMA. 323(21), 2133–2134.

Spoorthy MS, Pratapa SK, Mahant S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic-A review. Asian J Psychiatr, 51, 102119. 1-4.

Taylor, S., Landry, C. A., Rachor, G. S., Paluszek, M. M., & Asmundson, G. J. G. (2020). Fear and avoidance of healthcare workers: An important, under-recognized form of stigmatization during the COVID-19 pandemic. Journal of anxiety disorders, 75, 102289. 1-5.

Tzur Bitan, D., Grossman-Giron, A., Bloch, Y., Mayer, Y., Shiffman, N., & Mendlovic, S. (2020). Fear of COVID-19 scale: Psychometric characteristics, reliability and validity in the Israeli population. Psychiatry research, 289, 113100. 1-5.

World Health Organization. (2020). Coronavirus disease 2019 (COVID-19): situation report, 72. World Health Organization. Retrieved from: https://apps.who.int/iris/handle/10665/ 331685

Zhang, Y., Wang, C., Pan, W., Zheng, J., Gao, J., Huang, X., ... & Zhu, C. (2020). Stress, burnout, and coping strategies of frontline nurses during the COVID-19 epidemic in Wuhan and Shanghai, China. Frontiers in psychiatry, 1154. 1-9.

Labrague, L. J., & de Los Santos, J. A. A. (2021). Fear of COVID-19, psychological distress, work satisfaction and turnover intention among frontline nurses. Journal of nursing management, 29(3), 395–403.