



Original Research

## ANALYSIS OF FACTORS AFFECTING NURSE ANXIETY DURING PANDEMIC COVID-19

Indri Lestari, Nursalam Nursalam , Aria Aulia Nastiti 

Faculty of Nursing, Universitas Airlangga, Surabaya, East Java, Indonesia

### ARTICLE HISTORY

Received: June, 12, 2021  
Revised: July, 18 2021  
Accepted: July, 19 2021  
Available online: July 20, 2021

### CORRESPONDING AUTHOR

Indri Lestari  
[indri.lestari-2019@fkip.unair.ac.id](mailto:indri.lestari-2019@fkip.unair.ac.id)  
Faculty of Nursing, Universitas Airlangga, Surabaya, East Java, Indonesia

### ABSTRACT

**Introduction:** The development of cases of Corona Virus Disease 2019 (Covid-19) in Pati Regency which is increasing every day causes anxiety in nurses. The purpose of the study was to analyze the factors that influence the anxiety level of nurses during the Covid-19 pandemic.

**Method:** The research design used was descriptive analytic with a cross-sectional approach. The sample size was 55 respondents, taken according to the inclusion criteria and sampling using the proportional stratified random sampling technique. The inclusion criteria in this study were nurses who worked in room units that did not treat Covid-19 patients and were cooperative at RSUD Kayen Pati. The independent variables in this study were perceptions of risk, workload as well as information and training. The dependent variable in this study was the level of anxiety of nurses. The instrument used for the perception of risk as well as information and training was a questionnaire from Gershon et al (1995), for the workload instrument using a questionnaire from Nursalam (2016) while for anxiety instruments using a Depression Anxiety Stress Scale (DASS) 42 questionnaire. Analysis using a test Logistics Regression statistic with significance level  $p < 0.05$ .

**Results:** The results showed that there was an influence between information and training (0.000), workload (0.000) and perceptions of risk (0.001) with nurses' anxiety levels during the Covid-19 pandemic. The most dominant factor giving the relationship between nurses' anxiety levels during the Covid-19 pandemic was information and training.

**Conclusion:** Information and training factors, workload and perceptions of risk have an influence on nurses' anxiety levels during the Covid-19 pandemic.

### Keywords

nurse anxiety; the Covid-19 pandemic; information and training; workload; perception of risk

### Cite this as:

Lestari, I., Nursalam, N., Nastiti, A.A. (2021). Analysis of Factors Affecting Nurse Anxiety During Pandemic Covid-19. *Psych. Nurs. J.*, 3(1). 15-22. doi.org/10.20473/pnj.v3i1.27468

## 1. INTRODUCTION

The development of cases of Corona Virus Disease 2019 (Covid-19) in Pati Regency is increasing day by day and currently has a red zone status or a high risk of Covid-19 (Nugroho, 2020). Health workers who treat Covid-19 patients are a group with a very high risk of exposure to Covid-19 disease. Many nurses who work in hospitals have psychological problems,

due to high workloads and prolonged fatigue but are also at high risk of infection (Tan et al., 2020b). Psychological problems of nurses in dealing with Covid-19 patients, such as the stress of nurses working in the ward during the Covid-19 pandemic, encountered various signs and symptoms, one of which was anxiety (Astuti & Suyanto, 2020). The biggest contribution that causes disruption of psychological conditions and mental health is

psychological factors which include levels of anxiety, stress, coping mechanisms and problems encountered; These four factors can trigger the Covid-19 pandemic, so psychological treatment is needed as a form of preparedness (Priyantini et al., 2021).

Based on data from the *World Health Organization* (WHO) on November 6, 2020, the number of confirmed cases of Covid-19 in the world was 48.3 million people, patients died from this virus infection reached 1.23 million people and as many as 32 million people were declared cured. from Covid-19. The case of the spread of Covid-19 in Pati Regency until November 2020 was in the 22nd place in Central Java. The number of confirmed patients being treated was 52 people, the number of suspects being treated was 53 people, the number still confirmed was 50 people, 84 people died positive and 106 people died. There were 4 confirmed COVID-19 patients being treated at the RSUD Kayen Pati. The prevalence of anxiety from 164 health workers who treat patients infected with Covid-19, 53 health workers suffer from mild anxiety, 7 health workers suffer from moderate anxiety and 4 health workers suffer from severe anxiety (Liu, Yang, Zhang, Xu, Dou, Zhang, et al., 2020). At the RSUD Kayen, there were 11 employees most of whom were medical personnel who were declared reactive or positive for Corona after undergoing a rapid Covid-19 test.

During the *Severe Acute Respiratory Syndrome* (SARS) and *Middle East Respiratory Syndrome* (MERS), frontline health workers reported experiencing high levels of stress resulting in *Post Traumatic Stress Disorder* (PTSD) (Cai et al., 2020). The four main risk factors that influence stress on health care workers during the SARS outbreak include medical perceptions of their risk of infection, the impact of SARS on their work, feelings of depression and working in high-risk space units (Cai et al., 2020).

Factors that affect nurses' anxiety during the Covid-19 pandemic based on Roy's Adaptation Theory model include a focal stimulus (ie negative stigma from the community or the surrounding environment), contextual stimulus (ie age, gender, marital status, length of work, level of education, workspace unit, availability of PPE and workload) and residual stimulus (ie perception of risk as well as information and training). The factor that will be examined in this study is the contextual stimulus factor because this stimulus experienced by a person both internally and externally that can affect the workload and residual stimulus is the perception of risk as well as information and training. The purpose of this study was to analyze the factors that influence the anxiety level of nurses during the Covid-19 pandemic at RSUD Kayen Pati.

## 2. METHODS

The design of this research was descriptive analytic with a *cross-sectional* approach. The sample size was 55 respondents, taken according to the inclusion criteria and sampling using the *proportional stratified*

*random sampling* technique where the sample was determined according to the proportion of each inpatient room and the selection is done randomly using lottery numbers. The respondent recruitment process was carried out by asking for data on the names of nurses who worked at Kayen Hospital in the nursing committee section. Then a room that does not treat Covid-19 patients is selected. After knowing the data of the nurse who will be the respondent, the researcher then contacted the head of each room. The way to maintain the privacy of respondents is to use the initials in the questionnaire sheet, filling out the questionnaire can be done at each respondent's home. Distribute questionnaires to respondents to fill out, then check the filling of the questionnaires to ensure that the questionnaires have been filled out completely by the respondents. The inclusion criteria in this study were nurses who worked in room units that did not handle Covid-19 patients and were cooperative. The exclusion criteria in this study were nurses who were sick so that it could affect the research process and nurses were on leave.

The instrument of perception about risk as well as information and training uses a questionnaire from Gershon et al (1995), the workload instrument uses a questionnaire from Nursalam (2016) while for anxiety instruments uses the Depression Anxiety Stress Scale 42 (DASS) questionnaire. The results of the validity test of the Depression Anxiety Scale 42 (DASS 42) questionnaire on anxiety items that opened 14 questions, a perception questionnaire about risk that would open 3 questions, an information and training questionnaire that operated 4 questions and a workload questionnaire that opened 13 questions, all questions were found on valid questionnaire. The results of the reliability test on the Depression Anxiety Scale 42 (DASS 42) questionnaire on anxiety items that appeared 14 questions, a perception questionnaire about risk that opened 3 questions, an information and training questionnaire that operated 4 questions and a workload questionnaire that appeared 13 questions, the results of all questions were reliable. This research meets the ethical requirements issued by the Health Research Ethics Commission, Faculty of Nursing, Airlangga University, as evidenced by a certificate of passing the ethical review number 2154-KEPK dated February 1, 2021.

The inclusion criteria in this study were nurses who worked in room units that did not treat Covid-19 patients and were cooperative. The exclusion criteria in this study were nurses who were sick so that it could affect the research process and nurses were on leave. The data analysis used by the researcher is by using the help of SPSS. The analysis used logistic regression statistical test with a significance level of  $p < 0.05$ . The independent variables in this study are perceptions of risk, workload as well as information and training. The dependent variable in this study is the level of anxiety of nurses.

### 3. RESULTS

Based on table 1, it can be concluded that the characteristics of respondents based on age are known to be mostly in the age range of 36-45. Based on gender, it is known that most of the respondents are female. Based on the length of work, it is known that most of the respondents have worked longer than 3 years. Based on the level of education, it is known that most of the respondents are D III nursing graduates. Based on marital status, it is known that most of the respondents are married. Based on the room where they work, it is known that most of the respondents work in the cendana room, emergency room and seruni. Based on the history of comorbid diseases, it is known that most of the respondents do not have a history of comorbid diseases. Based on living at home with family, it is known that most of the respondents live at home with family.

There was a significant relationship between perceptions of the risk of anxiety during the Covid-19 pandemic at RSUD Kayen Pati with a *p value* of 0.001. Most respondents have a good perception of the possibility of being exposed to infection in the workplace (58,2%).

There was a significant relationship between workload and the level of anxiety of nurses during the Covid-19 pandemic at RSUD Kayen Pati with a *p value* of 0.000. Most of the respondents experienced a moderate workload (41,8%).

There was a significant relationship between information and training with nurses' anxiety levels during the Covid-19 pandemic at RSUD Kayen Pati with a *p value* of 0.000. Most of the respondents have less information and training about the transmission of the Covid-19 disease (56,4%).

Table 1 Characteristics of nurse respondents

Characteristics	Category	n	Percentage (%)
Age	17-25 Years	6	10,9
	26-35 Years	12	21,8
	36-45 Years	33	60
	46-55 Years	4	7,3
	<b>Total</b>	55	100%
Gender	Male	17	30,9
	Female	38	69,1
	<b>Total</b>	55	100%
Length of work	≤ 3 Years	7	12,7
	> 3 Years	48	87,3
	<b>Total</b>	55	100%
Education Level	Associate degree	36	65,5
	Ners	19	34,5
	<b>Total</b>	55	100%
Marital Status	Single	7	12,7
	Married	48	87,3
	<b>Total</b>	55	100%
Room	Cendana	11	20,0
	Hemodialisa	4	7,3
	IBS	7	12,7
	IGD	11	20,0
	Seruni (inpatient rooms that do not treat Covid-19 patients)	11	20,0
	<b>Total</b>	55	100%
Comorbid diseases	None	53	96,4
	Exist	2	3,6
	<b>Total</b>	55	100%
Living at home	No	4	7,3
	With family	51	92,7
	<b>Total</b>	55	100%

Table 2. The relationship between perceptions of risk, workload, information and training with nurses' anxiety levels during the Covid-19 pandemic

Anxiety	Perception About Risk		Workload			Information and Training	
	Good	Not Good	Slight	Moderate	Heavy	Good	Not Good
Slight	22 (40%)	5 (9,1%)	16 (29,1%)	10 (18,2%)	1 (1,8%)	22 (40%)	5 (9,1%)
Moderate	10 (18,2%)	18 (32,7%)	1 (1,8%)	13 (23,6%)	14 (25,5%)	2 (3,6%)	26 (47,5%)
<b>Total</b>	32 (58,2%)	23 (41,8%)	17 (30,9%)	23 (41,8%)	15 (27,3%)	24 (43,6)	31 (56,4%)
<b>P</b>	0,001		0,000			0,000	
Information	*Significant		*Significant			*Significant	

Information: \*) p < 0,05

Table 3 Multivariate Test Results the effect of perceptions of risk, workload as well as information and training on nurses' anxiety levels during the Covid-19 pandemic

Variable	Multiple Logistic Regression						Information
	S.E	Wald	Sig.	Exp.(B)	95% Confidence Interval		
					Lower	Upper	
Perception About risk	8170,935	0,000	0,995	-	-	-	Not Significant
Workload	1,384	10,197	0,001*	83,072	5,513	1251,864	*Significant
Information and training	2,219	9,287	0,002*	863,566	11,163	66805,49	*Significant

Information: \*) p < 0,05

Based on table 3 shows that the factors related to the anxiety level of nurses during the Covid-19 pandemic which showed significance with a value of <0.05, which can be seen from the workload factor (p = 0.001) as well as information and training (p = 0.002) while the perception about risk (p = 0.995) did not have a significant relationship with the level of anxiety of nurses during the Covid-19 pandemic because it had a value > 0.05.

Determination of the most dominant variable that is most related to nurses' anxiety levels during the Covid-19 pandemic can be seen by looking at the value of Exp (B) from the value of the variable that has a significant relationship <0.05. The most dominant factor affecting nurses' anxiety levels during the Covid-19 pandemic was information and training with an Exp (B) value = 863.566 and the second was workload with an Exp (B) value = 83.072. Respondents who had information and training on the use of PPE during the Covid-19 pandemic had the opportunity to experience anxiety problems by 863.566 times than those who did not. In addition, respondents who have a high workload are 83,072 times more likely to experience anxiety problems than those who do not.

#### 4. DISCUSSION

##### The effect of perceptions of risk on nurses' anxiety levels during the Covid-19 pandemic

The results of the research that have been carried out showed that the perception of risk affects the anxiety level of nurses during the Covid-19 pandemic at RSUD

Kayen Pati. The fear of contracting Covid-19 increases the severity of anxiety symptoms. Nurses who have a good perception of the risk of Covid-19 transmission will decrease their level of anxiety.

These results are in line with research which states that one of the factors that is significantly related to psychological problems in the form of anxiety, depression, and insomnia is the perception of the risk of exposure (Hanggoro et al., 2020). Health workers have a good perception of the risk of being infected with Covid-19, most of the respondents are aware that they are more at risk of contracting Covid-19 compared to their families because they spend more time in the hospital (Gorini et al., 2020). In the early stages of the Covid-19 epidemic, health workers were more concerned about the risk of transmitting it to co-workers and family members than themselves. The fear of health workers, especially nurses, transmitting the virus to their families is the main source of this burden of anxiety. They are afraid of being a carrier of the virus that causes transmission to their families and among other health workers (Dai et al., 2020).

The results of the research findings, the perception of risk affects the anxiety level of nurses during the Covid-19 pandemic. Perceptions about the threat of contracting the disease influence the behavior of nurses in preventing this virus. Nurses will increase their vigilance and self-protection in dealing with Covid-19 patients so that the level of anxiety will be reduced.

### **The effect of workload on nurses' anxiety levels during the Covid-19 pandemic**

The results of the research that have been carried out show that the workload affects the anxiety level of nurses during the Covid-19 pandemic at RSUD Kayen Pati. Nurses who have a high workload, the level of anxiety will increase. As the number of patients with Covid-19 increases, more health resources are needed, including staff, beds and facilities. Limited resources have an impact on the emergence of pressure and anxiety on health workers, especially nurses. Physical work activities that exceed the capacity of a nurse can reduce productivity at work, so that actions are taken that are not in accordance with applicable procedures.

These results are in line with research which states that health workers in the areas most severely affected by Covid-19 have higher anxiety scores than health workers from other areas (Liu, Yang, Zhang, Xu, Dou, & Zhang, 2020). These health workers are suffering from a heavy workload due to the increasing number of cases infected with Covid-19. Excessive or high workload results in fatigue of health workers (Laksono, 2021). One of the workloads of nurses during the current Covid-19 pandemic is the intensity of care for patients who require intensive care, in addition to the large number of patients with a minimal number of nurses causing an excessive workload for nurses themselves. Most of the Covid-19 patients who progress to critical condition will require intensive care. Given the challenges of treating this disease, nurses must manage a heavy workload that often requires invasive procedures and a high level of attention. Therefore, maintaining the physical and psychological health of nurses can make a major contribution to the success of controlling this pandemic (Yifan et al., 2020).

The results of the research findings, the workload affects the anxiety level of nurses during the Covid-19 pandemic because most nurses experience a high workload. Based on this, nurses are very at risk of making mistakes in nursing actions so that they are less than optimal to maintain patient safety. The number of nurses must always be pursued in accordance with the workload to produce effective and efficient services.

### **The effect of information and training on nurses' anxiety levels during the Covid-19 pandemic**

The results of the research that have been carried out show that information and training affect the anxiety level of nurses during the Covid-19 pandemic at RSUD Kayen Pati. Nurses who have information and training regarding the use of personal protective equipment (PPE) are not good, then the level of anxiety will increase.

This is in line with research which explains that health workers experience moderate depression due to lack of accessibility of formal psychological support, lack of medical information about the outbreak, and less intensive training on personal

protective equipment and infection control measures (Tan et al., 2020a). As for the relationship between personal protective equipment and nurses' anxiety, even though nurses have used personal protective equipment, it is possible that they can still be dangerous for patients to infect, especially when they regulate the patient's condition, wipe their sweat, or when taking off the patient's clothes. Transmission of the virus can occur by droplets, or aerosols from Covid19 through the gaps that are formed without being carried out by health workers (Astin & Paembonan, 2021).

The results of the research findings, information and training have a significant and most influential relationship on the anxiety level of nurses during the Covid-19 pandemic. Information on the risk of transmission and how to protect against Covid-19 makes nurses able to increase awareness of the disease and how to overcome this anxiety. Meanwhile, the training consisted of the use of Personal Protective Equipment (PPE) related to the welfare/protection of a team of health professionals and maintaining practice standards during the pandemic. This is for the safety of patients and health workers from the transmission of the Covid-19 disease. Adequate pre-employment training for health workers who will work on the front lines regarding accurate information about disease, risk of transmission and means of protection, establishing systematic diagnostic and treatment protocols with clear guidelines can help reduce depression and increase job confidence.

## **5. CONCLUSION**

Perception factors about risk affect nurses' anxiety levels during the Covid-19 pandemic at RSUD Kayen Pati. Nurses who have a good perception of the risk of Covid-19 transmission will decrease their level of anxiety. The workload factor affects the anxiety level of nurses during the Covid-19 pandemic at RSUD Kayen Pati. Nurses who have a high workload, the level of anxiety will increase. Information and training factors affect the anxiety level of nurses during the Covid-19 pandemic at Kayen Pati Hospital. Nurses who have information and training regarding the use of personal protective equipment (PPE) are not good, then the level of anxiety will increase. The most dominant factors affecting the anxiety level of nurses during the Covid-19 pandemic at Kayen Pati Hospital are information and training.

Suggestions for nurses need to improve the prevention and control of Covid-19 disease in treating patients, get support for efforts to resolve anxiety experienced and provide counseling services and receive ongoing education and training regarding the use of Personal Protective Equipment (PPE) before treating Covid-19 patients. Health institutions need to pay more attention and immediately implement policies that support efforts to maintain and restore mental health for health workers, especially nurses. Steps that can be considered include: the formation of

groups that can support efforts to resolve anxiety and the provision of counseling services. It is necessary to increase information and training for nurses regarding the use of Personal Protective Equipment (PPE) before treating Covid-19 patients. Suggestions for further researchers considering that there are still some limitations in this study, it is recommended for further researchers to: a questionnaire about the main causes of anxiety based on open-ended questions can add information that can be answered with more than one reason. The questionnaire used to measure the workload should use subjective and objective measurement instruments.

## 6. REFERENCES

- Astin, A., & Paembonan, A. (2021). Faktor yang Berhubungan dengan Tingkat Kecemasan Perawat dalam Penanganan Pasien Covid-19 di Rumah Sakit Siloam Makassar. *Jurnal Keperawatan Florence Nightingale*, 4(1), 31–35. <https://doi.org/10.52774/jkfn.v4i1.60>
- Alligood, M. (2014). *Nursing Theorists and Their Work*. Mosby. <http://docshare01.docshare.tips/files/29843/298436680.pdf>
- Annisa, D. F., & Ildil, I. (2016). Konsep Kecemasan (Anxiety) pada Lanjut Usia (Lansia). *Konselor*, 5(2), 93. <https://doi.org/10.24036/02016526480-0-00>
- Anwar, C. (2020). *Sebelas Karyawan RSUD Kayen Reaktif Covid-19*. <https://www.murianews.com/2020/05/04/187625/sebelas-karyawan-rsud-kayen-reaktif-covid-19.html> diakses pada tanggal 16 Desember 2020.
- Arikunto, S. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Rineka Cipta.
- Astuti, J. T., & Suyanto, S. (2020). Implikasi Manajemen Keperawatan Dalam Penanganan Pasien Corona Virus Disease 19 (Covid-19): Literatur Review. *Medica Hospitalia : Journal of Clinical Medicine*, 7(1A), 288–297. <https://doi.org/10.36408/mhjcm.v7i1a.465>
- Cai, H., Tu, B., Ma, J., Chen, L., Fu, L., Jiang, Y., & Zhuang, Q. (2020). Psychological impact and coping strategies of frontline medical staff in Hunan between January and March 2020 during the outbreak of coronavirus disease 2019 (COVID) in Hubei, China. *Medical Science Monitor*, 26, 1–16. <https://doi.org/10.12659/MSM.924171>
- Carrasco, G. A., & Van De Kar, L. D. (2003). Neuroendocrine pharmacology of stress. *European Journal of Pharmacology*, 463(1–3), 235–272. [https://doi.org/10.1016/S0014-2999\(03\)01285-8](https://doi.org/10.1016/S0014-2999(03)01285-8)
- Choi, J. S., & Kim, J. S. (2018). Factors influencing emergency nurses' ethical problems during the outbreak of MERS-CoV. *Nursing Ethics*, 25(3), 335–345. <https://doi.org/10.1177/0969733016648205>
- Committee, I. S. (2020). *Catatan tentang aspek kesehatan jiwa dan psikososial wabah*. Feb, 1–20.
- Dai, Y., Hu, G., Xiong, H., Qiu, H., Yuan, X., Yuan, X., Hospital, T., Avenue, J. F., Qiu, H., & Hospital, T. (2020). *Affiliations :2019*(1095).
- Diinah, D., & Rahman, S. (2020). Gambaran Tingkat Kecemasan Perawat Saat Pandemi Covid 19 Di Negara Berkembang Dan Negara Maju: a Literatur Review. *Dinamika Kesehatan: Jurnal Kebidanan Dan Keperawatan*, 11(1), 37–48. <https://doi.org/10.33859/dksm.v11i1.555>
- Gershon, R. R. M., Vlahov, D., Felknor, S. A., Vesley, D., Johnson, P. C., Delcios, G. L., & Murphy, L. R. (1995). Compliance with universal precautions among health care workers at three regional hospitals. *AJIC: American Journal of Infection Control*, 23(4), 225–236. [https://doi.org/10.1016/0196-6553\(95\)90067-5](https://doi.org/10.1016/0196-6553(95)90067-5)
- Gorini, A., Fiabane, E., Sommaruga, M., Barbieri, S., Sottotetti, F., La Rovere, M. T., Tremoli, E., & Gabanelli, P. (2020). Mental health and risk perception among Italian healthcare workers during the second month of the Covid-19 pandemic. *Archives of Psychiatric Nursing*, 34(6), 537–544. <https://doi.org/10.1016/j.apnu.2020.10.007>
- Guilliams, T. G., & Edwards, L. (2010). Chronic stress and the HPA axis: Clinical assessment and therapeutic considerations. *The Standard*, 9(2), 1–12.
- Hanggoro, A. Y., Suwarni, L., Selviana, & Mawardi. (2020). Dampak psikologis pandemi COVID-19 pada petugas layanan kesehatan : studi. *Jurnal Kesehatan Masyarakat Indonesia*, 15(2), 13–18.
- Hernandez, S. H. A., Morgan, B. J., & Parshall, M. B. (2016). Resilience, stress, stigma, and barriers to mental healthcare in U.S. Air Force Nursing Personnel. *Nursing Research*, 65(6), 481–486. <https://doi.org/10.1097/NNR.0000000000000182>
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Xia, L., Wei, S., Liu, Z., Shen, Q., Yang, J., He, H., & Zhu, J. (2020). *EclinicalMedicine 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*. 24. <https://doi.org/10.1016/j.eclinm.2020.100424>
- Ibrahim, A. S. (2012). *Panik Neurosis dan Gangguan Cemas (1 st ed)*. Tangerangf: jelajah Nusa.
- Joseph, T. (2020). Pulmonologist ' S Consensus on Covid-19. *International Pulmonologists Consensus on Covid 19*, 2(April), 1–72. [https://www.researchgate.net/profile/Tinku\\_Joseph/publication/340862051\\_COVID-19\\_E-Book\\_International\\_Pulmonologist's\\_consensus\\_on\\_COVID-19\\_-\\_2nd\\_Edition/links/5ea150cf299bf143894015e9/COVID-19-E-Book-International-Pulmonologists-consensus-on-COVID-19-2nd](https://www.researchgate.net/profile/Tinku_Joseph/publication/340862051_COVID-19_E-Book_International_Pulmonologist's_consensus_on_COVID-19_-_2nd_Edition/links/5ea150cf299bf143894015e9/COVID-19-E-Book-International-Pulmonologists-consensus-on-COVID-19-2nd)

- Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yang, B. X., Wang, Y., Hu, J., Lai, J., Ma, X., Chen, J., Guan, L., Wang, G., Ma, H., & Liu, Z. (2020). The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *The Lancet Psychiatry*, 7(3), e14. [https://doi.org/10.1016/S2215-0366\(20\)30047-X](https://doi.org/10.1016/S2215-0366(20)30047-X)
- Kang, L., Ma, S., Chen, M., Yang, J., Wang, Y., Li, R., Yao, L., Bai, H., Cai, Z., Xiang Yang, B., Hu, S., Zhang, K., Wang, G., Ma, C., & Liu, Z. (2020). Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study. *Brain, Behavior, and Immunity*, 87(March), 11–17. <https://doi.org/10.1016/j.bbi.2020.03.028>
- Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors Associated With Mental Health Outcomes Among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Network Open*, 3(3), e203976. <https://doi.org/10.1001/jamanetworkopen.2020.3976>
- Laksono, A. D. (2021). *The Risk Factors of COVID-19 Transmission in Health Workers: A Literature The Risk Factors of COVID-19 Transmission in Health Workers: A Literature Review. April.*
- Lazaropoulou, C., Margeli, A., & Papassotiriou, I. (2010). *Acute resistance exercise results in catecholaminergic rather than hypothalamic – pituitary – adrenal axis stimulation during exercise in young men Acute resistance exercise results in catecholaminergic rather than hypothalamic – pituitary – adrenal axis . November.* <https://doi.org/10.3109/10253891003743432>
- Liang, Y., Chen, M., Zheng, X., & Liu, J. (2020). Screening for Chinese medical staff mental health by SDS and SAS during the outbreak of COVID-19. *Journal of Psychosomatic Research*, 133(March), 16–18. <https://doi.org/10.1016/j.jpsychores.2020.11.0102>
- Lisdiana. (2012). *Regulasi Kortisol Pada Kondisi Stres dan Addiction.* <https://journal.unnes.ac.id/nju/index.php/bio-saintifika/article/view/2264>
- Liu, C. Y., Yang, Y. Z., Zhang, X. M., Xu, X., Dou, Q. L., & Zhang, W. W. (2020). The prevalence and influencing factors for anxiety in medical workers fighting COVID-19 in China: A cross-sectional survey. *MedRxiv*. <https://doi.org/10.1101/2020.03.05.20032003>
- Liu, C. Y., Yang, Y. Z., Zhang, X. M., Xu, X., Dou, Q. L., Zhang, W. W., & Cheng, A. S. K. (2020). The prevalence and influencing factors in anxiety in medical workers fighting COVID-19 in China: A cross-sectional survey. *Epidemiology and Infection*, 148, 19–25. <https://doi.org/10.1017/S0950268820001107>
- Menteri Kesehatan Republik Indonesia. (2020). Keputusan Menteri Kesehatan Republik Indonesia Nomor HK.01.07/MenKes/413/2020 Tentang Pedoman Pencegahan dan Pengendalian Corona Virus Disease 2019 (Covid-19). *MenKes/413/2020, 2019.*
- Nugroho, P. D. P. (2020). *Kasus Covid-19 Meningkatkan Pati Kembali Berlakukan Jam Malam.* <https://regional.kompas.com/read/2020/11/30/17411301/kasus-covid-19-meningkat-pati-kembali-berlakukan-jam-malam diakses pada tanggal 16 Desember 2020.>
- Nursalam. (2017). Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan Edisi 2. In *Salemba Medika.*
- Nursalam, N., Sukartini, T., Priyantini, D., Mafula, D., Efendi, F., & Airlangga, U. (2020). *Risk Factors for Psychological Impact and Social Stigma Among People Facing Covid-19: a. 11(6), 1022–1028.*
- Pardede, J. A. (2018). *Teori Dan Model Adaptasi Sister Calista Roy : Pendekatan Keperawatan.*
- Park, J. S., Lee, E. H., Park, N. R., & Choi, Y. H. (2018). Mental Health of Nurses Working at a Government-designated Hospital During a MERS-CoV Outbreak: A Cross-sectional Study. *Archives of Psychiatric Nursing*, 32(1), 2–6. <https://doi.org/10.1016/j.apnu.2017.09.006>
- Pouralizadeh, M., Bostani, Z., Maroufizadeh, S., Ghanbari, A., Khoshbakht, M., Alavi, S. A., & Ashrafi, S. (2020). Authors : Affiliations : *International Journal of Africa Nursing Sciences*, 100233. <https://doi.org/10.1016/j.ijans.2020.100233>
- Priyantini, D., Nursalam, N., & Sukartin, T. (2021). Analysis of Factors Affecting the Mental Health Crisis of Coronavirus Disease Infection in Java Island. *Jurnal Ners*, 16(1).
- Rochman, K. L. (2010). *Kebutuhan Mental.* Purwokerto: Fajar Media Press.
- Setiawan, F., Puspitasari, H., Sunariani, J., & Yudianto, A. (2020). Molecular Review Covid19 from the Pathogenesis and Transmission Aspect. *Jurnal Kesehatan Lingkungan*, 12(1si), 93. <https://doi.org/10.20473/jkl.v12i1si.2020.93-103>
- Sim, M. R. (2020). *The COVID-19 pandemic: major risks to healthcare and other workers on the front line.* 281–282. <https://doi.org/10.1136/oemed-2020-106567>
- Stuart, G. . (2007). *Buku saku keperawatan jiwa.6 th editon* Jakarta: EGC.
- Stuart, G. . W., & Sundeen, A. J. (2005). *Principles and practice of psychiatric nursing.Edisi 8.* St. Louis: Mosby Book.Inc..
- Stuart, G. W. (2009). *Participle and Practice of Psychiatric.* St Louis: Mosby.
- Styra, R., Hawryluck, L., Robinson, S., Kasapinovic, S.,

- Fones, C., & Gold, W. L. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect, the company 's public news and information . January.* <https://doi.org/10.1016/j.jpsychores.2007.07.015>
- Susilo, A., Rumende, C. M., Pitoyo, C. W., Santoso, W. D., Yulianti, M., Herikurniawan, H., Sinto, R., Singh, G., Nainggolan, L., Nelwan, E. J., Chen, L. K., Widhani, A., Wijaya, E., Wicaksana, B., Maksum, M., Annisa, F., Jasirwan, C. O. M., & Yuniastuti, E. (2020). Coronavirus Disease 2019: Tinjauan Literatur Terkini. *Jurnal Penyakit Dalam Indonesia*, 7(1), 45. <https://doi.org/10.7454/jpdi.v7i1.415>
- Tan, B. Y. Q., Chew, N. W. S., Lee, G. K. H., Jing, M., Goh, Y., Yeo, L. L. L., Zhang, K., Chin, H. K., Ahmad, A., Khan, F. A., Shanmugam, G. N., Chan, B. P. L., Sunny, S., Chandra, B., Ong, J. J. Y., Paliwal, P. R., Wong, L. Y. H., Sagayanathan, R., Chen, J. T., ... Sharma, V. K. (2020a). Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore. *Annals of Internal Medicine*, 173(4), 317-320. <https://doi.org/10.7326/M20-1083>
- Tan, B. Y. Q., Chew, N. W. S., Lee, G. K. H., Jing, M., Goh, Y., Yeo, L. L. L., Zhang, K., Chin, H. K., Ahmad, A., Khan, F. A., Shanmugam, G. N., Chan, B. P. L., Sunny, S., Chandra, B., Ong, J. J. Y., Paliwal, P. R., Wong, L. Y. H., Sagayanathan, R., Chen, J. T., ... Sharma, V. K. (2020b). Psychological Impact of the COVID-19 Pandemic on Health Care Workers in Singapore. In *Annals of internal medicine* (Vol. 173, Issue 4, pp. 317-320). NLM (Medline). <https://doi.org/10.7326/M20-1083>
- Thornton, L. M., & Andersen, B. L. (2006). Psychoneuroimmunology examined: The role of subjective stress. *Cellscience*, 2(4), 66-91. <http://www.ncbi.nlm.nih.gov/pubmed/18633462><http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC2473865>
- Tsigos, C., & Chrousos, G. P. (2002). Hypothalamic-pituitary-adrenal axis, neuroendocrine factors and stress. *Journal of Psychosomatic Research*, 53(4), 865-871. [https://doi.org/10.1016/S0022-3999\(02\)00429-4](https://doi.org/10.1016/S0022-3999(02)00429-4)
- Utama, T. A., & Dianty, F. E. (2020). *Pengalaman Perawat Dalam Memberikan Asuhan Keperawatan Pada Pasien Terinfeksi Covid - 19.* 1(2), 13-19.
- World Health Organization. (2020a). *No Title.*
- World Health Organization. (2020b). Transmisi SARS-CoV-2 : implikasi terhadap kewaspadaan pencegahan infeksi. *Pernyataan Keilmuan*, 1-10. [who.int](http://who.int)
- Yifan, T., Ying, L., Chunhong, G., Jing, S., Rong, W., Zhenyu, L., Zejuan, G., & Peihung, L. (2020). Symptom Cluster of ICU Nurses Treating COVID-19 Pneumonia Patients in Wuhan, China. *Journal of Pain and Symptom Management*, 60(1), e48-e53. <https://doi.org/10.1016/j.jpainsymman.2020.03.039>
- Yotley, A. S. (2019). *Skripsi analisis faktor yang... abraham s. yotley.*
- Yusuf, A. (2020). *Gangguan Mental Perawat saat Pandemi.* <https://www.jawapos.com/opini/26/08/2020/gangguan-mental-perawat-saat-pandemi/diakses-pada-tanggal-16-Desember-2020>
- Zhang, W. R., Wang, K., Yin, L., Zhao, W. F., Xue, Q., Peng, M., Min, B. Q., Tian, Q., Leng, H. X., Du, J. L., Chang, H., Yang, Y., Li, W., Shangguan, F. F., Yan, T. Y., Dong, H. Q., Han, Y., Wang, Y. P., Cosci, F., & Wang, H. X. (2020). Mental Health and Psychosocial Problems of Medical Health Workers during the COVID-19 Epidemic in China. *Psychotherapy and Psychosomatics*, 89(4), 242-250. <https://doi.org/10.1159/000507639>
- Zhu, J., Sun, L., Zhang, L., Wang, H., Fan, A., Yang, B., Li, W., & Xiao, S. (2020). Prevalence and Influencing Factors of Anxiety and Depression Symptoms in the First-Line Medical Staff Fighting Against COVID-19 in Gansu. *Frontiers in Psychiatry*, 11(April), 1-6. <https://doi.org/10.3389/fpsy.2020.00386>