

Conference Paper

Psychological Stress of Nurses During the Covid-19 Pandemic

Oktovin¹, Mohammad Basit², and Margareta Rosa Peni³¹Undergraduate and Nursing Study Program, Suaka Insan College of Health Science, Banjarmasin, South Borneo, Indonesia²Faculty of Health Sciences, Universitas Sari Mulia (UNISM), Banjarmasin, South Borneo, Indonesia**ORCID:**Oktovin: <https://orcid.org/0000-0002-4570-0778>**Abstract**

The COVID-19 pandemic has captured the world's attention, especially regarding the risk of stress. The majority of nurses experience mild and moderate levels of stress. This is because nurses are particularly at risk of being infected with COVID-19. Many of nurses feel hot and breathless because of the PPE. This research illustrates the phenomenon of psychological stress amongst nurses working during the pandemic. This research uses a quantitative descriptive research approach. The research sample was 157 nurses working in all health care facilities from various regions in Indonesia, selected using convenience sampling. The results showed a high risk of stress, with the nurses experiencing mild and moderate stress. The study concludes by suggesting the government and health care providers pay greater attention to the early detection and reduction of stress, providing sports facilities, increasing the number of nurses, regular meetings to reflect on the problems faced and psychological consulting facilities of nurses.

Keywords: COVID-19 Pandemic, Nurse, Nurse Stress

Corresponding Author:

Oktovin

oktavin24@gmail.com

Published: 15 March 2021

Publishing services provided by
Knowledge E

© Oktovin et al. This article is

distributed under the terms of
the [Creative Commons](#)[Attribution License](#), whichpermits unrestricted use and
redistribution provided that the
original author and source are
credited.Selection and Peer-review under
the responsibility of the IVCN
Conference Committee.

1. Introduction

The world has been currently facing the pandemic case of the COVID-19 disease (Corona Virus Disease-2019). It was caused by the Novel Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The first case occurred in Wuhan City, Hubei Province, China in early December 2019 [1]. It has spread to almost all countries in the world. In July 2020, the latest data, COVID-19 has hit 216 countries, with cases reaching 8,708,008 people and the number of confirmed deaths reaching 461,715 people [2]. As of August 8, 2020, the number of people confirmed positive for COVID-19 had reached 123,503 people in Indonesia itself. A total of 79,306 people were declared cured and

OPEN ACCESS

5,658 people died [3] This number is spread across 34 provinces and 496 districts/cities in Indonesia [4].

The increasing number of confirmed positive COVID-19 in Indonesia is of course very concerning. The nurses who are on the front line, are certainly quite difficult. The workload and psychological stress while handling the patients tended to be experienced by nurses [5]. The complaints such as fatigue, numb feet and body aches are often felt due to the high number of patients with COVID-19 symptoms. They also feel worried about being infected and spreading the disease to the family at home [6]. This concern is due to the lack of personal protective equipment (PPE) availability during work and an ineffective infection control system [7]. In fact the use of complete PPE such as the use of Hazmat suit, layered of surgical mask and safety glasses also cause complaints for nurses. Many of nurses feel swelter, breathless and discomfort because holding back the urge to go to the toilet \pm 4 hours [8]. majority of nurses in the United States experience acute stress, mild depression and moderate anxiety [9] and in China have mild to moderate mental health problems [10].

The condition psychological stress of nurses in Indonesia during the COVID-19 pandemic is more real. The hashtag "Indonesia Terserah" ("Indonesia is up to you") has become a trending topic on social media network. This was initiated because of protests by health workers about government policies that have the potential to increase COVID-19 cases in Indonesia [11]. Many people do not care about the conditions of the pandemic that attack Indonesia. Public attitudes tend to be negative in responding to orders to maintain distance, wearing masks when gathering, exercising and eating nutritious food [12]. So, health workers feel that the sacrifice of being one of the frontline teams in handling COVID-19 has been in vain [11]. Even though nurses have been battling COVID-19 with various pressures while carrying out their duties. Starting from the working hours per week which is quite high [13] and the occupational risk of being infected with COVID-19 is higher than other health teams [14].

This phenomenon is currently being faced by nurses in Indonesia and this is almost the same as the phenomenon in other countries. However, the description stress of nurse in Indonesia it might be different, because Indonesia is a developing country. Majority of research are on the same theme come from developed countries like China, Korea, United States, Britain and others. Aside from that, in previous research not much been disclosed regarding nurses stress control (individual) and management support in helping nurses deal with the COVID-19 pandemic. This research want to reveal the real phenomenon related to the psychological stress of nursing personnel in Indonesia in carrying out their duties during the pandemic.

2. Research Methods

This research uses a quantitative descriptive research approach. It described the phenomenon of the psychological pressure of nurses at work during the COVID-19 pandemic.

2.1. Research sample

The samples were 157 people from various regions in Indonesia. The samples were selected using a non-probability sampling technique, convenience sampling, where the researcher sent a research questionnaire in the form of google form via telecommunications media, Whatsapp Messenger, to nurses who worked in hospitals and in health centers in various regions in Indonesia. The inclusion criteria of respondents in this research is nurses working in the hospital, public health care, polyclinic and the other of health care facilities, minimum level of education is diploma of nursing, willing to fill out a questionnaire in *google form*. The exclusion criteria for respondents in this research were nurses who worker in structural and did not face the patient directly.

2.2. Research instruments

The research instrument used a questionnaire to measure nurs psychological pressure who worked during the COVID-19 pandemic. This questionnaire was compiled by the researcher himself. The goal is for the questionnaire to measure the psychological stress conditions of nurses while working during the COVID-19 pandemic. This research questionnaire consisted of respondent characteristics, sources of stress for nurses in work, stress reactions of nurses and stress control performed by nurses. This questionnaire has 46 statement items divided into 10 statement items for nurses 'stress sources, 21 statement items for nurses' stress reactions and 15 statements for stress control by nurses.

2.3. Validity and reliability of the instrument

The questionnaires previously have been tested regarding the validity and reliability of each statement item. The questionnaire validity and reliability tests were carried out with the SPSS 16 application, namely using Product Moment Correlation.

2.3.1. Research Instrument Validity Test

The validity test of the questionnaire is to compare the number of r count and r table. It is said valid if count is greater than r table, 0.361 (n = 30).

2.3.2. Research Instrument Reliability Test

The reliability test of the questionnaire is to compare the Cronbach alpha numbers with r table. It is reliable if the Cronbach alpha number is greater than the r table, 0.361 (n = 30).

2.4. Data collection procedures

This study has received research ethics approval from the Sari Mulia University Research Ethics Committee (UNISM) Banjarmasin. Research questionnaires that have been valid and reliable are then made in the form of google form. The questionnaire was then distributed to nurses who work at hospitals and health centers in several regions in Indonesia. The distribution of this questionnaire was carried out with WhatsApp Messenger.

2.5. Data Analysis

The questionnaire answers were then processed and analyzed by using the SPSS version 16 with descriptive analysis. The findings analyzed included the mean, median, mode and frequency distribution values.

3. Result

3.1. Demography

In general, the characteristics of the respondents in the study can be seen in table 1 below.

3.2. Description of the psychological stress of the nurses

TABLE 1: Characteristics of Respondents

ITEM	CLASSIFICATION	Σ	%
Gender	Male	63	40
	Female	94	60
Age	18-25 years old	33	21
	26-35 years old	91	58
	36-45 years old	31	19,7
	46-55 years old	2	1,3
Marital Status	Singe	54	34,3
	Married	101	64,3
	Widow/widower	2	1,3
Level of Education	D1/D3 of Nursing	77	49
	Bachelor of Nursing & Ners	72	45,9
	Master of Nursing	8	5,1
Work Place	Rg. Specifically for COVID-19	48	31
	UGD/IGD	27	17
	ICU/ICCU	9	6
	General Care Room	23	14
	Polyclinic	11	7
	Public Health Centers	27	17
	Others: Rg. Child, Hemodialysis, Surgical Room, COVID-19 Screening Team	12	8
Firsthand -Treating COVID-19 patients	Yes	59	37,6
	No	98	62,4

TABLE 2: Description of Psychological Stress for Nurses during the COVID-19 Pandemic

ITEM	KATEGORI	Σ	%	Mean	Med	Mod	Min-Max
Nurse stress	Stress in working	78	49,7	15.57	15.00	18	11-20
	No-stress in working	79	50,3				
Nurse Stress Symptoms	Mild	69	44	48.15	49.00	21	21-94
	Moderate	61	38,8				
	Severe	27	17,2				
How Nurses Manage Stress	Low	11	7	42.99	43.00	43	25-60
	Moderate	99	63				
	Good	47	30				

4. Discussion

The findings of this study indicate psychological stress of nurses in Indonesia during the COVID-19 Pandemic are at the mild and moderate levels. However, severe level of stress

also experienced by nurses. This finding is in line with Shecher, *et al.* (2020), wherein the majority of nurses in the United States experience acute stress, mild depression and moderate anxiety. Kang, *et al.* (2020), express the same thing where the majority of health workers in China have mild to moderate mental health problems. Stress symptom nurses generally experience sleep disturbance [14–16]. Other stress symptoms include decreased appetite and indigestion, fatigue, nervousness, frequent crying, and suicidal thoughts [15], depression, anxiety [16] and mood disorders [14]. In this study, nurses in Indonesia experience symptoms of stress at work like heart palpitations, fatigue and not having time to relax. Nurses in Indonesia feel physical and psychological stresses while carrying out their jobs. Nurses often feel worried about being infected when dealing with COVID-19 patients. This describes nurses in Indonesia as pessimistic. The high level of stress for nurses because nurses as the front line in direct contact with COVID-19 patients [17] and the lack of experience of nurses in facing a disease pandemic [14].

This psychological stress is reflected in married female nurses. Stress symptoms are also linked to gender. Where female nurses are always associated with stress, depression, and anxiety [18]. Most female nurses, especially those who are married, experience higher stress during the COVID-19 pandemic, especially for young female nurses [19]. Previous findings even described female nurses working at the Primary Hospital in Wuhan, China reported a poor prognosis [20]. It reflects the differences in symptoms of anxiety and depression between men and women [21]. Women who work as nurses carry out multiple roles, as a wife and mother and as a career woman [22]. Generally, women in Indonesia carry out a dual role in a non-natural way, such as earning a living, cooking and washing clothes [23]. Generally, they help the family economy [22]. Another reason is to take advantage of education, fill out spare time and as entertainment instead of staying at home [24].

The majority of nurses in Indonesia who experience psychological stress have diploma education in nursing. However, nurses with undergraduate or nurse education has almost matched. This condition can be related to the organizational structure in nursing management. In a nursing management organizational structure, nurses divided into two namely as clinical manager and Implementing nurse. Clinical managers are expected to have professional abilities to manage nursing care. Implementing nurses have professional practice skill. This ability will be obtained through formal and non formal education. As in several hospitals in Europe, where the qualification of nursing education has a role in reducing mortality in addition to the ratio of the number of nurses to patients [25]. Demands for the quality of health services based on the application

of evidence-based practice (EBP) are influenced by nurses' knowledge, experience in research, statistics and one of them is education [26]. In contrast to the existing findings, the level of nurse education does not have a significant effect on the quality of service and safety of patients in hospitals in Malaysia. This is because the training program provided by hospital management to nurses is the key to optimal service quality and patient safety [27].

In this pandemic situation, source of stress for nurses in hospitals, public health centers or the other health service comes from their jobs. Nurses must work by dealing directly with patients with indicated or confirmed COVID-19. This condition put nurses at high risk infected COVID-19 [14, 28]. Moreover, the direct contact between patients and nurses is higher than other health workers [14]. The nurses is unable to refuses this sutuastion because nurses are always responsible for their work. The most important factors motivating them to continue working are their social and moral responsibilities and professional obligations [15]. Nurses work every day to provide quality care during this pandemic. Nurses are involved in system planning, implement capacity spike strategies, provide triage in emergency rooms and in government health centers, screen long queues at test sites and provide health promotion services around infection control in communities of all ages. Not only that, nurses also provide care, relieve symptoms and monitor patient vital signs, as well as collect data in clinical trials and protect patient safety [29]. In addition, the nurse's job responsibility in understanding the patient's physical and psychological problems turns out to make nurses experience psychological pressure [17]. Such as the results before, the average health workers in China working more than 54 hours a week in this pandemic period [30] due to the lack of available health personnel [31]. Similarly in Indonesia, as the number of confirmed cases of COVID-19 increases, hospitals handling COVID-19 patients need health personnel and ward with amount is sufficient to handle this pandemic.

The way nurses control the majority of stress is quite good, such as carry out worship and watching TV, using social media, making any jokes with friends, and relaxing. It is in line with Cai, *et al.* (2020) where nurses often relax. Social networks such as Facebook, Wiber, Whatsapp, Intagram, Tik-Tok and Twitter have recently been used as a strategy to control stress [32]. Seeking support from peers to control stress is also often done by nurses [15]. Social support for nurses needs to be increased [33], because social support has the greatest impact on the mental health of health workers [34, 35].

Management where nurses work also provides support, especially in controlling stress, such as creating a comfortable room and involving nurses in decision making. Involving nurses in decision making occurs in complex situations with specific goals

[36]. Decision making is related to the fulfillment of rights and obligations. Every health worker has the right to occupational safety and health in providing health services. The government and management, where nurses work is also required to provide adequate health facilities [37]. The government and hospital management need to prepare strict protective measures, provide an explanation for prevention, provide special equipment and take social isolation measures [15]. The availability of a comfortable room for the nurses to help control the stress of nurses during work. One of the actions of management do is to plan and provide a to standards comfortable room. As is known earlier hospital management gave actions that directly impacted the psychology of nurses [18].

The current condition of the COVID-19 pandemic has been attracting global attention, especially regarding the risk of stress it causes. Nurses as the front-line team in handling the pandemic are not immune from this problem either. The attention of all stakeholders in each region needs to be increased. From government to management, there is a need to increase their promotional efforts to help nurses manage stress today and, in the future, [9]. Treatment to relieve the psychological pressure of nurses is still needed, especially in controlling the risk of long-term psychological disorders [33]. Symptoms of moderate and severe stress emphasize the need for early detection and immediate treatment so that they do not evolve into more complex and persistent psychological responses.

5. Conclusion

The nurses are one of the Frontline Teams for handling COVID-19. The work of the nurses during the COVID-19 pandemic has shown a high risk of experiencing stress. The majority of them experience mild and moderate stress. However, this needs to be kept in mind because if it is not handled properly, an increase in stress conditions to more severe is very likely to occur. So far, the nurses have tried to control stress independently by themselves. They do more worship activities, entertain and take advantage of social media. Maximum support from the management where nurses work needs to be realized at this time, such as providing comfortable resting facilities, independent isolation areas, relaxation areas and sports facilities. The management also needs to make regular meetings to reflect on the problems faced by the nurses. Psychologist consultation facilities also need to be prepared. In addition, the management also needs to pay attention to the high workload and work shifts for the nurses. Therefore, increasing the number of nurses needs to be considered.

Acknowledgments

The research has been carried out with the support and participation of nurses from various regions throughout Indonesia.

References

- [1] Harapan, H., *et al.* (2020). Coronavirus Disease 2019 (COVID-19): A Literature Review. *Journal of Infection and Public Health*, Volume 13, Issue 5, pp. 667-673, doi: <https://doi.org/10.1016/j.jiph.2020.03.019>.
- [2] WHO. (2020). *Coronavirus Disease (COVID-19) Pandemic*. Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.
- [3] *CNBC Indonesia*. (2020, August). Retrieved August 8, 2020 from <https://www.cnbcindonesia.com/news/20200808174746-16-178433/update-corona-8-agustus-2020-79306-sembuh-5658-meninggal>.
- [4] *COVID-19.Go*. (2020, June). Retrieved June 23, 2020 from <https://covid19.go.id/p/berita/infografis-covid-19-06-juli-2020>.
- [5] *Ayosemarang.com*. (2020, July). Retrieved July 16, 2020 from <https://www.ayosemarang.com/read/2020/04/06/54825/perawat-pasien-covid-19-rawan-alami-tekanan-psikologis-karena-beban-kerja>.
- [6] *BBC News Indonesia*. (2020 March). Retrieved June 23, 2020 from <https://www.bbc.com/indonesia/dunia-52101525>.
- [7] Joob, B. and Wiwanitkit, V. (2020). Traumatization in Medical Staff Helping with COVID-19 Control. *Brain, Behavior and Immunity*, Volume 87, Issue 10, p. 10 doi: <https://doi.org/10.1016/j.bbi.2020.03.020>.
- [8] *theAsianparent.Indonesia*. (2020, June). Retrieved June 23, 2020 from <https://id.theasianparent.com/menggunakan-apd>
- [9] Shecher, A., *et al.* (2020). Psychological Distress, Coping Behaviors and Preferences for Support Among New York Healthcare Workers During the COVID-19 Pandemic. *General Hospital Psychiatry*, Volume 66, pp. 1-8, doi: <https://doi.org/10.1016/j.genhosppsych.2020.06.007>.
- [10] Kang, L., *et al.* (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*, vol. 87, pp. 11-17.

- [11] Salsabila, A. P. (2020). *Trending Tagar Indonesia Terserah, Berawal dari Tenaga Medis yang Kecewa*. Jakarta: Hai_Online.com.
- [12] Sari, D. K., et al. (2020, June 24). Positive Correlation Between General Public Knowledge and Attitudes Regarding COVID-19 Outbreak 1 Month After First Cases Reported in Indonesia. *Journal of Community Health*, Volume 46 (1), pp. 182-189, doi <https://doi.org/10.1007/s10900-020-00866-0>.
- [13] Mo, Y., et al. (2020). Work Stress Among Chinese Nurses to Support Wuhan in Fighting Against COVID-19 Epidemic. *Journal of Nursing Management*, Volume 28, Issue 5, pp. 1-8, doi: <https://doi.org/10.1111/jonm.13014>.
- [14] Pappa, S., et al. (2020). Prevalence of Depression, Anxiety and Insomnia among Healthcare Workers During the COVID-19 Pandemic: A Systematic Review and Meta-Analysis. *Brain, Behavior and Immunity* Volume 88, pp. 901-907, doi: <https://doi.org/10.1016/j.bbi.2020.05.026>.
- [15] Cai, H., et al. (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-19) in Hubei, China. *Medical Science Monitor*, Volume 26, pp.1-16, DOI: 10.12659/MSM.924171
- [16] Lai, J., et al. (2020). Factors Associated with Mental Health Outcomes among Health Care Workers Exposed to Coronavirus Disease 2019. *JAMA Network Open*, Volume 3, Issue 3, pp. 1-12, doi: <https://doi.org/10.1001/jamanetworkopen.2020.3976>.
- [17] Li, Z., et al. (2020). Vicarious Traumatization in General Public, Member and Non-Members of Medical Teams Aiding in COVID-19 Control. *Brain, Behavior and Immunity*, Volume 88, pp 916-919, doi: <https://doi.org/10.1016/j.bbi.2020.03.007>.
- [18] Zhu, Z., et al. (2020). COVID-19 in Wuhan: Sociodemographic Characteristics and Hospital Support Measures Associated with the Immediate Psychological Impact on Healthcare Workers. *EClinicalMedicine*, Volume 24, pp 1-11, doi: <https://doi.org/10.1016/j.eclinm.2020.100443>.
- [19] Rossi, R., et al. (2020). Mental Health Outcomes among Frontline and Second-Line Health Care Workers during the Coronavirus Disease 2019 (COVID-19) Pandemic in Italy. *JAMA Network Open*, Volume 3, Issue 5, pp. 1-4.
- [20] Dai, Y., et al. (2020). Psychological Impact of the Coronavirus Disease 2019 (COVID-19) Outbreak on Healthcare Workers in China. *MedRxiv*, pp 1-15.
- [21] Albert, R. P. (2015). Why is Depression more Prevalent in Women. *Ottawa Hospital Research Institute*, Volume 40, Issue 4, pp. 219-221.

- [22] Tumbage, S., Tasik, F. and Tumenkol, S. (2017). Peran Ganda Ibu Rumah Tangga Dalam Meningkatkan Kesejahteraan Keluarga di Desa Allude Kecamatan Kolongan Kabupaten Talaud. *Acta Diurna*, vol. 6, issue 2 pp. 1-14.
- [23] AR, Mariatul, Q.H (2015). Rethinking Peran Perempuan dalam Keluarga. *KARSA*, vol. 23, issue 1, pp. 17-35, doi: <http://dx.doi.org/10.19105/karsa.v23i1.607>.
- [24] Susanto (2010). Analisis Pengaruh Konflik Kerja-Keluarga Terhadap Kepuasan Kerja Pengusaha Wanita di Kota Semarang. *Aset*, vol. 12, issue 1, pp. 75-85.
- [25] Aiken, L., et al. (2014, May). Nurses Staffing and Education and Hospital Mortality in Nine European Countries: A Retrospective Observational Study. *National Institutes of Health Public Access*, Volume 383, Issue 9931, pp 1-16, doi: [http://10.1016/S0140-6736\(13\)62631-8](http://10.1016/S0140-6736(13)62631-8).
- [26] Yoo, J. Y., et al. (2019). Clinical Nurses'beliefs, Knowledge, Organizational Readness and Level of Implementation of Evidence-Based Practice: The First Step to Creating an Evidence-Based Practice Culture. *PLoS ONE*. Volume 14, Issue 12, pp. 1-15, <https://doi.org/10.1371/journal.pone.0226742>.
- [27] Rahman, H. A., Jarrar, M. and Don, M. S. (2015, April). Nurses Level of Education, Quality of Care and Patients Safety in the Medical and Surgical Wards in Malaysian Private Hospitals: A Cross Sectional Study. *Global Journal of Health Science*, Volume 7, No.6, pp 331-337, doi: <http://10.5539/gjhs.v7n6p331>.
- [28] Shaukat, N., Ali, D. M. and Razzak, J. (2020). Physical and Mental Health Impacts of COVID-19 on Healthcare Workers: A Scoping Review. *International Journal of Emergency Medicine*, Volume, 13, No.40, pp. 1-8, doi:<https://10.1186/s12245-020-00299-5>.
- [29] Treston, C. (2020). COVID-19 in the Year of the Nurse. *Journal of the Association of Nurses in AIDS Care*, Volume 31, No.3, pp. 359-360, doi: 10.1097/JNC.0000000000000173
- [30] Ran, L., et al. (2020). Risk Factors of Healthcare Workers With Coronavirus Disease 2019: A Retrospective Cohort Study in a Designated Hospital of Wuhan in China. *Clinical Infectious Diseases Brief Report*, Volume 71, Issue 16, pp 1-4.
- [31] Zhang, X., et al. (2020). Nurses Reports of Actual Work Hours and Preferred Work Hours Per Shift among Frontline Nurses During Coronavirus Disease 2019 (COVID-19) Epidemic: A Cross-Sectional Survey. *International Journal of Nursing Studies*, Volume 17, No.16, pp 1-6.
- [32] Salopek-Ziha, D., et al. (2020). Differences in Distress and Coping with the COVID-19 Stressor in Nurses and Physicians. *Psychiatria Danubina*, issue 32, pp. 287-293.

- [33] Shen, X., *et al.* (2020). Psychological Stress of ICU Nurses in the Time of COVID-19. *Critical Care*, Volume 24, No. 200, pp.1-3.
- [34] Song, X., *et al.* (2020). Mental Health Status of Medical Staff in Emergency Departments During the Coronavirus Disease 2019 Epidemic in China. *Brain, Behavior and Immunity*, Volume 80, pp. 60-65.
- [35] Xiao, H., *et al.* (2020). The Effects of Social Support on Sleep Quality of Medical Staff Treating Patients with Coronavirus Disease 2019 (COVID-19) in January and February 2020 in China. *Medical Science Monitor*, Volume 26, pp. 1-7.
- [36] Naranjee, N., Ngxongo, T. and Sibiyi, M. (2019). Financial Management Roles of Nurse Managers in Selected Public Hospital in KwaZulu-Natal Province, South Africa. *African Journal of Primary Health Care & Family Medicine*, Volume 11, Issue 1, pp. 1-8.
- [37] Pesulina, T. L. and Hetharie, Y. (2020). Perlindungan Hukum Terhadap Keselamatan Kerja Bagi Tenaga Kesehatan Akibat Pandemi COVID-19. *SASI*. Volume 26, No.2, pp. 280-285.