PSYCHOLOGICAL STRESS ON NURSE PERFORMANCE IN PROVIDING NURSING CARE DURING THE COVID-19 PANDEMIC

Meirizal Ari Putra1, Lina Handayani2*, Ciptasari Prabawanti3.
1,2,3Public Health Faculty, Universitas Ahmad Dahlan, Yogyakarta, Indonesia
Email: meirizalarieputra@gmail.com, linafkm@gmail.com, ciptasari.prabawanti@psy.uad.ac.id

ABSTRACT

Objectives: This study examines the psychological stress experienced by nurses, explores the psychological stress on nurses’ performance in providing nursing care in hospitals during the COVID-19 pandemic.

Methods: In this study using a qualitative design with an analytical strategy using in-depth interviews, the subjects used were nurses who worked in two Yogyakarta hospitals, the sampling technique used consecutive sampling, which was then carried out qualitative analysis.

Results: The research has two themes. First, the psychological stress experienced at the beginning of the pandemic with four sub-themes, namely; 1) fatigue and PPE problems during the pandemic; 2) fear of infection; 3) anxiety caused by community stigmatization; 4) concern for family health. Second, coping and self-care with three sub-themes, namely; 1) awareness and vigilance on duty; 2) spiritual support; 3) support for facilities and infrastructure.

Conclusion: Research provides in-depth knowledge of the stress experienced by nurses in the COVID-19 pandemic situation and can provide advice to hospital management in ensuring the health and safety of nurses in the hospital.

Recommendation: Hospitals can improve the Standard Operating Procedures, mental support, support for personal protective equipment to protect nurses to minimize the negative impact in nurses in providing nursing care in a pandemic situation.

INTRODUCTION

Coronavirus Diseases (COVID-19) is a current world health problem that was declared a pandemic by (WHO) in early 2020. Where in early 2020 the world got a new virus problem whose cause was unknown, this virus originated in the city of Wuhan, Hubei Province, China, where 44 pneumonia patients with very severe signs and symptoms were found at the end of 2019. In January 2020 this type of virus was identified as the coronavirus by the World Health Organization (Handayani D et al., 2020). Coronavirus is an emerging threat to health security worldwide and has caused epidemics worldwide, resulting in mortality and a worsening economic crisis in almost all parts of the world (Chang et al., 2020; Gugus Tugas COVID-19, 2020). In addition to economic problems, the impact also
affects health workers around the world, who are required to work harder in providing health services resulting in increased stress for nurses (Assiri et al., 2013). The stress experienced by nurses in this pandemic situation can certainly affect the performance of nurses in providing comprehensive nursing care to patients so that it affects health services for patients in the hospital (Sang Long et al., 2014). Nurses' psychological stress is influenced by several factors such as workload, patient mortality rate, supervisory management, working hours, number of patients, intensity obtained, and uncontrollable situations such as in this pandemic situation (Al-Hajjaa et al., 2018; Carotenuto et al., 2012; Chan & La Greca, 2020; Nabirye et al., 2011; Tesfaye & Abera, 2015; Younes & Shalaby, 2014). A study conducted on health workers in dealing with COVID-19 in Singapore showed, out of 500 health workers, 68 (14.5%) nurses experienced anxiety, 42 (8.9%) experienced depression, and 31 (6.6%) experienced psychological stress 36 (7.7%), which resulted in health workers being traumatized by the handling of COVID-19 (Impact & Workers, 2020).

Nurse performance is the result of an action or implementation of a nurse's duties in providing nursing care to patients, being responsible for the organization carried out within a certain period, the performance of nurses in providing nursing care needs to be measured to know the categories of nursing care provided by nurses in providing services to patients in a COVID-19 pandemic situation can be carried out well. To assess it must measure the nursing care process (assessment, diagnosis, intervention, implementation, and evaluation) given to patients (Al-Hajjaa et al., 2018; Carotenuto et al., 2012; Impact & Workers, 2020; Nabirye et al., 2011; Tesfaye & Abera, 2015).

The spread of this Coronavirus infection is very fast, data were obtained on August 31, 2020, the number of confirmed infected patients worldwide reached 25.4 million infected people. In the state of Indonesia itself as of August 31, 2020, the number of confirmed cases of coronavirus infection was 174,796 cases, 7,417 cases died, and 125,959 confirmed cures. Yogyakarta Province, the distribution of confirmed COVID-19 cases has reached 1,425 cases (Gugus Tugas COVID-19, 2020).

The COVID-19 pandemic situation can indirectly increase concerns for nurses in providing professional nursing care in hospitals, resulting in high stressors that can affect the performance of nurses in providing nursing care. Based on the description above, the researcher is very interested in conducting a study with the theme Corona Virus, the aim of the research that you want to know is to find out the description of psychological stress on the performance of nurses in providing nursing care at the hospital during the COVID-19 pandemic which was carried out at the PKU Muhammadiyah Yogyakarta hospital and Mitra Paramedika Hospital Yogyakarta.

**Figure 1. The theoretical framework for psychological stress in the COVID-19 pandemic situation on the performance of nurses**

![Diagram](https://example.com/diagram.png)
METHOD

Study design
This study used a qualitative design with an analytical strategy using in-depth interviews (O’Cathain et al., 2009; Sun et al., 2020; Ulfah et al., 2018).

Sample/Participants/Informants
Participants in this study were nurses who served in the Yogyakarta Special Region Hospital with a total sample of 10 nurses and 2 informants.

Data collection
The sampling technique will be carried out by consecutive sampling, namely the selection of nurses by assigning subjects who meet the research criteria to be included in the study until a certain period, so that the number of respondents can be fulfilled by looking at the inclusion and exclusion criteria starting with observing, then conducting interviews and finally documenting. For informant, data retrieval is done by interviewing the head of the room and the hospital education and training section. Collecting data analysis begins with collecting data on informants and continues with interviewing nurses who are included in the research criteria, then reducing data for simplification, then presenting data, and drawing conclusions or themes based on the results of interviews that have been collected from the subject.

Data analysis
Data were studied through six steps of thematic analysis: data introduction, first code generation, theme search, theme research, theme definition and naming, as well as reporting. NVivo 12 makes it easier for researchers to handle their data iteratively, and emerging themes were organized based on the semantic content of the codes.

Trustworthiness/Rigor
The interview questions were based on the interview guideline instrument made by the researcher and then tested the validity to determine the levels of validity or validity, the validity of the items was tested using expert judgment. The results of the validity and reliability tests that have been carried out state that each item in the questionnaire is declared valid and reliable to be a research measurement tool.

Ethical consideration
Ethical approval was obtained from the Health Research Ethics Committee of PKU Muhammadiyah Yogyakarta Hospital No. Ref: 0035/KT.7.4/X/2020 Informed consent was obtained from all respondents before data collection.

RESULTS
This study used a qualitative design approach so that the results and discussion will be described in two parts, the discussion is based on research results and characteristics of respondents and identification of psychological stress themes of nurses in providing nursing care in a pandemic situation COVID-19. The results of the characteristics are described in (Table 1).

Table 1. Participant Characteristics (n = 10)

| Characteristics | N   | %  |
|-----------------|-----|----|
| Gender          |     |    |
| Man             | 4   | 40 |
| Women           | 6   | 60 |
| Age             |     |    |
| 20-35 years     | 6   | 60 |
| >35 years       | 4   | 40 |
| Length of working |  |    |
| <1 year         | 10  | 100|
| >1 year         |    |    |
Table 1 shows that there were 10 participants in this study, most of whom were female, aged between 20-35 years, with a length of work of more than 1 year, and had the status of permanent employees.

Based on the results of the psychological stress interview on the performance of nurses in providing nursing care in the COVID-19 pandemic situation, two themes are described in (Table 2).

Table 2. Themes identified through interviews with nurses

| Themes                                      | Subtheme                                                                 |
|---------------------------------------------|--------------------------------------------------------------------------|
| Psychological stress at the start of the    | Fatigue and personal protective equipment problems during the pandemic |
| COVID-19 pandemic                           |                                                                          |
|                                             | Fear of viral infections                                                |
|                                             | Anxiety due to stigmatization of public acceptance                     |
|                                             | Concern for family health                                               |
| Coping and Self Care                        | Awareness and Vigilance on duty against the dangers of COVID-19         |
|                                             | Spiritual Support in the form of spiritual facilities                  |
|                                             | Supporting facilities and infrastructure for the prevention of COVID-19 |

Table 2 explains the theme of psychological stress in nurse's performance. At the beginning of the pandemic, nurses experienced suffering in using personal protective equipment, experiencing fear of contracting the virus, then stigmatizing community acceptance, caring for family health. Then nurses can build and care for themselves by building awareness and alertness on the road, supported by spiritual and spiritual facilities and support for supporting facilities and infrastructure in preventing COVID-19.

DISCUSSION

This research raises the first theme regarding psychological stress at the beginning of the pandemic, one of which is the problem of personal protective equipment during the pandemic which causes stressful conditions for nurses (Sun, Wei, Shi, Jiao, Song, Ma Msc, et al., 2020). At the beginning of the pandemic, personal protective equipment for health workers became a major problem because there was a shortage of personal protective equipment. Much medical personnel are waiting for personal protective equipment that is following standards, while on the other hand patients who have been infected with COVID-19 are waiting to be treated (The, 2020), cases of health workers applying proper personal protective equipment use and adequate procedures, it is important to consider other situations of transmission, potential, such as contacts among coworkers and contacts outside the hospital (Belingheri et al., 2020; Greenberg, N., Docherty, et al., 2020).

The fear experienced by nurses as the frontline in handling COVID-19 positive patients is a matter that needs to be a major concern. Research that has been conducted in China reports that 23 nurses who are over 30 years of age experience psychological changes in the COVID-19 pandemic situation which consists of three stages, including 1) the initial stage (being ambivalent) at this stage the nurse will feel an uncomfortable feeling, chaos such as fear of being infected; 2) the middle stage (emotional exhausted) the manifestation is more prone to anxiety, depression, automation, irritability, convulsiveness, and fear; and 3) in the final stage (energy renewal) the nurses already feel that they
have received support from social, fellow nurses, and society and the government, meanwhile in the case of the COVID-19 pandemic many nurses feel they have failed the mission because so many people died and very few had saved at the start of the pandemic (Bryan et al., 2018; Williamson et al., 2020; Zhang Y et al., 2020)

Almost all participants and supporting informants in the study expressed their anxiety at the start of the pandemic. A survey of 102 nurses serving in the ICU, reported that nurses felt they had a large workload, fatigue, frustration, difficulty sleeping, decreased appetite, frequent crying, occasional thinking, suicide and extreme anxiety, it certainly degrades nurse performance (Shen X et al., 2020). Another survey stated that medical staff, especially nurses in the emergency department and ICU, are more likely to experience insomnia, depression, somatization, and obsessive-convulsive symptoms compared to non-medical staff (Zhang WR et al., 2020).

Extreme concern for the health of their family at the start of the pandemic. This situation has caused concern for their safety as well as anxiety if transmitting the virus to the family. The most important source of stress is the increasing number of health professionals infected with COVID-19 (The, 2020; Zhang WR et al., 2020).

The level of vigilance of the nurses slowly reduces anxiety, this is supported by the mental nurse that is needed to be able to do good coping in the various problems faced to be resolved properly. So this is an appropriate coping resource for nurses in a pandemic situation (Peters et al., 2014). Self-care starts with the individual's awareness of himself by realizing what will happen to him in the future so that the individual will manage, overcome, and prevent various problems (Hidayati et al., 2020).

External coping strategies have been carried out according to information from participants and informants. Self-care theory is formed based on three interrelated theories, namely: 1) self-care theory, a theory that describes and explains the goals and ways of individuals to care for themselves; 2) deficit self-care theory, a theory that describes and explains the situation of individuals who need help from others in carrying out self-care; and 3) the theory of the nursing system (nursing system theory), a theory that describes and explains the interpersonal relationships that must be done and maintained to be able to do something productively (Renpenning KML, 2003).

The better the facilities and infrastructure to support the prevention and termination of the COVID-19 chain, the coping strategy in preventing and breaking the COVID-19 chain that focuses on problems consists of three things, including 1) planful problem solving, react by making efforts specific aims to change circumstances followed by an analytical approach to solving problems; 2) confrontative coping, reacting to change the situation which can describe the level of risk that must be taken; and 3) seeking social support, namely reacting by seeking support from outside parties, whether in the form of information, concrete help, or emotional support. The three coping strategies are carried out by the hospital management as an effort to strive for stress release on nurses which results in efficient performance of nurses in providing standardized nursing care during the COVID-19 pandemic (Allen et al., 2014).

CONCLUSIONS
The results of the study to get the theme of psychological stress experienced by nurses at the beginning of the pandemic and Coping and Self Care for nurses in
providing nursing care in the COVID-19 pandemic situation. Hospital management is recommended to improve operational procedures, personal protective equipment that ensures the safety of nurses and implements government policy in ensuring the safety and health of nurses in health care sed.

REFERENCES

Al-Hajaa, E. A., Ayaad, O., Al-Refaay, M., & Al-Refaay, T. (2018). Malpractice: An Updated Concept Analysis and Nursing Implication in Developing Countries. 7(1), 81–85. https://doi.org/10.9790/1959-0701078185

Allen, J. O., Zebrack, B., Wittman, D., Hammelef, K., & Morris, A. M. (2014). A model of barriers to the use of coping resources. The Journal of Community and Supportive Oncology, 12(8)(Expanding the NCCN guidelines for distress management), 271–277.

Assiri, A., McGeer, A., Perl, T. M., Price, C. S., Al Rabeelah, A. A., Cummings, D. A. T., Alabduallatif, Z. N., Assad, M., Almulhim, A., Makhdoom, H., Madani, H., Alhakeem, R., Al-Tawfiq, J. A., Cotten, M., Watson, S. J., Kellam, P., Zumla, A. I., & Memish, Z. A. (2013). Hospital outbreak of middle east respiratory syndrome coronavirus. New England Journal of Medicine, 369(5), 407–416. https://doi.org/10.1056/NEJMoa1306742

Belingheri, M., Paladino, M. E., & Riva, M. A. (2020). Additional exposure situations to COVID-19 for healthcare workers. S0195-6701(0120)30132-30138. The Journal of Hospital Infection, Beyond the assistance, https://doi.org/10.1016/j.jhin.2020.03.033.

Bryan, C. J., Bryan, A. O., Roberge, E., Leifker, F. R., & Rozek, D. C. (2018). Moral injury, posttraumatic stress disorder, and suicidal behavior among National Guard personnel. 10(1), 36. Psychological, Psychological trauma: theory, research, practice, and policy, https://doi.org/10.1037/tra0000290.

Carotenuto, A., Molino, I., Fasanaro, A. M. Ari., & Amenta, F. (2012). Psychological stress in seafarers: a review. International Maritime Health, 63(4), 188–194.

Chan, S. F., & La Greca, A. M. (2020). Perceived Stress Scale (PSS). Encyclopedia of Behavioral Medicine, 1–2. https://doi.org/10.1007/978-1-4614-6439-6_773-2

Chang, L., Yan, Y., & Wang, L. (2020). Coronavirus Disease 2019: Coronaviruses and Blood Safety. Transfusion Medicine Reviews, September 2012, 2–7. https://doi.org/10.1016/j.tmrv.2020.02.003

Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during covid-19 pandemic. m1211. BMJ, 368, https://doi.org/10.1136/bmj.m1211.

Gugus Tugas COVID-19. (2020). Situasi virus corona. https://www.covid19.go.id/situasi-virus-corona/

handayani D, Hadi D.R, Isbaniah F, Burhan E. A. (2020). penyakit virus corona 2019. CPD Infection, 3(1), 9–12.

Hidayati, D. L., Suryani, S. I., Hasanah, M., & Septiani, R. (2020). Konseling Islam untuk meningkatkan strategi coping korbn bencana kebakaran di Kota Samarinda. J Bimb Konsel
Impact, P., & Workers, H. C. (2020). *Annals of Internal Medicine* *Psychological Impact of the COVID-19 Pandemic on Health*. 16(April), 5–7.

Nabirye, R. C., Brown, K. C., Pryor, E. R., & Maples, E. H. (2011). Occupational stress, job satisfaction and job performance among hospital nurses in Kampala, Uganda. *Journal of Nursing Management*, 19(6), 760–768. https://doi.org/10.1111/j.1365-2834.2011.01240.x

O’Cathain, A., Nicholl, J., & Murphy, E. (2009). Structural issues affecting mixed methods studies in health research: A qualitative study. *BMC Medical Research Methodology*, 9(1), 1–8. https://doi.org/10.1186/1471-2288-9-82

Peters, D. H., Adam, T., Alonge, O., Agyepong, I. A., & Tran, N. (2014). Republished research: Implementation research: what it is and how to do it. *British Journal of Sports Medicine*, 48(8), 731–736.

Renpenning KML, T. S. (2003). Selected papers of Dorothea Orem. *New York. Springer Publishing Company, Self care theory in nursing.*

Sang Long, C., Owee Kowang, T., Ai Ping, T., & Muthuveloo, R. (2014). Investigation on the impact of job stressors on nurses in Malaysia. *Asian Social Science*, 10(4), 67–77. https://doi.org/10.5539/ass.v10n4p67

Shen X, Zou X, Zhong , Yan J, L. L. (2020). Psychological stress of ICU urses in the time of COVID-19. *Critical Care (London, England)*, 24(1), 200. https://doi.org/10.1186/s13054-020-02926-2.

Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., Wang, H., Wang, C., Wang, Z., You, Y., Liu, S., & Wang, H. (2020). A qualitative study on the psychological experience of caregivers of COVID-19 patients. *American Journal of Infection Control*, 48(6), 592–598. https://doi.org/10.1016/j.ajic.2020.03.018

Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma Msc, L., Wang, H., Wang, C., Wang, Z., Liu, S., & Wang, H. (2020). Qualitative study: Experienced of caregivers during Covid19. *American Journal of Infection Control*, 48(January), 592–298.

Tesfaye, T., & Abera, A. (2015). Assessment of Factors Affecting Performance of Nurses Working at Jimma University Specialized Hospital in Jimma Town, Oromia Region, South-West Ethiopia. *Journal of Nursing & Care*, 04(06), 4–10. https://doi.org/10.4172/2167-1168.1000312

The, L. (2020). COVID-19: protecting health-care workers. 395(10228), 922. *Lancet (London, England)*. https://doi.org/10.1016/S0140-6736(20)30644-9.

Ulfah, E., Rahayuningsih, S. E., Herman, H., Susiarno, H., Gurnida, D. A., Gamayani, U., Sukandar, H., Studi, P., Kebidanan, M., Ilmu, D., Anak, K., Orthopaedi, D., Traumatologi, D., Obstetri Dan Ginekologi, D., Neurologi, D., & Epidemiologi, D. (2018). *ARTIKEL PENELITIAN Global Medical and Health Communication Asuhan Nutrisi dan Stimulasi dengan Status Pertumbuhan dan Perkembangan Balita Usia 12-36 Bulan. April*. https://doi.org/10.29313/gmhc.v6i1.2323
Williamson, V., Murphy, D., & Greenberg, N. (2020). COVID-19 and experiences of moral injury in frontline key workers. *Occupational Medicine (Oxford, England), Kgaa052.*, https://doi.org/10.1093/occmed/kqaa052.

Younes, S., & Shalaby, S. (2014). Stress among nurses working in the Intensive Care Environment: A Study in two different Egyptian Governorates. *Zagazig Nursing Journal, 10*(2), 21–44. file:///C:/Users/user/Downloads/Stress among Nurses.pdf

Zhang WR, Wang K, Yin L, Zhao WF, Xue Q, dkk. (2020). Mental health and psychosocial problems of medical health workers during the COVID-19 epidemic in China. *Psychother Psychosom, 45.*

Zhang Y, Wei L, Li H, Pan Y, Wang J, Li Q, Wu Q, W. H. (2020). The psychological change process of frontline nurses caring for patients with COVID-19 during its outbreak. *Issues Ment Health Nurs, 41*(6), 525–530. https://doi.org/10.1080/01612840.2020.1752865