

STRESS MANAGEMENT OF EMERGENCY NURSES DURING THE COVID-19 PANDEMIC: SCOPING ARTICLE

Annisa'i Rohimah, Adi Buyu Prakoso*, Rahmah Yanita Kusuma, Sobran Jamil, Sri Setiya Rini, Syahirul Alim

Master of Nursing Study Program, Faculty of Medicine, Public Health and Nursing, Gadjah Mada University, Yogyakarta, Indonesia

Article Information

Received: 21 February 2022
Revised: 22 April 2022
Accepted: 21 June 2022

*Corresponding Author

Adi Buyu Prakoso
adi.buyu.prakoso@mail.ugm.ac.id

DOI

10.20884/1.jks.2022.17.2.5586

ABSTRACT

Nurses are front-line health professionals. This is especially so for those in the Emergency Room (ER) and during the COVID-19 pandemic, as they are the key to controlling virus transmission. The purpose of this article is to review the stress management strategies applied by nurses in emergency rooms throughout the COVID-19 pandemic. A scoping review was done by searching for related literature using databases from Science Direct, ProQuest, SAGE Journal, and BMJ. We explored the literature from a relevant point of view and assessed the quality of the research. The data were then mapped to identify the main themes found in the literature. A total of 36 articles were found from the search results and six articles were selected to be analyzed. We observed that stress on nurses is caused by an excessive burden of several factors, such as having a family or child, lifestyle changes, lack of access to personal protective equipment (PPE), lack of self-confidence, as well as feelings, and fatigue. We also observed how nurses managed stress, namely, by strengthening training, positive spiritual coping, social support, and access to mental health services.

Keywords: Covid-19 pandemic; emergency room nurse; stress; stress management



ISSN : 1907-6637

e-ISSN : 2579-9320

INTRODUCTION

The Coronavirus (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. This disease has become a global pandemic and affected health care systems around the world. The World Health Organization (WHO) officially declared this issue an international emergency on March 11, 2020 (Soltany et al., 2020). COVID-19 is transmitted quickly, widely, and generally unnoticed, through droplets and contact. Currently, therapy for COVID-19 is still limited due to the lack of supporting evidence regarding its treatment and vaccines (Hou et al., 2020). As front-liners, doctors, nurses, and ambulance workers were more likely to be infected than other groups. Of the confirmed cases worldwide, 6% or 90,000 cases were healthcare professionals (Cui et al., 2021).

Nurses are health workers with an important role in fighting infectious diseases. This is especially so for Emergency Department (ED) nurses, as they work at the threshold of the hospital health care system. They have the role of differentiating confirmed cases from suspected patients

through the careful evaluation of clinical manifestations, contact history, and patient travel history (Cui et al., 2021). Thus, ED nurses hold the key to controlling transmission among patients, staff, visitors, and the community.

During the pandemic, there are several types of pressure experienced by nurses in the ER, both physically and psychologically, as triggers for stress. This pressure can cause burnout, loss of enthusiasm, and depersonalization (Nishimura et al., 2021). The common risk factors that cause stress and anxiety during a pandemic include lack of an effective hospital management system, lack of personal protective equipment (PPE) and training, exposure to confirmed cases, fear of infection, fear of spreading the virus to family members, concerns about their children, long working hours, and heavy workload (Cui et al., 2021).

During previous epidemics, there has been previous research on the experience of nurses in dealing with epidemic conditions and how they coped. For example, during the

Ebola epidemic, supportive supervision, peer support networks, and better use of communication technologies were needed, along with programs that would rebuild trusting relationships with community structures (Raven et al., 2018). However, limited research has been done regarding the COVID-19 pandemic, especially on the work stress of nurses in the ER during COVID-19. Much of the research has focused on the mental health of nurses caring for patients with definite diagnoses in isolation wards. Therefore, this narrative review provides a global perspective on the impact of the COVID-19 pandemic on the ED. This study discussed the impact of the pandemic on the mental health of ED staff and investigated how emergency room nurses managed their stress during the COVID-19 pandemic.

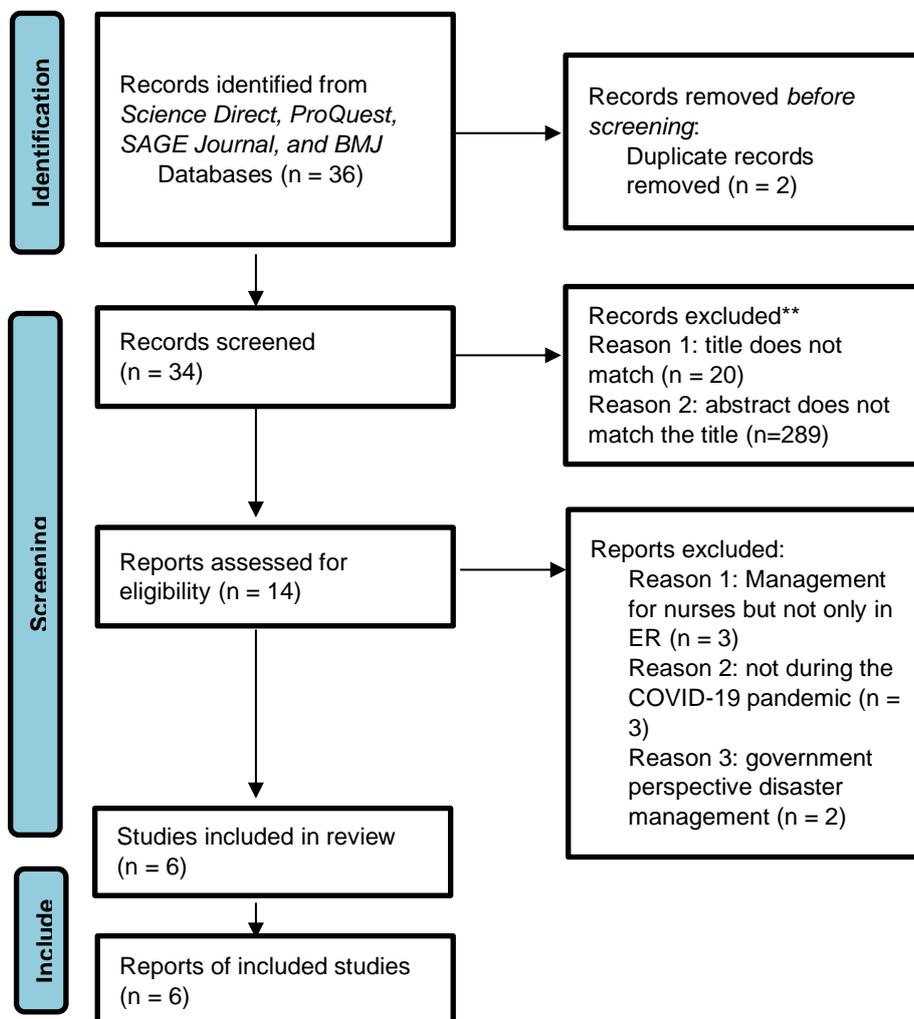
METHOD

The research used the scoping review technique with a methodological framework as suggested by Arksey and O'Malley for the literature review. The following five steps were taken for the review: 1) identification of research questions, 2) identification of relevant articles, 3) selection of relevant articles, 4) selection of literature related to articles and data extraction, as well as 5) compiling, summarizing, and reporting results.

When developing the review's focus and search strategy, the researchers applied the Population, Concept, Context (PCC) format to manage and determine the focus of the review. In this study, P = emergency nurse, C = strategies to reduce work stress/stress management/coping strategy, and C = stress in the pandemic era. The question asked in this article is "How do emergency room nurses manage their stress during the COVID-19 pandemic?"

Relevant literature was searched on databases, including Science Direct, ProQuest, SAGE Journal, and BMJ, as well as using the Boolean operator "OR/AND". The following keywords were used in the search: "Emergency nurse" AND "strategies to reduce work stress" OR "stress management" OR "Coping Strategy" AND "stress in a pandemic era".

The limitation of this study is the selection of only free, full-text articles from 2020-2021 in English. The screening process obtained 36 articles (picture 1). The duplicate articles were then identified from three databases using the Mendeley application to simplify the search process. The researcher then screened the articles by reading the title and abstract based on the inclusion criteria. Finally, 6 articles were selected to be analyzed (Table 1).



Picture 1. Identification of studies via databases and registers

Table 1. Literature collection

No	Title/ author/ year	Research purposes	Research design	Sample characteristics	Results
1	Impact of COVID-19 on Anxiety, Stress, and Coping Styles in Nurses in Emergency Departments and Fever Clinics: A Cross-Sectional Survey Shasha Cui, Yujun Jiang, Qianyu Shi, Lei Zhang, Dehua Kong, Meijuan Qian, Jing Chu (2021)	To identify the impact of COVID-19 on the psychology of Chinese nurses in the ED and fever clinic and to identify associated factors.	Cross-sectional study	453 nurses, 16 (3.53%) were male, and 437 (96.47%) were female. The mean age was 33.15 years, and the average length of employment was 11.33 years.	Participants who had the following characteristics had more mental health problems: female gender, fear of infection among family members, regrets about being a nurse, less rest time, more night shifts, had children, lacked confidence in fighting infection, did not get emergency protection training, and attitude. Effective measures are needed to maintain the mental health of nurses in emergency departments and fever clinics. This includes strengthening protection training, reducing night shifts, ensuring adequate rest time, and timely update of the latest pandemic situation.
2	Perceived Stress and Affecting Factors Related to the COVID-19 Pandemic of Emergency Nurses in Turkey Çınar, Derya; Nazan Kılıç Akça; Pınar Zorba Bahçeli; Yaşarğ (2021)	To investigate the stress experienced by emergency nurses and the factors that influence it during the COVID-19 pandemic.	Descriptive study, cross-sectional study	169 emergency nurses, registered with the Emergency Nurses Association, aged 18 years or older, volunteered to participate in the research, working in the ED during COVID-19.	5 factors were found to influence the stress levels of emergency nurses during the COVID-19 pandemic, such as (1) the application of respiratory isolation guidelines, (2) lifestyle changes, (3) lack of access to PPE, (4) lack of human resources in the ED room, and (5) fear of contracting COVID-19.
3	The Effectiveness of a Time Management Workshop on the Job Stress of Nurses Working in Emergency Departments: An Experimental Study Azam Karbakhsh Ravari, MSN, Jamileh Farokhzadian, Ph.D., Monirsadat Nematollahi, Ph.D., Sakineh Miri, MSN, and Golnaz Foroughameri, MSN, Kerman, Iran (2020)	Evaluating the effectiveness of time management to reduce stress on emergency nurses	Randomized controlled trial	80 emergency nurses	There was no significant difference in the stress level changes of emergency nurses in the intervention group and the control group after the time management training.

Table 1. Literature collection (continue)

No	Title/ author/ year	Research purposes	Research design	Sample characteristics	Results
4	<p>Religious Coping, Depression and Anxiety Among Healthcare Workers During the COVID-19 Pandemic: A Malaysian Perspective</p> <p>Soon Ken Chow, Benedict Francis, Yit Han Ng, Najmi Naim, Hooi Chin Beh, Mohammad Aizuddin Azizah Ariffin, Mohd Hafyuzdin Md Yusuf, JiaWen Lee, and Ahmad Hatim Sulaiman</p> <p>(2021)</p>	Evaluating the prevalence of stress and depression in health workers and their relationship to spiritual coping	Cross-sectional study	200 health workers, most of whom are health workers on duty in the ER, UMMC health workers, managed COVID-19 patients, 20 years old and over, and have faith (not atheists).	Positive spiritual coping can help overcome stress and depression for health workers during COVID-19.
5	<p>Prospective Study of the Wellness of Emergency Medicine Providers Across Ten Academic and Community Hospitals During the Initial Surge of the COVID-19 Pandemic</p> <p>Heather Kelker, Kyle Yoder, Paul Musey Jr, Madison Harris, Olivia Johnson, Elisa Sarmiento, Punit Vyas, Brooke Henderson, Zachary Adams, and Julie Welch</p> <p>(2021)</p>	Assessed well-being, resilience, fatigue, health factors, and the needs of Emergency Medicine (EM) physicians and advanced practice providers (e.g., nurse practitioners and physician assistants; APP) during the early phase of the COVID-19 pandemic	A descriptive, prospective, cohort survey study	157 employed EM doctors and 56 APP working in 10 emergency departments	This study of frontline physicians and APP during the initial spike of the COVID-19 pandemic in Indiana found significant levels of stress, anxiety, fear, safety concerns, and relationship tension, all of which gradually improved. Psychological stress and burnout are also reduced when specific health needs are addressed early and resources are made quickly available through department, institutional, and community initiatives. Examples of interventions include increased availability of PPE, hospital-provided scrubs and on-site bathrooms, access to sleeping areas on-site or at local hotels, and community-based laundry services. Adequate PPE and rest are also more important for frontline healthcare providers early in a pandemic to reduce stress than access to psychologists.
6	<p>Emergency Department Mental Health Presentations Before and During the COVID-19 Outbreak in Western Australia</p> <p>Milan DragovicViki PascuTammy HallJesse IngramFlavie Waters</p> <p>(2020)</p>	To check whether the ED also noted an increase in mental health presentation	Research examining the number and type of presentations regarding mental health between 2019 and 2020	Mental health personnel in three ED North Metropolitan Health Services was selected from the Emergency Department Data Collection database. The population of the area consists of about 800,000 people.	There has been an unexpected increase in mental health presentations in the ED due to the increase in COVID-19 cases. Evidence showed a positive impact on individuals who have visited counseling services via telephone.

RESULTS

Overall, six articles met the inclusion criteria, and two themes were discovered: the factors that cause work stress in ER nurses during the pandemic and the stress management strategies of ER nurses during the pandemic.

Theme 1: Factors that cause work stress in ER nurses during a pandemic

A total of three studies discussed the factors that cause stress and anxiety in ER nurses. Research conducted by Cui, et al (2021) found that excessive workload, fear of infecting family members, death of medical staff/colleagues, feelings of regret being a nurse, female gender, less rest time, more night shifts, having children, lack of confidence in fighting contagion, and not receiving emergency protection training are causes of stress for ED nurses. Another study by Kelker et al. (2021) showed that nurses felt isolated and exhausted while working in the emergency room during a pandemic. Another study also found the following five factors that influence the stress of ER nurses during the COVID-19 pandemic: (1) implementation of respiratory isolation guidelines, (2) lifestyle changes, (3) lack of access to PPE, (4) lack of human resources in the ED room, and (5) fear will be infected with COVID-19 (Derya, Akça, Bahçeli, & Yaşarğ., 2021).

Theme 2: Stress management strategies of ER nurses during the pandemic

Five articles discussed the stress management strategies during the COVID-19 pandemic. Research by Cui, et al (2021) stated that effective actions are needed to maintain the mental health of ER nurses, including strengthening protective training, reducing night shifts, ensuring adequate rest time, and providing timely updates on the latest pandemic situation. Time management can also reduce the stress levels of ER nurses (Ravari, et al., 2020). Another study by Chow, et al. (2021) found that positive spiritual coping that prioritizes the religious understanding of bonding, surrendering, and drawing closer to God can help generate and increase positive coping mechanisms to overcome mental health problems. Research from Kelker, et al. (2021) identified the specific needs of EM providers through advocacy work and targeted interventions per department and institution. Furthermore, counseling services via telephone can be an option for health workers who are on duty in the ER during the COVID-19 pandemic to have access to mental health services (Dragovic, Pascu, Hall, Ingram, & Waters, 2020)

DISCUSSION

COVID-19 patients will be handled by ER nurses when they arrive at the hospital. This is why ED nurses are considered to be the first group in providing health services to COVID-19 patients (Derya, Akça, Bahçeli, & Yaşarğ., 2021). As an important area in the hospital, the ED is always busy with high levels of stress due to workload, surges in patients, and other unexpected situations when providing health services (Ravari, et al., 2020). The high level of stress, fear, anxiety, and worry about safety was felt by most health care providers in the ED during COVID-19 (Kelker et al., 2021). This is supported by Derya, et al.'s (2021) study who found that half of the ER nurses had above-average stress levels during the COVID-19 pandemic.

Stress on health workers sometimes arises when they face difficulties in providing or accessing optimal care and treatment due to negative stigma in society (Aflakseir in Chow, et al., 2021). The application of respiratory isolation

guidelines, changes in lifestyle both in the work environment and other social environments, lack of access to PPE, lack of human resources for nurses in the ER, and fear of being infected with COVID-19 are the main factors that cause the increased stress levels of ER nurses (Derya, Akça, Bahçeli, & Yaşarğ., 2021). Fear of infecting family members, death of a colleague, excessive workload, and internal shocks that contribute to negative thoughts such as feelings of regret in choosing a nursing profession are factors that cause stress in ER nurses (Cui, et al., 2021).

Based on this phenomenon, the psychological health of ER nurses needs to be considered and solutions need to be found, especially to deal with the stress during the COVID-19 pandemic to obtain optimal health services. Good social support from family members, patients, colleagues, and effective communication with leaders can also protect and reduce the stress levels of health officers in the ED during the pandemic (Kelker et al., 2021).

The nursing manager can also contribute to helping overcome the stress levels of ER nurses that are on duty. The following are steps that can be taken to solve this issue: meeting the nurses' physiological needs, providing counseling or psychological guidance to help ER nurses to manage stress, and strengthening the nurses' coping mechanisms. Furthermore, it is necessary to conduct comprehensive and effective infection control in the ED to increase the number of nurses and avoid a high workload (Derya, Akça, Bahçeli, & Yaşarğ., 2021). According to Cui, et al. (2021), the application of positive coping coupled with infection prevention through training can result in lower stress levels for ER nurses during the COVID-19 pandemic. Calculation of the optimal number of nurses in the emergency room, including proper and coordinated shift scheduling, can also help to overcome high workloads as one of the factors that cause stress in ER nurses.

Another action that can help overcome stress-related health problems for ER nurses during the COVID-19 pandemic is appropriate and effective support and training (Mukhtar in Derya, Akça, Bahçeli, & Yaşarğ., 2021). Counseling services by telephone can be an option to help the health workers on duty in the ER get mental health services during the COVID-19 pandemic (Dragovic, Pascu, Hall, Ingram, & Waters, 2020).

The solutions above offer several external methods for emergency room nurses to manage their stress. An internal solution that has been proven to be able to reduce the stress levels of nurses during the COVID-19 pandemic is spiritual coping. Improving negative spiritual coping and increasing positive spiritual coping through spiritual counseling can optimize mental health during the COVID-19 pandemic and help ER nurses go through difficult times while on duty (Derya, Akça, Bahçeli, & Yaşarğ., 2021).

The limitation of this study is that there are still few studies that specifically discuss stress management in nurses during the COVID-19 pandemic. The pandemic occurred in 2019 and the studies that were found generally discussed health workers including nurses. Most of the articles found also discussed the situation outside the ER such as in the isolation ward.

CONCLUSION AND RECOMMENDATION

Mental health problems that arise in nurses require great attention because nurses, as health care professionals on the front lines during the COVID-19 pandemic, have a high risk

of exposure to the virus. Therefore, effective action is needed to maintain the mental health of ER nurses during the COVID-19 pandemic. Nurses should receive protection training and update their knowledge of the pandemic situation. This can reduce the anxiety and fear felt by ER nurses and enable them to protect themselves and their family members. Moreover, ensuring adequate rest periods and reducing long shifts is one way to reduce stress on nurses in the ED. Spiritual coping can also help generate and enhance positive coping. Guidance and counseling services to encourage mental health services are also needed. Nevertheless, it is not only the management within the ER nurse that needs to be considered, but support from institutions and departments related to social support and nurse safety is needed.

This study recommends this scoping review be used as a reference to further studies on the stress management of nurses in the ER during the pandemic because it is still rarely done, especially in Indonesia.

REFERENCES

- Chow, SK, Francis, B., Ng, YH, Naim, N., Beh, HC, Aizuddin, M., Ariffin, A., Yusuf, MH, Lee, JW, & Sulaiman, AH (2021). Religious coping, depression and anxiety among healthcare workers during the COVID-19 pandemic: A Malaysian perspective. *Healthcare (Basel)*, 9(1):79. doi: 10.3390/healthcare9010079.
- Cui, S., Jiang, Y., Shi, Q., Zhang, L., Kong, D., Qian, M., & Chu, J. (2021). Impact of COVID-19 on Anxiety, Stress, and Coping Styles in Nurses in Emergency Departments and Fever Clinics: A Cross-Sectional Survey. *Risk Management and Healthcare Policy*, Volume 14, 585–594. <https://doi.org/10.2147/rmhp.s289782>
- Çınar D, Kılıç Akça N, Zorba Bahçeli P, & Bağ Y. (2021). Perceived stress and affecting factors related to COVID-19 pandemic of emergency nurses in Turkey. *J Nurs Manag*. 29(7):1916-1923. doi: 10.1111/jonm.13329.
- Dragovic, M., Pascu, V., Hall, T., Ingram, J., & Waters, F. (2020). Emergency department mental health presentations before and during the COVID-19 outbreak in Western Australia. *Australasian Psychiatry, Volume 28(6)*, 627–631. <https://doi.org/10.1177/1039856220960673>
- Hou, Y., Zhou, Q., Li, D., Guo, Y., Fan, J., & Wang, J. (2020). Preparedness of our emergency department during the coronavirus disease outbreak from the nurses' perspectives: A qualitative research study. *Journal of Emergency Nursing*, 46 (6), 848-861.e1. <https://doi.org/10.1016/j.jen.2020.07.008>
- Kelker, H., Yoder, K., Jr., PM, Harris, M., Johnson, O., Sarmiento, E., Vyas, P., Henderson, B., Adams, Z., & Welch, J. (2021). Prospective study of emergency medicine provider wellness across ten academic and community hospitals during the initial surge of the COVID-19 pandemic. *BMC Emerg Med* 21. 36 (2021). <https://doi.org/10.1186/s12873-021-00425-3>
- Nishimura, Y., Miyoshi, T., Hagiya, H., Kosaki, Y., & Otsuka, F. (2021). Burnout of healthcare workers amid the covid-19 pandemic: A Japanese cross-sectional survey. *International Journal of Environmental Research and Public Health*, 18 (5), 1–8. <https://doi.org/10.3390/ijerph18052434>
- Ravari, AK, Farokhzadian, J., Nematollahi, M., Miri, S., Foroughameri, G., Kerman, & Iran. (2020). The effectiveness of a time management workshop on job stress of nurses working in emergency departments: An experimental study. *Journal Of Emergency Nursing, Volume 46(4)*, 1-10.
- Raven, J., Wurie, H., & Witter, S. (2018). Health workers' experiences of coping with the Ebola epidemic in Sierra Leone's health system: a qualitative study. *BMC Health Services Research*, 18 (1), 251. <https://doi.org/10.1186/s12913-018-3072-3>
- Soltany, A., Hamouda, M., Ghzawi, A., Sharaq, A., Negida, A., Soliman, S., & Benmelouka, AY (2020). A scoping review of the impact of the COVID-19 pandemic on surgical practice. *Annals of Medicine and Surgery*, 57 ,24-36. <https://doi.org/https://doi.org/10.1016/j.amsu.2020.07.003>