

Research Article

Burnout and Work Stress of Nurses During the Covid-19 Pandemic

Nunung Rachmawati*, Tri Yuni Rahmanto

¹Prodi D3 Keperawatan, Sekolah Tinggi Ilmu Kesehatan YKY Yogyakarta, 55182, Indonesia

²RSUD Wonosari, 55812, Indonesia

Article history:

Submission October 2024

Revised December 2024

Accepted December 2024

*Corresponding author:

E-mail:

rachmawa84@gmail.com

ABSTRACT

Introduction: Nurses are one of the frontline healthcare workers who are highly vulnerable to exposure to COVID-19. Physical and mental exhaustion can be experienced by nurses working under the conditions of the COVID-19 pandemic. This exhaustion reflects the phenomenon of burnout. The prolonged COVID-19 pandemic in Indonesia also poses a risk of causing stress for all healthcare workers, especially nurses at Wonosari Regional General Hospital.

Methods: This study was conducted to describe the levels of burnout and work stress among nurses at Wonosari Regional General Hospital during the COVID-19 pandemic. The research design used was quantitative with a descriptive-analytic approach.

Results: The study found that nurses at Wonosari Regional General Hospital experienced burnout ranging from low to moderate levels, with none experiencing high levels of burnout. This could be attributed to the hospital's ability to meet the nurses' basic needs, such as adequate rest periods. Nurses at Wonosari Regional General Hospital experienced work stress ranging from mild to very severe levels. This could be due to the fear of contracting the virus, which poses a potential risk of death. The levels of burnout and work stress among nurses at the hospital varied, ranging from mild to very severe levels.

Conclusion: This study provides hospital policymakers with an overview of the condition of nurses during the COVID-19 pandemic, with the hope that the policies implemented can ensure safety and comfort, thereby reducing burnout and work stress among nurses during the pandemic.

Keywords: *Burnout, Covid-19, Nurses, Stress*

Introduction

The COVID-19 pandemic has placed a significant burden on Indonesia's healthcare system. The rising number of COVID-19 cases has not been matched by the readiness of healthcare facilities and personnel in the

country [1]. Differences in patient and healthcare worker characteristics, combined with the pandemic conditions in Indonesia, have made hospital healthcare services increasingly challenging [2].

How to cite:

Rachmawati, N. & Rahmanto, T. Y. (2024). Burnout and Work Stress of Nurses During the Covid-19 Pandemic. *Basic and Applied Nursing Research Journal*, 5(2), 133 – 140. doi:10.11594/banrj.05.02.08

Nurses, as frontline healthcare workers, are particularly vulnerable to COVID-19 exposure. The gap between the number of nurses and the population in Indonesia has contributed to their increasing workload [3]. The limited availability of personal protective equipment (PPE), especially for nurses handling COVID-19 patients, further adds to their burden [1]. While caring for COVID-19 patients, nurses are required to wear PPE for nearly their entire shift. They often need to stay away from their families and refrain from returning home during their duties to ensure the safety of their loved ones.

Nurses working under pandemic conditions for an uncertain period often experience both physical and mental exhaustion. This exhaustion can lead to burnout, characterized by mental fatigue and emotional distress [4].

Burnout among nurses poses serious risks. It increases the likelihood of mistakes, which can disrupt hospital services and endanger patient safety [5]. Additionally, burnout raises the risk of infections among patients [6]. The condition not only jeopardizes patient outcomes but also threatens nurses' well-being, potentially affecting their work quality and overall quality of life [7]. Nurses suffering from burnout may avoid their duties, such as arriving late or leaving early. When unable to provide optimal care, nurses may develop negative self-perceptions and feelings of guilt toward their patients [8]. In extreme cases, burnout can even lead to suicidal tendencies [9].

In addition to burnout, nurses are highly susceptible to stress. As healthcare professionals responsible for patient recovery and safety, the weight of this responsibility makes them particularly vulnerable. Although all hospital healthcare workers face stress risks, nurses are at a higher risk compared to other professionals [10]. Nurses unable to manage stress effectively may compromise patient safety.

The prolonged COVID-19 pandemic in Indonesia has caused significant physical and mental exhaustion, posing a heightened risk of stress for all healthcare workers, especially nurses in hospitals. Wonosari Regional General Hospital (RSUD Wonosari), a Type C hospital located in Wonosari, Gunungkidul, Yogyakarta,

employs 220 nurses. The pandemic has necessitated changes in hospital policies, work procedures, and physical or environmental conditions. Nurses have had to adapt to these changes while coping with burnout and managing work-related stress. Therefore, this study aims to explore the levels of burnout and work stress among nurses at RSUD Wonosari during the COVID-19 pandemic.

Methods

Study design

This study employs a quantitative research design with a descriptive-analytic approach. The design aims to describe and analyze burnout levels and work-related stress among nurses at Wonosari Regional General Hospital (RSUD Wonosari) during the COVID-19 pandemic.

Participants

The study population comprises all nurses employed at Wonosari Regional General Hospital (RSUD Wonosari) in Gunungkidul, Yogyakarta, totaling 220 nurses. A purposive sampling technique was utilized, with inclusion criteria requiring participants to hold at least a D3 (Diploma) in nursing and express willingness to participate in the study. A total of 64 respondents completed the questionnaires within the specified deadline. The study was conducted at RSUD Wonosari in Gunungkidul, Yogyakarta, from February to July 2021.

Data collection

Nurse characteristics were assessed using an online questionnaire distributed via a Google Form link. The form was completed by nurses who met the inclusion criteria.

Stress levels were measured using the Depression Anxiety Stress Scale 42 (DASS-42), developed by Lovibond and Lovibond in 1995 [11]. This tool includes 14 stress-related questions, each scored on a scale: *Never* (0), *Sometimes* (1), *Often* (2), and *Very Often* (3). The total score ranges from 0 to 42.

Burnout levels were assessed using the Maslach Burnout Inventory (MBI), developed by Maslach in 1981 [12,13]. This inventory includes 21 questions, with responses rated as

Never (1), *Rarely* (2), *Often* (3), and *Always* (4). Both the DASS-42 and MBI questionnaires were created as Google Forms to facilitate data collection during the COVID-19 pandemic. The questionnaire links were shared with nurses through their respective ward WhatsApp groups.

Both questionnaires had undergone validity and reliability testing prior to use. The Maslach Burnout Inventory demonstrated strong internal consistency, with Cronbach's alpha coefficients of 0.83 for frequency and 0.84 for intensity. The DASS-42 reliability test produced a Cronbach's alpha of 0.939, while the validity test confirmed that all items were valid based on a degree of freedom (df) of 28 and a significance level of 0.05.

Data analysis

The data collected in this study were analyzed using univariate methods to describe the distribution of burnout and stress levels among nurses, as well as their demographic and professional characteristics, such as age, gender, marital status, educational attainment, work experience, and ward assignment.

Stress levels were determined by summing each nurse's responses to the stress-related items in the DASS-42 questionnaire, resulting in a total score for each individual. These scores were categorized into five levels: *Normal* (scores 0–7), *Mild* (scores 8–9), *Moderate* (scores 10–12), *Severe* (scores 13–16), and *Very Severe* (scores ≥ 17).

Burnout levels were assessed using the Maslach Burnout Inventory (MBI) by

calculating the mean score of the responses for each participant. The resulting mean scores were classified into four categories: *Low* (mean 1–1.75), *Moderate* (mean 1.76–2.5), *Sufficient* (mean 2.51–3.25), and *High* (mean 3.26–4).

The frequency distribution of stress and burnout levels among the nurses was then calculated, providing a detailed overview of the prevalence of these conditions in the study population. This method allowed the researchers to identify patterns and trends in the data, such as the proportion of nurses experiencing high levels of stress or burnout and how these levels varied across different demographic and professional groups.

Ethical consideration

Ethical approval for this study was obtained from the Health Research Ethics Committee of RSUD Wonosari (Approval Number: 070/010/2021). Before data collection, the researchers explained the study's objectives and procedures to the respondents. Participation was voluntary, and respondents could withdraw from the study at any time without penalty. Informed consent was obtained from each participant. The researchers guaranteed data confidentiality and assured participants that their information would be published anonymously.

Result and Discussion

The description of burnout among nurses at Wonosari Regional General Hospital (RSUD) during the COVID-19 pandemic is summarized in the following table:

Table 1. Frequency Distribution of Burnout among Nurses at Wonosari Regional General Hospital (n=64)

Burnout level	Frequency	Percentage (%)
Low	44	68,8
Moderate	18	28,1
Sufficient	2	3,1
High	0	0

Based on Table 1, the findings indicate that nurses at Wonosari Regional General Hospital experienced burnout at levels ranging from low to moderate during the COVID-19 pandemic, with no nurses reporting high levels of

burnout. The majority of nurses (68.8%) reported low levels of burnout, while only a small proportion (3.1%) experienced sufficient levels of burnout.

Burnout is a common workplace phenomenon associated with chronic stress and excessive work demands [14]. Healthcare professionals, particularly nurses, are highly vulnerable to burnout due to the intense and complex nature of their work [15,16]. Nurses often work in environments directly tied to human safety and interact closely with patients and their families for extended periods

Work-related stress, increasing patient numbers, rising workloads, fear of contracting illnesses, mismatched job expectations, and uncomfortable work environments are significant contributors to burnout among nurses [17,18].

This study's results show that most nurses at Wonosari Regional Hospital experienced low levels of burnout during the COVID-19 pandemic, aligning with findings from previous research indicating that nurses in hospitals often report low burnout levels [19]. The experience gained from managing previous pandemics may have helped these nurses employ effective coping strategies, minimizing burnout's negative impact on their work [20].

Several factors likely influenced the burnout levels observed in this study. The hospital's ability to meet nurses' basic physiological needs, such as providing adequate nutrition, allowing sufficient rest, and implementing fair scheduling to prevent overworking, may have played a key role [21].

Although the majority of nurses reported low levels of burnout, a notable portion (28.1%) experienced moderate burnout, and a small fraction (3.1%) experienced sufficient burnout. Differences in burnout levels among nurses could be attributed to variations in personal characteristics, work patterns, and the complexity of patient conditions [19]. For example, female nurses are more prone to burnout than male nurses, and older nurses or those with children may experience heightened burnout risks [19]. Female nurses working in critical care units or COVID-19-related departments are particularly susceptible to higher burnout levels [20].

Interestingly, this study differs from some previous research, which found that nurses caring for patients with infectious diseases often reported higher burnout levels [22,23]. The fear of contracting COVID-19 and concerns about inadequate personal protective equipment (PPE) or transmitting the virus to family members have been strongly associated with burnout during the pandemic [24,25]. Although nurses at Wonosari Regional Hospital might have faced similar concerns, these factors appear to have been managed effectively for most of the workforce.

The level of work-related stress among nurses during the COVID-19 pandemic is summarized in the following table:

Table 2. Frequency Distribution of Work Stress Among Nurses at Wonosari Regional Hospital (n=64)

Work- stress level	Frequency	Percentage (%)
Normal	26	40,6
Mild	5	7,8
Moderate	15	23,4
Severe	15	23,4
Very Severe	3	4,7

As shown in Table 2, work-related stress among nurses at Wonosari Regional Hospital during the COVID-19 pandemic ranged from normal to very severe levels. While 26 nurses (40.6%) reported normal stress levels, a majority (59.3%) experienced stress levels ranging from mild to very severe. This included 5 nurses (7.8%) with mild stress, 15 nurses (23.4%) with moderate stress, 15 nurses

(23.4%) with severe stress, and 3 nurses (4.7%) with very severe stress.

In addition to burnout, healthcare workers, particularly nurses, are highly vulnerable to work-related stress. This issue has become a significant phenomenon in various countries. The COVID-19 pandemic has exacerbated the situation, causing healthcare workers, especially nurses, to experience significantly higher

levels of work-related stress compared to the pre-pandemic period [26].

Based on the findings of this research, the majority of nurses at Wonosari Regional Hospital experienced work-related stress ranging from mild to very severe levels. This aligns with previous studies indicating that stress levels among nurses in hospitals are generally high [27]. Concerns and fears about the risk of contracting a potentially fatal virus are key factors contributing to stress in nurses [28].

Among the 64 nurses surveyed at Wonosari Regional Hospital, 23.4% experienced moderate stress, while another 23.4% reported severe stress. These findings are consistent with prior research, which identified moderate stress levels among most nurses (49.6%) and high stress levels (71.85%) among nurses at Advent Hospital in Bandar Lampung [27,29]. Several factors contributed to nurses' stress during the pandemic, including increased workloads, the strict use of personal protective equipment (PPE), the high number of COVID-19 patients, and a shortage of healthcare workers, particularly nurses [26].

Additionally, previous studies have highlighted specific factors causing stress for nurses during the pandemic. These include physical discomfort such as rough and cracked hands from frequent hand washing and disinfectant use, difficulties using restrooms while on duty, restrictions on eating and drinking in the workplace, fears of transmitting the virus to family and friends, and anxiety about contracting COVID-19 [30]. The pandemic forced nurses to adapt to new working styles and environments, further contributing to their stress.

Nurses experiencing mild to moderate stress often demonstrate the ability to control their emotions and maintain a balance between their work and personal lives [29]. Emotional resilience typically improves with age, as older individuals are better able to regulate emotions, think rationally, and remain open to others' perspectives, which helps them cope with workplace stress [31]. Similarly, more experienced nurses develop greater proficiency in managing their roles and addressing workplace challenges, which can serve as a preventive measure against work-related stress [26].

Higher education levels also equip nurses with the skills to handle complex situations and mitigate anxiety, thus reducing their stress levels [27].

This study revealed that 4.7% of nurses at Wonosari Regional Hospital experienced very severe work-related stress. While the percentage is relatively small, it cannot be ignored, as such stress may impact nurses' performance and the quality of care provided to patients. Nurse managers must guide and support nurses in addressing mental and psychological challenges. Measures to alleviate stress may include engaging in enjoyable activities and practicing relaxation techniques [32].

Hospitals must prioritize providing psychological counseling services and stress-management programs for nurses, especially during a pandemic. The anxiety of potentially bringing infections home after caring for COVID-19 patients underscores the importance of such initiatives [30]. Additionally, governments should work to create comfortable and safe working environments for nurses while offering financial subsidies and public recognition for their essential contributions [32].

To further support nurses, governments could implement policies that provide medical care for nurses and their families. For instance, arranging family visits or offering assistance to nurses' families could allow nurses to focus more effectively on their work [33]. Collaboration among all stakeholders—nurses, nurse managers, hospital leadership, and government entities—is essential to effectively manage the work-related stress experienced by healthcare workers, particularly nurses, during crises like the COVID-19 pandemic.

Limitations

This study has several limitations. First, not all respondents completed the questionnaire in its entirety, resulting in a total number of participants that fell short of the researcher's target. Second, the study was limited to nurses employed at Wonosari Regional General Hospital in Yogyakarta, with a minimum educational qualification of a Diploma III in Nursing. Consequently, the findings of this study cannot be generalized to all nurses.

Implications

This study offers hospital policymakers valuable insights into the conditions faced by nurses during the COVID-19 pandemic. It is hoped that the resulting policies will prioritize safety and comfort, thereby helping to reduce burnout and work-related stress among nurses during such crises.

Furthermore, this study can serve as a foundation for future research. Further investigations are essential, particularly to develop and evaluate effective interventions aimed at reducing burnout and work-related stress among nurses.

Conclusion

The results highlight the significant psychological burden faced by nurses during the pandemic, influenced by factors such as heavy workloads, strict adherence to personal protective equipment protocols, fear of infection, and concerns about transmitting the virus to loved ones. While low levels of burnout among the majority may reflect effective coping mechanisms and hospital support, the prevalence of moderate and severe stress levels underscores the urgent need for targeted interventions to support nurses' mental health and well-being.

The findings of this study provide valuable insights for hospital policymakers, emphasizing the importance of implementing policies that ensure safety and comfort for nurses to mitigate burnout and work-related stress. Additionally, this study underscores the need for further research to develop and evaluate effective strategies and interventions to reduce the psychological burden on nurses, particularly during public health crises like the COVID-19 pandemic. Collaborative efforts from all stakeholders, including hospital leadership, nurse managers, and government bodies, are essential to create a supportive work environment that prioritizes the mental health and resilience of healthcare workers.

Acknowledgment

All praise be to Allah Subhanahu Wa Ta'ala. I am deeply grateful for His abundant blessings and guidance, which have enabled me to complete this research article. I would also like to

express my sincere gratitude to Sekolah Tinggi Ilmu Kesehatan YKY Yogyakarta for their invaluable support, including facilitation, motivation, and funding, which contributed to the successful completion of this research.

References

1. Artiningsih, & Chisan. (2020). Burnout dan Komitmen Terhadap Tugas: Tantangan Tenaga Medis dalam Menghadapi Pandemi Covid-19. *Prosiding Seminar Nasional*, 199–203.
2. Jaya, Irfannuddin, & Santoso. (2020). Pengaruh Teknik Afirmasi Terhadap Tingkat Stress Kerja Perawat Covid 19. *Jurnal Media Kesehatan*, 13(2), 67–72.
3. Jayani. (2020). *Rasio Dokter Indonesia Terendah Kedua di Asia Tenggara*. Kata Data.
4. Maharja, R. (2015). Analisis Tingkat Kelelahan Kerja Berdasarkan Beban Kerja Fisik Perawat di Instalasi Rawat Inap RSU Haji Surabaya. *The Indonesian Journal of Occupational Safety and Health*, 4(1), 93–102.
5. Hoskins, K. (2013). *The Possible Role of Burnout in Nursing Errors*. University of Central Florida.
6. Cimiotti, J. P., Aiken, L. H., Sloane, D. M., & Wu, E. S. (2012). Nurse staffing, burnout, and health care-associated infection. *American Journal of Infection Control*, 40(6), 486–490. <https://doi.org/10.1016/j.ajic.2012.02.029>
7. Marpaung, F. V., Wiroko, E. P., & Wicaksana, S. (2020). Pengaruh Iklim Organisasi Terhadap Burnout Pada Perawat Rumah Sakit Di Lebak Dalam Masa Covid-19. *JIVA: Journal of Behavior and Mental Health*, 1(2), 46–54. <https://doi.org/10.30984/jiva.v1i2.1390>
8. Sari NL. (2011). *Hubungan Beban Kerja, Faktor Demografi, Locus of Control dan Harga Diri Terhadap Burnout Syndrome Pada Perawat Pelaksana IRD RSUP Sanglah Denpasar*. 51–60.
9. Warner, H., R. (2013). *Stress, Burnout, And Addiction in The Nursing Profession*. Xlibris.

10. Yana, D. (2015). Stres Kerja pada Perawat Instalasi Gawat Darurat di RSUD Pasar Rebo Tahun 2014 Work Stress Among Nurses In Emergency Room in RSUD Pasar Rebo 2014. *Jurnal ARSI*, 1(2), 107–115.
11. Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, 42(2), 111–131. <https://doi.org/10.1348/014466503321903544>
12. States, U., & Inventory, M. B. (2008). *Measuring Introduction The History of Burnout*.
13. Maslach, C. Scaufeli, WB, L. M. (2001). *Job Burnout*. 397–422.
14. Khamisa, N., Peltzer, K., & Oldenburg, B. (2013). Burnout in Relation to Specific Contributing Factors and Health Outcomes Among Nurse: A Systematic Review. *International Journal of Environmental Research and Public Health*, 10, 2214–2240. <https://doi.org/https://doi.org/10.3390/ijerph10062214>
15. Katsounari, I. (2015). The Road Less Traveled and Beyond: Working With Severe Trauma and Preventing Burnout. *Burnout Research*, 2(4). <https://doi.org/https://doi.org%2F10.1016%2Fj.burn.2015.10.002>
16. Nugroho, A, S., Andrian, & Marselius. (2012). Studi Deskriptif Burnout dan Coping Stres pada Perawat di Ruang Rawat Inap Rumah Sakit Jiwa Menur Surabaya. *Calyptra: Jurnal Ilmiah Mahasiswa Universitas Surabaya*, 1(1), 1–6.
17. Algunmeeyn, A., El-Dahiyat, F., & Altakhineh, M, M. (2020). Understanding The Factors Influencing Healthcare Providers' Burnout During The Outbreak of Covid 19 in Jordanian Hospitals. *Journal of Pharmaceutical Policy and Practice*, 13(1). <https://doi.org/https://doi.org/10.1186/s40545-020-00262-y>
18. Khalafallah, A, M., Lam, S., Gami, A., Dornbos, D, L., Sivakumar, W., Johnson, J, N., & Mukherjee, D. (2020). Burnout and Career Satisfaction Among Attending Neurosurgeons During the Covid-19 Pandemic. *Clinical Neurology and Neurosurgery*, 198. <https://doi.org/https://doi.org/10.1016/j.clineuro.2020.106193>
19. Antari, G, A, A., Devi, N, L, P, S., & Wiranata, I, G. (2021). Burnout pada Perawat Hemodialisis Selama Pandemi Covid-19. *Jurnal Keperawatan*, 13(2), 59–68.
20. Chen, R., Sun, C., Chen, J, J., Jen, H, J., Kang, X, L., Kao, C, C., & Chou, K, R. (2021). A Large Scale Survey on Trauma, Burnout, and Posttraumatic Growth Among Nurse During the Covid-19 Pandemic. *International Journal of Mental Health Nursing*, 30, 102–116. <https://doi.org/10.1111/inm.12796>
21. Restauri, N., & Sheridan, A, D. (2020). Burnout and Posttraumatic Stress Disorder in the Coronavirus Disease 2019 (COVID-19) Pandemic: Intersection, Impact and Interventions. *Journal of the American College of Radiology: JACR*, 17(7). <https://doi.org/https://doi.org/10.1016/j.jacr.2020.05.021>
22. Boo, Y, L., Liam, C, C, K., & Lim, S, Y. (2018). Stress and Burnout Syndrome in Health Care Providers Treating Dengue Infection : A Cross Sectional Study. *Medical Journal of Malaysia*, 73, 371–375.
23. Qiao, Z, X., Chen, L., & Chen, M, Q. (2016). Prevalence and Factors Associated with Occupational Burnout Among HIV/AIDS Healthcare Workers in China: A Cross Sectional Study. *BMC Public Health*, 16.
24. Sun, D., Yang, D., Li, Y., Zhou, J., Wang, W., Wang, Q., Lin, N., Cao, A., Wang, H., & Zhang, Q. (2020). Psychological Impact of 2019 Novel Coronavirus (2019-nCov) Outbreak in Health Workers in China. *Epidemiology and Infection*, 148. <https://doi.org/https://doi.org/10.1017/S0950268820001090>
25. Kisely, S., Warren, N., McMahon, L., Dalais, C., Henry, I., & Siskind, D. (2020). Occurrence, Prevention and Management of the Psychological Effects of Emerging Virus Outbreaks on Healthcare Workers : Rapid Review and Meta-analysis. *BMJ*, 369.
26. Musu, E, T., Murharyati, A., & Saelan. (2021). Gambaran Stres Kerja Perawat IGD di Masa Pandemi Covid-19 di Rumah Sakit

- Surakarta. *Jurnal Gawat Darurat*, 3(1), 1–10.
27. Pasaribu, P, D, L, B., & Ricky, D, P. (2021). Tingkat Stres Perawat Terkait Isu Covid-19. *Jurnal Penelitian Perawat Profesional*, 3(2), 287–294.
28. Arnetz, J, E., Goetz, C, M., Arnetz, B, B., & Arble, E. (2020). Nurse Reports of Stressful Situations During the Covid-19 Pandemic: Qualitative Analysis of Survey Responses. *International Journal of Environmental Research and Public Health*, 17(21), 1–12. <https://doi.org/https://doi.org/10.3390/ijerph17218126>
29. Oktaria, T., Nauli, F, A., & Deli, H. (2021). Gambaran Tingkat Stres Kerja Perawat Rumah Sakit pada Era New Normal. *Health Care : Jurnal Kesehatan*, 10(1), 115–124.
30. Kuo, F, L., Yang, P, H., Hsu, H, T., Su, C, Y., Chen, C, H., Yeh, I, J., Wu, Y, H., & Chen, L, C. (2020). Survey on Perceived Work Stress and Its Influencing Factors Among Hospital Staff During the Covid-19 Pandemic in Taiwan. *Kaohsiung Journal Medical Science*, 1–9. <https://doi.org/10.1002/kjm2.12294>
31. Jusnimar. (2012). *Gambaran Tingkat Stres Kerja Perawat Intensive Care Unit (ICU) di Rumah Sakit Kanker Dharmais*.
32. Mo, Y., Deng, L., Zhang, L., Lang, Q., Liao, C., Wang, N., Qin, M., & Huang, H. (2020). Work Stress Among Chinese Nurses to Support Wuhan in Fighting Against Covid-19 Epidemic. *Journal Nursing Management*, 1–8. <https://doi.org/10.1111/jonm.13014>
33. Zhuang, H. C. of G. (2020). *Measures of Guangxi Health Commission to Care for Medical Team Members in Hubei Province*.