

The impact and challenges of COVID-19 to nurses: Implications for learning

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Abstract

COVID-19 has had a profound impact on society at all levels. A great deal of the impact is felt by those working in the healthcare sector. The current review reflects on the various issues that affect nurses during COVID-19. Issues such as the different emotions experienced by nurses with COVID-19 during the isolation and treatment process, the roles and responsibilities of nurses during COVID-19 pandemic, the psychological distress among nurses in the care of patients with COVID-19, and the various challenges faced by nurses during COVID-19 pandemic. In essence, nurses play a critical role and responsibilities during an emergency and disaster situations. Nurses serving patients in the frontlines during the COVID-19 pandemic are risking their lives at risk to be able to perform their duties causing tremendous fear of contracting the virus or transmitting it to other people. Therefore, continuous education is needed in other to prepare for the future.

Keywords: nurse education, COVID-19, pandemic, Philippines, literature review

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1. Introduction

It is evident that the symptoms of the COVID-19 infection vary in severity. For many people diagnosed with this virus, the symptoms can be mild such as loss taste, cough, running nose, sore throat and fever. But in other cases, it was documented that the symptoms are more severe and individuals can develop pneumonia and necessitates confinement in hospitals. While researchers and health experts continue to study and learn about this disease, it is reported and documented that persons who were not able to survive from the virus had other underlying health issues that predispose them and made the more vulnerable in comparison to the general population such as existence of health comorbidities such as diabetes mellitus, and hypertension (Kao & Perng, 2021).

The severity of symptoms and mortality rate among diagnosed patients were significantly much higher among people with hypertension and survival rates were significantly lowered by the presence and existence of additional medical comorbidity. Hypertension posed an increased risk of severe morbidity which is approximately 4-fold and death is approximately 7-fold from COVID-19 in the presence of multiple health comorbidities (Abayomi et al., 2021). The virus is transmitted to other persons through direct and indirect contact with infected persons and contaminated objects. Transmissions happen during close contact with an infected individual, contact with droplets produced by coughing, and contact with droplets produced while sneezing and talking. Indirect transmission occurs by touching contaminated surfaces or objects and then touching the face. Although the virus is more contagious in the first days after the onset of symptoms, asymptomatic patients can also spread the disease. The full spectrum of COVID-19 infection ranges from subclinical self-limiting respiratory disease to severe progressive pneumonia with multiple organ failures and death. According to studies, more than 80% of patients remained asymptomatic and 15% of the patients developed mild symptoms. Fever, cough, dyspnea, myalgia, and fatigue were the most commonly reported symptoms of the disease (Alkaissi et al., 2022).

The illness severity ranges from mild (81%) to severe (14%) to critical (5%), with mortality rates of 2.3% in mild cases and as high as 49% in critical cases (Wu and McGoogan, 2020). Due to the risk of infecting and transmitting the virus to others, diagnosed individuals with COVID-19 infection are kept in quarantine or isolation wards. Because of the isolation, the fear of death, and associated stigma, many patients with COVID-19 infection go through mental distress (Sahoo et al., 2020). In the Philippines, there were more than 3.3 million confirmed COVID-19 cases and 53, 000 deaths recorded as of January 20, 2022. In Negros Occidental, there were more than 85, 100 confirmed positive COVID-19 cases and 2, 432 deaths recorded as of January 2022 (Department of Health, 2022).

2. Different emotions experienced by nurses with COVID-19 during the isolation and treatment process

In the previous study conducted, nurses infected with COVID-19 reported that they felt and experienced mixed emotions such as frustration, depression, isolation, and fear of death during the isolation process. Several studies reported that some patients in quarantine and isolation experience fear of death, frustration, and exclusion, and discrimination especially those persons living alone, and fear of death or staying in quarantine or isolation for a longer period of time may cause these clients not socializing with other people (Chen et al., 2020). Studies have noted that some COVID-19 positive people experienced fear of death even though they had no mild symptoms of COVID-19 (Dong et al., 2022). In addition to having to cope with the disease-related physical and psychological symptoms, nurses diagnosed with COVID-19 have to return to work before they can fully regain their health due to the shortage of the nursing workforce. This situation can negatively affect both the quality of life of nurses and the quality of care provided to patients.

Current literature has examined the experiences of nurses caring for patients with COVID-19 (Zhang et al., 2020). Emotions experienced when nurses tested positive for COVID-19 were documented. Most nurses stated that they experienced fear and sadness when they learned that they were COVID-19 positive. Since they are healthcare professionals, they were aware of the potential of the disease course getting worse suddenly, the intensive care treatment process, or the possibility of infecting the family and other people. Some of the nurses reported that as they were aware of the difficulties during the deterioration phase of the disease, they were afraid of the possibility of experiencing them. Nurses verbalized they had fears, because the disease can suddenly get worse. Some of the nurses emphasized that when they first learned that they were COVID-19 positive, they experienced anger due to the delay in testing and the possibility of getting sick and infecting others.

Furthermore, some of the nurses reported that they felt lonely during the quarantine process, that this disease was different from other diseases, touching was not allowed, and the disease caused emotional emptiness and caused a great longing for their families. Some of the nurses indicated that the sense of smell was very valuable for them, that life without smell was not meaningful, and they constantly checked whether it came back, but they felt disappointed afterwards. Some of the nurses experienced depressive feelings during the quarantine. One of the nurses stated that social life did not exist in quarantine, and the symptoms of depression were very wearying for people. Some of the nurses stated that during the quarantine they were afraid of being excluded and of stigma, and that was exactly what happened after the quarantine. Some of the nurses expressed that they were afraid of death due to the shortness of breath.

In another spectrum, patients diagnosed with COVID-19 conveyed fear about their health and described the uncertain and unpredictable nature of the disease. Feeling the repercussion of the diagnosis, the patients described their symptoms as unpleasant and bizarre. Others expressed feeling isolated and lonely, and majority shared that they relied on spirituality to cope in a time when there was a feeling of being out of control. Many patients shared concerns that their home and work environments were sources of disease exposure. Patients described high anxiety awaiting test results. Some were fearful about dying, whereas a few remained hopefuls. Despite having suspicions of viral exposure, patients were shocked about their diagnosis. Fear of dying, inadequate health benefits, financial issues, and worries about spreading the virus to their families were acknowledged by the patients as critical areas of concerns. Most patients reported high anxiety. They reported that the disease produced uncertainty about the future, which was alleviated by spirituality, religious beliefs, and practices.

Importantly, most identified ongoing spiritual support as a way of coping with physical symptoms, producing a positive outlook. Living with COVID-19 is an emotionally and physically challenging experience for patients diagnosed with COVID-19 infection (Aliyu et al., 2021). Previous study conducted reported that participants described the fear they perceived when they were diagnosed as positive for COVID-19. Most of them experienced symptoms due to the onset of COVID-19 it was the news of the clinical COVID-19 confirmation of having infected by the virus that caused fear among nurses, a fear that was due to the knowledge of the possible complication and progression of the disease. Nurses are aware of the possible progression and complication of the infection and everything that may happen to them. Living with fear that suddenly their health could degenerate into serious and worst damage of vital health functions and death accompanied the experiences of nurses with COVID-19. The idea of the use of treatment did little to alleviate this sensation.

Another important issue is that fear was felt during their illness, as they anxiously awaited any sudden complication of their state of health. Nurses regardless of whether they had been hospitalized or placed in isolation, expressed and verbalized how the loneliness resulting from the isolation imposed by their clinical conditions accompanied their experience. The deprivation of being with their families and children and the closeness of family affections contributed to making their experiences more difficult. Being away from their families and children contributed to their feelings of loneliness. Isolation and loneliness as a problem was expressed by nurses (Simeone et al., 2022). In a study conducted locally, results revealed that health care workers have their own positive and negative internal psychological and interpersonal social dynamics when

caring for COVID-19 patients. They have adaptive factors that helped them in their struggles in their personal and professional life. Despite the challenges they have hope to continue their life and work (Laguerder, 2022).

3. Roles and responsibilities of nurses during COVID-19 pandemic

Nurses play significant roles at the front line in controlling the pandemic and providing patient care. Close contact with COVID-19 patients causes nurses to be concerned about catching the infection and passing that infection to their family members. Indeed, many nurses have been diagnosed with COVID-19 and infected their families (Senol Celik et al., 2020; Schwartz et al., 2020). In addition to having to cope with the disease-related physical and psychological symptoms, nurses diagnosed with COVID-19 have to return to work before they can fully regain their health due to the shortage of the nursing workforce. This situation can negatively affect both the quality of life of nurses and the quality of care provided to their patients. Health care workers can play an important role in supporting and helping the patients to rehabilitate and recover (Galehdar et al., 2020).

In a study, nurses in China were working with an increased workload, higher patient ratio, and put them at a higher risk of infection to treat patients diagnosed with COVID-19 infection. Nurses have shown high level of professionalism and care, but the physical, mental, and psychological health of nurses and other health care professionals are at a higher risk when working under such challenging conditions, and anxiety and mental and physical stress adversely affect their sleep and well-being (Xiao, 2020). Battling COVID-19 in the frontline makes nurses vulnerable to physical and psychological distress. Finding shows high levels of stress, depression, anxiety, anger, distress, fear, and post-traumatic stress disorder among nurses. It was also noted that female nurses were significantly affected more from mental and psychological health consequences.

Frontline female nurses work in close contact with patients with COVID-19 for longer working hours, which may result in stress, tiredness, and anxiety (Shaikat et al., 2020). Despite that nurses see themselves in danger, they try to carry out their duties with good quality. As a professional mission, it is expected from health care providers to deliver health services with maximum honesty and courage. In this regard, feeling safe and receiving support can boost the quality of performing this duty by nurses (Back et al., 2020). High demanding responsibilities in very stressful situations and uncooperative clients put nurses to psychological stress in the day-to-day fulfillment of their respective tasks.

Nurses during pandemic were maximized to perform nursing procedures, they multitask over extended hours and shifts to provide nursing care for COVID-19 patients. The sharp and sudden surge in COVID-19 cases is associated with significant increase in nurse staffing demands as health-care authorities all over the world had to immediately deploy and assign nurses to COVID-19 wards and train nurses to work in the different area of the hospitals such as medical and surgical, emergency department, intensive and critical care units (Minissian et al., 2020). This can cause a large amount of stress, fear and lack of confidence to health-care providers because they have to treat a disease which was not well understood and out of their line of expertise. Moreover, they had to learn, master, and perform new technical skills in a very short time (Minissian et al., 2020).

In Qatar, the health authorities have deployed some nurses working in governmental hospitals to COVID-19 wards, designated facilities, and hospitals and the recruitment of nurses who are currently in the country with valid nursing license and willing to work in a COVID-19 facility was accelerated and increased. Orientation and training of nurses were fast tracked to hasten the deployment of nurses to different COVID-19 facilities in Qatar. Existing government employee nurses who worked in post anesthesia care units were given at least 10 days to train under a preceptor to work in critical care units to be able to meet the high demand of nurses to care for patients diagnosed with COVID-19 (Villar et al., 2021). Because of the change in the working environment, health-care providers had to work in areas that did not meet infection control standards. They were confused about the difference in protocols like prescribing and carrying out doctor's orders.

In addition, different studies have shown that health-care professionals who were treating COVID-19 patients have higher risks of physical and mental health problems due to insomnia, stress, anxiety and depression

(Lu et al., 2020). Nurses infected by COVID-19 verbalized how having fallen ill, and being not able to provide and give direct care and assistance to their patients, made them feel guilty for abandoning their fellow nurses and patients in their time of their need. The seriousness of a global level health crisis pushed these health care professionals to put the collective well-being before their own. Everyone wanted to be on the front line and help those that are sick at this particular pandemic situation. Nurses as soon as they recovered from illness, immediately returned to work to provide assistance. Their illness was therefore also created a new experience and created new perspective in this light. During their illness, they were required to be isolated and undergo treatment. During pandemic, they felt part of a very large family given an extremely important task and regretted not being able to make their contribution and assistance during their illness (Simeone et al., 2022).

4. Psychological distress among nurses in the care of patients with COVID-19

Healthcare staff, especially nurses, experience a greater deal of mental and psychological challenges and distress during care of patients with COVID-19. The data showed that the nurses experienced a variety of psychological and mental distress during care of patients with COVID-19. Through proper planning by the government and authorities, it is possible to manage the risk factors of mental health distress among nurses and improve their mental health status (Galehdar et al., 2020). Mental distress including depression and anxiety has been reported among nurses at the frontline (Du et al., 2020). Nurses are among the most involved and in charge in fighting against the COVID-19. Actually, they regularly are in direct contact with patients from the time of admission to the discharge. Therefore, nurses are highly exposed to psychological distress compared to other health workers during the pandemic. Studies revealed that nurses who had young children suffered from anxiety and stress because of falling apart from their children. Some of the participants had young children and were compelled to keep a distance from them. One of the participants with maternal concerns verbalized that she was worried about her daughter. Another participant about being separated from her child to prevent disease transmission that it was hard and difficult situation for her and her family (Galehdar et al., 2020).

Challenges faced by nurses during COVID-19 pandemic

COVID-19, as an emerging disease, is related to the SARS-COV and has many unknown clinical dimensions (Huang et al., 2020). In particular, COVID-19 disease has great effects on healthcare workers and leads to some challenges for this vital part of the society. These problems include an increasing need for medical staff; increasing costs for personal protective equipment (PPE), diagnostic tests, beds and ventilators, as well as rising mortality (Lippi et al., 2020; Puradollah & Ghasempour, 2020). Many health care workers are at the risk of contracting the virus and even death, and it is largely impossible to reduce this threat to zero. Due to its unique properties such as high transmission and spreading rate, being unknown, and jeopardizing the lives of health care staff, COVID-19 has caused so much confusion and many challenges among health care workers. The coronavirus disease (COVID-19) pandemic has exposed nurses to conditions that threaten their health, well-being, and ability to work (Arnetz et al., 2020). Nurses working in the wards and care facilities designated for patients with COVID-19 are experiencing mental and emotional distress and are working in inadequate professional conditions (Karimi et al., 2020).

Health threats of COVID-19 on nurses

Nurses, who make up the majority of healthcare professionals, are struggling with COVID-19, a silent war, on the front lines at the cost of their lives. The pandemic has deeply affected nurses' lives, and hundreds of nurses around the world have been diagnosed with COVID-19 and died (Aydin & Bulut, 2021). With many people being infected with COVID-19, nurses and other health care professionals are serving in the frontlines to alleviate the situation of this pandemic and serve those who needed their health care services. Because of this, frontline healthcare workers especially nurses face a substantially higher risk of being infected and death due to excessive and extreme COVID-19 exposure (Shaukat et al., 2020).

To prevent labor shortages, nurses' leaves were postponed (Sun et al., 2020). Because of their frequent

contact with patients, nurses carry a high risk of contracting and transmitting the virus, and so especially in the early days of the pandemic, nurses were accommodated in hotels, guesthouses, and dormitories. Recent related studies conducted in China have also revealed results that nurses deployed for the care of COVID-19 infected individuals were continuously and incessantly at higher risk of getting infected, experienced psychological, mental conditions nevertheless they still able to serve, adapt, and continue to render care and deliver selfless service to patients affected by COVID -19. These nurses stay in hospitals and facilities and go home after several weeks to limit their exposure to other people such as their families and children (Zhang et al., 2020).

Statistics of nurses infected with COVID-19

At least 115,000 health care workers have now died from Covid-19 around the world, according to the updated figures from the World Health Organization. The WHO highlighted shortfalls in reporting of deaths. The International Council of Nurses described the death toll as a "disgrace" (De Castella, 2021). In The Philippines there is an estimated 23,000 shortfall of nurses nationwide; the situation is getting worse and most Filipinos die without consulting a medical professional. In response, nurses in most hospitals are left without choice to work on longer shifts and higher patient ratio to compensate for the lack of manpower. These situations put nurses to a higher risks of infection, physical, and mental stress (Alharbi et al., 2020; Buheji & Buheid, 2020). In the Philippines, there were more than 3.3 million confirmed COVID-19 cases and 53, 000 deaths recorded as of January 20, 2022. In Negros Occidental, there were more than 85, 100 confirmed positive COVID-19 cases and 2, 432 deaths recorded as of January 2022 (Department of Health, 2022).

Coping mechanisms of nurses during COVID-19 recovery

Nurses stated that they coped with the problems and difficulties related to COVID-19 with the social support from their coworkers and families. They focused and gave attention to their diet, wellness, have positive thinking, and continued performing their favorite domestic activities. The most important facilitating factors that made it easier for them to overcome this period were social support, being a nurse, and having a COVID-19 survivor family member. The factors that made it challenging were reported to be loneliness, frustration, fear of death, severity of symptoms, stigma, being a nurse, having children, and fear of infecting other family members. Individuals develop various methods to cope with challenging situations due to traumatic events such as diseases, and natural disasters. Nurses diagnosed with COVID-19 tried to cope with the disease by thinking positively, doing indoor activities they like, taking care of their diet, and obtaining social support from the people around them (Huang et al., 2020).

Nurses as COVID-19 survivors

As a result of struggling with traumatic events associated with death, such as COVID-19, people can experience positive changes in some areas like spiritual and existential change, improvement in personal power, changes in relationships with others, new opportunities, and appreciation of the meaning of life through personal and professional growth. In fact, this is one of the best responses and outcome indicators of transition as fluid integrative identities. The experienced transition has brought the individuals to a point further from where they stand by ensuring that they are attached to life and appreciates it (Tedeschi & Moore, 2020).

5. Conclusion

Coronavirus disease (COVID-19) pandemic has spread globally to 220 countries. The preceding review of literature on the concepts of COVID-19 and how the pandemic affected the overall health of nurses and how they overcome the illness when they were diagnosed and their lived experience as COVID-19 survivors internationally and locally are related to the lived experiences of these frontline health care workers. It serves as a basis for analysis and comparison of the findings in this study. It has also given the researcher a deeper understanding and information of the variables to be included in the study. Nurses play a critical role and responsibilities during an emergency and disaster situations. Nurses serving patients in the frontlines during the

COVID -19 pandemic are risking their lives at risk to be able to perform their duties causing tremendous fear of contracting the virus or transmitting it to other people.

Several kinds of literature have revealed that this pandemic had affected nurses psychologically and mentally. Large amounts of reported results have shown a significant relationship between the pandemic and unfavorable psychological health concerns and challenges which include fear, stress, and periods of depression among nurses. But despite all of these, nurses still selflessly and continuously helped and served COVID-19 patients with effective and selfless care. Nurses infected with COVID-19 were able to survive and overcome their illness and caused them to have a new perspective in their profession and personal lives. Many researchers have interest on this research topic and the results have revealed consistent and identical results. The findings of this study will be used to support or contradict the results that will be generated from this study. There was a lack of literature published locally about lived experience of nurses infected with COVID-19. Several studies have only focused and studied the lived experience of nurses caring for COVID-19 patients amidst the pandemic, but they do not focus and studied about lived experience of nurses infected by COVID-19. Presently, few studies have been conducted identifying the lived experiences of nurses infected with COVID-19 during this pandemic, so this study exploring the lived experiences of nurses infected with COVID-19 amidst the pandemic will be conducted in Negros Occidental, Philippines.

6. References

- Abayomi, A., Osibogun, A., Kanma-Okafor, O., Idris, J., Bowale, A., Wright, O., Adebayo, B., Balogun, M., Ogboye, S., Adeseun, R., Abdus-Salam, I., Mutiu, B., Saka, B., Lajide, D., Yenyi, S., Agbolagorite, R., Onasanya, O., Erinosh, E., Obasanya, J., Adejumo, O., & Akinroye, K. (2021). Morbidity and mortality outcomes of COVID-19 patients with and without hypertension in Lagos, Nigeria: A retrospective cohort study. *Global Health Research and Policy*, 6(1), 26. <https://doi.org/10.1186/s41256-021-00210-6>
- Alharbi, J., Jackson, D., & Usher, K. (2020). The potential for COVID-19 to contribute to compassion fatigue in critical care nurses. *Journal of Clinical Nursing*, 29(15-16), 2762-2764. <https://doi.org/10.1111/jocn.15314>
- Aliyu, S., Travers, J. L., Norful, A. A., Clarke, M., & Schroeder, K. (2021). The lived experience of being diagnosed with COVID-19 among Black patients: A qualitative study. *Journal of Patient Experience*, 8, 2374373521996963. <https://doi.org/10.1177/2374373521996963>
- Alkaissi, A., Zaben, F., Abu-Rajab, M., & Alkony, M. (2022). Lived experiences of Palestinian patients with COVID-19: A multi-center descriptive phenomenological study of recovery journey. *BMC Public Health*, 22, 470. <https://doi.org/10.1186/s12889-022-12868-9>
- 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), 8126. <https://doi.org/10.3390/ijerph17218126>
- Aydin, R., & Bulut, E. (2021). Experiences of nurses diagnosed with COVID-19 in Turkey: A qualitative study. *International Nursing Review*, 69(3), 294-304. <https://doi.org/10.1111/inr.12735>
- Back, A., Tulskey, J. A., & Arnold, R. M. (2020). Communication skills in the age of COVID-19. *Annals of Internal Medicine*. <https://doi.org/10.7326/M20-1376>
- Buheji, M., & Buhaid, N. (2020). Nursing human factor during COVID-19 pandemic. *International Journal of Nursing Science*, 10(1), 12-24. <https://doi.org/10.5923/j.nursing.20201001.02>
- Chen, D., Song, F., Tang, L., Zhang, H., Shao, J., Qiu, R., Wang, X., & Ye, Z. (2020). Quarantine experience of close contacts of COVID-19 patients in China: A qualitative descriptive study. *General Hospital Psychiatry*, 66, 81–88. <https://doi.org/10.1016/j.genhosppsych.2020.07.006>
- De Castella, T. (2021). WHO says ‘at least’ 115,000 health workers have now died from COVID-19. *Nursing Times*. <https://www.nursingtimes.net/news/coronavirus/who-says-at-least-115000-health-workers-have-now-died>

- [ed-from-covid-19-27-05-2021/](#)
- Department of Health. (2022). COVID-19 tracker. <https://doh.gov.ph/covid19tracker>
- Dong, L., Chen, L., & Ding, S. (2022). Illness uncertainty among patients with COVID-19 in the Mobile Cabin Hospital. *Nursing Open*, 9(2), 1456–1464. <https://doi.org/10.1002/nop2.924>
- Du, J., Dong, L., Wang, T., Yuan, C., Fu, R., & Zhang, L. (2020). Psychological symptoms among frontline healthcare workers during COVID-19 outbreak in Wuhan. *General Hospital Psychiatry*, 67, 144–145. <https://doi.org/10.1016/j.genhosppsych.2020.03.011>
- Galehdar, N., Kamran, A., Toulabi, T., & Heydari, H. (2020). Exploring nurses' experiences of psychological distress during care of patients with COVID-19: A qualitative study. *BMC Psychiatry*, 20, 489. <https://doi.org/10.1186/s12888-020-02898-1>
- Huang, C., Wang, Y., Li, X., Ren, L., Zhao, J., Hu, Y., Zhang, L., Fan, G., Xu, J., Gu, X., Cheng, Z., Yu, T., Xia, J., Wei, Y., Wu, W., Xie, X., Yin, W., Li, H., Liu, M., Xiao, Y., & Cao, B. (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*, 395(10223), 497–506. [https://doi.org/10.1016/S0140-6736\(20\)30183-5](https://doi.org/10.1016/S0140-6736(20)30183-5)
- Kao, I. H., & Perng, J. W. (2021). Early prediction of coronavirus disease epidemic severity in the contiguous United States based on deep learning. *Results in Physics*, 25, 104287. <https://doi.org/10.1016/j.rinp.2021.104287>
- Karimi, Z., Fereidouni, Z., Behnamoghdam, M., Alimohammadi, N., Mousavizadeh, A., Salehi, T., Mirzaee, M. S., & Mirzaee, S. (2020). The lived experience of nurses caring for patients with COVID-19 in Iran: A phenomenological study. *Risk Management and Healthcare Policy*, 13, 1271–1278. <https://doi.org/10.2147/RMHP.S258785>
- Laguerder, J. (2022). *A glimpse in the life of health care workers handling COVID-19 patients: Challenges, protective factors and aspirations*. USLS.
- Lippi, G., Sanchis-Gomar, F., & Henry, B. M. (2020). Coronavirus disease 2019 (COVID-19): The portrait of a perfect storm. *Annals of Translational Medicine*, 8(7), 497. <https://doi.org/10.21037/atm.2020.03.157>
- Lu, W., Wang, H., Lin, Y., & Li, L. (2020). Psychological status of medical workforce during the COVID-19 pandemic: A cross-sectional study. *Psychiatry Research*, 288, 112936. <https://doi.org/10.1016/j.psychres.2020.112936>
- Minissian, M. B., Ballard-Hernandez, J., Coleman, B., Chavez, J., Sheffield, L., Joung, S., & Marshall, D. (2020). Multispecialty nursing during COVID-19: Lessons learned in Southern California. *Nurse leader*, 19(2), 170–178. <https://doi.org/10.1016/j.mnl.2020.08.013>
- Puradollah, M., & Ghasempour, M. (2020). Necessity of attention to mental health of the front line nurses against COVID-19: A forgotten requirement. *International Journal of Community Based Nursing and Midwifery*, 8(3), 280–281. <https://doi.org/10.30476/IJCBNM.2020.85889.1301>
- Sahoo, S., Mehra, A., Suri, V., Malhotra, P., Yaddanapudi, L., Dutt Puri, G., & Grovera, S. (2020). Lived experiences of the corona survivors (patients admitted in COVID wards): A narrative real-life documented summaries of internalized guilt, shame, stigma, anger. *Asian Journal of Psychiatry*, 53, 102187. <https://doi.org/10.1016/j.ajp.2020.102187>
- Schwartz, J., King, C.-C., & Yen, M.-Y. (2020). Protecting health care workers during the COVID-19 coronavirus outbreak—lessons from Taiwan's SARS response. *Clinical Infect Disease*, 71, 858–860. <https://doi.org/10.1093/cid/ciaa255>
- Senol Çelik, S., Atılı Özba, S. A., Çelik, B., Karahan, A., Bulut, H., Koç, G., (2020). The COVID-19 pandemic: Turkish Nurses Association. *Journal of Education and Research in Nursing*, 7, 279–283. <https://doi.org/10.5222/KUHEAD.2020.34603>
- Shaukat, N., Ali, D. M., & Razzak, J. (2020). Physical and mental health impacts of COVID-19 on healthcare workers: A scoping review. *International Journal of Emergency Medicine*, 13, 40. <https://doi.org/10.1186/s12245-020-00299-5>
- Simeone, S., Ambrosca, R., Vellone, E., Durante, A., Arcadi, P., Cicolini, G., Simonetti, V., Alvaro, R., & Pucciarelli, G. (2022). Lived experiences of frontline nurses and physicians infected by COVID-19 during their activities: A phenomenological study. *Nursing and Health Sciences*, 24(1), 245–254.
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<https://doi.org/10.1111/nhs.12920>

- 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, 592–598. <https://doi.org/10.1016/j.ajic.2020.03.018>
- Tedeschi, R. G., & Moore, B. A. (2020). Posttraumatic growth as an integrative therapeutic philosophy. *Journal of Psychotherapy Integration*, 31, 180–194. <https://doi.org/10.1037/int0000250>
- Villar, R., Nashwan, A., Mathew, R., Mohamed, A., Munirathinam, S., Abujaber, A., Al-Jabry, M., & Shraim, M. (2021). The lived experiences of frontline nurses during the coronavirus disease 2019 (COVID-19) pandemic in Qatar: A qualitative study. *Nursing Open*, 8(6), 3516–3526. <https://doi.org/10.1002/nop2.901>
- Xiao, H., Zhang, Y., Kong, D., Li, S., & Yang, N. (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: International Medical Journal of Experimental and Clinical Research*, 26, 923549. <https://doi.org/10.12659/MSM.923549>
- Zhang, M.-M., Niu, N., Zhi, X.-X., Zhu, P., Wu, B., Wu, B.-N., Meng, A. F., & Zhao, Y. (2020). Nurses' psychological changes and coping strategies during home isolation for the 2019 novel coronavirus in China: a qualitative study. *Journal of Advanced Nursing*, 77, 308–317. <https://doi.org/10.1111/jan.14572>

