Nurses' Emotional Stress Levels When Caring for COVID-19 Patients in an Intensive Care Unit

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ABSTRACT

Context • The COVID-19 pandemic has had an effect on many communities' physical and mental well-being, especially that of healthcare workers. During the pandemic, health workers have shown signs of depression and anxiety and have experienced sleep disturbances. Few studies have examined health workers' resilience during the pandemic.

Objective • The current study intended to examine the job stress and mental well-being of nurses who have supported, worked with, and cared for COVID-19 patients in an intensive care unit.

Design • The research team performed a narrative review by searching the Mendeley, ScienceDirect, Medline, PubMed, Google Scholar, and Springer databases. The search used many keywords, both alone and in combination, such as COVID-19, pandemic, nurses, healthcare professionals, stress, and frontline workers. The review considered only English journals.

Setting • This study was take place in Second Affiliated Hospital of Hainan Medical University, Hainan Province, China.

Results • During the current pandemic, COVID-19 prevention in social settings, governmental regulation during the pandemic, and provision of frontline care have faced notable challenges. In general, nurses who have assisted during the COVID-19 pandemic have been under severe strain. The key factors that influenced nurses' stress were being only children, their working time per week, and their levels of anxiety.

Conclusions • COVID-19 has posed a vast threat to public health worldwide. The psychological stress of nurses should be managed in public-health emergencies. (*Altern Ther Health Med.* 2021;27(5):46-50).

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COVID-19 is a severe pandemic, causing thousands of deaths every day across the globe. The disease has made over one-billion people sick worldwide, resulting in pronounced inequities between groups of people and inadequate healthcare networks. During the current pandemic, COVID-19 prevention in social settings, governmental regulation during the pandemic, and provision of frontline care have faced notable challenges.

Psychologically stressful experiences, with empirical signs of elevated mental distress, are commonly encountered in nurses in all over the world, especially, who are experiencing heavy workloads, occupational abuse, burnout, and exposure.[1] The combined effects of repetitive exposure to stressors may contribute to poorer mental health and working conditions.

Acute-care facilities have played a key role in managing the care of people with previously existing diseases, and at the same time, establishing a cohesive response to the COVID-19 outbreak. These facilities have had to find ways to avoid complications from COVID-19, such as cardiovascular disease, stroke, and kidney problems; to provide emergency treatment; to deliver preventive care, such as prenatal care and immunization; and to devise a multifaceted response to the pandemic.[2]

The COVID-19 contagion has had physical and mental-health consequences. Uncertainty about the problems it can cause has caused healthcare workers to experience great stress. The coronavirus has required researchers globally to attempt to classify its features, including transmission, management, mitigation, and rehabilitation. Numerous researchers have shown COVID-19 can impair the psychological condition of frontline workers and communities.[3] The mental health of

doctors and nurses, particularly those who took the lead in coping with COVID-19, has been affected.

Medical professionals have a high risk for infection from many diseases as a result of proximity to patients, and a high workload can impact their psychological conditions. In 2003, an analysis revealed substantially higher anxiety in medical workers who had interactions with SARS patients relative to medical workers who didn't interact during a severe acute respiratory syndrome (SARS) outbreak.[4] One study in China found that mood disorders, somatization, and distress affected medical staff in COVID-19 referral centers in higher numbers than medical staff who served in non-COVID-19 hospitals.[5]

The ability to adapt and solve current problems—resilience—is necessary in coping with disease.[6,7] Resilience can be shown to support mental health, such as by preventing anxiety and depression.[8] This suggests that resilience in hospital professionals may be connected to the degree that they experience anxiety; the more resilient a person is, the better his mental state might be.[9]

Resilience isn't a character trait but instead is an aspect of action, thinking, or behavior that anyone can learn. In Bonanno's words, "resilience is an individual's capacity to intervene physically and psychologically in normal situations when faced with an issue."[10]

In two studies, Singh et al found that resilience is one of the best methods of coping with traumatic events or trauma, since resilient people are capable of maintaining a secure equilibrium.[11,12] Those researchers found a correlation between the level of healthcare workers' anxiety and their resilience in a work situation. To cope with a long-term outbreak such as the COVID-19 pandemic, in which medication wasn't available for an extended period, resilience in the disease's management is important.[9,13,14]

Between February and March 2020 in Singapore, several surveys of healthcare workers participating in the COVID-19 response found that 14.5% had experienced clinically relevant anxiety levels, 8.9% had experienced depression, and 7.7% had experienced posttraumatic stress disorder (PTSD).[15] One study found that Chinese nurses had elevated depression levels and experienced fear, sleeplessness, neurological disorders, and insomnia during the COVID-19 pandemic.[16]
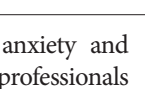
Numerous investigators have studied anxiety, depression, and sleep problems in medical staff throughout the COVID-19 pandemic, but few studies have studied resilience during the pandemic. The current study intended to examine the job stress and mental well-being of nurses who have supported, worked with, and cared for COVID-19 patients in an intensive care unit.

METHODS
Procedures

The research team performed a narrative review by searching the Mendeley, ScienceDirect, Medline, PubMed,

Figure 1. Stress in Nurses When Taking Care of COVID-19 Patients

Problem	Solution
Anxiety regarding unfamiliar working environment and processes	Establish a communication mechanism with local medical staff to get familiar with the working environment and working procedures as soon as possible
Lack of work experience in infection diseases	Allocate appropriate patients according to the actual nursing ability and provide necessary special training
Worry about getting infected	Enhance education and training, including personal protection, hand hygiene, ward disinfection, medical waste management, and occupational exposure management
Huge workload and long-term fatigue	Adjust work shift to ensure nurses to have plenty of rest
Depression due to inability to cure critically ill patients	Equip each medical team with a psychologist for early psychological assessments and interventions
Worry about their families, and vice versa	Communicate with colleagues who have the same experience or similar feelings

Google Scholar, and Springer databases. The search used many keywords, both alone and in combination, such as COVID-19, pandemic, nurses, healthcare professionals, stress, and frontline workers. The review considered only English journals. Also, reference lists from the articles found in the initial search were also screened for relevant studies.

The 30-item questionnaire was developed by the research team for the purpose of the study. It included measures regarding demographic and work-related factors, as well as COVID-19 experiences concerning patient contact, emergency preparedness, personal protective equipment, fear, and mental health and well-being. In addition to the 30 forced-choice items, the final question of the survey was open-ended and asked nurses to describe "the most stressful situations you have dealt with during the COVID-19 pandemic". In this study, qualitative content analysis was used to examine nurses' responses to this question.

RESULTS
Healthcare Team's Experience

Stress related to the COVID-19 pandemic. Stress can be anticipated when people feel that they may be highly susceptible to an extremely dangerous infection. In terms of the possibility of contracting COVID-19, the nurses considered itself to be highly susceptible.[17] The team stated, "Tent cities are heavily populated, and no physical distance is maintained by residents in situations where we might get the infection." They also reported that contracting an infection was of "high personal significance" because it could involve stigma, alienation, and death. Risk perception (product of perceived severity and perceived susceptibility) of the health team was high as they rated high perceived susceptibility and severity to COVID-19 infection. The statements showed that the health professionals experienced emotions during the pandemic that included fear, anxiety, and stigma (Figure 1).[18,19]

Fear of contracting the infection. The government's compulsory lockdown to curb COVID-19 spread also

generated an existential fear in the high-risk area of healthcare. The biggest problem for all healthcare professionals was the fear of infection. One doctor indicated: "What will my children do if I die? They're so tiny; who's going to care for them?"

Fear of violence. Healthcare workers were also worried about the failure of improvements, such as wearing masks, having patients entering clinics one-by-one, and following cough etiquettes. To prevent the disease's transfer, saying "We are careful in the clinic, but patients come with no masks, the regulations are hard to implement, and often patients became aggressive.[20,21] Although strict compliance laws have been enforced, healthcare workers, particularly nurses, have been worried that they could be victims of panic abuse.

Guilt. The fear of transmitting the infection to loved ones, especially the elderly and teenagers, was a further worry. Although healthcare professionals recognize the potential risk of acquiring diseases as part of their chosen career, with COVID-19 they were concerned with family exposure, especially for elderly people, those with autoimmune conditions, or those with chronic illnesses. They indicated, "I can give grandma an infection or my eight-month-old baby; how could I forgive myself if anything happens to them?" They were afraid of spreading infections in their homes to the vulnerable.[22]

Stigma. Government officials confined contagious individuals to their houses and stained their palms to identify areas and homes with infections to help control them.[23,24] Healthcare workers said, "The whole community is going to want to tell us to leave where we shelter." The ill and their close relatives were tracked socially.

The impact of the stigma was widespread. For example, one health worker said, "My landlord called and asked 'Why do you not quit your nursing job? It puts your families and our entire locality at risk.'" Residents of towns considered healthcare professionals to be infection carriers and discouraged them from being in an area as a measure to defend themselves.

Exhaustion and burn out. Healthcare workers left the field due to the mental strain of working in unsafe environments.[25,26] They were often physically drained by attending to patients when dressed completely in personal protective equipment (PPE). They became soaked in sweat and found it hard to see patients when wearing the same PPE for more than four hours. Their household demands became extreme because of the lockdown. They had to wash clothing, use the toilet, cook, and carry out all household work after

Figure 2. Mental Health Issues Due to COVID-19
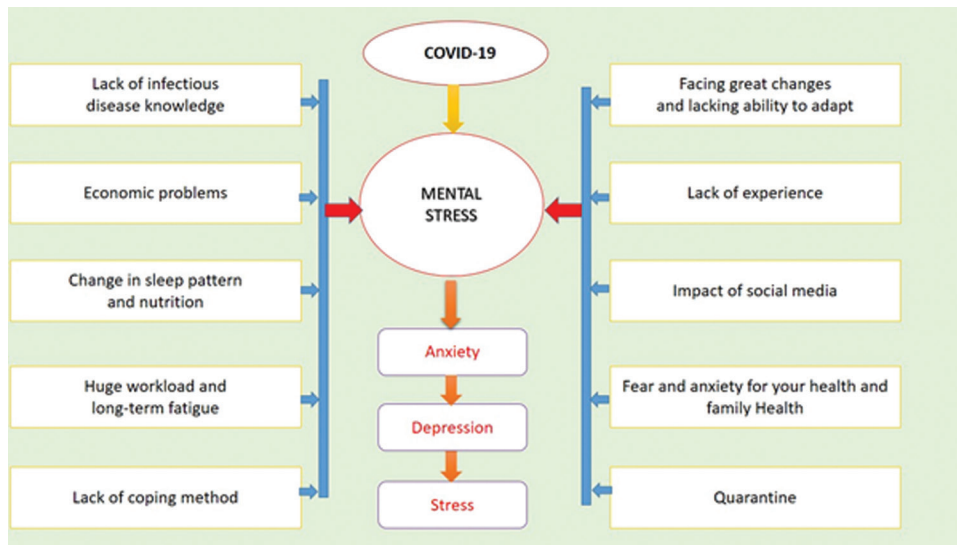
they arrived home from the clinic, which was exhausting (Figure 2).

Stress associated with a change in societal norms. In Chinese culture, people place value on talking to other people as a regular matter, including interactions with neighbors, social meetings, visits with the sick, festivals, and other social activities; it's very important. Physical distancing, rules about no contacts, and absence of social activities and meetings have placed a tremendous burden on individuals, communities, and the society.[27]

Prevalence of Psychological Symptoms

A high prevalence of psychological symptoms, such as anxiety and depression, is not optimal for frontline healthcare professionals or the general public and has affected the response to other outbreaks, such as those of Ebola hemorrhagic fever, swine flu (H1N1), or SARS.[28] Current reviews from 13 Asian studies on the psychological effects of COVID-19 on healthcare workers have reported a prevalence of 23.2% for anxiety and 22.8% for depression.[29] The same study found a similar prevalence for anxiety of 26% and for depression of 25% among healthcare professionals.[29-32] Another study found that patients have a higher prevalence of psychological distress than healthy controls.[33]

Nurses' Stress Loads

Being an only child in a family. In contrast with nurses who aren't only children, nurses who were only children experienced more stress, being afraid of the impact on their parents if they died from COVID-19.[34-36] They also were more concerned about their families' health. Hu, et al., reported that the social support of the nurses who are the only child in their families maintains their mental health.[37] In addition, the researchers found that it's important to mitigate the fears of frontline nurses.

Long work weeks. Consistent with other studies, long working time per week increased stress, which may be

correlated with the fear of infection, excessive physical consumption, etc.[38] COVID-19 infections are triggered by respiratory droplets and by nearby airborne transmission. Nurses caring for COVID-19 patients are at greater risk of occupational exposure. The breathing of nurses is restricted to some degree due to their wearing of full PPE.[29]

Nurses may not drink water or use the bathroom during work to reduce the use of PPE, which raises the challenges of nursing practice.[39,40] The greater the work time each week, the larger the demands on the body and mind. Nurses' bodies are often in a state of discomfort and tiredness, they can be vulnerable to burnout if anxiety exists for long period of time. Job stress effects burnout gradually. Burnout is linked to nurses' physical and mental well-being and affects nursing quality and safety.

Effects of anxiety. Anxiety is a negative emotional state that an individual perceives subjectively and is one of the most common psychological disorders of nurses. The greater the anxiety, the more pressure the nurse will feel. Many previous studies have shown that stress can lead to anxiety, frustration, depression, and other mental disorders and emotions in nurses.[41]

COVID-19 is highly infectious and spreads rapidly, and the number of suspicious and confirmed cases increases daily.[42] Nurses feel anxiety and helplessness in trying to care for so many patients.[43-45]

The Chinese government has implemented policies to address these mental-health issues. Infection with COVID-19 can be claimed as an occupational accident, and healthcare workers infected as a result of performing their duties can benefit from workers' compensation insurance, in accordance with the law.[46]

Nurses need to maintain psychological health to ensure quality care for their patients. The government has provided an online platform with medical advice for sharing information about how to reduce the risk of infection between patients in a medical setting, which is ultimately aimed at reducing the anxiety of and pressure on healthcare professionals.

Relief From Mental Stress

Airline safety briefings remind people to put on their own oxygen masks before helping others in the event of an emergency. Attending to nurses' mental health and psychosocial well-being while caring for patients is as important as managing their physical health.[47,48]

Freedom to feel your feelings. Nurse and their colleagues are likely to feel immense pressure given the potential surge in care demands, risks of infection, and equipment shortages, among other stressors.[26] Experiencing stress and the feelings associated with it are by no means a sign of weakness or a reflection on nurse ability to do their job.

Intentional adoption of a coping strategy. Nurses should practice strategies that have worked for nurses in the past during stressful times.[49-51] These include getting enough rest, finding breaks during work or between shifts, eating

meals—ideally healthy eating on schedule, engaging in physical activity, and socializing with family members. These include keeping in touch with family and friends at an appropriate social distance.

Regular check-ins with nurses. Healthcare facilities should monitor nurses for symptoms of depression, stress disorders such as long-term grief, sleep disorders, intrusive memories, and/or hopelessness.[52] They should talk to trusted colleagues or bosses. If their symptoms persist or worsen over time, they should seek professional help.

Breaks from news and social media. Nurses should get in the habit of moving away from their computers or smartphones from time to time.[7,53,54] When returning to online media, they should focus on information from trusted sources, not just sources in social-media feeds.

Recall and strengthen the importance and meaning of nurses' work. Despite current challenges and frustration, healthcare facilities should remind nurses that caring for patients is a noble calling and that taking care of those in need during uncertain times is important.[15] They should take the time to recognize the efforts and sacrifices of their colleagues. Together, healthcare workers are stronger than individuals alone.

CONCLUSIONS

COVID-19 has posed a vast threat to public health worldwide. The psychological stress of nurses should be managed in public-health emergencies.

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