

# The Impact of COVID-19 on Nurse Burnout

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The COVID-19 pandemic has led to millions of deaths and hospitalizations all over the world. Not only has the pandemic increased anxiety among healthcare workers, but it has heightened the already challenging environment. Nurses have been especially impacted by the pandemic due to their essential role in patient care, as they spend a significant amount of time directly working with patient populations. Due to a shortage of personal protective equipment, uncertainty about regulations, and testing accuracy, nurses were put into situations where they could potentially contract COVID-19 themselves. Furthermore, due to staff shortages, nurses were moved to different wards where they have to adapt quickly to new responsibilities leading to high levels of stress and unfair expectations. Nurse burnout has strong implications on patient care as well. Nurses' dissatisfaction with their jobs had led to an increase in adverse events such as medication errors, decreasing patient satisfaction with their hospital stay. Additionally, the adjustment to the pandemic in nursing schools has negatively affected nursing students' perceptions of the field. Some suggestions to alleviate nurse burnout include prioritizing the wellbeing of all healthcare workers, involving nurses in administrative decision-making processes, and fostering a better work environment. If the nurse burnout issue is not addressed, patient care quality and hospital outcomes will decline, having a negative impact on all stakeholders. This review found that burnout has a negative impact on patient care satisfaction and the desire for students to pursue nursing. Interventions such as increasing nurse autonomy and decreasing patient to nurse ratios can protect nurses from burnout.

## Keywords

mental health • burnout • nursing • COVID-19 • nursing students • patient satisfaction • patient care • personal protective equipment (PPE)

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## Introduction

COVID-19 is a respiratory illness caused by the SARS-CoV-2 virus (World Health Organization, 2022). The pandemic caused by this virus has created a major strain in the United States hospital system. At the beginning of the pandemic, the unknown effects of COVID-19 and its variants caused hospitals to become overwhelmed with logistical challenges, especially in rural and lower-income areas (ASPE, 2022). For many healthcare workers, hospital guidelines were constantly changing, and there was no standardized care nor information about COVID-19 (Giannis et al., 2021). The personal protective equipment (PPE) supply was decreasing and reported to be inadequate; many staff viewed the shortage of PPE to be a sign of a lack of administrative support (Giannis et al., 2021). Hospitals are still facing workforce and PPE/resource shortages, leading to increased stress among staff (ASPE, 2022). Due to these challenges, 19.8% of respondents from the April 2020 McKnight's survey had felt pressure to admit patients who had been treated for COVID-19 in the hospital as they were unequipped to treat them. (Berklan, 2020).

One of the major concerns for healthcare workers during the pandemic is their own physical and mental health. Healthcare workers worry about becoming sick themselves, suffering COVID-19 symptoms, and spreading COVID-19 to their family members (ASPE, 2022). One United Kingdom observational study states that healthcare workers were seven times as likely to have severe COVID-19 compared to non-essential workers (Mutambudzi et al., 2021). Healthcare professionals also witnessed their colleagues getting sick and, in some cases, dying from contracting COVID-19, leading to more stress and anxiety (ASPE, 2022). Two-thirds of respondents from the McKnight's survey said that staff called in sick or quit due to COVID-19 concerns (Berklan, 2020). Worries about COVID-19 symptoms and spread were associated with poor mental health among nurses.

Nurses are particularly affected by the COVID-19 pandemic because they directly attend to patients. Compared to physicians who only spend approximately 15% of their time with patients, nurses spend approximately 37% of their time directly providing care to patients, with indirect care and service-related activities accounting for the rest of their time (Brooks et al., 2021; Gardner et al., 2010). They are responsible for performing physical exams and health histories; providing health promotion, counseling, and education; administering medications; and coordinating care with collaboration from many health professionals (American Nurses Association, 2023). In a study that observed the association between patient satisfaction and nurses' work in England, Aiken et al. found that patients' perceptions of care were significantly negatively impacted by their lack of confidence in either nurses or doctors and decreased with "missed nursing care" (Aiken, 2018). Missed care was defined as when a nurse missed treatments, was unable to complete necessary pain management, and lacked time to comfort and talk to patients. With more cases of missed care from the nurse, there was an overall decrease in patient satisfaction. Although this association was found prior to the pandemic, the increase in cases of missed care could be attributed to nurses being constantly worried about their own health and exposure to COVID-19 while they take care of patients. A nurse's ability to provide care consistently and positively is essential to ensure optimal patient care.

Nurses view their jobs as important and meaningful, but they are simultaneously putting their own lives at risk to help others. This dilemma causes nurses to have a higher risk of experiencing burnout. Nurse burnout is defined as the "emotional and physical exhaustion that is . . . the result of a high-stakes, demanding job that frequently exposes them to human suffering" (Clarke, 2022). The Maslach Burnout Inventory (MBI) has measured burnout through three components: emotional

exhaustion, depersonalization, and reduced personal achievement (Sullivan et al., 2022). Emotional exhaustion is defined as “the depletion of one’s emotional resources and feeling like one has nothing left to give to others” (Sullivan et al., 2022). Depersonalization is when negative feelings towards work develop (Sullivan et al., 2022). Lastly, reduced personal achievement manifests as feeling like one’s accomplishments do not meet personal expectations (Sullivan et al., 2022). Studies have shown that more nurses are becoming more burnt out compared to pre-pandemic times (Boev, 2012). Shah et al. reported that among 50,000 US registered nurses surveyed in 2018, 9.5% of nurses were leaving their current employment and among that number 31.5% say they were leaving because of burnout (Shah et al., 2021). Sexton et al. had found that there were increases in reports of emotional exhaustion among nurses each year since 2019 (Sexton et al., 2022).

This paper will examine the COVID-19 related factors that led to nurse burnout and how these factors directly affected patient care in the United States as well as discuss current interventions. Nurses are crucial for ensuring that patients feel comfortable and safe in the hospital. This paper will examine elements of patient experience that may be negatively impacted if nurses continue to leave the field. I also will be reviewing the impacts of COVID-19 on nursing students and their interest in the field. Nursing students are the future of nursing, so it is important to evaluate the effects of the COVID-19 pandemic on their interest in the field. With the decrease in future nursing students (Kells and Jennings, 2022), there is a great negative implication towards the future of patient care. Finally, I will examine recommendations that could improve the national nurse burnout issue.

## Patient Satisfaction and Nurse Burnout

Addressing nurse burnout is important because it is closely tied with the quality of patient care. In a 2004 Gallup Poll, patient satisfaction surveys showed that nurses’ ability to anticipate needs, help calm fears, and respond to requests positively impacted a patient’s overall satisfaction (Blizzard, 2004). Gallup also found that a patient’s interaction with the hospital staff was a predictor of the patient’s overall hospital satisfaction.

Patient experiences were found to be closely associated with a nurse’s relationship with their work. A study conducted by Leiter et al. suggested that a nurse’s affect such as exhaustion, intention to quit, and work meaningfulness cannot be hidden from patients (Leiter, 1998). The study found that patients on units where nurses found their work more meaningful were more satisfied with their hospital stay. Conversely, patients in units with exhausted staff were less satisfied with their stay. Nurse cynicism was also found to lower patient satisfaction with interactions with nursing staff. Leiter et al. hypothesized that feelings of frustration from perceived inability to provide the best care for patients are likely to be shown towards the patient due to how many interactions patients have with nurses (Leiter, 1998). A more recent study conducted in 2010 also supported the impact of nurse’s satisfaction with their work environment on patient satisfaction. Nurses who reported a favorable perception of their work environment also had high patient satisfaction scores (Gardner et al., 2010). On the contrary, nurses who had a steadily declining perception of their work environment had also a similarly decreasing trend in patient satisfaction scores (Gardner et al., 2010). Based on these two studies conducted decades apart, there seems to be an association illustrated between nurse satisfaction and patient care. When nurses felt more positive about their job there seemed to be a positive association with patient satisfaction of their care. However, if nurses felt discontent with their job, patient satisfaction decreased directly as well.

With an increase in nurse burnout, there was also an upward trend in patient adverse events and less safety management occurring in hospitals. In a study conducted in Iran, as the burnout prevalence increased among nurses, so did the number of adverse events (AEs) including events such as “Pressure ulcer”; “Patient fall”; “Medication errors” such as inappropriate medication use or patient harm while medication is in control of a healthcare professional, patient, or consumer (U.S. Food and Drug Administration, 2019); “Surgical wound infection,” “Infusion or transfusion reaction,” “Patient and family verbal abuse,” and “Patients or family complaints” (Kakemam et al., 2021). Kakemam et al. used binary logistic regression to find a relationship between burnout dimensions and AEs. Detachment, a measure of burnout, was found to increase the risk of all AEs, while low productivity and emotional exhaustion had reduced the risk of some AEs or had no effect on AEs, respectively (Kakemam, 2021). The study suggested that detachment negatively affected the relationship between the provider and the patient leading to low quality patient care. To support the previous points, Seul Ryu and Shim found decreases in patient safety management activities with increased levels of burnout in Korea (Seul Ryu and Shim, 2021). As echoed by previous studies above, psychological detachment from work because of burnout led to indifference towards patients. Burnout also decreased concentration which was hypothesized to increase the number of patient safety incidents (Seul Ryu and Shim, 2021). However, higher compassion satisfaction (CS) — defined as “a pleasant emotion that comes from the ability to help others” — could mitigate AEs that may arise as a nurse’s CS improved job satisfaction and lowered levels of physical and emotional burnout (Seul Ryu and Shim, 2021).

## Nurse Burnout COVID-19 Factors

COVID-19 has brought many new challenges for healthcare professionals, especially nurses. Overall, there has been an increase in anxiety and depression among nurses during the COVID-19 pandemic. In the Intensive Care Units (ICU) across the United States, nurses are experiencing moral distress, burnout, anxiety, depression, and post-traumatic stress disorder (PTSD) (Guttormson et al., 2022). Using an observational cross-sectional study design, Sagherian et al. also found that nursing staff who care for COVID-19 patients similarly have worse insomnia, fatigue, and higher PTSD symptom severity compared to other nurses (Sagherian et al., 2020). Those who worked more than forty hours per week had higher PTSD symptom severity. Repeated exposure to trauma and constant worry about contracting COVID-19 and spreading COVID-19 to their families also increased the risk of developing PTSD (Sagherian et al., 2020). Over half of the nurses in the above-mentioned study have reported that their life was threatened or they might die due to caring for COVID-19 patients (Sagherian et al., 2020). The respondents who felt that their life was threatened or they might die due to COVID-19 had a higher PTSD risk — 61.4% were at risk for PTSD compared to 27.8% who did not feel threatened (Sagherian et al., 2020).

Nurses experienced fear, stress, and uncertainty about the possibility and consequences of contracting COVID-19. A study by Barrett et al. (2020) demonstrated with a cross-sectional data analysis that healthcare workers in New Jersey had a higher prevalence of COVID-19 infections than non-healthcare workers, and nurses represented a majority (62.5%) of the positive tests among healthcare workers. Nurses brought up in interviews that they were stressed about contracting COVID-19 from an asymptomatic patient due to false negatives and a lack of information regarding antibody testing (LoGiudice and Bartos, 2021). One nurse said that “chances are that a



reasonable percentage are gonna get critically ill and we know you're gonna spread it to your family members" (Norful et al., 2021). Another nurse expressed concerns about giving COVID-19 to their grandparents so she avoids visiting them because "it will be too high of a risk to go see them and possibly pass the disease onto them" (Norful et al., 2021). The separation and distancing from families added an additional layer of stress on healthcare workers.

One of the biggest issues during the COVID-19 pandemic was the lack of PPE. In a descriptive study conducted by Norful et al. (2021), physicians expressed that they "tried to get [hospital scrubs] to wear while [they are] at work and [were] denied." Respondents in a different study said that they have to "[reuse] surgical masks and N95s, [order] off-brand gowns and shoe covers, and [use] house-made hand sanitizers" (George et al., 2021). A survey by the American Nurses Association (ANA) found that nine out of 10 nurses feared going to work due to inadequate PPE, and nurses have been forced to create their own surgical masks (American Nurses Association, 2020). The lack of PPE has been associated with depression and is a high risk for anxiety and PTSD as well among Michigan nurses (Arnetz et al., 2020). Younger nurses have expressed their desire to leave the workforce due to a lack of PPE and support from the administration (Guttormson et al., 2022).

On the other hand, wearing PPE has also led to a lot of stress for nurses. In one interview study, all the registered nurses have expressed experiencing exhaustion from wearing PPE and N95 masks (LoGiudice and Bartos, 2021). They were worried that the methods to sanitize and clean PPE will damage masks and therefore increase the risk of getting infected with COVID-19. Nurses sometimes wore N95 masks for weeks or until they were "visibly soiled" and "until damaged" (LoGiudice and Bartos, 2021). Soiled and damaged PPEs are ineffective at protecting nurses against the virus. Due to the shortages in PPE, nurses were forced to balance between having enough PPE and their health. Wearing PPE for long periods of time also had negative consequences on nurses' physical health. A questionnaire for ICU nurses in India showed that nurses experienced headaches, extreme sweating, and difficulty breathing (Jose et al., 2021). Additionally, nurses had nasal bridge scarring, indentation, and pain on the back of the ears as adverse reactions. Latex gloves led to sweaty skin and skin chapping (Jose et al., 2021).

In addition to PPE shortage, nurses gained or switched to new roles with new expectations due to a large number of COVID-19 patients. Some staff were pulled from their normal work to attend to the massive number of patients. For example, healthcare workers who usually saw patients with concerns in their specialty were all asked to focus on the influx of COVID-19 patients. One nurse said, "on the [Labor and Delivery unit] it's now mandatory that we float to other units if needed . . . We are all expected to take on more responsibilities in an effort to help other team units" (Morley et al., 2020). A team of unqualified nurses might be caring for six ICU patients at one time (Morley et al., 2020). Critical care nurses often only care for one or two patients at a time which is considered busy already (Krischke, 2017). Furthermore, taking away nurses from their original ward has led to increased patient demands for those who remain at the ward (George et al., 2021). Nurses were also taking on additional roles and responsibilities "from witnessing advance directives and setting up virtual communication platforms to cleaning patient rooms and emptying bins" (Morley et al., 2020). With COVID-19, nurses were also now responsible for "monitoring adherence to proper mask wearing, ensuring proper handwashing, and conducting signs and symptoms assessment" (George et al., 2021). In the Labor and Delivery units, nurses picked up duties such as phlebotomy and housekeeping (mopping floors) because staff did not want to enter COVID-19 rooms (George et al., 2021). The extra tasks, shifting of job responsibilities, uncertainty of work routine have led to

nurses leaving their jobs because they were feeling overwhelmed. Nurses also reported that management was refusing to hire more staff, therefore nurses continued to feel uncertain about their job responsibilities and whether they will have to substitute in for another role (George et al., 2021).

## COVID-19's Impact on Future Nurses

Nursing students are also feeling the negative impacts of COVID-19. In a study examining levels of anxiety and depression among nursing students, researchers found that the pandemic has both positively and negatively influenced nursing students' perceptions of the field (Kells and Jennings, 2022). Some students became more interested in helping during the pandemic and making a positive impact on people's lives. 31.9% of respondents reported that the pandemic has strengthened or reaffirmed their desire to become a nurse (Kells and Jennings, 2022). However, 17.6% of respondents reported a decrease in interest, less confidence, and/or negative affect or drive associated with the pandemic (Kells and Jennings, 2022). Students became more aware of the dangers, risks, and challenges associated with healthcare; they also reported feeling that there was a lack of support and respect for nurses at the frontlines.

The COVID-19 pandemic had also directly affected nursing students' learning experiences. The transition to online learning in the United States led to many challenges such as the format of learning, professor and student relationships, peer relationships, and general anxiety and stress. A qualitative study conducted by Wallace et al. (2021) found that students felt that professors had trouble teaching online, and the students were unsure about when and how to ask questions and approach their professors. Students were also isolated, unable to form in-person study groups and ask questions to their peers. In general, students were not in an environment where they could focus on their studies. Michel et al. (2021) supported Wallace's above findings with similar results from a quantitative and qualitative survey regarding undergraduate students' perceptions of their education during COVID-19. Students also struggled with their study environment and the constant change in course schedules and guidelines (Michel et al., 2021). They have expressed concerns about how the virtual environment disconnected them from the feelings associated with direct patient care. Even in direct clinical care, COVID-19 has also impacted on-site learning. A cross-sectional study in Belgium noted that students had to switch clinical sites which led to concerns about learning opportunities (Ulenaers et al., 2021). Some students were moved from hospital units to a nursing home, where they say they have less opportunity to practice technical skills. One student said that they are "missing out on learning opportunities by not being able to do [their] elective internship in heart surgery" and they already had "four similar internships in this [nursing home] field" (Ulenaers et al., 2021).

## Interventions Against Burnout

Hospitals with the best work environments were found to have the lowest burnout rate and highest patient satisfaction. A study conducted by Brooks et al. (2021) analyzed 463 hospitals in 4 states to examine the relationship between nurse burnout and patient satisfaction as well as whether work environments are associated with the outcomes. Work environment was measured using the Practice Environment Scale of the Nursing Work Index that comprised nurse participation in hospital affairs, nursing foundations for quality of care, nurse manager ability, leadership and support

of nurses, staffing and resource adequacy, and collegial nurse-physician relations (Brooks et al., 2021). In hospitals with poor work environments, hospitals improving their work environment from poor to best led to a 12% increase in patient satisfaction (Brooks et al., 2021). Brooks et al. attributed Magnet designation hospitals — hospitals where “nursing leaders successfully align their nursing strategic goals to improve the organizational outcome” (ANA Enterprise, 2023) — to improved patient outcomes (Brooks et al., 2021). Patient experience will likely improve by investing in “Magnet-like qualities” through fostering relationships between nurses, administrators, and physicians and giving nurses more decision-making authority.

These findings were supported by Aiken et al. (2012) who suggested an improvement in hospital work environments was a “relatively low-cost strategy” to improve patient satisfaction. Some of these changes included increasing the percentage of Bachelor of Science in Nursing (BSN) nurses and lowering the patient-to-nurse ratio (Aiken et al., 2011). Higher patient-to-nurse ratios were found to increase odds on patient deaths and failure-to-rescue, while higher percentage of BSN nurses decreased those odds. Aiken et al. (2011) also echoed that better nurse work environments — environments where doctors and nurses have good working relationships, nurses are involved in hospital affairs, management listens to patient care problems identified by nurses, and institutions invest in the education of nurses and quality improvement of patient care — were essential for patient outcomes. In fact, without a good work environment, adding nurse staffing to reduce workloads had an insignificant effect. In the worst staffed hospitals, better work environments were found to decrease the odds of mortality and failure-to-rescue by approximately 2% or 3% (Aiken et al., 2011). Furthermore, in the best staffed hospitals, better environments decreased the odds by approximately 12% and 14%, respectively (Aiken et al., 2011). Sagherian et al. (2020) found that 30-minute breaks had a protective role on nurses’ mental health due to decreasing fatigue levels, PTSD symptom severity, and psychological distress. In the United States, volunteering programs have been established to relieve overwhelmed hospitals (Giannis et al., 2021).

Current approaches are mainly individual-based, but there is a need for an organization-level change. As mentioned earlier, Brooks et al. (2021) suggested that a more organization-level solution is allowing nurses to be more involved in decision-making regarding their practices and be at a position of change. The study called for an increase in organization-wide initiatives that foster well-being and engage all clinicians, including nurses, in creating a positive work environment. Furthermore, leaders in the hospital should be guiding nurses and healthcare workers about when PPE is and is not essential (Morley et al., 2020). Organizations should be supporting healthcare workers with enough PPE and prioritizing the health of healthcare workers by delaying treatment and procedures when PPE is unavailable, reassuring nurses and doctors that they can save more people by protecting themselves first.

## Conclusions

Due to the COVID-19 pandemic, there has been an efflux of nurses and an increase in burnout, depression, and anxiety among nurses at the frontline. Nurses are the hospital staff who work the most closely with patients and highly impact patient satisfaction with their hospital experience. However, this close relationship increases the chances of nurses contracting COVID-19, and these nurses can spread it to their families and loved ones. The shortage of PPE exacerbates these concerns and has been a factor to nurses expressing their desire to leave the field. Nursing students

have also felt that their competencies and learning have been impacted. Many students are unable to practice what they learned in the field, and those who can often had their clinical sites switched and/or expressed concerns about contracting COVID-19 themselves. Furthermore, when nurses are burnt out, they are unable to provide the best care possible for patients. Adverse events were associated with increase in nurse burnout manifestations such as detachment with one's work. While addressing nurse burnout has been an issue since before the pandemic, it is necessary to intervene in the increasing burnout among nurses during the COVID-19 pandemic. Most research has only focused on individual-based strategies, but more researchers have expressed that there needs to be change in the organizational-level such as involving nurses in decision-making more often. It is critical for hospital administration and healthcare workers to work together to tackle these issues to provide quality patient care.

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