

Mental Health and COVID-19

The psychological implications of a pandemic for nurses

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BACKGROUND: The risk of psychological effects from the COVID-19 pandemic is significant and manifests as stress, anxiety, depression, sleeplessness, and, in some cases, suicide. The need for psychological support services for healthcare providers should be included in all pandemic and disaster planning.

OBJECTIVES: The aim of this article is to explore the potential psychological sequelae of nursing during a pandemic and to provide recommendations to support a psychologically healthy work environment.

METHODS: Highlights from the literature on psychological sequelae, symptoms, and outcomes related to COVID-19 and prior pandemics is presented, along with insight from the experiences of oncology nurses caring for patients with COVID-19.

FINDINGS: Destigmatizing mental health needs for healthcare providers empowers them to seek support. Hospital administrators must develop proactive wellness plans for the triage and management of mental and emotional health needs during a pandemic that prioritize transparent communication, resources for healthcare providers within and beyond the clinical setting, and training.

KEYWORDS

oncology nursing; pandemic; COVID-19; coronavirus; mental health

DIGITAL OBJECT IDENTIFIER

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SINCE THE FIRST COVID-19 CASES WERE REPORTED in December 2019, more than 37 million individuals have been diagnosed worldwide, including nearly 8 million cases in the United States alone (World Health Organization, 2020). Of the more than 1.9 million deaths to date, more than 400,000 have occurred in the United States; more than 1,500 have been healthcare workers (Reed, 2020; World Health Organization, 2021). The psychological burden of the pandemic from both a personal and professional perspective has contributed to stress, anxiety, depression, and, in some cases, suicide among healthcare professionals (Mahbubani & Mosher, 2020). The endemic nature of the pandemic has required increased attention to how best to support healthcare providers, including nurses, as they cope with the stresses of the pandemic at work and home. The causes of psychological impact for healthcare professionals include the sheer volume of individuals affected, the risk of infection, the potential rationing of care, possible shortages of personal protective equipment (PPE), the challenge of balancing work and personal demands, and the deaths of patients and coworkers (Shanafelt et al., 2020). The presence of COVID-19 symptoms may further exacerbate psychological effects, up to and including post-traumatic stress (Chew et al., 2020; Spoorthy et al., 2020).

In the context of oncology care, these risks and stressors are further magnified for patients and providers. From the outset of the pandemic, individuals with cancer were identified among those at highest risk for significant complications of COVID-19 (Robilotti et al., 2020). In addition to the potential physical sequelae, a number of psychological effects are also a concern for individuals with cancer. These effects include increased fear of contracting COVID-19; treatment delays; experiencing a new diagnosis or initiation, continuation, or completion of treatment alone; and potentially end of life and death accompanied by few, if any, family members (Young et al., 2020). Among individuals with cancer, one study demonstrated that risk of mental health complications was associated with a history of a mental health diagnosis, frequency of worrying about cancer management during the COVID-19 pandemic, higher levels of pain and fatigue, excessive alcohol consumption, and more frequent experience of psychological pressure related to COVID-19 (Wang et al., 2020). This psychological

pressure manifests not only for patients with cancer, but also for the healthcare providers entrusted with their care. These individuals, most notably nurses, may assume the psychological stressor of caring for a vulnerable population who would be at risk for significant morbidity and mortality if they contracted the virus, as well as face potential barriers to providing the full scope of care to which they are accustomed (Tichich, 2020). Coupled with the additional stressors of COVID-19 at work and in the community, this creates a context for psychological sequelae for oncology healthcare professionals.

Background

Experiences from previous natural disasters provide key insights into how the stress of healthcare crises can affect the psychological well-being of providers (Krystal & McNeil, 2020). Previous pandemics, such as severe acute respiratory syndrome (SARS) and influenza A virus subtype H1N1 (H1N1), have led to negative mental health consequences for healthcare providers, including nurses (Blake et al., 2020). However, unlike weather and even previous disease-related crises that have been largely regionally confined, COVID-19 has affected health care at a global scale and created unique stressors and challenges, particularly for nurses on the front line of care (Maben & Bridges, 2020). These stressors and challenges include moral and ethical distress related to the reality that not everyone can be treated and that limited resources must be allocated (Maben & Bridges, 2020). These

“The long-term mental and physical effects of caring for individuals with COVID-19 remain unknown.”

logistical and psychological challenges may manifest in unique ways for oncology nurses, who are caring for vulnerable, often immunocompromised patients who may be at greater risk for complications or death (Paterson et al., 2020). In addition, while nurses cope with the challenges of the pandemic in the workplace, they simultaneously do so as members of society, where they may face similar challenges related to child care, access to needed resources, and uncertainty and concern for infection inside and outside the clinical setting.

The aim of this article is to review literature about psychological effects, symptoms, and outcomes for healthcare professionals during a pandemic.

Methods

As an example of the psychological effects of the COVID-19 pandemic, this article presents stressful psychological experiences relayed by oncology nurses in acute care practice at Northwell Health Huntington Hospital in New York. In addition, to inform strategic planning during future pandemics and other natural disasters, this article reviews actions to support the well-being of healthcare professionals.

Findings

Historical Context

COVID-19 is not the first pandemic in the modern era to challenge healthcare providers. The H1N1 pandemic led to 60.8 million cases, 274,304 hospitalizations, and 12,469 deaths in the United States from April 2009 to April 2010 (Centers for Disease Control and Prevention, 2019). In addition, although SARS and the Middle East respiratory syndrome (MERS) had high mortality rates (10%), they had lower transmission rates (Virginia Commonwealth University Health, 2020). A history of pandemics and the psychological influence of and sequelae from their occurrence suggest that not only do pandemics affect the psychology of individuals and communities, but their spread, duration, and intensity are also influenced by the psychological response of communities to the pandemic itself (Taylor, 2019). The context of ever-evolving healthcare delivery and demands on clinicians and health systems, coupled with the

FIGURE 1.
CONTRIBUTORS TO PSYCHOLOGICAL
DISTRESS FOR HEALTHCARE PROVIDERS

- Lack of access to personal protective equipment
- Fear of being infected
- Fear of infecting family members
- Lack of access to testing
- Spreading the virus to patients, coworkers, families, or friends
- Uncertainty of support for themselves and their family if they become infected
- Lack of access to child care or the ability to work from home
- Fear of litigation related to supply rationing
- Inability to provide support for personal and family needs as work demands and hours increase
- Being unable to provide competent care if supporting a new clinical area
- Lack of access to consistent, timely, and up-to-date information
- Sense of loneliness and frustration
- Death of nursing colleagues and coworkers
- Not having control over patient flow
- Projected emotions from family members of patients

Note. Based on information from Fernandez et al., 2020; Shanafelt et al., 2020.

unpredictability of pandemic emergence, require creative solutions to prepare for global health challenges and particularly the mental health needs of clinicians in diverse geographic and practice settings.

Psychological Outcomes of a Pandemic for Healthcare Professionals

Although the evidence related to COVID-19 specifically is still emerging and the psychological effects may not be fully appreciated for many years to come, preliminary studies and systematic reviews provide insight into the mental health consequences of the pandemic for healthcare professionals. A systematic review and meta-analysis of articles related to COVID-19 identified poor sleep quality, stress, psychological distress, insomnia, post-traumatic stress, anxiety, and depression secondary to COVID-19 (Krishnamoorthy et al., 2020). In that review, healthcare workers had one of the highest psychological symptom burdens, second only to individuals who were positive for COVID-19 (Krishnamoorthy et al., 2020). A second meta-analysis reported a pooled prevalence of anxiety (23%), depression (28%), and insomnia (39%) among healthcare professionals, with female healthcare providers and nurses demonstrating higher rates of affective symptoms (Pappa et al., 2020). A broader review examined mental health outcomes of healthcare professionals (n = 60,458) exposed to SARS, MERS, or COVID-19 (de Pablo et al., 2020). Symptoms observed across 115 publications included fear (44%), insomnia (38%), psychologic distress (38%), burnout (34%), anxiety (29%), depressive symptoms (26%), post-traumatic stress disorder (PTSD) (21%), somatization (16%), and stigmatization (14%) (de Pablo et al., 2020). In a study of nurses working in hospitals treating patients with COVID-19, 25% were identified as experiencing psychological distress (Nie et al., 2020). According to the Anxiety and Depression Association of America (ADAA, 2020), stress and anxiety can evolve into acute stress disorder, which precedes PTSD, of which the latter is chronic. Depressive symptoms are likely to follow chronic unresolved anxiety. Anxiety and depressive symptoms may include constant fear, excessive worrying, poor concentration, disturbances in sleep or appetite, low energy or fatigue, and decreased motivation (ADAA, 2020).

Contributors to Psychological Distress in a Pandemic

A systematic review of qualitative studies (n = 13) focused on the experiences of nurses in the context of pandemics, including SARS, MERS, COVID-19, and avian influenza (Fernandez et al., 2020). Contributing factors identified in this review and another publication specific to COVID-19 are summarized in Figure 1. These contributing factors include fears about contracting or spreading the virus to patients, family, and coworkers. During the COVID-19 pandemic in particular, the stressors of exposure in the workplace may be compounded by the social restrictions present

FIGURE 2.
RECOMMENDATIONS FOR HEALTH SYSTEMS TO SUPPORT THE MENTAL HEALTH OF PROVIDERS

HEAR PROVIDERS' CONCERNS.

- Provide opportunities for bidirectional communication to allow health-care providers to express concerns.
- Listen to and act on concerns.

PROTECT PROVIDERS FROM UNNECESSARY RISK.

- Provide physical (e.g., personal protective equipment) and emotional resources to support holistic health and optimal coping.

PREPARE PROVIDERS FOR PRACTICE BASED ON EVIDENCE.

- Provide training to support safe and effective practice.
- Use evidence-based tools to support safe practice and evaluation of providers' health needs.

SUPPORT PROVIDERS WITHIN AND BEYOND THE CLINICAL SETTING.

- Identify, anticipate, and support the physical and mental health needs of providers within and beyond the clinical setting.
- Extend supportive services to clinicians at home and in the community.

CARE FOR THE HOLISTIC NEEDS OF PROVIDERS.

- Provide opportunities for healthcare providers to be screened for holistic health needs.
- Establish resources to support those holistic health needs, including for clinicians who also contract the virus.
- Destigmatize mental health needs to encourage clinicians to openly express their concerns and use support resources.

Note. Based on information from Shanafelt et al., 2020.

in the community, where social distancing and stay-at-home recommendations have been associated with increased depression, acute stress, and generalized anxiety disorder (Marroquín et al., 2020). The social isolation coupled with self-imposed isolation practiced by some nurses, such as staying at a hotel or away from home so as not to put family members at risk for infection, could further compound the psychological effects of a pandemic scenario.

Beyond Psychological Outcomes

The outcomes of a pandemic transcend the psychological symptoms noted previously and can have far-reaching and potentially dire consequences, including suicide (Gunnell et al., 2020; Sher, 2020). Reports of healthcare professionals' suicides during the COVID-19 pandemic (Dean, 2020) are a significant consequence of the mental health effects of COVID-19 that requires proactive attention to the mental health and well-being of healthcare providers. Global studies suggest that increased fear of COVID-19 is associated with psychological distress, job dissatisfaction, and increased turnover at the organizational and professional

level (Irshad et al., 2020; Labrague & de los Santos, 2020). Such outcomes are consistent with studies outside the context of a pandemic that suggest that workplace stressors are a major contributor to nurse turnover (Halter et al., 2017) and reduced retention, including among oncology nurses (Gillet et al., 2018; Wu et al., 2016).

Oncology Nurse Narratives From New York

Northwell Health Huntington Hospital is a full-service, 306-bed, four-time Magnet®-designated community hospital in New York, which was the epicenter of the early COVID-19 outbreak in the United States. The Northwell Health Cancer Institute is home to the Don Monti Cancer Center, a 20-bed inpatient unit, and a five-chair outpatient infusion center. At Northwell Health Huntington Hospital, the first patient who was positive for COVID-19 presented on March 10, 2020, after which positive cases began to surge, many of which required intensive care. From March 10, 2020, through April 8, 2020, 26 hospital units were converted to care for all patients with COVID-19, leaving two areas to house uninfected medical-surgical patients. A total of 1,116 patients with COVID-19, including 96 individuals with a cancer diagnosis, were treated at Northwell Health Huntington Hospital. Of the 2,115 employees, as of August 17, 2020, 175 employees contracted the virus and 1 employee died.

This resulted in many of the psychological effects highlighted previously.

Northwell Health Huntington Hospital experienced a large number of positive patient and provider cases, from which they also experienced deaths, some of whom died shortly after presenting with symptoms. This included an RN who died seven days after presenting to the hospital with flu-like symptoms. This was not only the loss of a respected colleague, but also the loss of any security felt from the use of PPE. The concern about contracting the virus within and beyond the healthcare setting, as well as the potential risk of exposure to family and friends, became a significant stressor. This is epitomized in the case of two nurses from this institution.

A new graduate nurse working on the oncology unit coped with her first patient death related to COVID-19 on the same day she went home to discover that her grandfather had died from COVID-19 after infection in the nursing home in which he resided. Just four days later, she received word that her grandmother had also died from COVID-19. She struggled emotionally with the burden of caring for patients who were dying, alongside the grief for her family members whose lives were lost. After a week of mourning, she started to feel anxious about her return to work as a nurse caring for patients with COVID-19. She experienced a myriad of emotions, including fear of returning to a clinical environment in which there was a risk of exposure to the virus that had taken the lives of her grandparents. Consistent with the literature, this nurse experienced the dual psychological challenges of experiencing death in the workplace concurrently with death related to COVID-19 in her family, resulting in fear and anxiety about returning back to work and potential risk of exposure.

A second nurse experienced the conversion of her oncology unit to a COVID-19 unit. This required a rapid translation of skills from practicing exclusively as an oncology nurse to practicing as a nurse for a highly infectious virus about which new information was constantly emerging, making it difficult to attain clinical proficiency. This transition was also highlighted by the physical manifestation of the viral presence in the form of extensive PPE. The reality of walking into a room to care for an infected patient created understandable concern. This was further exacerbated by thoughts of her own family and friends with chronic conditions who would be particularly susceptible to complications of COVID-19 if infected. These included her fiancé who has asthma, her best friend who has diabetes, and her mother who is a breast cancer survivor on lifelong immunosuppressive therapies. Several weeks later, when initiating aromatherapy for a patient, this nurse realized she could not smell. After testing positive for COVID-19, she quarantined in a bedroom in her parents' home so as not to expose other family members. During the next few weeks, meals were left outside her bedroom door, and requests were made via text message. Although she ultimately recovered, she spent each day wondering when things were going to turn.

FIGURE 3.
SIGNS OF PSYCHOLOGICAL CONDITIONS
FOR HEALTHCARE PROVIDERS IN THE CONTEXT
OF COVID-19

DEPRESSION

- Trouble concentrating while taking care of patients
- Fatigue from working long hours
- Insomnia
- Feeling empty after patients with COVID-19 died

ANXIETY

- Worry about contracting the virus
- Worry about unintentionally infecting others
- Worry about family getting COVID-19

BURNOUT

- Anxiety
- Depression
- Frustration of working long hours
- Chronic fatigue from working long hours
- Insomnia
- Inability to concentrate while taking care of patients
- Feeling isolated from family
- Feeling detached from family and friends

Note. Based on information from Barzilay et al., 2020.

This case highlights several contributing factors to psychological effects in nurses, including fear of contracting the virus and concern about spreading it to vulnerable family members. This led to significant physical isolation at home during a time of potentially intensified fear and emotional distress, epitomized in her concern that things would inevitably end badly. Although that nurse eventually recovered, the experience of contracting COVID-19 may contribute to persistent psychological effects.

Recommendations for Clinical Practice

Recommendations to health systems regarding ways to address mental health needs in the context of the COVID-19 pandemic were summarized by Shanafelt et al. (2020) (see Figure 2).

FOSTER AN ENVIRONMENT OF PSYCHOLOGICAL SAFETY:

Creating an environment of trust and support is imperative to promote a psychologically safe working environment (Rangachari & Woods, 2020). This begins with transparent communication and obtaining nurses' insights and lived experiences to identify and address mental health needs. Focus groups can be created to discuss challenging situations that may result in mental and emotional distress for nurses. Integrating pandemic planning into new or existing educational or training programs for staff, including simulation, is imperative to provide exposure for managing patient care and self-care during a pandemic. Online forum groups can be used to aid staff and encourage opportunities to reflect and adapt to the challenges that COVID-19 may create for years to come (Veitch & Richardson, 2020).

IDENTIFY THE SIGNS OF PSYCHOLOGICAL DISTRESS IN SELF AND OTHERS: The ability to identify signs of psychological distress among healthcare professionals is imperative to support early intervention. In some studies, validated assessments, such as the Generalized Anxiety Disorder Scale, Primary Care PTSD Screen, or Patient Health Questionnaire-2, were used to screen for anxiety and depression (Shechter et al., 2020). Further assessment tools, including the Brief Symptom Inventory, Symptom Checklist-90-Revised, Depression Anxiety Stress Scale-21, and General Health Questionnaire-28, are validated to measure more than one domain of psychological distress (Ghawadra et al., 2019). Even without validated instruments, there are well-established signs and symptoms of anxiety, depression, and burnout in nursing (see Figure 3). They may be helpful in identifying symptom clusters indicative of one cause or more of psychological distress. These self-reported outcomes can be used by individuals to screen for the presence of psychological distress; however, such instruments should be used as part of care delivered by a healthcare professional so that any distress can be further evaluated and managed using an evidence-based approach.

DESTIGMATIZE SELF-REPORT: The stigma of mental health needs is a significant barrier to healthcare professionals self-reporting and seeking assistance (Knaak et al., 2017). Among the barriers to self-reporting is the perception of being devalued,

IMPLICATIONS FOR PRACTICE

- Be able to identify signs of psychological distress in self and among other healthcare professionals to support early intervention.
- Foster an environment of psychological safety among frontline nurses with transparent and open-ended communication at the leadership level.
- Destigmatize mental health needs by sharing personal experiences of mental health needs and offering training focused on destigmatization and initiatives that provide a safe and supportive working environment.

dismissed, and dehumanized, in addition to actual or perceived discouragement from disclosing psychological challenges. The fear of being perceived as less competent or as performing work in a less reliable manner is an additional and significant barrier to seeking needed assistance (Knaak et al., 2017). Interventions, including the sharing of personal experiences of mental health needs by staff, training focused on destigmatization, and initiatives that provide a safe and supportive environment in which to self-disclose mental health needs, may contribute to destigmatization of mental health concerns among healthcare professionals and support earlier help seeking, which may, in turn, improve outcomes (Knaak et al., 2017).

The real-world experience at Northwell Health Huntington Hospital suggests the incalculable effect of COVID-19 on healthcare providers, including nurses. The long-term mental and physical effects of caring for individuals with COVID-19 remain unknown. However, early studies suggest a high prevalence of depression, insomnia, anxiety, and distress, with nurses on the front line at highest risk for experiencing symptoms of distress (Lai et al., 2020). Depending on the severity, these symptoms may begin to impair nurses' professional function (Hu et al., 2020). Therefore, it is imperative that health systems continue to monitor for and address mental and emotional sequelae of COVID-19 and develop action plans in the event of future pandemics. Just as emergency planning is created to support the logistics of healthcare delivery in the context of man-made or natural disasters, so too should a mental health support plan be established for measuring, triaging, and treating the psychological and emotional effects of a global health crisis on healthcare providers. Northwell Health Huntington Hospital captured many of the recommendations for promoting a psychologically safe work environment, even in the most acute stages of the COVID-19 pandemic, through a series of interventions such as an emotional support resource center and "in this together" sessions that supported staff in openly sharing psychoemotional concerns related to COVID-19.

Conclusion

Few predicted a pandemic of the magnitude of COVID-19, and understanding of this pandemic, including unknown mental and emotional effects, continues to evolve. Despite this, important lessons have been learned about how to prioritize the holistic health needs of the healthcare workforce, particularly nurses. This starts by destigmatizing mental health needs for healthcare providers, empowering individuals to seek support as needed without fear

of stereotype or retribution. In addition, hospital administrators must develop proactive wellness plans for the triage and management of mental and emotional health needs during a pandemic that prioritize transparent communication, resources for health-care providers within and beyond the clinical setting, and training to ensure safe and, when available, evidence-based practice. This may be particularly important for nurses caring for specialty populations who are vulnerable to morbidity and mortality associated with COVID-19, including oncology. As evidence continues to emerge from the ongoing COVID-19 pandemic, research should focus on the longitudinal mental health outcomes for nurses and other healthcare providers, along with interventional studies to generate evidence around safe and effective approaches to prevent or ameliorate psychological distress among healthcare professionals in oncology practice and beyond.

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QUESTIONS FOR DISCUSSION USE THIS ARTICLE FOR JOURNAL CLUB



Journal club programs can help to increase your ability to evaluate the literature and translate those research findings to clinical practice, education, administration, and research. Use the following questions to start the discussion at your next journal club meeting.

- Based on the anxiety relayed by oncology clinical nurses caring for patients with COVID-19 at Northwell Health Huntington Hospital, how would you manage that type of anxiety?
- From Figure 2's recommendations for ways to support the mental health of providers, which recommendations can you help support in your healthcare system?
- During the COVID-19 pandemic, have you experienced depression, anxiety, or burnout? If so, how have you managed to keep going despite these psychological challenges?

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