I Am a Nurse, Not a Martyr: Qualitative Investigation of Nurses' Experiences During Onset of the Coronavirus Pandemic

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Abstract

Nurses have always played an essential role during epidemics, risking their lives caring for sick and dying patients. However, the unprecedented nature of the novel coronavirus disease 2019 (COVID-19) has left organizations and health-care professionals ill-prepared and under-equipped to manage the severity, manifestations, and acute and long-term implications. While COVID-19 has presented profound physical and mental health implications for nurses, we know little about nurses' professional experiences within their organizational context. Thus, this qualitative descriptive study fills that gap through in-depth exploration of nurses' shared professional experiences working in hospitals during the first surge of COVID-19 in the United States. Twenty-two nurses were interviewed via telephone during April and May 2020. Through thematic analysis four main themes emerged: (1) fear, (2) collective resilience through shared trauma, (3) uncharted territory, and (4) perceived disposability. Nurses felt ill-praepared for the rapid changes wrought by COVID-19; yet they also felt proud with a renewed sense of meaning in their work. While unit colleagues were a great source of strength, nurses still reported disappointment, even feeling abandoned by their organizations. Our study indicates that nurses relied on one another to cope and find meaning. These findings are invaluable for policy development and the establishment of preventive and early intervention strategies. Done right, such efforts could better support nurses by encouraging team building, protection, and rewards to maintain nurses' wellbeing during such outbreaks and in their aftermath. Organizations also ought to make nurses' health and wellbeing a priority by streamlining communication, transparency, and leadership visibility.

Introduction

From the "Spanish Flu" of 1918 to the Severe Acute Respiratory Syndrome of 2003 (McDonald et al., 2004), nurses have played an essential role managing most modern epidemics, risking their lives caring for sick and dying patients (Maunder et al., 2006). But the unprecedented nature of the novel coronavirus disease 2019 (COVID-19) has left organizations and health care professionals ill-prepared and under-equipped to manage the severity, manifestations, and acute and long-term implications (Himmelstein & Woolhandler, 2020) of a disease that has killed over millions people worldwide (CDC 2021).

Given the drastic potential of the disease, health care professionals who fear they may infect others tend to experience depression, insomnia, anxiety, frustration, anger, and trauma (Barello et al., 2020; Lai et al., 2020; Pappa et al., 2020; Salari et al., 2020; Zhang et al., 2020). Mental and emotional

anguish stems from healthcare workers coping with the deaths of colleagues (Maunder et al., 2006), as well as workers' sense of losing control, feeling vulnerable, logging excessive hours, and witnessing the breakdown of social support systems (Chua et al., 2004; Lee et al., 2007; Maunder et al., 2006), all the while managing family responsibilities and other stresses of life issues (Chua et al., 2004; Lai et al., 2020; Maunder et al., 2006). The upshot is that,

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despite their training and dedication, nurses, like anyone else, can never be completely prepared to deal with a pandemic.

While COVID-19 has presented profound physical- and mental-health implications for nurses (Mo et al., 2020; Zhang et al., 2020), we know surprisingly little about how nurses' professional experiences managing such crises. Specifically, we lack a sufficient understanding of nurses' perceptions of organizational processes and the significance of collegiality among frontline workers. The purpose of this study is to fill this gap through an in-depth exploration of shared organizational context, perception, and experiences of frontline nurses working in hospitals during COVID-19 using a qualitative descriptive methodology.

Method

Study Design

This was a qualitative descriptive study. This approach facilitates natural inquiry using low inference interpretation to present the facts using common language (Sullivan-Bolyai et al., 2005; Willis et al., 2016).. Thus, this allows for the understanding of the complex experiences, events, and processes that are embedded within the human context (Sullivan-Bolyai et al., 2005; Willis et al., 2016).

Sample and Recruitment

In April 2020, nurses and nurse managers working frontline during the COVID-19 were initially recruited via a social media post of the study description and the contact information on the lead author (JJ)'s Twitter page. Nurses who were interested in the study contacted the author directly for further information and to schedule interviews. Several participants also volunteered to share the study information with other frontline nurses. Thus, we recruited study participants through purposeful sampling and snowball techniques. To participate in the study, individuals had to (1) be a registered nurse in a hospital providing care to patients infected with COVID-19, (2) speak English, (3) be at least 18 years old, and (4) be able to provide verbal consent. Nurses with no contact with COVID-19 patients were excluded.

Data Collection

Once participants agreed to take part in the study, the lead author (JJ) called the participants to obtain verbal consent and to conduct an in-depth, semi-structured individual phone interview. The researchers (JJ, MAR) had no prior established relationship with study participants. The interviews were conducted between April and May 2020 with each interview lasting 45–90 min, averaging 62 min. All interviews were audio-recorded and the lead author took reflective notes after each interview. No new interviews were conducted once information redundancy was reached

indicating saturation. The interview guide (Supplement A) included open-ended questions and basic work-specific queries regarding matters such as work setting and nursing experiences. Participants received a fifty-dollar digital gift card as compensation.

Data Analysis

Each audio-recorded interview was transcribed verbatim by a professional transcriptionist (Graneheim & Lundman, 2004). The transcripts were stored in a secured cloud platform which required a two-factorauthentication to unlock and only the researchers had access. We employed thematic analysis, a theoretically flexible method of qualitative data examination allowing researchers to identify patterns in coded data (Braun & Clarke, 2006). Two research team members (JJ & MAR) read the transcripts independently, highlighting key passages that addressed the study's research questions and identifying codes and associated themes using NViVo 7. Once patterns within the coded materials were identified, they were collapsed and refined into distinct study themes (Braun & Clarke, 2006). The authors then met to discuss and compare codes while finalizing the themes. Trustworthiness was established through repeated member-checking with participants during and after interviews; participants were, for example, asked to affirm the veracity of both the researchers' conceptualizations and their codification of interview statements. Additionally, an audit trail was maintained to preserve the transparency of each step in the analysis. Exemption status was granted for this study by the University of Michigan's Institutional Review Board.

Results

Participant Characteristics

Twenty-two nurses working in hospitals located across nine different states (Connecticut, Illinois, Massachusetts, Minnesota, New Mexico, New York, North Carolina, Oregon, and Washington) in the United States were included in the study. Table 1 summarizes the characteristics of the participants: three assumed a managerial role, and nineteen were bedside registered nurses. At the time of the interviews, fourteen nurses were practicing in areas with a high number of COVID-19 cases. Nurses had work experiences ranging from less than one year to more than ten years, with the average tenure equaling 4.9 years. Eight participants were ICU nurses, and the rest of the sample worked in various medical/surgical units or emergency departments (n = 14). Of those nurses working in non-ICU environments, ten reported that their units converted to ICUs during the peak. One nurse worked in a unionized organization. No other organizational information was collected to maintain anonymity. Three nurses reported having contracted COVID-19, later recovering and returning to work. Five nurses were in the midst of pursuing advanced degrees,

Table 1. Professional Demographics (N = 22).

	Areas with high number of COVID-19 cases*	Years of Nursing Experiences	Current type of Nursing unit	Sex	Role	Converted to ICU
N1	N	<1	Med/surg	F	RN	No
N2	Y	<1	Oncology	F	RN	Yes
N3	Y	<1	ICU	M	RN	N/A
N4	N	9	ICU	F	RN	N/A
N5	N	7	ICU/Med/surg	M	RN	N/A
N6	Y	5	ICU	F	RN	No
N7	Y	11	Stepdown	F	RN	Yes
N8	Y	>10	ICU/Stepdown	F	NM	N/A
N9	Y	2	Stepdown	F	RN	Yes
N10	Y	>5	Med/surg	M	NM	N/A
N11	N	>5	ICU/Med/surg	F	RN	No
N12	N	7	ICU	F	RN	N/A
N13	Y	3	ED	F	RN	Yes
N14	Y	2	Med/Surg	F	RN	Yes
N15	Y	2	ED	M	RN	Yes
N16	N	6	ICU	F	RN	N/A
N17	N	3	Med/surg	F	RN	Yes
N18	N	10	ICU	F	RN	N/A
N19	Y	1	oncology	F	RN	N/A
N20	Y	8	OR	F	NM	Yes
N21	Y	2	Med/surg	F	RN	Yes
N22	Y	<1	Med/surg	F	RN	Yes

Notes: ICU = Intensive Care Unit, ED = Emergency Department, Med/surg = medical surgical general floor; *at the time of the interview.

while three participants had either already left their unit or were in the process of seeking different employment.

Themes

The four themes distilled from these interviews were (1) fear, (2) collective resilience through shared trauma, (3) uncharted territory, and (4) a perceived disposability.

Table 2. Summary of the Thematic Findings.

1. **Fear**
   - Fear of the virus
   - Fear of the unknowns
   - Fear of second surge
   - Fear of being a carrier
2. **Collective resilience through sharing trauma**
   - Heightened meaning
   - Call of duty
   - Renewal of pride and purpose
   - My team, my tribe
   - But some of the other professional groups may not be a part of the tribe
3. **Uncharted territory of nursing practice**
   - Rationing personal protective equipment
   - Chaos with the constant and inconsistent messages
4. **Disposability of nursing**
   We bear the burdens yet we can be replaced

Fear

Fear was the most common theme among nurses, regardless of their work experiences, with the unknown being their predominant concern. As one of the participants explained in this regard, "My initial biggest concern was that … we didn't really know what this was." At the time of the interviews, the first surge of COVID-19 was happening in certain parts of the United States, and there were many unknowns about both the virus and the course of infection. This quote from another participant captures the fear nurses experienced at that time:

> It gets scary because I see how sick these patients can get and how quickly they can deteriorate. . . . I don't wanna be one of them. I don't wanna be intubated or be on a ventilator. I still have my whole life ahead of me.

This sense of fear was strongly associated with the availability of personal protective equipment (PPE), which varied across geographical locations. However, all nurses reported having to either re-use or conserve PPE during this time. As a participant noted:

> We [nurses] didn't become a nurse to be a martyr. I took an oath, and our oath didn't say I would have to die for my patient because there wasn't enough PPE. . . or that I'm required to offer my life for them.

That said, when nurses believed they had sufficient PPE at work, they felt safer there than they did out in public. As another participant put it, "When I go into those rooms, there is fear [of contracting the virus], of course. But my perspective is that, if I have the proper PPE, then I feel safer than going out to the grocery store."

Nurses witnessed the devastation of the virus firsthand and feared they might become asymptomatic carriers, unwittingly spreading it to patients, co-workers, family members, and those in their community. Consequently, many practiced social isolation and physical distancing at home by, for example, sleeping in separate bedrooms or moving in to hotels or temporary housing provided by the hospital. Nurses also exercised added vigilance concerning their hospital scrubs and personal hygiene. Lastly, the initial panic and fear were eventually replaced by uncertainty and heightened anxiety. Along these lines, one nurse from New York City explained,

> When we had Hurricane Sandy . . . a lot of rain and stuff lasted forty to forty-eight hours. There were lots of physical buildings damaged. But the actual event stopped; then people were able to begin recuperating and restoring, right? But with this virus, it just kept going on and on, and they will keep going on. When is this going to end?

Collective Resilience Through Shared Trauma

When nurses talked about their experiences at work, they consistently referred to their experiences in a collective sense. Nurses felt that only their fellow nurses would understand their experiences; some even reported not discussing what they had seen with family or non-nursing friends for fear of burdening them. Nurses used the analogy of being at war and relied on their peers for emotional support. They also shared the palpable dread within their professional environments and witnessed other providers feeling overwhelmed and traumatized by the pandemic. As a participant described this feeling of helplessness, "So, it was like you couldn't get a response from house staff or intensivists, [be]cause they were overwhelmed. . . . So, it's like if [they] are traumatized, then what am I gonna do?" Finally, participants repeatedly expressed collective frustration with the unrealistic expectations of their institutions and the public, with one asserting:

> A lot of people were like, "You signed up for this." I was like, "No, I didn't sign up for a war. I signed up to advocate for patients." I think this unique opportunity showed me that I am flexible and adaptable, which I just didn't know. I was never in this kind of experience. Not that we signed up for it, but the patients need us.

And yet, despite nurses' expressed fear and anxiety in this study, many also voiced a heightened sense of purpose and meaning. As the following passage by participant N4 indicates, these nurses were driven by a strong sense of duty and dedication toward their patients and colleagues: "I think regardless of why you came in [to nursing], once you've been a nurse, there's a part of you [that feels that] when the world is hurting, you want to be able to help."

Nurses also felt proud doing something meaningful during the pandemic, as a participant explained:

> I feel more needed or important about being a nurse than on the med/surg unit [where I was working before the pandemic], being up there with the first responders. I just feel like what I'm doing is more meaningful and purposeful than before. What I do during this is meaningful.

Another participant echoed this sense of pride in the profession, suggesting that, "I feel like this is what we've been preparing for. As a nurse, this is what we've been training for up until now; and now we can show the world and show our patients what we can do."

Nurses described their own and their colleagues' strengths, resilience, and adaptability amid rapid changes and during a time of uncertainty. As a participant noted, "Strength, yeah, we have to be strong—to be the ones going in every day and taking care of these patients, and you know that we will pull through." Put simply, the significance of co-workers, teamwork, and a sense of community among nurses was highlighted through collective trauma and resilience, although this comradery was not limited to fellow nurses; it also extended to other hospital employees. On this note, a participant in a leadership position explained:

> I think they [staff] learn to work together. I did see . . . unspoken comradery. It became "I'm not just co-workers"; it became a community within itself . . . [with] people helping each other, people who are being recognized for the work—from housekeeping, respiratory, and phlebotomy, to pharmacy. So, we all came together and helped each other. I saw that the humanity within each other started coming out more.

That said, while some nurses reported greater comradery with physicians, others reported an increasingly more strained relationship with physicians compared to what existed before COVID-19. Some nurses felt that the exposure rates and risks were not equally shared and that physicians did not shoulder their share of the burden. For example, one participant recalled a cardiac resuscitation where only one nurse was in the room performing a chest compression while the other providers were all outside the room.

Uncharted Territory

During COVID-19, the nursing practice changed rapidly, having little or no time for preparation. The greatest

changes involved infection-control practices, starting with rationing and reusing PPE. At the beginning of the pandemic, there was no consensus regarding proper PPE use. In the words of one participant,

> One week, we would be like, "Okay, surgical masks"; the next week, it would be like, "Okay you need N95." And then the next day, it could even be N95 and surgical—and then we were running out of PPEs. Everything was changing and it was chaotic.

Some participants mentioned members of hospital management trying to conserve resources by discouraging the use of PPE outside of patient rooms, while others reported management retaliating when nurses wore PPE, thus creating punitive work environments. Summarizing the problem, another participant stressed,

> People weren't allowed to wear masks or PPE in the hallway [in the beginning]. So, what happened then is the staff kept getting sick and then managers . . . then they realized that it's in the air. . . . They handled it terribly.

Availability of staffing during the surge of COVID 19 was also inconsistent, depending on geographical location. Interviewees working in areas that were being or had already been hit hard by the coronavirus had an extremely high workload, reaching as many as ten patients per nurse. Meanwhile, nurses working in areas with fewer cases had only one or two patients.

Nurses also talked about the difficulties they faced staying informed of constantly changing policies while being thrown into new clinical situations with little or no preparation or training. For example, non-ICU nurses were told they would be handling ventilated patients and were briefly, if any, oriented to ICU care to accommodate the ballooning number of patients on ventilators and in need of ICU-level care. Nurses reported teaching themselves through resources such as YouTube videos or free continuing education courses on professional organization websites. Conveying this sense of desperation, participant N8 observed:

> They had us take a two-and-a-half-hour crash ICU class, where they taught us a bunch of things really fast. So, I was pretty nervous. I was just gonna be handed some vented patients . . . or CRRT; they just handed me a patient then [said], "Go for it." So, that was really scary.

Constant changes in policy and messaging came from organizations as well as normally trusted sources, such as the Centers for Disease Control. Such fluctuation created chaos and thwarted consensus, ultimately diminishing a sense of trust in the leadership.

Disposability

Lastly, nurses shared their frustration and perception that their organization viewed them as disposable. Though nurses voiced understanding of the challenges faced by management, they also felt that nurses shouldered most of the burden, performing all aspects of patient care and tasks beyond the role of a nurse. A participant explained this:

> Everything falls to the nurses. We are cleaning the room, bringing things, and we're doing everything. . . . And we've had to kind of step up, which we always do. And we do; we do step [up] for the most part when someone is in need. But it's frustrating that we're expected to do more and more and more because we're there at the bedside. Like I said, I will end up doing things: I will clean the room. I am an ICU nurse; everything needs to be immaculate, so I will do all those things. But it's just [that] we are asked [to do] more and more.

However, despite shouldering the majority of the burden to maintain the daily operation and continue to care for patients, the nurses felt that they were replaceable. And some participants also felt that because they were replaceable, they were being asked to do more. One participant even described being a frontline nurse as being in an assembly line of a large factory. If one drops, another will replace.

Furthermore, nurses were also angered by the absence of leadership and lack of consensus among leaders at the beginning of the pandemic. They felt, as a participant explained, that leadership downplayed the risks to nurses, leaving the nurses to fend for themselves, while hospital administrators and leadership were safely working from home:

> I feel like a lot of the nurses were being exposed compared to everyone else. I felt like everything is just thrown at us . . . like a lot of this pressure were [sic] on the nurses. . . . It is so unfair.

However, not all participants voiced the same anger towards leadership. Some participants praised their leaders (e.g., CNO or president of the healthcare system) for being the strong voice and leadership demonstrated. Those participants had favorable opinions of their leaders cited transparency and clear communication as the key leadership skills demonstrated by their leaders. And those who were angry focused on the lack of visibility and the perceived absence.

Discussion

The lived professional experiences of nurses are complex and have been even more pronounced during the pandemic. Despite the fear, frustration, and anger felt while working

during such challenging times, our study found that nurses are proud of their profession and one another. Nursing practice has been disrupted in unprecedented ways, yet nurses have adapted.

Our findings are consistent with results observed in other studies, such as Zhang et al., 2020, which found a strong sense of duty and resilience among nurses on COVID-19 units and which also underscored the importance of comradery among nurses, even equating the pandemic to fighting in a war. Meanwhile, as with our work, Lai et al., 2020 found that nurses felt that only other nurses could understand what they were going through.

Nurses rely on peer support (de Oliveira et al., 2019), never more so than amid the coronavirus pandemic. Their shared experiences encourage resilience and renew their sense of purpose as members of a team. Resilience is an adaptive process of bouncing back from unexpected and/or adverse conditions either from large-scale events or accumulation of minor disruptions (Sutcliffe & Vogus, 2003), and it has been shown to be essential in coping with work-related stress, while also helping with staff retention and wellbeing (Foster et al., 2019; Slatyer et al., 2018). Although it is often considered an individual trait, emerging evidence presents resilience as a social construct of a group (Bowers et al., 2017; Gucciardi et al., 2018). And thus, team resilience is the capacity of teams to cope and even thrive under significant adversity, adapt to significant changes or stress, or simply recover from a negative experience (West et al., 2009); it is strengthened through a dynamic iterative process experienced together (Bowers et al., 2017). Furthermore, in a qualitative investigation of highly resilient nurses, an establishment and nurturing of social networks and social support were the key characteristics, perhaps even an antecedent, of resilience (Mealer et al., 2012).

The nurses in this study demonstrated their resilience by collective "sense-making," wherein people create meaning through context-specific social interactions, incorporating perceptions of their local and wider organizational environments (Weick et al., 2005). Nurses have exhibited resilience prior to the pandemic and continued to rely and further enhanced their resilience by social support, assigning meaning and value to their experiences with colleagues during COVID-19 (Huang et al., 2021). Sense-making is a powerful proactive tool people can use to convey the meaning and purpose of their experience and to clarify difficult situations (Kristiansen et al., 2015; O'Keeffe et al., 2015; Wrzesniewski et al., 2003). Sense-making can be leveraged to avoid burnout and other psychological distress even before the pandemic (Halama, 2014). Thus, resilience in nursing is reflected as a collective dynamic process predicated on adaptability and flexibility in the face of uncertainty and constant change. Our findings highlighted teamwork as offering protection and serving as a source of resilience for nurses, while also underscoring the importance of organizational support.

Implications

Employers have a legal and ethical duty to provide a safe working environment for their employees (OSHA 1970); amid COVID-19, those in healthcare can meet this requirement by equipping workers with adequate PPE. At the same time, employers must also offer transparent, visible, and model leadership. Leaders are influential on an interpersonal level, with their behavior salient to team members (Huang et al., 2010). As shown in our study, nurses look to leaders' actions as an indication of what is both expected and accepted within the work environment. Thus, the behavior of a leader can shape team climate and team capabilities by preserving psychological safety (Frazier et al., 2017). This is especially true during crises such as COVID-19 when, for example, the extent to which leaders such as nurse managers make themselves available and display fallibility can encourage psychological safety (Nembhard & Edmondson, 2006).

Furthermore, organizations need to shift the healthcare paradigm to a team-based approach. Processes of team development include shift huddles (Clark & McLean, 2018), peer debriefing where team members are invited to share their thoughts and insights after the shift or a care event (Scott et al., 2010). While these interventions are already in practice in many settings, they could be used more effectively and more widely according to unit and hospital needs.

Most importantly, systems-level interventions supersede common yet generally less-than-effective individual training. Additional sessions on wellness are not the answer for clinicians trying to keep up their work while being inundated with constantly changing practice guidelines. Policies should center on the need for organizational changes. Currently, there are no federal or state policies in place to protect healthcare workers beyond the OSHA Act. That said, a new bill, the Dr. Lorna Breen Health Care Provider Protection Act (S. 4349), was recently introduced in the Senate. Despite calling for funding and training support for health care providers, this bill does not include policies to hold organizations accountable for the fundamental changes to protect worker's wellbeing. Although exact statistics are not available, more than 3,600 healthcare workers are thought to have died during the first year of COVID 19 (Spencer & Jewett, 2021). At a minimum, standardized hazard pay and healthcare coverage for long-term disability for those who perished while caring for patients with COVID-19 should be included.

Limitations

This study has several limitations. First, participants were recruited through social media and snowball sampling; thus, there is a self-selection bias favoring those looking to tell their stories. Second, in order to focus on hospital organizational perspectives, we only interviewed those working

in such environments. Future studies focusing on COVID-19 could examine nurses' experiences in other settings, including outpatient and long-term-care facilities. Third, we did not account for race or ethnicity within our purposive sampling strategy. COVID-19 has disproportionately affected communities of color; therefore, we could be misapprehending the complexity of nurses' accounts as their experiences have been shaped by their race or ethnicity.

Conclusion

The COVID-19 pandemic has highlighted the intensity and essentiality of nurses' work. The findings from this study provide a deeper understanding of the lived experiences of nurses during COVID-19, while also adding to our understanding of organizational context. These findings are invaluable for policy development and the establishment of preventive and early intervention strategies. Done right, such efforts could better support nurses during and after these unprecedented times, encouraging team building, protection, and rewards to maintain nurses' wellbeing during such outbreaks and in their aftermath.

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Supplemental Material

Supplemental material for this article is available online.

References

Barello, S., Palamenghi, L., & Graffigna, G. (2020). Burnout and somatic symptoms among frontline healthcare professionals at the peak of the Italian COVID-19 pandemic. *Psychiatry Research*, *290*, 113129. https://doi.org/10.1016/j.psychres.2020.113129

Bowers, C., Kreutzer, C., Cannon-Bowers, J., & Lamb, J. (2017). Team resilience as a second-order emergent state: A theoretical model and research directions. *Frontiers in Psychology*, *8*, 1360. https://doi.org/10.3389/fpsyg.2017.01360

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Center for Disease Control and Prevention. (2021). COVID Data tracker. https://covid.cdc.gov/covid-data-tracker/#datatracker-home

Chua, S. E., Cheung, V., Cheung, C., McAlonan, G. M., Wong, J. W. S., Cheung, E. P. T., Chan, M. T. Y., Wong, M. M. C., Tang, S. W., Choy, K. M., Wong, M. K., Chu, C. M., & Tsang, K. W. T. (2004). Psychological effects of the SARS outbreak in Hong Kong on high-risk health care workers. *Canadian Journal of Psychiatry*, *49*(6), 391–393. https://doi.org/10.1177/070674370404900609

Clark, R., & McLean, C. (2018). The professional and personal debriefing needs of ward based nurses after involvement in a cardiac arrest: An explorative qualitative pilot study. *Intensive and Critical Care Nursing*, *47*, 78–84. https://doi.org/10.1016/j.iccn.2018.03.009

de Oliveira, S. M., de Alcantara Sousa, L. V., Gadelha, V., do S, M., & do Nascimento, V. B. (2019). Prevention actions of burnout syndrome in nurses: An integrating literature review. *Clinical Practice & Epidemiology in Mental Health*, *15*(1), 64–73. https://doi.org/10.2174/1745017901915010064

Foster, K., Roche, M., Delgado, C., Cuzzillo, C., Giandinoto, J.-A., & Furness, T. (2019). Resilience and mental health nursing: An integrative review of international literature. *International Journal of Mental Health Nursing*, *28*(1), 71–85. https://doi.org/10.1111/inm.12548

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, *70*(1), 113–165. https://doi.org/10.1111/peps.12183

Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105–112. https://doi.org/10.1016/j.nedt.2003.10.001

Gucciardi, D. F., Crane, M., Ntoumanis, N., Parker, S. K., Thøgersen-Ntoumani, C., Ducker, K. J., Peeling, P., Chapman, M. T., Quested, E., & Temby, P. (2018). The emergence of team resilience: A multilevel conceptual model of facilitating factors. *Journal of Occupational and Organizational Psychology*, *91*(4), 729–768. https://doi.org/10.1111/joop.12237

Halama, P. (2014). Empirical and applied perspectives: Meaning in life and coping: Sense of meaning as a buffer against stress. In *Meaning in positive and existential psychology* (pp. 239–250). Springer New York. https://doi.org/10.1007/978-1-4939-0308-5_14.

Himmelstein, D. U., & Woolhandler, S. (2020). The U.S. Health care system on the Eve of the covid-19 epidemic: A summary of recent evidence on Its impaired performance. *International Journal of Health Services*, *50*(4), 408–414. https://doi.org/10.1177/0020731420937631

Huang, D. T., Clermont, G., Kong, L., Weissfeld, L. A., Sexton, J. B., Rowan, K. M., & Angus, D. C. (2010). Intensive care unit safety culture and outcomes: A US multicenter study. *International Journal for Quality in Health Care*, *22*(3), 151–161. https://doi.org/10.1093/intqhc/mzq017

Huang, F., Lin, M., Sun, W., Zhang, L., Lu, H., & Chen, W.-T. (2021). Resilience of frontline nurses during COVID pandemic in China: A qualitative study. *Nursing & Health Sciences*, 23(3), 639–645. https://doi.org/10.1111/nhs.12859

Kristiansen, M., Obstfelder, A., & Lotherington, A. T. (2015). Nurses' sensemaking of contradicting logics: An underexplored aspect of organisational work in nursing homes. *Scandinavian Journal of Management*, 31(3), 330–337. https://doi.org/10.1016/j.scaman.2015.04.003

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., Wu, J., Du, H., Chen, T., Li, R., Tan, H., Kang, L., Yao, L., Huang, M., Wang, H., Wang, G., Liu, Z., & Hu, S. (2020). Factors associated With mental health outcomes Among health care workers exposed to coronavirus disease 2019. *JAMA Network Open*, 3(3), e203976. https://doi.org/10.1001/jamanetworkopen.2020.3976

Lee, A. M., Wong, J. G. W. S., McAlonan, G. M., Cheung, V., Cheung, C., Sham, P. C., Chu, N. M., Wong, P. C., Tsang, K. W. T., & Chua, S. E. (2007). Stress and psychological distress among SARS survivors 1 year after the outbreak. *Canadian Journal of Psychiatry*, 52(4), 233–240. https://doi.org/10.1177/070674370705200405

Maunder, R. G., Lancee, W. J., Balderson, K. E., Bennett, J. P., Borgundvaag, B., Evans, S., Fernandes, C. M. B., Goldbloom, D. S., Gupta, M., Hunter, J. J., Hall, L. M. G., Nagle, L. M., Pain, C., Peczeniuk, S. S., Raymond, G., Read, N., Rourke, S. B., Steinberg, R. J., Stewart, T. E., VanDeVelde-Coke, S., … Wasylenki, D. A. (2006). Long-term psychological and occupational effects of providing hospital healthcare during SARS outbreak. *Emerging Infectious Diseases*, 12(12), 1924–1932. https://doi.org/10.3201/eid1212.060584

McDonald, L. C., Simor, A. E., Su, I. J., Maloney, S., Ofner, M., Chen, K. T., Lando, J. F., McGeer, A., Lee, M. L., & Jernigan, D. B. (2004). SARS In healthcare facilities, toronto and Taiwan. In *Emerging infectious diseases* (Vol. 10, Issue 5, pp. 777–781). Centers for Disease Control and Prevention (CDC). https://doi.org/10.3201/eid1005.030791.

Mealer, M., Jones, J., & Moss, M. (2012). A qualitative study of resilience and posttraumatic stress disorder in United States ICU nurses. *Intensive Care Medicine*, 38(9), 1445–1451. https://doi.org/10.1007/s00134-012-2600-6

Mo, Y., Deng, L., Zhang, L., Lang, Q., Liao, C., Wang, N., Qin, M., & Huang, H. (2020). Work stress among Chinese nurses to support wuhan in fighting against COVID-19 epidemic. *Journal of Nursing Management*, 28(5), 1002–1009. https://doi.org/10.1111/jonm.13014

Nembhard, I. M., & Edmondson, A. C. (2006). Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior*, 27(7), 941–966. https://doi.org/10.1002/job.413

Occupational Safety and Health Administration. (1970). OSHA Act of 1970. https://www.osha.gov/laws-regs/oshact/completeoshact

O'Keeffe, V. J., Thompson, K. R., Tuckey, M. R., & Blewett, V. L. (2015). Putting safety in the frame: Nurses' sensemaking at work. *Global Qualitative Nursing Research*, 2, 2333393615592390. https://doi.org/10.1177/2333393615592390

Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsi, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. In *Brain, behavior, and immunity* (Vol. Vol. 88, pp. 901–907). Academic Press Inc. https://doi.org/10.1016/j.bbi.2020.05.026.

Salari, N., Hosseinian-Far, A., Jalali, R., Vaisi-Raygani, A., Rasoulpoor, S., Mohammadi, M., Rasoulpoor, S., & Khaledi-Paveh, B. (2020). Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: A systematic review and meta-analysis. In *Globalization and health*, 16(1), 1–11. https://doi.org/10.1186/s12992-020-00589-w.

Scott, S. D., Hirschinger, L. E., Cox, K. R., McCoig, M., Hahn-Cover, K., Epperly, K. M., Phillips, E. C., & Hall, L. W. (2010). Caring for our own: Deploying a systemwide second victim rapid response team. In *Joint commission journal on quality and patient safety* (Vol. 36, Issue 5, pp. 233–240). Joint Commission Resources, Inc. https://doi.org/10.1016/S1553-7250(10)36038-7.

Slatyer, S., Craigie, M., Heritage, B., Davis, S., & Rees, C. (2018). Evaluating the effectiveness of a brief mindful self-care and resiliency (MSCR) intervention for nurses: A controlled trial. *Mindfulness*, 9(2), 534–546. https://doi.org/10.1007/s12671-017-0795-x

Spencer, J.the Guardian, & Jewett, C. (2021, April 8). 12 Months of Trauma: More Than 3,600 US Health Workers Died in Covid's First Year. Kaiser Health News. https://khn.org/news/article/us-health-workers-deaths-covid-lost-on-the-frontline/.

Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. Positive organizational scholarship: Foundations of a new discipline. KS Cameron, JE Dutton and RE Quinn.

Sullivan-Bolyai, S., Bova, C., & Harper, D. (2005). Developing and refining interventions in persons with health disparities: The use of qualitative description. *Nursing Outlook*, 53(3), 127–133. https://doi.org/10.1016/j.outlook.2005.03.005

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. In *Organization science* (Vol. 16, Issue 4, pp. 409–421). INFORMS . https://doi.org/10.1287/orsc.1050.0133.

West, B. J., Patema, J. L., & Caesten, M. K. (2009). Team level positivity: Investigating positive psychological capacities and team level outcomes. *Journal of Organizational Behavior*, 30(2), 249–267. https://doi.org/10.1002/job.593

Willis, D. G., Sullivan-Bolyai, S., Knafl, K., & Cohen, M. Z. (2016). Distinguishing features and similarities between descriptive phenomenological and qualitative description research. *Western Journal of Nursing Research*, 38(9), 1185–1204. https://doi.org/10.1177/0193945916645499

Wrzesniewski, A., Dutton, J. E., & Debebe, G. (2003). Interpersonal sensemaking And The meaning Of work. In *Research in organizational behavior* (Vol. Vol. 25, pp. 93–135). Elsevier. https://doi.org/10.1016/S0191-3085(03)25003-6.

Zhang, H. J., Yin, L., Peng, Y., Chen, Q., Lv, C., Juan, L., & Tian, S. (2020). A Qualitative Study on the Inner Experience of First-Line Nurses in the Clinical Fight against COVID-19. https://doi.org/https://doi.org/10.21203/rs.3.rs-33438/v1.