Experiences and Perspectives on Stressors and Organizational Strategies to Bolster Resiliency During the COVID-19 Pandemic

A Qualitative Study of Health Care Workers at a Tertiary Medical Center

Carine Khalil, PhD, Carl T. Berdahl, MD, MS, Kevin Simon, MD, Heatherlun Uphold, PhD, Sara Ghandehari, MD, Omar Durra, MD, Clarence Glenn, III, MD, MBA, Linda Kim, PhD, MSN, RN, PHN, Roya Yumul, MD, PhD, CHSE, and Adam Jeraldo Milam, MD, PhD

Objective: This qualitative study included a sample of health care workers (HCWs) at a tertiary care center providing direct care to patients with COVID-19 to explore experiences and perceptions regarding care delivery during the COVID-19 pandemic as well as factors that helped HCWs cope with the challenges of the pandemic.

Methods: Grounded theory methodology was used to conduct virtual focus groups with a semistructured interview guide May to June 2020.

Results: We identified major themes related to (1) HCWs' emotions during the pandemic, (2) the perceived triggers of these feelings, (3) organizational factors that made HCWs feel more supported and appreciated, and (4) personal factors that helped HCWs cope with the pandemic.

Conclusion: Results highlighted the stress and challenges associated with exposure to SARS-CoV-2. The findings can help inform interventions to support HCWs during pandemics and other crises.

Keywords: COVID-19, SARS-CoV-2, pandemic, health care workers, resilience

The novel coronavirus (SARS-CoV-2), causing COVID-19, has caused an unprecedented global health crisis, leading to an increase in the number of related hospitalizations and deaths. This outbreak is having a crucial impact on health care workers (HCWs) on the frontlines managing patients with COVID-19. Many HCWs working in potentially contaminated environments during pandemics have experienced social stigmatization and mental health problems such as anxiety, burnout, depression, insomnia, and stress-related disorders including posttraumatic stress disorders. The physical and emotional stress experienced by frontline HCWs impacts their well-being and ability to effectively care for others, specifically their patients. Recent studies on the impact of the novel coronavirus highlighted the psychological burden of this infectious disease on frontline HCWs. Additional evidence suggests a high prevalence of mental health–related challenges among HCWs including but not limited to distress (72%), depression (50%), anxiety (45%), burnout (45%), and insomnia (34%). Risk factors associated with poorer psychological outcomes included younger age, female sex, identified role as a nurse, and working directly with patients experiencing COVID-19. In a study of HCWs throughout China, nearly one third of frontline workers experienced posttraumatic stress disorders. During an outbreak, HCWs tend to work long hours under pressure, and they do not always have the adequate resources to protect themselves, which can increase their risk of exposure and cause more discomfort.

In addition to individual characteristics that may increase the risk of poorer physiological outcomes, extrinsic organizational characteristics may increase the risk of mental health symptoms among HCWs. Some extrinsic organizational characteristics related to workplace stress and mental health symptoms among HCWs include increased work demands, little control over their work environment, adequacy of training, deployment to COVID-19 units, and lack of perceived organizational support. Other studies, conducted in countries such as Oman, United Kingdom, India, Singapore, and Iran, have already portrayed the experiences of frontline HCWs during the COVID-19 crisis and highlighted the challenges HCWs have encountered. Although many of these studies examined the psychological impacts of COVID-19, they rarely focused on the role of health care organizations during the COVID-19 pandemic in improving well-being and enhancing resiliency. There is also a dearth of literature examining how HCWs perceive the role of health care institutions in providing mental health support and addressing challenges during a pandemic. A better understanding of organizational strategies may inform interventions to improve HCWs' well-being and prevent psychological distress during a pandemic or any other crisis. Accordingly, this study sought to explore the experiences and perceptions of HCWs regarding care delivery during the COVID-19 pandemic in the United States and to examine factors that helped HCWs cope with the challenges of the pandemic.

METHODS

Recruitment and Sampling

This study used grounded theory methodology; this methodology is especially useful for preliminary studies. Through purposeful and iterative recruitment, our sample included personnel providing direct care to patients with COVID-19, including nurses, physicians,
respiratory therapists, and social workers from the departments of Anesthesiology, Emergency Medicine, Medicine, and Psychiatry. To be eligible, participants had to be full-time employees at Cedars-Sinai Medical Center starting on or before September 10, 2019 (starting at least 6 months before the pandemic). One of the coauthors (A.M.) sent an e-mail invitation to a list-serv of potential participants. An informational letter was attached to this e-mail, explaining the study's purpose, goals, risks, and benefits. Participants who consented to participate in the study were contacted and scheduled for a virtual focus group. Participant remuneration included a $50 gift card. All participants received confidentiality assurances; we used numbers instead of names (for instance, nurse N1, N2; physician P1, P2; social worker SW1, SW2) and removed any identifying information from the transcripts. The institutional review board approved this current study. There are no known conflicts of interest to report. All authors certify responsibility.

Data Collection
Data collection occurred iteratively based on grounded theory methodology, between May 2020 and June 2020. There were six virtual focus groups with 37 participants (13 physicians, 19 nurses [registered nurses and nurse practitioners], 1 respiratory therapist, and 4 social workers). Early data analysis helped us identify the direction for further data gathering. The focus groups sought to gain insights into HCWs' thoughts, emotions, needs, and concerns when caring for patients with COVID-19. A semistructured guide with open-ended questions was developed for the focus groups (see Appendix 1, http://links.lww.com/JOM/B147). Focus groups lasted between 60 and 90 minutes; they were performed virtually by a qualitative researcher (C.K.). One of the coauthors, a clinician with experience in qualitative research (A.M.), also attended the focus groups, explained the purpose of the focus group to the participants, and took notes. The focus groups included questions such as “How do you describe the current situation that the hospital is facing?” “What type of fear and threat did COVID-19 create?” “What helps you cope with the different level of challenges faced today?” “How do contextual factors, such as the organizational culture, resources, etc, affect your ways of dealing with the current situation?” Follow up questions, such as “Can you please tell me more about that” and “What did you mean by...?”, were used to deepen the discussion. Focus groups were audio-recorded with the consent of all participants. Data about demographics were collected using a short online survey.

Data Analysis
The audio-recordings from each focus group were transcribed. Data analysis was performed by an experienced qualitative researcher (C.K.). We used an inductive approach to analyze the data. The analysis started as soon as we collected the data from the first focus group as concurrent data collection and analysis is central to grounded theory research. This iterative process of selecting, collecting, and analyzing the data allowed us to constantly compare the generated themes. It also helped us define the different samples of participants. After four focus groups, thematic saturation had been achieved. This was confirmed after we held two additional focus groups in which participants shared additional stories, but no new themes emerged.

The qualitative data were carefully read multiple times for a total immersion in the discussions. Throughout the reading, sentences and/or paragraphs were coded, and important sections of texts were highlighted and labeled. Key labels were inductively identified in the unstructured data. After sorting and combining the identified labels, a set of inductive themes and subthemes were subsequently defined and justified with verbatim quotes. These themes were summarized in a conceptual framework. Table 1 illustrates examples from the coding process. To ensure validity, findings were discussed during peer debriefing in the presence of the three coauthors (C.K., A.M., and C.B.). In addition, the presence of the two coauthors (C.K. and A.M.) in the focus groups allowed note taking and helped with data familiarization and interpretation. Data summaries were presented to the three coauthors to share perspectives on the insights obtained. Performing six focus groups was an opportunity to prolong our engagement in the study and gain an in-depth understanding of the phenomenon of interest. Transferability was achieved by involving different participant profiles, providing thick data description, and quoting participants.

RESULTS
A total of six focus groups were conducted with 37 participants in total. Table 2 displays the demographic characteristics of focus group participants. Approximately 14% of the participants were in residency training; 22% had been in practice for fewer than 5 years. The majority of participants were female (66.6%), and ages ranged between 25 and 74 years (mean age, 39.1; SD, 11.1). About half of the participants identified as White, and 38% identified as Asian; 92% of participants identified as not Hispanic or Latino.

Four key themes and several subthemes were identified in the data analysis describing the experiences of HCWs during the COVID-19 pandemic and coping strategies. The major themes we identified were related to (1) HCWs' emotions during the pandemic (eg, feeling stressed, anxious, confused, scared, social isolated, stigmatized, and emotionally distressed); (2) the perceived triggers of these feelings (eg, the unknown/uncertainty, rapid changing guidelines, overload of nonvalidated information, lack of information, other people's fear and anxiety, indirect pressure from families and relatives); (3) organizational factors that made HCWs feel more supported and appreciated (eg, backup assistance, communication, perceived support from the hospital, supportive messages from the president of

| TABLE 1. Extracts From the Coding Process |
|-------------------------------------------|
| Quotes | Themes |
| "I definitely was fearful and scared of what I could bring home and how I could affect my family." | Fear from infecting their families |
| "You should really take care of your own health and invest in your own well-being, mentally and physically." | Perceived importance of self-care |
| "Peer support helped reinforce the bonds of we are all in this together." | Perceived importance of peer support |

| TABLE 2. Demographic Characteristics of Focus Group Participants |
|-------------------------------------------|
| Position | n (%) |
| Nurse | 19 (51.4) |
| Physician | 13 (35.1) |
| Respiratory therapist | 1 (2.7) |
| Social worker | 4 (10.8) |
| Female | 24 (66.6) |
| Race/ethnicity | |
| Asian | 14 (37.8) |
| Black | 2 (5.6) |
| Hispanic | 3 (8.3) |
| White | 17 (47.2) |
| Mean age (SD) | 39.1 (11.1) |
| Years in practice | |
| Resident/training | 5 (13.5) |
| 1–5 y | 8 (21.6) |
| 5–9 y | 9 (24.3) |
| 10–20 y | 11 (29.7) |
| >20 y | 3 (8.1) |
the hospital, peer collaboration and support, resource availability, remote work when possible, adequate training, and room for relaxation); and (4) personal factors that helped HCWs cope with the pandemic (eg, perceived importance of self-care, family and friends' support). Figure 1 shows an analytical framework that describes the themes and subthemes identified in the data analysis.

Health Care Workers Emotions During the Pandemic (Theme 1) and the Perceived Triggers (Theme 2)

Regardless of their experience at work and expertise with infectious diseases, participants unanimously felt stressed and anxious about the pandemic: “Honestly, it’s been a little stressful here. I feel it’s normal to be anxious about this situation.” According to them, the feeling of being stressed and anxious was triggered by the unknown, “This is something we haven’t seen before in our lifetime,” and the uncertainty around the outbreak, “We were thrown into a situation that we knew very little about; it didn’t seem like we had a clear plan for this.” The rapidly changing guidelines, “The guidelines were literally changing almost daily,” the overload of nonvalidated information, “Initially too much information was going on without being validated,” and the lack of information about the newly discovered coronavirus, “Everybody was concerned and scared of what this was going to be like,” contributed to the feelings of being stressed and anxious.

Organizational Factors that Improved HCWs’ Experiences During the Pandemic (Theme 3)

Participants pointed out a few factors that supported them at work and helped them handle this unprecedented situation. They emphasized the importance of having backup assistance when there is too much to do, “Knowing that there is always a backup assistance relieved the anxiety,” and transparent communication when managing patients with COVID-19, “We communicate very well the updates and that's been extremely helpful” “I found really helpful to be heard about some questions.” In fact, the hospital deployed educators to support HCWs, especially regarding the guidelines for management of patients with COVID-19. This was highly appreciated by participants, “One thing that helped the continuity of care is having the educators on each floor, sometimes hourly” “The hospital has been doing its best to support and provide resources, especially, our educators, making themselves available 24 hours a day.” In addition, HCWs reported

![Analytic framework of the identified themes and subthemes.](image-url)

**FIGURE 1.** Analytic framework of the identified themes and subthemes. The themes identified include 1) HCWs’ emotions during the pandemic, 2) the perceived triggers of these feelings, 3) organizational factors that made HCWs feel more supported and appreciated, and 4) personal factors that helped HCWs cope with the pandemic.
the positive impact of the support they were getting from the hospital in general, “The administrative leave pay was hugely helpful to calm people” “The possibility to stay at a nearby hotel in order to rest between shifts.” Health care workers also appreciated the implementation of the emotional support line available 24/7. They also valued the supportive messages from the president of the hospital. According to them, it is crucial to feel recognized in such context, “I think it is really nice to recognize that we are here, doing what we are doing…” Furthermore, peer collaboration was perceived as essential in such an ambiguous context where HCWs have to collectively overcome challenges without specific protocols, “There were no protocols, and it was all innovation” “We were figuring out how to set up the unit, how to set up the clean and dirty areas.” In addition, peer support and solidarity kept them highly motivated to come to work and deal with this continuously challenging situation, “Peer support helped reinforce the bonds of we are all in this together!” “I work in a great unit where we look out for each other!” “It’s a big support system...you have people you can at least talk to...they understand what you are going through.” Last but not least, HCWs were thankful to be supported with redeployed staff, “We were really well supported with staff and equipment early on...this helped us adapt to the changes we needed to make,” and have access to personal protective equipment. This made them feel safe at work, which is very valuable in such context, “The rate of safety is really much higher at the hospital versus going out or pumping up gas.” They also valued the option of working remotely when it is possible, “Having that as an option [working remotely], once per pay period, or even once per week, is a huge help,” and found it helpful to have adequate training to deal with similar infectious diseases, “Did have some extra training for dealing with SARS and MERS in case we did have outbreak, so that did help.” In addition, HCWs expressed the need for creating a quiet isolated room for relaxation at work, “It is important to have a room where you can decompress. This would be really great.”

Personal Factors That Help HCWs Cope With the Pandemic (Theme 4)

In addition to being supported by their organization and colleagues at work, participants emphasized the need for self-care. According to them, it is primordial to take care of their physical and mental health to leverage stress and improve their overall well-being, “You should really take care of your own health and invest in your own well-being, mentally and physically.” The participants highlighted the importance of exercise, “I’m also doing mindfulness exercises to help me stay sane with all this,” and relaxation at home, “Trying to leave work at work and focus on other things at home.” Health care workers also mentioned how important is to stay in contact with friends and family, “Reaching out to friends and family virtually is very important” “One of the things that actually helped out is that everyone seemed to be more open on communication because everyone is at home.”

DISCUSSION

This study sought to gain an in-depth understanding of HCWs' perceptions of working during the COVID-19 pandemic using methods from the grounded theory. A series of six focus groups were performed with various HCWs (eg, registered nurses, nurse practitioners, physicians, and social workers) to gain insights into their feelings, needs, and perceptions of support when delivering care during the COVID-19 pandemic. The focus groups highlighted the stress and challenges associated with exposure to SARS-CoV-2, the importance of HCWs practicing self-care, and working in an environment where they felt safe, supported, and rewarded by their community and leadership. In the beginning of the pandemic, 500 employees were redeployed from their traditional jobs to the areas of greatest need in the Medical Center and the Medical Network.

This study generated an analytical framework grounded in evidence. The study also uncovered the impact of individual factors and organizational factors on HCWs’ well-being. These factors should be taken into consideration when developing interventions for the mental well-being of frontline health workers. These findings are timely as there is a lack of evidence from studies conducted during and after pandemics that can inform the selection of such interventions. Consistent with prior qualitative studies,13,28,29 the COVID-19 pandemic has substantially impacted the physical and mental health of HCWs at our institution. The participants were frustrated, anxious, and stressed about delivering care for sick patients, confused with the changing guidelines, and afraid of getting infected and infecting others. They highlighted the importance of having access to the correct PPE to feel safe, being supported by their management, and having assigned staff that assisted and helped them meet patients’ needs. Our participants mentioned fear of PPE shortages in the beginning of the pandemic, although this did not come to fruition. The HCWs did not describe burnout at the time of the study, which was conducted between May and June 2020, just several months into the pandemic. According to them, they had continuous backup assistance and were supported by educators, redeployed staff, and their leadership; they even felt appreciative for being valued and recognized by the community (eg, people bringing them food) and the hospital in general. Notably, for some participants, being a part of focus groups was therapeutic as they felt heard and could share their feelings, thoughts, fears, and concerns; it may prove beneficial to incorporate group sessions in the workplace as a strategy to support HCWs.

Participants also reported feeling stigmatized and socially isolated by their relatives, friends, and neighbors who tended to avoid them; this finding is consistent with prior studies.30,31 Interestingly, the stigmatization enhanced solidarity at work and made HCWs feel closer to their colleagues as they were all dealing with the same social stigma outside work. Consistent with prior work,13,31,32 this study also highlights the importance of collaboration during the pandemic. According to our participants, the lack of guidelines, especially at the beginning of the pandemic, encouraged them to be “creative” and “figure out collectively” how to manage patients with COVID-19 while maintaining personal safety. This shows how HCWs faced with unknown situations were able to collectively create a shared understanding of their experiences through communication and socially constructed meaning.32,33 Hence, approaching this topic through the lens of sensemaking can be a step forward for future research to understand how HCWs, in crises, make sense of their experiences and collectively develop plausible solutions. In this regard, HCWs’ shared experience, knowledge, and social interactions with each other.

For this study, several limitations warrant discussion. First, although our focus group sample was diverse in terms of sex, age, and job positions, all focus group participants were all recruited from a single medical center, which is a limitation of qualitative research. However, the findings can be transferable to other contexts and hospitals dealing with a similar situation. Second, the sample size was limited by budgetary constraints, and thus, we may not have captured a comprehensive list of coping strategies and experiences, and we were unable to stratify by demographic characteristics and workplace roles. Third, the study was conducted early in the COVID-19 pandemic and may not offer a representative picture of circumstances later in the pandemic’s evolution, such as after distribution of vaccines and dealing with staff shortages. Although the study was conducted in a large metropolitan area that was impacted by the pandemic relatively early, our institution had adequate staffing, and we were able to maintain our nurse/patient ratio during the time of this study. Future follow-up studies should explore HCWs’ experiences over time (eg, exhaustion, burnout, lack of training opportunities, backup work that has been cumulated) and how job experience and demographic characteristics are associated with HCWs’ experiences while managing infectious patients.
This qualitative research study extends recent studies examining HCWs' experiences during the COVID-19 pandemic. In addition to exploring HCWs' perceptions of care during the pandemic, our study also focused on the organization's role in helping HWCs deal with this challenging situation through constant support and recognition. Future studies should continue to examine organizational characteristics and strategies to support HWCs. This can be useful in the future during similarly stressful pandemics. In addition, this study sheds light on the role of sensemaking in crises, where HWCs without adapted protocols and guidelines need to structure the unknown to provide care for their patients.

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