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# A Mixed Methods Study of Moral Distress Among Frontline Nurses During the COVID-19 Pandemic

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***Objective:*** The study's purpose was to develop an understanding of factors affecting moral distress among nurses during the COVID-19 pandemic. ***Method:*** California-licensed, registered nurses who cared for COVID-19 patients for at least 3 months were recruited for an explanatory concurrent mixed methods study. Data are derived from the first of two surveys administered 3 months apart, including open-ended questions. ***Results:*** Variables with significant bivariate correlations were included as simultaneous predictors in a linear regression model predicting moral distress. The overall model was significant, explaining a substantial portion of the variance in moral distress, but results showed only organizational support and institutional betrayal uniquely predicted moral distress. Three qualitative themes were identified: *Ethical Violations in Care*, *Institutional Betrayal*, and *Traumatic Strain*. The impacts of organizational support and institutional betrayal on nurses' moral distress are important findings in both datasets. ***Conclusions:*** Findings provide insights into how nurses' experiences affected their feelings about work. Participants indicated feeling disregarded by management and institutional structures, indicating potential means of slowing the rates at which nurses plan to leave bedside practice.

***Clinical Impact Statement***

Nurses caring for COVID-19 patients have been exposed to intensely stressful and morally injurious events, with significant repercussions for workforce mental and physical health—and by implication, for patients. Our study sought to generate evidence of the impact of the pandemic on nurses' experiences of moral distress. We found that nurses felt unsupported and betrayed by their workplaces, and traumatized by circumstances encountered in their work.

*Keywords:* moral distress, nurses, COVID-19, explanatory concurrent design, workforce

*Supplemental materials:* https://doi.org/10.1037/tra0001493.supp

The nursing profession has faced stunning challenges during the COVID-19 pandemic. Prepandemic, the U.S. Bureau of Labor Statistics projected a deficit of 1 million nurses by 2026 (U.S. Bureau of Labor and Statistics, 2019). A recent survey of nurses in California showed that intention to retire increased from 11% in 2018 to 25% in 2020 among nurses 55–64 years old (Spetz, 2021). Burnout is an often cited factor in nurses' exit from practice (World Health Organization, 2022), but literature often implies that nurses' individual characteristics are the impetus for turnover and ignore the impact of workplace moral dilemmas. Research has shown that moral distress among nurses is associated with increased intention to leave the profession (Khan et al., 2019). Although moral distress among nurses is not a new phenomenon (Deschenes et al., 2020), the pandemic has created fertile ground for moral dilemmas

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by forcing nurses to cope with scant resources, hazardous conditions for themselves and patients, and lack of critical support while trying to maintain high standards of care (Kelley et al., 2021).

As defined by A. Hamric (2014, p. 456), "Moral distress occurs when an individual's moral integrity is seriously compromised, either because one feels unable to act in accordance with core values and obligations, or attempted actions fail to achieve the desired outcome."

In the healthcare literature, three root causes of moral distress have been identified (A. B. Hamric et al., 2012): clinical situations, factors internal to the provider (internal constraints), and external factors in the situation or environment (external constraints). Clinical situations that contribute to moral distress include but are not limited to providing aggressive treatment that is not in the best interest of the patient, having conflicting duties that prohibit the provider from providing optimal care, providing false hope to patients and families, and using resources inappropriately. Internal constraints refer to personal characteristics that affect providers' perceived ability to give optimal care and include feelings of powerlessness or lack of assertiveness, self-doubt, lacking a full understanding of the situation, and socialization to follow others. External constraints describe factors inherent to the institution or healthcare system including lack of administrative support, institutional policies conflicting with care needs, power dynamics or hierarchies within the system, inadequate staffing, and compromised care due to pressures to reduce costs.

All of these potential root causes of moral distress were amplified by the COVID-19 pandemic. By the time of the World Health Organization's declaration of a global pandemic, healthcare systems were overwhelmed to the point of establishing protocols for rationing mechanical ventilation and other critical care supports (White & Lo, 2020). By implication, this meant overextension of the nursing workforce in a context of uncertainty, along with inequities in care and practice (Guttormson et al., 2022). These conditions created an environment in which nurses witnessed, experienced, and at times had to participate in acts they perceived as violating the ethical norms of their practice (Amsalem et al., 2021).

In parallel to the work on moral distress in the nursing field, the concept of moral injury has emerged in the psychology literature. Moral injury refers to the "lasting psychological, biological, spiritual, behavioral, and social impact of perpetrating, failing to prevent, or bearing witness to acts that transgress deeply held moral beliefs and expectations" (Litz et al., 2009, p. 697). Several recent studies have explored moral injury and distress among healthcare workers during COVID-19 (e.g., Hines et al., 2021; Lake et al., 2022; Liu et al., 2021; Silverman et al., 2021; Wang et al., 2022) and a recent scoping review sought to identify predictors of moral distress and injury among healthcare workers during COVID-19 (Riedel et al., 2022). The latter found that moral stressors for healthcare workers stemmed from patient care situations, interpersonal relationships, and organizational factors. Notably, these studies often combine different types of healthcare workers (e.g., Pappa et al., 2020; Vanhaecht et al., 2021). Moral distress and injury among nurses may be unique in that nurses are often primary providers of care and contact to both patients and families, yet power dynamics and scope of practice regulations limit autonomous decision making. In addition, evidence exists that rates of suicide are higher among nurses than among other healthcare professionals (Davis et al., 2021).

Importantly, extant studies have utilized either qualitative (e.g., Arcadi et al., 2021; Guttormson et al., 2022) or quantitative methodology (e.g., Lake et al., 2022) alone. There were no studies identified in the recent scoping review of moral distress and injury that used a mixed methods approach (Riedel et al., 2022). As moral distress is more commonly referenced in nursing science, this study uses that term—although it may be that some nurses' experiences ultimately rose to a level of moral injury. This article reports findings from analysis of data collected via survey, including qualitative data gathered via an open-ended question about participants' most distressing event or experience in working with COVID-19 patients. Following an explanatory concurrent mixed methods design, these data were collected simultaneously. Results are presented as quantitative, qualitative, and mixed method synthesis. Human subjects research approval was obtained from the University of California Irvine Institutional Review Board.

## Method

Owing to the complexity of the issues under study in this case, and the need to rapidly gather as much data and in as much depth as possible to support the health of the nursing workforce in pandemic conditions, an explanatory concurrent mixed methods approach was selected (Nastasi et al., 2010). Mixed methods approaches provide additional dimensionality to research, in that they combine the capacity for gathering large amounts of data via quantitative methods with the ability to contextualize and enhance understanding of a phenomenon through qualitative data collection—this has been characterized as *legitimation* of data and inference (Nastasi et al., 2010). In such an approach, qualitative data are interpreted as explanatory of aspects of the studied phenomenon that cannot be fully captured quantitatively (Curry & Nunez-Smith, 2015). The qualitative and quantitative data discussed here were therefore collected simultaneously, via a survey that included an open-ended question about participants' most morally distressing event. This ensured that the two datasets would be readily comparable both temporally and contextually, and therefore amenable to this analytic approach (Bazeley, 2010).

The study purpose was to understand the types of emotional and value-based conflicts that frontline nurses have faced working with COVID-19 patients and how nurses experienced and processed these events. The goal of the quantitative data collection was thus to assess whether nurses caring for patients during the COVID-19 pandemic experienced morally distressing events, the degree of moral distress where experienced, and related factors that may impact moral distress. The goal of the qualitative data collection was to gather more details about morally distressing events experienced during the COVID-19 pandemic and their impact on the affected nurses. Finally, the mixed methods analysis aimed to illuminate the factors driving moral distress among frontline nurses during the COVID-19 pandemic.

### Participants and Procedures

Data for this article were derived from Time 1 of a two-wave survey data collection process, administered 3 months apart. Time 1 surveys were completed from May to July 2021. Registered nurses licensed in California who directly cared for COVID-19 patients over at least 3 months were recruited through professional organization email lists. Advertisements linked to online screening questions and the consent form, upon completion of which participants were

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directed to the survey. Participants received a $30 gift card for completion. A total of 319 nurses consented to participate and 284 reported whether they had ever experienced or witnessed an event that went against their morals or values when working with COVID-19 patients. Of the 284 participants, 172 (60.6%) participants who responded yes comprised the study sample.

Qualitative data for analysis were derived from the 163 participants who responded yes to the question about events that were contrary to the nurse's morals or values and provided a response to the subsequent open-ended prompt asking them to describe their most morally distressing event. Quantitative analyses were restricted to those who responded yes to this question and responded correctly to at least two of three attention check items ($N = 144$; 83.7%). See Table 1 for participant characteristics. On average, participants were 38.9 years old ($SD = 10.0$, range = 23–67), had 10.5 years of experience ($SD = 8.68$, range = 0–46), and spent 75.0% of their time caring for COVID-19 patients in a typical work week ($SD = 28.4$, range = 5–100).

## Measures

### Demographic and Workplace Characteristics

Participants were asked to report their age, gender, race, ethnicity, number of years worked as a nurse, what role they had caring for COVID-19 patients, and if they were travel nurses. They were also asked to report the percent of the time they spent providing direct clinical care to COVID-19 patients in a typical work week, whether their institution went out of ratio, and if they experienced a lack of personal protective equipment (PPE) during the pandemic. To capture changes in nurses' workplace experiences during the pandemic, participants were asked to retrospectively report how personally connected they were to their patients and how enthusiastic they were about their job prior to the pandemic on a 5-point Likert-type scale (0 = *not at all connected/enthusiastic* to 4 = *extremely connected/enthusiastic*). They were then asked how personally connected they were to their patients and how enthusiastic they were about their job currently (during the pandemic). Score changes for patient connection (*connection change*) and job enthusiasm (*enthusiasm change*) were calculated for these by subtracting scores from scores prior to the pandemic.

**Table 1**
*Participant Characteristics*

| Variable | *n* (%) |
|---|---|
| Gender | |
| Female | 151 (87.8) |
| Male | 20 (11.6) |
| Decline to answer | 1 (0.6) |
| Ethnicity | |
| Hispanic/Latinx | 44 (25.6) |
| Non-Hispanic/Latinx | 127 (73.8) |
| Decline to answer | 1 (0.6) |
| Race | |
| White | 103 (59.9) |
| Asian | 27 (15.7) |
| Black or African American | 5 (2.9) |
| Mixed | 18 (10.5) |
| Other | 11 (6.4) |
| Missing/decline to answer | 8 (4.7) |
| Nurse role | |
| Clinical/staff nurse | 149 (86.6) |
| Unit/department leadership | 9 (5.2) |
| Advanced practice registered nurse | 6 (3.5) |
| Other | 8 (4.7) |
| Travel nurse | 10 (5.8) |

### Moral Distress Index Event

When completing the survey, participants were asked to think of the times when they experienced or witnessed events that went against their morals or values when working with COVID-19 patients. Using the free text box, they were asked to describe the event that *most* strongly went against their morals or values and caused the most distress. The study employed thematic analysis within the explanatory concurrent design to identify patterns or themes in what participants perceived as their most morally distressing experience (Bergman, 2010). The qualitative investigators read and re-read this free text data independently, and systematically generated initial open codes. Codes were then organized into families and ultimately into broader themes using ATLAS.ti software. The qualitative researchers then compared their findings and found marked consistency in interpretation.

### Self-Report Measures

*Organizational support* was measured using an eight-item shortened version of the Survey of Perceived Organizational Support (SPOS-8; Eisenberger et al., 1986). *Institutional betrayal* was measured using the Institutional Betrayal Questionnaire, Version 2 (IBQ-2; Smith & Freyd, 2017). The current study asked participants to respond to the IBQ-2 while thinking about their Moral Distress Index Event. Although the IBQ-2 is traditionally scored dichotomously, the present study scored the IBQ-2 by adding the items (range 0–12) because a large percentage (91%) of participants endorsed institutional betrayal. Good internal consistency ($\alpha = .84$) was found, supporting the use of a composite score. *Workplace social support* was captured using the four-item Peer Support (PS; Haynes et al., 1999) measure. The current study asked participants to answer regarding the workplace where they spent the most time caring for COVID-19 patients. *Moral distress* was measured using the Measure of Moral Distress for Health Care Professionals (MMD-HP; Epstein et al., 2019). The current study asked participants to respond based on their experiences during the COVID-19 pandemic. See Table 1 in the online supplemental materials for the psychometric properties of these measures.

## Results

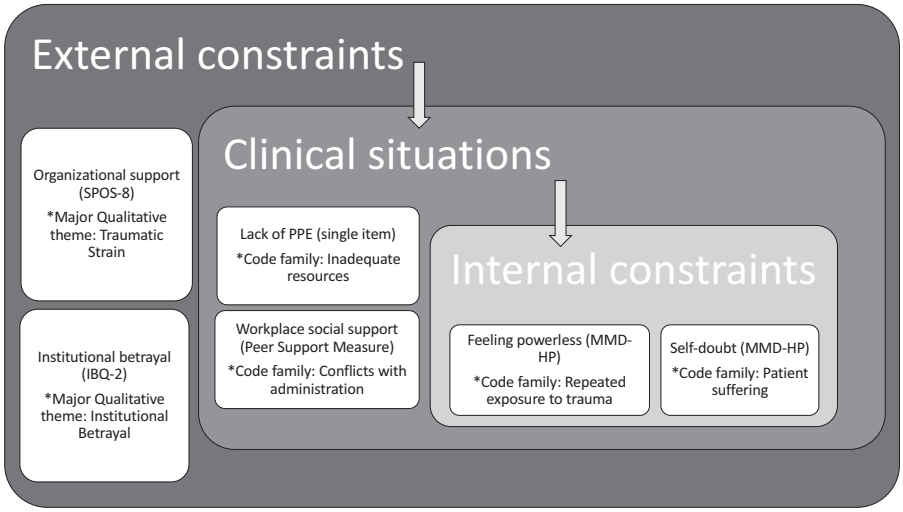
In keeping with the mixed methods approach, a figure illustrating the relationships between the qualitative and quantitative data is provided (Figure 1).

## Quantitative Results

Correlations between nursing characteristics, workplace pandemic conditions, changes in nurses' workplace experiences, organizational factors, and moral distress are reported in Table 2. Results showed that nurses with more years of experience reported significantly lower moral distress ($r = -.17$). Those who lacked PPE ($r = .26$) and reported greater decreases in job enthusiasm ($r = .23$) reported significantly greater moral distress. Lower

**Figure 1**

*Mapping of Quantitative and Qualitative Results Within Moral Distress Framework*




*Note.* SPOS-8 = eight-item shortened version of the Survey of Perceived Organizational Support; IBQ-2 = Institutional Betrayal Questionnaire, Version 2; PPE = personal protective equipment; MMD-HP = Measure of Moral Distress for Health Care Professional.

organizational support ($r = -.52$), greater institutional betrayal ($r = .44$), and lower workplace social support ($r = -.24$) were significantly associated with greater moral distress. All variables with significant bivariate correlations were included as simultaneous predictors in a linear regression model predicting moral distress. The overall model was significant, explaining a substantial portion of the variance in moral distress, $F(6, 130) = 10.684$, $p < .001$; adj. $R^2 = 0.299$. In this model, only organizational support and institutional betrayal remained unique predictors of moral distress (see Table 3).

## Qualitative Results

Three overarching themes were identified: *Ethical Violations in Care*, *Institutional Betrayal*, and *Traumatic Strain*. Each theme encompassed code families, developed from code clusters that emerged in the initial coding process and then refined by the study team.

### *Ethical Violations in Care*

This theme encompassed times when nurses identified problematic clinical situations, particularly when they felt they had direct and adverse effects on patients. Code families under this theme included *Delayed or denied care* and *Provider conflicts*. The former included times when the nurse felt patients were not provided the best possible care or that circumstances resulted in care being fractured or delayed. One nurse wrote, "I have had multiple patients denied MRIs, and other procedures/tests just because they were diagnosed with COVID," while another commented, "Patient care for COVID patients was delayed frequently due to the stigma and also policies that … made adequate staffing to meet the needs of the patients often impossible. Scans, labs, tests, and treatments were delayed …." These situations made nurses feel that they were not able to provide quality care, in violation of their professional ethics.

The second code family, *Provider conflicts*, referenced times when the nurses felt that other providers' actions were impeding the provision of appropriate nursing care. Nurses described seeing patients suffer through life-sustaining treatments with little to no hope of recovery, "either families refusing to withdraw, or whatever [physician] is on that week doesn't believe in 'comfort care' or withdrawal and therefore won't advocate for it." They also described being treated disrespectfully by other providers, or as "sacrificial lambs":

> Some [physicians] were not going in the room to see the patient. [The nurse] was expected to place patient in room, place on monitor, start IV, draw blood work, do EKG, collect COVID swab, and start any treatments ordered …. If patient was ok to talk [nurse] was to give them the phone in the…room so [physician] could talk to patient…. Some physicians avoided the patients like the plague, while I as the [nurse] wearing an already overused N95 am in the room for at least 1.5 hr from the get-go.

The nurses felt that this showed disregard for their practice and deprived patients of appropriate care by a complete team.

### *Institutional Betrayal*

This theme encompassed nurses' perceptions of being betrayed by institutions at which they worked, particularly in ways that made them feel sacrificed or endangered. The first code family, *Conflicts with administration*, described the ways that nurses perceived hospital administrations' role and responsibility in both the traumatic experiences the nurses endured and in patient harm. One nurse explained, "Working in this environment … I am 'just a body' to my hospital leaders. I am expendable. I am undeserving of having PPE, having a break …, eating, drinking water, urinating. … I … am not worth spending money on to protect or respect."

The second code family, *It is about the money,* described nurses' perceptions that profit motives were of greater priority than nurse and

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**Table 2**
*Pearson Correlations*

| Variable | Years nursing | Time with COVID pts | Lack PPE | Out of ratio | Connection change | Enthusiasm change | Organizational support | Institutional betrayal | Workplace social support |
|---|---|---|---|---|---|---|---|---|---|
| Years nursing | | | | | | | | | |
| Time with COVID pts | −.217** | | | | | | | | |
| Lack PPE | −.005 | −.155 | | | | | | | |
| Out of ratio | −.108 | −.003 | .228** | | | | | | |
| Connection change | .034 | .009 | .080 | −.080 | | | | | |
| Enthusiasm change | −.112 | .022 | .114 | −.143 | .389*** | | | | |
| Organizational support | .200* | .132 | −.450** | .279** | −.144 | −.197* | | | |
| Institutional betrayal | −.013 | −.244** | .305*** | −.123 | .054 | .060 | −.546*** | | |
| Workplace social support | −.043 | .274*** | −.211* | .147 | −.120 | −.046 | .273*** | −.336*** | |
| Moral distress | −.173* | .053 | .260** | −.126 | .140 | .224** | −.521*** | .439*** | −.237** |

*Note.* *N* ranges from 137 to 144. Years nursing: number of years the individual had been working as a nurse. Time with COVID pts: percentage of time spent providing direct clinical care to COVID-19 patients in a typical work week (0%–100%). Lack of PPE: whether the individual lacked PPE during the pandemic (*yes* = 1, *no* = 0). Out of ratio: whether their workplace went out of ratio during the pandemic (*yes* = 1, *no* = 0). PPE = personal protective equipment.
* $p < .05$. ** $p < .01$. *** $p < .001$.

patient safety. A participant reported that "My organization chose to do elective surgeries and close ICU's while other hospitals … were overwhelmed …. [This] forced physicians and nurses to watch patients die unnecessarily. … I don't want to be a part of this system anymore."

The third code family, *Inadequate resources*, reflected times when nurses experienced insufficient or inequitable allocation of resources, human or material. One explained:

> It was so stressful to not have the supplies and staff to code this patient. … I was worried my drips would run out, who was going to help me, and if I could get things from pharmacy. All the while having to wear PPE. My PAPR, which I purchased myself, stopped working … so I had to scramble and find a mask and shield as well. … after 16 years of nursing …, this was the most distressing [thing] I had ever experienced.

Another wrote, "While one of our hospitals was drowning with patients and didn't have enough resources (including ventilators) a … hospital in the same system was cancelling nurses and closing departments." This nurse added that they also believed their hospital wanted to avoid providing expensive, critical-level care to uninsured patients.

### *Traumatic Strain*

This theme encompassed ongoing experiences nurses perceived as traumatic or emotionally burdensome. The first code family *Repeated exposure to trauma* was associated with feelings of sadness, fear, anger, and expressions of helplessness, isolation, and anxiety. One nurse shared, "It was extremely distressing knowing that I was powerless. I felt extremely helpless 75% of the time." Many of the morally distressing events experienced by nurses were also related to the second code family, *Patient suffering*. Descriptions of patient suffering were particularly focused on traumatic resuscitation or end-of-life scenarios, often with only the nurse in the room: "I sometimes feel like a monster, taking care of people day after day, watching their bodies literally decay …. The people I assisted with an extubation … and the time I spent with them as they died. I will never be the same."

The experience of patients *Dying alone* was also very distressing to the nurses and marked a third code family. A participant recalled, "I had patients pass away holding a stranger's hand (mine) without ever seeing our faces. Despite our words and actions of comfort one could only imagine how lonely and terrifying their last moments must have been." In addition, nurses reflected that patients dying alone was a result of strained resources: "There was one patient … their wife of 50 + years asked to be facetimed …, but because I had to be with my other patient who was decompensating … I was unable to do this …. No one deserves to die alone."

**Table 3**
*Linear Regression Predicting Moral Distress*

| Variable | β | *T* | *p* |
|---|---|---|---|
| Years in nursing | −.081 | −1.090 | .278 |
| Lack PPE | .014 | 0.174 | .862 |
| Enthusiasm change | .117 | 1.582 | .116 |
| Organizational support | −.333 | −3.470 | <.001 |
| Institutional betrayal | .220 | 2.506 | .013 |
| Workplace social support | −.068 | −0.887 | .377 |

*Note.* $F(6, 130) = 10.684$, $p < .001$; adj. $R^2 = 0.299$. PPE = personal protective equipment.

## Mixed Method Synthesis

Synthesis of qualitative and quantitative data began with a simultaneous initial analysis of each dataset by individual members of the study team, followed by a discussion with the entire team. Points of convergence were identified, and the most parsimonious synthesis of the data and meta-inferences was then established. There are clear points of concordance between the qualitative and quantitative datasets, as well as important divergence, creating a distinct and detailed picture of what frontline nurses experienced during the COVID-19 pandemic. These findings are consistent with the moral distress model's descriptions of *external constraints* as potent contributors to moral distress (A. B. Hamric et al., 2012). The clear impacts of organizational support and institutional betrayal on the nurses' moral distress evident in the quantitative data are borne out in the qualitative data (Figure 1). In the case of institutional betrayal, the qualitative data reflected this so clearly that it emerged there as a major theme. Specifically, the code family *Conflicts with administration* clarified that many nurses attributed their experiences of moral

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distress to a lack of support from management and executives. These nurses described feeling "expendable," and as if those in the upper echelons were wholly disconnected from the realities of the workforce. One nurse reflected, "It made me lose respect for them," while another noted that, "I feel so betrayed I can't look our executives in the eye anymore."

The second code family, *It* i*s about the money*, also identified a specific mechanism of institutional betrayal and reflected times when the nurses felt that there was a greater emphasis on costs than on safety or patient care. Some felt that higher salaries paid to travel or surge nurses demonstrated disregard for permanent staff, who faced the same working conditions, and reduced retention potential. Others reported frustration with being asked to "cut corners" while trying to provide care to "so many sick patients and so many [who] were dying." This code family contrasts how the nurses *wanted* to perform with how they felt they were *forced* to perform because of institutional budgetary and other financial concerns. One nurse likened this to "battle," and felt guilt "for not providing the right patient care due to limited resources."

The qualitative data also provided further insights into the statistical significance of organizational support as a predictor of moral distress. Given that some of the variables captured in the measure of organizational support were appreciation of efforts and employee well-being, the qualitative data offer important information about how nurses felt these were lacking. The major theme of *Traumatic Strain*, and its code family *Repeated exposure to trauma*, encapsulated times that nurses felt the institution disregarded the effects of witnessing "many of our patients die," and of "the weight of vicarious trauma." They described how "the crisis situation and handling of it highlighted many of the shortcomings in our system and our leadership," and that "hospitals do not provide enough systems, technology, or staffing … on [the] front line." Many described intense anxiety, exhaustion, and burnout related to their work, and resentment at being called "heroes" without "training or encouragement to attend counseling or focus groups for the stress" they endured. These and other comments clearly express that the nurses felt they were not appreciated or valued as people or professionals, and that there was an organization-level failure to recognize and respond to the fact that "We are not ok."

The data also converged to reflect the moral distress model's assertion that *clinical situations* contribute to moral distress, though not as significantly as what was seen with *external constraints*. Importantly, the qualitative data reflected that nurses often positioned clinical situations as examples of the consequences of external constraints, particularly as sequelae of institutional betrayal. Similar embeddedness was found with *internal constraints*. While assertions of feelings of powerlessness and self-doubt were present, powerlessness most often appeared related to externally imposed situations. These perspectives are reflected in the strong quantitative correlations between institutional betrayal and organizational support.

## Discussion and Implications

The experiences of frontline nurses during the COVID-19 pandemic are likely to have lasting effects on the nursing workforce and institutions dependent thereon. Nursing care and staffing have both been directly linked to patient outcomes, and there is clear evidence that decreased or inconsistent nurse–patient contacts can contribute to overall hospital mortality rates (Ball et al., 2018). It is, therefore, crucial to consider how nurses are affected by their working conditions, and how those conditions contribute to turnover in the nursing workforce. Moral distress, linked to poor mental health outcomes among healthcare providers (Amsalem et al., 2021), is one possible outcome of poor working conditions for nurses. This mixed methods study suggests that there are modifiable antecedents to moral distress embedded in institutional cultures and responses to challenging circumstances such as the COVID-19 pandemic.

This study revealed a variety of factors associated with moral distress among nurses, including years in the profession, lack of PPE, institutional betrayal, and lack of organizational support. These findings are consistent with those in a study of moral injury and psychiatric symptomologies among U.S. healthcare workers, which found that perceived betrayal by leadership contributed to moral injury and subsequently poorer mental health among participants (Amsalem, et al, 2021). Importantly, moral injury differs from moral distress in that moral injury typically relates to a specific incident or action involving the individual, while moral distress can encompass ongoing feelings of being constrained from doing what needs to or should be done by factors not under individual control (Čartolovni et al., 2021). The current study highlights that the ongoing and evolving nature of the COVID-19 pandemic created a situation that likely compounded experiences of moral distress and may have caused moral injury as nurses were forced to continue providing suboptimal care, without knowing for how long it might continue.

The emergence of both institutional betrayal and lack of organizational support in both quantitative and qualitative data is also noteworthy, insofar as this study is among the first to identify specific factors contributing to nurses' moral distress. Our results align with those from a study of 285 U.S. intensive care unit nurses, in which "Inadequate Leadership Support" was identified as an important contributor to "distress and harm experienced by nurses during the pandemic" (Guttormson et al., 2022, p. 99). Since this study was based on a national sample, it is likely that many U.S. nurses attribute feelings of moral distress to a sense of being abandoned by managerial and institutional leadership during the height of the COVID-19 pandemic. Interestingly, a cross-sectional study using a convenience sample of nurses from two hospitals in the Northeastern United States where data collection focused on nurses' experiences in April 2020 found that a large majority (70%–78%) of these nurses felt that hospital leadership provided effective and timely communications (Lake et al., 2022). The data reported here are from nearly a year later in the pandemic, suggesting that circumstances may have changed and/or worsened as time passed.

The possibility that worsening circumstances led to additional morally distressing experiences is also reflected in the qualitative data under the theme of *Ethical Violations in Care*. This theme is of particular importance in understanding nurses' unique experiences during the pandemic because of differences in professional ethical constructs that exist among healthcare disciplines. For nurses, professional ethics include the duty to self as well as others in the promotion of health and safety and in preserving "wholeness of character and integrity" (American Nurses Association, 2015, p. 19). Over the course of the pandemic, many nurses may have begun to feel that by going to work and continuing to engage in constrained and inadequate provision of care, they were violating the ethical duties owed to their patients and to themselves. This is consistent

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with an integrative review of nursing during the pandemic, which suggested that the pressure of maintaining safe and effective care under extraordinary circumstances while risking the nurse's own health and safety, contributed to moral distress (Gebreheat & Teame, 2021). Over time, the intersection of risks to patients and to self is likely to have intensified nurses' feelings of ethical violation and ultimately moral distress. This finding was not effectively captured in the quantitative data, and its emergence demonstrates the importance of a mixed methods approach.

Healthcare organizations often attempt to address issues labeled as "burnout," compassion fatigue, moral distress, and turnover with person-centered interventions such as meditation, gratitude journaling, and other "self-care" strategies (Copeland, 2020). While such interventions may be of individual benefit, they do not mitigate the most significant contributors to moral distress identified in this study. The COVID-19 pandemic has brought to light what many nurses have known for some time: significant issues with staffing, poor working conditions, and difficulties with interprofessional communication create a professional environment that goes beyond the stressful to the frequently traumatic (Schlak et al., 2022). This study highlights the complexity of registered nurses' experiences throughout the COVID-19 pandemic and the necessity for interventions that go beyond self-care initiatives to address the organizational and institutional conditions that can lead to a traumatized workforce. The already concerning state of nurses' mental health has only been worsened by COVID-19 (Davidson et al., 2020), and nursing staff turnover and retention remain tenuous. California alone is projected to face a significant shortfall of registered nurses over the next 5 years due to long-term trends that exacerbated by the COVID-19 pandemic (Spetz et al., 2021). The findings of this study illustrate the importance of addressing the organizational and institutional factors that create and maintain an environment in which morally distressing experiences occur.

A limitation of this study is its population of only nurses licensed in California. Since California and Massachusetts are the only states in which nurse–patient staffing ratios are legally mandated, it may be that the pandemic experiences and reactions of nurses in California differ from those of other states. Additionally, nurses in this study were self-selected to participate. Because the study was shared via various email lists and on social media, we cannot calculate a response rate. Moreover, those with more severe exposures or moral distress could have chosen to participate such that the results are not representative of the population of nurses. Yet, the fact that our data are consistent with other national studies (Guttormson et al., 2022; Riedel et al., 2022) suggests little self-selection bias. Another limitation is the study's temporal context: data collection took place in mid-2021 when pandemic conditions remained uncertain. It is possible that nurses' working conditions improved as vaccine rates increased and fewer patients became critically ill. Lastly, the cross-sectional nature of the data means no causal inferences can be made. Longitudinal research on relationships between institutional factors and moral distress among nurses is yet needed.

The results of this mixed methods study offer critical insights into nurses' working experiences during the COVID-19 pandemic. To our knowledge, this is the first such application of this methodology to moral distress and injury among nurses during the pandemic, and the findings provide uniquely dimensionalized and contextualized insights into how nurses' experiences shaped their feeling about their workplaces and psychological health. The nurses in this study clearly indicated that they felt disregarded by their management and institutional structures, indicating both a possible pathway to moral distress and injury and a potential target for improvements that could slow the rates at which nurses plan to leave bedside practice.

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