Moral Injury during the COVID-19 pandemic: A delphi model survey of family medicine residents

Sean B Ngo¹, Payson J Clark¹, Sarah E Parr¹, Abel R Thomas¹, Akshat Dayal¹, Richard Sanker¹, Burritt W Hess² and Dillon C Stull³

Abstract

Objectives: The objective is to investigate the primary factors that created experiences leading to moral injury in family medicine residents during the COVID-19 pandemic and also to identify any barriers keeping these residents from seeking or receiving help when they experienced moral injury.

Method: A DELPHI model study utilizing three rounds of surveys was conducted at four family medicine residency programs in the United States. Resident responses to Survey 1 generated factors perceived to be causing them moral injury or constituting barriers to their seeking help. Thematic analysis identified common themes which were presented to residents in Survey 2 for rating and justification. Results and feedback from Survey 2 were shared with residents in Survey 3, where residents were prompted to reevaluate their ratings for factors and barriers for the purpose of generating consensus among themselves. A ranked list of factors and barriers was thereby created for the participating sites.

Results: Residents shared several stories about the factors that most pressured them to violate their moral values. The most severe and frequent factors contributing to moral injury involved disruptions to doctor–patient relationships, patient–family

¹Office of PreHealth Studies, Baylor University, Waco, TX, USA
²Waco Family Medicine, Waco, TX, USA
³Stanford University School of Medicine, Stanford, CA, USA

Corresponding Author:
Sean B Ngo, Baylor University, One Bear Place #97108, Waco, TX 76798, USA.
Email: Sean.B.Ngo@uth.tmc.edu
relationships, and relationships with other healthcare professionals. Time was the major barrier to residents seeking help.

**Conclusion:** During times of crisis, moral injury among residents may be minimized by protecting and promoting important clinical and professional relationships with patients, colleagues, and other medical professionals. While residents report that lack of time was the most significant barrier to seeking help, it is unclear how this complicated and ubiquitous problem would be resolved or mitigated.

**Keywords**
moral injury, stress disorders, post-traumatic, COVID-19, family practice, internship and residency

**Introduction**

**Background**

This study is concerned with moral injury in family medicine residents during the COVID-19 pandemic. The term moral injury, as utilized in this paper, is defined as the profound psychological distress resulting from the sense that one’s moral code has been violated. Moral injury may result from one’s own actions or inactions (e.g., acting against one’s conscience). It may also be the result of other people’s actions or inactions (e.g., feeling betrayed by another’s response to a situation).

The first use of the term moral injury was by Jonathan Shay in his work with military veterans. Since then, research has begun to highlight the prevalence of moral injury within the healthcare setting. With the COVID-19 pandemic, some have predicted the emergence of unique clinical scenarios leading to potential morally injurious experiences (pMIEs) for physicians. Existing weaknesses in the healthcare system, such as nursing shortages, would be exposed or exacerbated. The increased demand on healthcare workers during the pandemic would cause some to feel abandoned by their institutions. Meanwhile, the COVID-19 pandemic would raise its own specific challenges, including the danger of exposing friends and family to the virus and the allocation of scarce resources such as ventilators.

For family medicine physicians, the new ways of working have also introduced a new form of stress by limiting important tools used in their practice, for example, face-to-face interactions, non-verbal communication, and the physical examination. Particularly vulnerable to professional stressors are residents, who face intense work demands and tend to have little authority to manage the circumstances of a pMIE, placing them at greater risk for moral injury. Repeated experiences of moral injury may erode a resident’s sense of integrity or contribute to burnout. With burnout come the potential risks of increased medical errors, decreased empathy, and suicidal
ideation among residents.\textsuperscript{19,20} Thus, minimizing the potential for moral injury and mitigating its effects play critical roles in preserving the physical and mental health of this important physician workforce, especially as the challenges of the pandemic continue.

\textbf{Research questions and study objectives}

We therefore hypothesized that the conditions of the COVID-19 pandemic may have caused moral injury in family medicine residents. To investigate this hypothesis, we posed two research questions: (1) ‘What factors have caused moral injury to family medicine residents most frequently and severely during the COVID-19 pandemic?’, and (2) ‘What barriers existed, if any, that have kept family medicine residents from seeking or receiving help for moral injury?’ Our study sought to gather resident consensus on these two research questions and aimed to provide administrators and residency program directors with insight on which factors and barriers to prioritize in addressing moral injury in their residents.

\textbf{Methods}

This study surveyed family medicine residents at four programs, denoted here by program type, location, cumulative state COVID-19 cases (and deaths, in brackets) per 100,000 by survey closure on May 14, 2021,\textsuperscript{21} and the date in 2021 when state some mask mandates were lifted\textsuperscript{22,23}: Site A (community-based, Texas, 10,061 cases [174 deaths], March 10th), Site B (academic, California, 9,670 [159], mask mandates continue as of September 2021), Site C (academic, Michigan, 9,853 [200], June 22nd) and Site D (academic, Alabama, 11,104 [229], April 9th). Site D was removed from data analysis due to an inadequate response rate (see Figure 1). Local- and state-mandated guidelines regarding COVID-19 varied widely across these programs, which presented unique challenges for each site.

This exploratory study implemented the widely used DELPHI model, which some have applied to the contexts of healthcare and medical education.\textsuperscript{24,25} The method involves three rounds of surveys with a group of subject experts—in this case, family medicine residents—who evaluate the study’s research questions first individually and then quasi-collectively with a view toward building group consensus. One major benefit of this method is the inclusion of both qualitative and quantitative data gathering.\textsuperscript{26-28}

All family medicine residents at participating sites received an email invitation to the study with a Qualtrics survey and consent form. Participants who completed Survey 1 (January 2021) were invited to complete Survey 2 (March 2021), and those who completed Survey 2 were invited to later complete Survey 3 (April–May 2021). At the end of each survey, participants provided their email addresses to receive reminders, follow-up surveys, and compensation. To minimize undue influence and
coercion, only the researchers from Baylor University could access the survey data. This research study was reviewed by the Baylor University Institutional Review Board and was exempted from formal review. Table 1 summarizes respondent demographic information.

| 1st Stage (Survey 1)          | 2nd Stage                     | 3rd Stage (Survey 2)             | 4th Stage (Survey 3)            |
|-------------------------------|-------------------------------|----------------------------------|----------------------------------|
| Summary                       | Thematic analysis of Survey 1 responses to generate list of moral injury factors and barriers | Residents rated the severity and frequency for each moral injury factor as well as the severity of each barrier | Residents re-evaluated the same ratings upon viewing responses from the other experts |

**Table 1. Resident demographic information.**

|                  | Site A | Site B | Site C | Site D |
|------------------|--------|--------|--------|--------|
| Residents†       | 10     | 8      | 5      | 1*     |
| **Sex**          |        |        |        |        |
| Male             | 5      | 3      | 2      |        |
| Female           | 5      | 5      | 3      |        |
| **Age range, years** | 26–35 | 26–39  | 27–41  |        |
| **Year in residency** |       |        |        |        |
| 1st year         | 2      | 3      | 1      |        |
| 2nd year         | 3      | 1      | 2      |        |
| 3rd year         | 5      | 4      | 2      |        |

†Information only displayed for residents who completed all three surveys.
*Site D removed from discussion due to low overall response rate.

**Figure 1.** Graphic summarizing the various stages of the DELPHI model used in this study. The response rate for each survey at the four sites was calculated as the percentage of residents that responded to the survey out of the total number of residents who received an invitation.
Open-ended questions in Survey 1 elicited factors identified by residents as contributing to pMIEs. More pointed “safety net” questions in Survey 1 interrogated particular factors suggested by a review of pertinent literature. Responses to “safety net” questions would allow the development of Surveys 2 and 3 in case the open-ended responses had been poor. The surveys also presented residents with the definition of moral injury.

After Survey 1, the qualitative data was thematically analyzed, and similar responses were grouped. As much as possible, the names of these groupings preserved the terminology of the responses. To minimize bias, two of the study authors worked independently to code the responses from each site. The pair and then the entire research team discussed and reconciled any differences in coding.

The groupings identified by the thematic analysis of Survey 1 responses were listed in Survey 2 as items to be rated. On an eleven-point rating scale (0–10, inclusive), experts rated the frequency and severity with which each item caused them to experience moral injury. Experts also evaluated barriers to seeking help using an eleven-point rating scale. Participants were prompted to justify their rating selection in written form. For each item, the median, interquartile range (IQR), and frequency distribution of participant ratings were computed and aggregated. The written feedback submitted by participants was compiled and then coupled with the corresponding quantitative data summaries for each item.

Survey 3 presented residents with the same items but also showed them the (anonymized) aggregate data and justifications from their peers’ responses to Survey 2. Viewing their peers’ ratings and justifications, the respondents again rated the survey items. Informed by the reasoning and examples of the whole group, the responses to some items on Survey 3 moved toward greater consensus. Figure 1 summarizes the DELPHI methodology.

Definitions of consensus vary widely in the DELPHI literature, but common measurement methods involve specifying minimum median ratings or maximum interquartile ranges. Following these methods, this study defined a priori that the experts will have achieved consensus on a survey item when that item had received ratings with a median above 7 and an IQR of 2 or less on the 11-unit rating scale. DELPHI studies with smaller scales (4–5 units) often define consensus using an IQR of 1, while larger scales (7–9 units) often use IQRs of 2 or 3. Compared to other DELPHI studies, the definition of consensus employed in this study was strict, designed to capture only those items that have caused the most severe moral injury, done so with utmost frequency, or presented extremely strong barriers to seeking help.

But survey ratings were much lower than predicted, and no items met the original consensus definition. Nevertheless, notable data trends existed in items that failed to meet consensus as strictly defined. Several items received responses with an IQR of 2 or less but not a median above 7. Tables 2–4 bold these items, which indicate that experts agree sufficiently on the value of a rating even if that value is not at the highest end of
the scale. Additionally, many items received responses with intermediate median values and an IQR higher than 2, indicating that at least some residents felt strongly about such items even though not all agreed. Tables 2–4 sort items by median (highest to lowest).

Results

Disruption to normal patient–physician interactions

Residents across all sites reported morally injurious experiences (MIEs) due to restricted patient interactions during the COVID-19 pandemic. Impediments to in-person, face-to-face patient interactions created frequent and severe MIEs for some residents at Sites A and B (Tables 2 and 3). The physical distance created by personal protective equipment (PPE) and telehealth, while protective against infection, created “issues with communication and evaluation of patients.” One resident felt that these issues “hindered [their] ability to provide good comprehensive care for chronic conditions.” Another, however, praised telehealth for fostering “increased access” to care.

Some residents at Site A were strongly concerned that care restrictions may have decreased the quality of care for patients with confirmed or suspected COVID (Table 2). For example, one worried that patients in the outdoor COVID clinics received “subpar treatment” and found it “hard to see some [patients] get treatment and some not.” At the same time, the pervasive fear of infecting healthy patients also caused moral distress (Table 2). In these complex scenarios, limited ability to obtain vital signs, bypassed physical examinations, and delayed imaging studies contributed to MIEs.

Furthermore, the “inconsistency and confusion” of COVID-related protocols (e.g., required quarantines) undermined the confidence of some Site A residents that their clinical teams were upholding best medical practice (Table 2). Site C responses generated a similar theme during early rounds of the study but failed to corroborate it in the later surveys (Table 4).

Disruption to normal patient–family interactions

The pandemic raised distressing barriers to family involvement in patient care. These were noted especially by residents at Site B, where pandemic-related policies have been strictest.

The enforced separation of patients from their families was rated by Site B residents as the most frequent and severe contributor to MIEs (Table 3). One felt that separating the patient and family had “detrimental effects on [the] patient’s health, outlook on [her] clinical status, and overall will to live.” Another found the entire situation “wrong and unfair,” and a third felt the need to “pressur[e] house supervisors to grant exceptions to [these] rules.”

Family visitation constraints also significantly exacerbated another distressing issue: conflicting wishes regarding a patient’s code status (Table 3). This conflict occurred
Table 2. Moral injury factors and barriers to seeking help generated and rated at Site A. Median ratings and interquartile ranges provided and listed in ranked order. Items with an interquartile range less than or equal to 2 are bolded.

| Moral Injury Factors and Barriers: Site A | Median (IQR) |
|------------------------------------------|--------------|
| **Site A**                               |              |
| **a)** Frequency: Physical barriers to interpersonal connection between doctors and patients… | 6 (5)        |
| **b)** Frequency: Inability to gather with co-workers | 6 (5)        |
| **c)** Frequency: Care restrictions for COVID patients and patients under investigation (PUIs) | 5 (4)        |
| **d)** Frequency: Fear of transmitting COVID to patients | 5 (6)        |
| **e)** Frequency: Increased workload | 5 (7)        |
| **f)** Frequency: Inconsistency regarding COVID-related protocols | 4 (4)        |
| **g)** Frequency: Unfair expectations about exposure risk and responsibilities for residents | 3.5 (4)      |
| **h)** Frequency: Staff cynicism regarding COVID patients | 2 (3)        |
| **i)** Frequency: Seeing visitor allowances delayed for dying COVID patients of low SES | 2 (3)        |
| **j)** Frequency: Inadequate access to PPE | 1 (6)        |
| **k)** **Frequency: Recommendations for residents to isolate from family** | .5 (1)       |
| **l)** Severity: Inability to gather with co-workers | 6.5 (4)      |
| **m)** Severity: Inconsistency regarding COVID-related protocols | 6.5 (5)      |
| **n)** Severity: Seeing visitor allowances delayed for dying COVID patients of low SES | 6.5 (8)      |
| **o)** Severity: Physical barriers to interpersonal connection between doctors and patients… | 6 (5)        |
| **p)** Severity: Increased workload | 4.5 (4)      |
| **q)** Severity: Care restrictions for COVID patients and patients under investigation (PUIs) | 4 (4)        |
| **r)** Severity: Unfair expectations about exposure risk and responsibilities for residents | 3.5 (4)      |
| **s)** Severity: Staff cynicism regarding COVID patients | 2 (4)        |
| **t)** Severity: Fear of transmitting COVID to patients | 2 (5)        |
| **u)** Severity: Recommendations for residents to isolate from family | 1 (5)        |
| **v)** Severity: Inadequate access to PPE | 1 (6)        |
| **w)** Barrier: Lack of time to seek support | 8 (3)        |
| **x)** Barrier: Fear of being a burden | 7.5 (8)      |
| **y)** Barrier: Feeling powerless to drive change | 7 (6)        |
| **z)** Barrier: Substandard treatment of residents normalized | 6.5 (6)      |
| **aa)** Barrier: Stigma around seeking help | 5.5 (9)      |
| **bb)** Barrier: Desire to avoid emotional discomfort from reflecting on moral injury | 5 (6)        |

(continued)
### Table 2. (continued)

Moral Injury Factors and Barriers: Site A

| Site A | Median (IQR) |
|--------|--------------|
| cc) Barrier: Fear of career repercussions | 4.5 (6) |
| dd) Barrier: Moral injury not acknowledged | 4 (5) |

Key: Frequency: 0 = never, 2 = quarterly, 4 = monthly, 6 = weekly, 8 = every 2–3 days; 10 = daily severity: 0 = no pressure, 10 = extreme pressure barrier: 0 = not at all a barrier; 10 = a major barrier.

### Table 3.

Moral injury factors and barriers to seeking help generated and rated at Site B. Median rating scores and interquartile ranges provided and listed in ranked order. Items with an interquartile range less than or equal to 2 are bolded.

Moral Injury Factors and Barriers: Site B

| Site B | Median (IQR) |
|--------|--------------|
| a) Frequency: Enforced separation of patient from family | 7.5 (2.5) |
| b) Frequency: Unfair responsibilities placed on nursing staff | 7 (3.5) |
| c) **Frequency: Doctor–patient relationship limited by isolation** | 6 (1) |
| d) Frequency: Decreased quality of care when mandated to use tele-health | 6 (2.5) |
| e) **Frequency: Difficulty of agreeing on code status with family** | 3 (2) |
| f) **Frequency: Limited hospital resources** | 2 (1) |
| g) Frequency: Expectation to prescribe antibiotics empirically | 2 (2.5) |
| h) Frequency: Duty to serve despite challenges | 1 (4) |
| i) Severity: Enforced separation of patient from family | 6.5 (3) |
| j) **Severity: Unfair responsibility placed on nursing staff** | 5 (1.5) |
| k) **Severity: Difficulty of agreeing on code status with family** | 4.5 (1.5) |
| l) Severity: Decreased quality of care when mandated to use telehealth | 4.5 (5) |
| m) Severity: Doctor–patient relationship limited by isolation | 3.5 (2.5) |
| n) Severity: Expectation to prescribe antibiotics empirically | 2 (3) |
| o) **Severity: Limited hospital resources** | .5 (1.5) |
| p) **Severity: Duty to serve despite challenges** | 0 (1) |
| q) Barrier: Lack of time | 4.5 (4) |
| r) Barrier: Burnout | 3.5 (4) |
| s) **Barrier: Lack of sufficient staff** | .5 (2) |
| t) **Barrier: Expected heroism** | 0 (0) |

Key: Frequency: 0 = never, 2 = quarterly, 4 = monthly, 6 = weekly, 8 = every 2–3 days; 10 = daily severity: 0 = no pressure, 10 = extreme pressure barrier: 0 = not at all a barrier; 10 = a major barrier.
Table 4. Moral injury factors and barriers to seeking help generated and rated at Site C. Median rating scores and interquartile ranges provided and listed in ranked order. Items with an interquartile range less than or equal to 2 are bolded.

| Moral Injury Factors and Barriers: Site C | Median (IQR) |
|-----------------------------------------|--------------|
| a) Frequency: Patients lying about their symptoms on screening questionnaires | 6 (8)        |
| b) **Frequency: Being distracted from work due to working and meeting from home** | 6 (2)        |
| c) Frequency: Lack of privacy from other providers during telephone encounters with patients | 5 (7)        |
| d) Frequency: Feeling the need to downplay the severity of COVID-19 to family and friends | 2 (4)        |
| e) Frequency: Fear of letting others down | 2 (5)        |
| f) Frequency: New responsibilities and expectations with minimal training | 2 (5)        |
| g) Frequency: Slow adaptation to telemedicine | 2 (6)        |
| h) Frequency: Inability to gather with friends and family | 2 (7.5)      |
| i) Frequency: Constantly changing COVID guidelines in the hospital and clinic | 1 (4.5)      |
| j) Frequency: Being left out of the COVID planning process | 1 (7.5)      |
| k) Frequency: Limited PPE | 0 (4.5) |
| l) Frequency: Lack of importance given to social distancing guidelines by administration | 0 (5.5)      |
| m) Frequency: Prioritization of other’s health despite risk of exposure | 0 (7)        |
| n) Severity: Being distracted from work due to working and meeting from home | 7 (6.5)      |
| o) Severity: Patients lying about their symptoms on screening questionnaires | 6 (8.5)      |
| p) Severity: Inability to gather with friends and family | 5 (7.5)      |
| q) Severity: Lack of privacy from other providers during telephone encounters with patients | 3 (10)      |
| r) Severity: New responsibilities and expectations with minimal training | 2 (5)        |
| s) Severity: Slow adaptation to telemedicine | 2 (5)        |
| t) Severity: Fear of letting others down | 2 (5)        |
| u) Severity: Limited PPE | 2 (5.5) |
| v) Severity: Prioritization of other’s health despite risk of exposure | 2 (8)        |
| w) Severity: Constantly changing COVID guidelines in the hospital and clinic | 1 (3.5)      |
| x) Severity: Feeling the need to downplay the severity | 1 (4.5)      |
| y) Severity: Lack of importance given to social distancing guidelines by administrators | 0 (3) |
| z) Severity: Being left out of the COVID planning process | 0 (5.5)      |
| aa) Barrier: Social isolation | 5 (4)        |
| bb) Barrier: Time constraints due to administrative tasks and inconsistency in scheduling | 4 (6)        |
| cc) Barrier: Mentality of having to continually push through | 1 (5.5)      |

(continued)
every 1 or 2 months, and the task of resolving a patient’s code status provoked moderate moral distress. Without family members at the bedside, residents struggled to relate “the suffering [the patient] may be undergoing for their condition… and therefore [the families] expressed more desires for ‘full code’ rather than partial or DNR/DNI codes.”

**Disruptions to normal functioning within the healthcare team**

Altered professional team dynamics also commonly contributed to MIEs. Residents at Site A reported that the most severe conflict stemmed from the inability to gather with co-workers (Table 2), with moral pressures arising due to varying views on social guidelines: it “became an issue when certain people made others feel bad for wearing masks [when gathering],” and it “caused issues with camaraderie.” One resident identified “guilt associated with having people together,” which deterred residents from interacting in person.

With regards to direct patient care, residents at Site B conveyed a strong concern that nursing responsibilities in their hospitals and clinics had been unfair (Table 3). Nurses “took on much more risk than [residents] did,” being “expected to go in and out of COVID patient rooms” even when the task was not part of their usual role (such as delivering an electronic device so that a resident and patient could converse via video call). One resident expressed that it was “difficult to see nursing colleagues suffer.”

**Resources**

For all three sites, lack of hospital resources, such as PPE, was low on the list of factors contributing to MIEs (Tables 2–4). Inadequate access to PPE was an early problem at
Site A, but the situation “slowly improved” until many found it to be “not an issue” and had “no concern” any longer. Site B residents had the greatest level of agreement on this issue, stating that a lack of resources only caused problems approximately quarterly and did not severely pressure the residents into moral dilemmas.

**Professional expectations**

Residents at Sites A and B agreed that professional expectations, even those affecting their families, did not amount to moral injury (Tables 2 and 3). It is unclear whether these items were rated as insignificant because they were not present at all or because they were present but not inconsistent with residents’ moral codes.

**Barriers to seeking support: Time constraints**

All sites cited a lack of time as one of the most significant hurdles to seeking and receiving support for moral injury (Tables 2–4). Site A residents were in clear agreement that it was “difficult to schedule around… a busy inpatient schedule.” Additionally, a resident at Site C reported that time constraints were “a bit worse during the pandemic [due to] longer shifts.”

**Discussion**

Family medicine residents at these diverse sites experienced the greatest sense of moral injury when important clinical relationships—patient–physician, patient–family, and physician–colleague—were threatened or disrupted. Family medicine in particular relies heavily on the strength of patient and physician relationships for successful care. Insofar as the pandemic created situations that compromised these relationships, residents became susceptible to moral injury.

The onset of the pandemic elicited predictions that several factors would contribute to pMIEs. Some of these factors surfaced in this study, with residents attributing to them varying levels of importance: for example, balancing individual patient care and community health, making decisions with limited information, and allocating scarce resources. However, the factors that generated the most moral conflict for the residents in this study were those that disrupted clinical relationships. It appears that residents simply experienced logistical problems such as a lack of PPE as practical difficulties rather than moral dilemmas.

Early on in the pandemic, advocates for healthcare worker well-being called for administrators to empower their workers to support each other, maintain good lines of communication, and ensure that mental health personnel were available. Fortunately, residents in this study did not rate stigma, career repercussions, or a lack of mental health resources as major barriers to support, suggesting that the participating sites had implemented structural elements or maintained institutional cultures conducive to seeking help. The primary barrier was time, a perennially scarce resource for
residents and one commonly reported in the literature.\textsuperscript{38,39} Future interventions may help residents to make or request the time needed to seek support. However, this is a complex and stubborn issue whose manner of resolution is not clearly foreseeable.

\textbf{Limitations}

Our study was not without some limitations. The very low response rate at Site D required the site’s exclusion from analysis and discussion. Response rates for Sites A, B, and C were also low, though we believe sufficient for the DELPHI methodology.\textsuperscript{40} Many residents who were invited did not participate (see Figure 1), raising some concern for non-response bias. Nonetheless, the results from this study may serve as a framework for similar, larger-scale studies that may generate even more valuable findings.

It should be noted that we had access to minimal information regarding the rotation schedule for residents at each site, creating some ambiguity as to the exact contexts in which resident respondents had practiced. However, we distributed the first surveys 9 months after the initial onset of the pandemic. By that time, residents likely would have experienced a wide variety of clinical situations with pMIEs shaped by the pandemic context.

Lastly, while the DELPHI model provides unique stories and insights into unexplored issues such as this one, its focus is primarily descriptive and exploratory. Further studies will be required to look more closely at individual factors and possible interventions.

\textbf{Conclusion and potential next steps}

“[The] pandemic has served as a reminder as to why I got into medicine, the call to serve. Pressure is high but it is part of what we signed up for.” - Resident at Site B.

Representation of family medicine residents in current moral injury studies is severely limited despite their role in adapting and serving “on the front lines” of care for patients during the entirety of the pandemic. The anecdotes and survey ratings provided by these individuals are an important window into their experiences as residents during this time.

The data of this study suggest that moral injury in family medicine residents during the COVID-19 pandemic has been primarily driven by those program- and patient care-related dynamics that disrupt certain fundamental relationships for physicians and their patients. That these were the chief objects of moral concern for these residents reflects a profound commitment to patient care and the well-being of colleagues. Residents expressed a willingness to rise to the challenge of clinical care, even when risky and demanding; they experienced moral injury when they felt unable to adequately connect with and care for their patients; they desired the well-being of their patients, colleagues,
team members, and themselves and incurred a moral toll when a patient or coworker was socially isolated, in distress, or burdened unfairly. Overall, educators who wish to glean from this study should recognize that the greatest opportunity for the mitigation of moral injury in family medicine residents is in protecting and promoting the relationships at the heart of residents’ care for patients.

Potentially fruitful questions arise from the most significant factors identified by this study and include the following: How has the pandemic altered the way in which healthcare team members relate to one another? How do patients and physicians perceive the effectiveness, equity, and meaningfulness of a healthcare system structured around telehealth? How should we best balance attempts to strive for individual patient health and public health?

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Data Availability Statement
The datasets generated and analyzed during the current study are available from the corresponding author upon request.

Ethical approval
This research study was reviewed by the Baylor University Institutional Review Board and was exempted from formal review (Ref #: 1652891).

ORCID iD
Sean B Ngo  https://orcid.org/0000-0001-7298-2662
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