

**Qualitative Exploration of the Lived Experiences of Healthcare Workers During the  
COVID-19 Pandemic Delta Surge**

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## **Abstract**

This study examined the problem of healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. National surveys indicated that 40% of nurses planned to leave their roles within two years of the pandemic's onset (Abbassi, 2022; LeClaire et al., 2022), a trend reflected in Texas where 44% of Nurse Aides and 34% of Registered Nurses left their positions in 2022 (Texas Center for Nursing Workforce Studies, 2022). The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 and December 2021. Grounded in Rushton's (2024) moral resilience framework, this study investigated how healthcare workers experienced distress when confronted with ethical dilemmas, systemic failures, and working conditions that conflicted with their moral and professional values. Ten healthcare workers were recruited through snowball sampling and data were analyzed using Braun and Clarke's (2022) reflexive thematic analysis, resulting in five themes across three research questions. Findings indicated that during the Delta wave, healthcare workers experienced profound moral distress that weakened moral resilience and eroded trust in the healthcare system. Participants cited ethical conflicts, exhaustion, constant change, and lack of organizational support as key contributors to burnout and decisions to leave their roles for the sake of self-preservation. Many reached a breaking point where continued self-sacrifice became unsustainable, prompting a shift toward personal and family well-being and the pursuit of roles offering a more realistic work-life balance. This study offers insights for healthcare institutions, highlighting the need to rebuild moral resilience at the system, team, and individual levels to help mitigate workforce attrition. Findings can inform the development of targeted interventions, including hospital-based mentorship models, leadership transparency practices, and the integration of validated moral resilience scales for future implementation and research.

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## Chapter 1: Introduction

Historically, pandemics have produced rapid spikes in illness and death, straining healthcare systems worldwide (Baysal et al., 2022; Cutler, 2022; Shiehzadegan et al., 2021; World Health Organization, 2020). Confronting pain and suffering is an inherent part of clinical practice, where healthcare providers diagnose, treat, and intervene to offer relief and resolution (Rushton, 2024). The novel coronavirus (COVID-19) pandemic placed unprecedented demands on healthcare institutions, administrators, and providers, forcing them to manage more patients with fewer resources (LeClaire et al., 2022; Rushton, 2024). COVID-19 began to spread globally in December 2019 (Centers for Disease Control and Prevention, 2022; World Health Organization, 2020) and has since produced several significant variant waves of the virus, including the Delta variant (SARS-CoV2) that disoriented national and international healthcare systems (Beck & Daniels, 2023; Elhadi et al., 2021; Shiehzadegan et al., 2021). Over a prolonged, multi-year period, the variants impacted U.S. regions at different times and intensities (Beck & Daniels, 2023), subjecting healthcare workers to extreme ongoing occupational stressors (Henderson & Schnall, 2021). At the onset of the coronavirus pandemic, The Centers for Disease Control and Prevention provided foundational guidelines for COVID-19 to slow the spread of the virus; however, as the guidelines for the public changed, the recommendations for healthcare institutions remained steadfast (National Institute of Occupational Safety & Health, 2021). In December 2020, reports of the new Delta variant indicated that it had rapidly infected a quarter of the heavily populated country of India within a 3-month span (Shiehzadegan et al., 2021). Not long after, the Delta variant spread across the United States, infecting both the unvaccinated and vaccinated, causing more intense illness among younger adults, teens, and children (Shiehzadegan et al., 2021).

On March 2, 2021, the governor of Texas signed Texas Executive Order GA-34 which lifted the mask mandate in Texas and allowed all businesses and facilities in the state to open at 100% capacity (Exec. Order No. GA-34, 2021). Limited adherence to social distancing by the public (Shiehzadegan et al., 2021), while businesses were allowed to open at full capacity, led the state of Texas into a heightened Delta variant wave from May 2021 through December 2021 (Beck & Daniels, 2023; Centers for Disease Control and Prevention, 2022; Texas Department of State Health Services, 2021). While public restrictions eased, the burden of the resulting surge increasing concentrated on frontline providers. Healthcare professionals dedicate years to education, sacrifice personal time, uphold ethical standards, and risk exposure to illness and occupational stress in their commitment to public service (Rushton, 2024; Said & El-Shafei, 2021). However, when confronted with ethical dilemmas and overwhelming challenges that prevent them from taking correct actions in accordance with their clinical and ethical judgment; they often experience personal and professional suffering, leading to moral distress (LeClaire et al., 2022; Rushton, 2024).

Moral distress has both short and long-term consequences, affecting healthcare providers physically, emotionally, spiritually, and behaviorally (Rushton, 2024). Unaddressed, repeated moral distress can lead to moral injury, such as a chronic sense of betrayal and loss of trust in healthcare institutions (LeClaire et al., 2022). During the COVID-19 pandemic, ethical dilemmas were unavoidable, as providers were forced to ration medical supplies, distribute care unevenly, and withdraw treatment from patients in need (Donkers et al., 2021). Emergency healthcare workers directly witnessed mass devastation and loss of life while also struggling with systemic challenges, such as staffing shortages and resource allocation (Cabarkapa et al., 2020; Chigwedere et al., 2021; Serrano-Ripoll et al., 2020). These conditions increased the risk of long-term mental

health consequences, which included posttraumatic stress disorder, depression, and secondary traumatic stress, ultimately contributing to burnout and workforce attrition in healthcare workers (Hendrickson et al., 2021).

Early in the COVID-19 pandemic, healthcare workers needed urgent support for their mental health (Hendrickson et al., 2021; Kreh et al., 2021; Pappa et al., 2020; Rushton et al., 2022). Critical healthcare providers faced relentless stressors, including fear of contamination (Beck & Daniels, 2023), transmitting the virus to family, prolonged exposure to death and suffering, extended work shifts, physical exhaustion, and limited resources to save lives (Cabarkapa et al., 2020; Chigwedere et al., 2021; Henderson & Schnall, 2021; National Institute of Occupational Safety & Health, 2021; Serrano-Ripoll et al., 2020). Additionally, frequent and abrupt changes in hospital protocols created chaos, leaving staff feeling unprepared, overwhelmed, and limited in providing quality care amid shifting expectations (Cabarkapa et al., 2020; Serrano-Ripoll et al., 2020).

Some institutions introduced mental health resources, resilience training, and crisis response teams to mitigate these effects, although access and effectiveness varied (Butler et al., 2019; Elhadi et al., 2021; Hegarty et al., 2022; Rushton et al., 2022). Despite these supportive efforts, many healthcare professionals left bedside care or transitioned to less demanding roles, reshaping the future of the healthcare workforce (Cutler, 2022; Kreh et al., 2021; LeClaire et al., 2022; Rushton et al., 2022). As the pandemic persisted, healthcare institutions attempted to implement mental wellness initiatives for frontline healthcare professionals; however, these initiatives were not prioritized across the nation (American Psychological Association, 2020; WHO, 2020). Other institutional priorities took precedence, which included minimizing exposure, enforcing vaccine mandates for staff, and developing effective treatment protocols to manage

illness and preserve life (Biswas et al., 2021; Elhadi et al., 2021; Hoffman et al., 2022; Law et al., 2022; Rao et al., 2022). The COVID-19 pandemic was an adverse event that reshaped healthcare providers' outlook on the industry, eroded their trust in the system and strained the workforce, which consequently led to increased turnover rates (Chung, 2022; De los Santos & Labrague, 2021). With a growing shortage of healthcare workers (Baysal et al., 2022; Haas et al., 2020), understanding how these stressors have impacted well-being, moral resilience (Rushton, 2024), and healthcare worker attrition (De los Santos & Labrague, 2021; Hendrickson et al., 2021; LeClaire et al., 2022) is crucial. Many healthcare workers contemplated leaving their jobs, with 24% of physicians and 40% of nurses planning to resign within 2 years of being surveyed (LeClaire et al., 2022). Some healthcare workers sought alternative roles within the industry, while others voluntarily left due to traumatic stress, burnout, illness, health risks, and moral injury during the COVID-19 pandemic (Cutler, 2022). Others were involuntarily dismissed, some for refusing hospital-mandated vaccinations (Ellison, 2021), or declining to follow recommended treatment protocols (APA, 2021). As a result, hospitals struggled to maintain adequate staffing to meet patient care demands (Cutler, 2022; Elhadi et al., 2021; Hegarty et al., 2022; LeClaire et al., 2022). While organizational attention shifted from patient care to recovering financial losses, frontline providers received limited support, leaving those still working feeling undervalued, unsupported, and overwhelmed (Beck & Daniels, 2023). This prolonged lack of support contributed to the erosion of eroded trust in the system, shifting providers' outlook on the healthcare industry in a more negative direction. Gaining insight into these challenges may offer a way forward to restoring trust and rebuilding a culture of ethical, inclusive, and collaborative practices to mitigate moral suffering and distress more effectively before, during, and after pandemic periods.

Resilience is a significant contributing factor to overall well-being (Hines et al., 2021). Munn et al. (2021) defined resilience as one's capacity to overcome and recover well from adverse experiences. The positive aspects of resilience can fuel physical, mental, and emotional health, which may lead to life fulfillment in many aspects (Munn et al., 2021). Personal and professional well-being may also be negatively affected when one's coping strategies are overwhelmed by compounded adversity (Munn et al., 2021), much like the prolonged nature of the COVID-19 pandemic (Hendrickson et al., 2021; Kreh et al., 2021; Rushton et al., 2022). Rushton et al. (2022) defined moral resilience as the power of one individual to recover from moral adversity with integrity, purpose, intention, character, and confidence (Hines et al., 2021; Rushton et al., 2022; Spilg et al., 2022). Moral resilience is supported by healthy self-care strategies that continue to influence overall well-being when positively activated. In contrast, when moral resilience is overwhelmed by moral distress and ethical injury, it can reinforce discouragement, hopelessness, burnout, and job dissatisfaction (Hines et al., 2021).

### **Statement of the Problem**

The problem addressed by this study was the healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. The loss of healthcare workers during this critical time left the healthcare system vulnerable, and further strained infrastructure (Cutler, 2022). Cutler (2022) identified three key factors contributing to provider attrition: frustration overshadowing professional fulfillment, heightened occupational stress, and increased workforce demands. As COVID-19 hospitalizations surged across the United States, these factors were compounded by specific operational challenges, including a shrinking workforce that increased patient-to-provider ratios (Huey & Palaganas, 2020; Vizheh et al., 2020) and limited availability to crucial supplies (Pujari et al., 2021). Healthcare professionals faced competing obligations to patients, employers,

and themselves, leading to unresolved ethical conflicts (Heinze et al., 2021). Heinze et al. (2021) defined moral adversity as internal and external conflicts that result in morally troubling or undesirable outcomes. When integrity and well-being are compromised, moral distress and moral injury can erode resilience, further exacerbating suffering after crisis among healthcare providers (Heinze et al., 2021).

During the COVID-19 pandemic, hospital operations were implemented to manage the evolving needs of personnel and the public, while reports about the mental health issues of healthcare providers were being exposed (Awan et al., 2022). Limited support was offered to mitigate the psychological toll COVID-19 had taken on healthcare staff (Pappa et al., 2020; Hendrickson et al., 2022); the pervasive exposure to these events caused a decline in these workers' psychosocial functioning (Huey & Palaganas, 2020; Pappa et al., 2020; Vizheh et al., 2020). If the problem is not addressed, studies have acknowledged that healthcare professionals who experience stress, anxiety, burnout, and compassion fatigue may be more likely to drop out of the health workforce (Brennan et al., 2019).

### **Purpose of the Study**

The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 and December 2021. The descriptive qualitative approach aimed to answer questions like what, who, where, and when, thus providing a robust description of the topic being explored (Doyle et al., 2020). A clear understanding of healthcare workers' experiences is essential for developing effective support programs and identifying ways to restore integrity in healthcare systems. This study examined how healthcare providers in Texas perceived organizational support, what influenced their decision to remain or resign, and how their outlook on life, work, and the

healthcare industry changed after the Delta surge. Moral resilience was a key factor in understanding workforce retention during this crisis.

Participants met the following criteria: licensed healthcare professionals aged 18 or older, with at least 1 year of experience, provided direct care to patients during the Delta wave of the COVID-19 pandemic, worked in Texas, and have since either left their institution or the healthcare field entirely. A snowball sampling method (Berbés-Blázquez et al., 2022) was used to recruit 10 healthcare professionals.

### **Introduction to Theoretical Framework**

Recent research focused on the long-term wellness and resilience of health care professionals has moved beyond physical health outcomes to broader domains of self-care, such as psychological well-being (Butler et al., 2019), moral resilience, and ethical sustainability (Rushton et al., 2022). This study applied moral resilience theory to explore the lived experiences of healthcare workers during the Delta wave of the COVID-19 pandemic. The moral resilience framework provided a lens through which to understand how providers sustained integrity, purpose, and trust when moral adversity and systemic breakdowns challenged their ethical foundations. It also guides the study's exploration of factors that contributed to healthcare workers' attrition and shifts in moral outlook.

Moral resilience theory emerged as a specialized extension of resilience theory, focusing on the ability to preserve moral integrity amid ethical complexity (Rushton et al., 2022). Healthcare workers, by the nature of their professional duty, must protect the public while navigating environments where ethical, relational, and systemic pressures collide. All healthcare workers are required to balance benefits, risks, and competing values, such as equity, justice, autonomy, reciprocity, and trust, while making decisions that may impact patient outcomes, the institution

they serve within, healthcare teams, and the individual provider (Law et al., 2022). Moral resilience reflects a person's capacity to remain true to personal and professional values and convictions while managing moral adversity (Heinze et al., 2021; Rushton et al., 2022). Heinze et al. (2021) described moral resilience as a concept that includes ethics education, meaning-making, value diversity, moral adversity, and reducing ethical complexity to alleviate moral distress. Rushton et al. (2022) identified key components of moral resilience: personal and relational integrity, buoyancy, self-regulation and awareness, moral efficacy, and self-stewardship. These dimensions sustained ethical functioning and well-being when professionals faced distressing or value-conflicted situations (Rushton, 2024).

During the COVID-19 Delta wave, healthcare workers faced compounded moral distress, diminished autonomy, and systemic failures that strained both personal integrity and institutional trust (Hegarty et al., 2022; Kreh et al., 2021; Rushton et al., 2022). These experiences eroded moral resilience and contributed to workforce attrition (Cutler, 2022; LeClaire et al., 2022). Moral resilience theory provided the theoretical framework for examining how healthcare professionals experienced and responded to moral adversity during the Delta wave. The framework aligned with this study's problem, healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas, and with the study's purpose, which was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 and December 2021.

Moral resilience theory directly informed this study's exploration of healthcare workers' experiences during the Delta wave of the COVID-19 pandemic. It provided a lens through which to characterize how participants described the psychological and moral challenges they encountered (RQ1), the ways those experiences reshaped their moral outlook (RQ2), and the

factors that contributed to job attrition (RQ3). The theory posits that sustaining personal and relational integrity amid moral adversity depends on internal capacities, such as self-awareness, self-regulation, and moral efficacy, as well as external conditions like ethical support and institutional trust (Rushton et al., 2022). When these factors are compromised, moral distress escalates, potentially leading to moral injury, disillusionment, and withdrawal from professional roles (Rushton et al., 2022; Rushton, 2024). By framing participants' experiences through the dimensions of moral resilience—personal integrity, relational integrity, buoyancy, self-regulation, self-stewardship, and moral efficacy, this study explored how healthcare workers' experiences during crises shaped their actions to remain in or vacate positions along with the factors that contributed to those choices.

### **Introduction to Research Methodology and Design**

This study utilized a qualitative descriptive design to explore the lived experiences of healthcare workers who provided direct care to patients during the COVID-19 Delta wave in Texas. A qualitative descriptive approach was the most appropriate methodology because the study aimed to gain rich, straightforward accounts of healthcare professionals' experiences, perceptions, and decisions rather than test a theory or measure a variable (Sandelowski, 2000; Sandelowski, 2010). The qualitative descriptive design allowed researchers to stay close to participants' own language while presenting comprehensive summaries of events and perceptions with minimal interpretation (Bradshaw et al., 2017; Colorafi & Evans, 2016).

A qualitative descriptive methodology provided the flexibility needed to examine complex moral and psychological experiences, capture participants' meaning making in context, and describe their realities as they occurred. This design aligned directly with the problem statement, which addressed the rise in healthcare worker attrition during the Delta wave of the COVID-19

pandemic, and the purpose statement, which sought to understand the lived experiences of healthcare professionals and the factors influencing their career decisions.

The qualitative descriptive approach also aligned with the study's research questions, which asked (a) how healthcare workers described the psychological and moral challenges they faced, (b) how these experiences shaped their moral outlook, and (c) what factors contributed to job attrition during the Delta wave. This design facilitated the collection of detailed narrative data through semi-structured interviews that encouraged reflection and personal storytelling, allowing the researcher to identify common patterns while preserving the authenticity of participants' voices. By focusing on description rather than abstraction, the design supported exploring both individual and systemic dimensions of moral adversity that contributed to burnout and workforce loss. In this way, the qualitative descriptive methodology served as the best choice to meet the study's intent to capture healthcare workers' lived realities and illuminate the factors influencing moral resilience and professional sustainability during a public-health crisis.

### **Research Questions**

#### ***RQ1***

How do healthcare workers describe the psychological and moral challenges they faced during the Delta wave of the COVID-19 pandemic?

#### ***RQ2***

How do healthcare workers describe the effects of the Delta wave during the COVID-19 pandemic on their moral outlook?

#### ***RQ3***

What contributing factors do healthcare workers identify as reasons for healthcare workers' job attrition during the Delta wave of the COVID-19 pandemic?

## **Significance of the Study**

Healthcare workers often experience traumatic events personally (Schwartz et al., 2020, p. 981) and vicariously through others in crisis (Huey & Palaganas, 2020; Schwartz et al., 2020; Vizheh et al., 2020). Trauma exposure was compounded by the COVID-19 pandemic because more people were in crisis than could be managed (Chigwedere et al., 2021). However, without sufficient time to process and receive support, some workers experienced the heightened stress of their work environment along with lasting memories of uncertainty, frequent change, difficult losses, frustrations, and fear of falling ill (Chigwedere et al., 2021; Huey & Palaganas, 2020). A deeper understanding of healthcare providers' experiences faced during the Delta variant wave could inform more effective strategies for addressing systemic challenges. Inclusive decision-making in policies, procedures, and ethical guidelines is essential for rebuilding trust and strengthening healthcare systems.

Examining the factors that contributed to moral distress and the role of moral resilience in provider well-being may help guide efforts to restore ethical integrity and alignment between individual, team, and institutional values. Creating emotionally and ethically safe work environments may reduce turnover, improve staff retention, and stabilize worker-to-patient ratios. Addressing these issues proactively may help prevent workforce shortages and support sustainable, ethically driven healthcare systems.

## **Definitions of Key Terms**

### ***Adult Personal Resilience***

Adult personal resilience is defined as an adult's internal capacity to recover and is explored as a personal quality that encompasses the four internal domains of endurance, adaptability, determination, and recuperability (Bonanno et al., 2007; Taormina, 2015; Wei & Taormina, 2014).

***Altruism***

Altruism is defined as a description of unselfish attention to the needs of others. Professionals' dedication and acceptance of the need to place themselves at risk to help others. (Wang et al., 2020).

***Attrition***

Attrition refers to the gradual reduction or loss of individuals from an organization, profession, or group over time (Cutler, 2022).

***Autonomy***

Autonomy is defined as independence in self-governing (Rushton, 2016).

***Buoyancy***

Buoyancy is defined as a multi-layered description of one's ability to withstand threats to their integrity, gaining new perspectives and acting courageously while facing ethical challenges (Heinze et al., 2022)

***Delta Variant (COVID-19)***

Delta Variant (B.1.617.2) is defined as an airborne, rapid-spreading variant of the Coronavirus that was discovered in India in December 2020. It marked the fourth major COVID-19 wave in the United States and became the dominant strain by July 2021 (Kim et al., 2021).

***Disillusionment***

Disillusionment refers to the feeling of disappointment and loss of trust that occurs when one's expectations, ideals, or beliefs are contradicted by reality. It often arises when people discover that a person, institution, system, or situation is not as good, fair, or trustworthy as they had believed (Rushton, 2024).

***Ethical Dilemma***

An ethical dilemma occurs when a person faces a situation that involves conflicting moral principles, values, or obligations, making it difficult to determine the right course of action (LeClaire et al., 2022).

***Moral Adversity***

Internal and external conflicts result in morally troubling or undesirable outcomes. (Heinze et al., 2021).

***Moral Distress***

Moral distress is defined as when a healthcare provider or group of health care providers knows the morally correct action to take but is constrained in some way from taking this action. (Rushton, 2016; Rushton et al., 2022).

***Moral Efficacy***

Moral efficacy is defined as confidence in one's capacity to respond to ethical challenges effectively with clear communication of one's beliefs and right solutions in the face of resistance. Healthy navigation of moral conflicts that reflect one's morals, beliefs, and values (Heinze et al., 2022).

***Moral Injury***

Moral injury is defined as a violation of significant moral values (Kreh et al., 2021; Rushton et al., 2022)

***Duty of care***

Duty of care is defined as the core ethical responsibility of healthcare workers (Rushton et al., 2022).

***Moral Outlook***

Moral outlook refers to an individual's overall perspective, beliefs, and attitudes regarding what is ethically right, just, and meaningful within their personal and professional roles (Rushton, 2024).

***Moral Resilience***

Moral Resilience is defined as the capacity of an individual to sustain or restore their integrity in response to moral complexity, confusion, distress, or setbacks (Rushton et al., 2022; Rushton, 2016).

***Moral Stress***

Moral stress is defined as a state of arousal in response to real or potential threats or challenges to one's integrity arising from moral adversity (Rushton et al., 2022; Rushton, 2024).

***Organizational/ Institutional Support***

Organizational or institutional support refers to the resources, structures, policies, and practices that an employer, organization, or healthcare system provides to promote the well-being, effectiveness, and ethical functioning of its workforce (Conn et al., 2022).

***Personal Integrity***

Personal integrity is defined as staying true to one's values in the midst of adversity (Heinze et al., 2022)

### ***Professional Integrity***

Professional integrity refers to the commitment of individuals to consistently uphold the ethical principles, standards, and responsibilities of their profession, even in the face of challenges or adversity. It involves acting with honesty, fairness, accountability, and respect for others, while aligning one's actions with both professional codes of conduct and personal moral values (Rushton, 2024).

### ***Relational Integrity***

Relational integrity is defined as upholding one's personal values and professional commitments, keeping balance to prioritize the interests of those being served (Heinze et al., 2022).

### ***Resilience***

Resilience is the capacity to adapt, recover, and maintain well-being in the face of adversity, stress, or significant challenges. It reflects an individual's ability to "bounce back" from difficult situations while preserving their personal and professional functioning (Banerjee et al., 2021; Huey & Palaganas, 2020; Tayyib, 2021; Vizheh et al., 2020).

### ***Self-regulation***

Self-regulation is defined as being aware of one's own mental, emotional, and physical state, recognizing changes without being overwhelmed or distracted, and activating strategies to recalibrate after experiencing anxiety and upset (Heinze et al., 2022; Rushton, 2024).

### ***Self-stewardship***

Self-stewardship is defined as tending to one's own self-care (Heinze et al., 2022; Rushton, 2024).

## ***Suffering***

Suffering refers to the experience of physical, emotional, psychological, moral, or spiritual distress, often resulting from pain, loss, adversity, or unmet needs. It involves a deep sense of discomfort or anguish that can affect a person's overall well-being and sense of purpose (Rushton, 2024).

## **Summary**

The purpose of this chapter was to provide an overview of the study, outlining the context, significance, and rationale for exploring healthcare workers' experiences during the Delta variant wave of the COVID-19 pandemic in Texas. The Delta wave amplified existing occupational stressors, increased moral distress within the healthcare system, and contributed to workforce attrition among healthcare workers (Chung, 2022; De los Santos & Labrague, 2021). With a growing shortage of healthcare workers (Baysal et al., 2022; Haas et al., 2020), understanding how these occupational stressors, inclusive of moral injuries, have altered life functioning, impacted moral resilience, and contributed to worker attrition could aid in developing future strategies to decrease job turnover and strengthen workforce retention. The purpose of this descriptive qualitative study was to examine healthcare workers' lived experiences during the COVID-19 pandemic Delta Variant surge from May 2021 to December 2021 in the state of Texas. Data were obtained from a sample of 10 healthcare workers who were asked to complete a semi-structured interview to share their experiences. NVivo software was used to organize and code the data. The study aimed to identify key factors contributing to attrition and explored how the factors moral resilience influenced healthcare workers' ability to cope with moral adversity. Understanding these dynamics may assist organizations and policy makers in restoring trust within the healthcare

industry, improving safeguards, support structures, and fostering sustainable practices to protect and retain the healthcare workforce.

## Chapter 2: Literature Review

The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 and December 2021. The problem addressed by this study was the healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. This literature review summarizes research by examining the impact of the COVID-19 Delta wave on healthcare personnel in Texas. The benefits of conducting this research include contributing to the body of knowledge gathered on healthcare worker well-being and emphasizing how moral distress has impacted healthcare workers' overall resilience during the COVID-19 pandemic. Furthermore, it exposed potential organizational support avenues for worker well-being to help employers rebuild and retain the current and future workforce. Finally, it adds to the growing body of research on moral resilience and its multidimensional nature as a construct (Heinze et al., 2021; Ruiz Moral et al., 2021; Rushton et al., 2022).

The following sections: Theoretical Framework; Strengths and Weaknesses in Resilience Research; Moral Resilience; Moral Adversity, Distress, and Injury; explore resilience theory including its origin as it relates to moral resilience. The researcher discusses relevant influences, assumptions, weaknesses, and the application of the theory. Additional literature elaborates on such factors as well-being, moral adversity, emerging societal issues during Delta wave, vaccination mandates, healthcare worker illness with long COVID complications, institutional response to ethical concerns and need for worker support, healthcare worker burnout, lastly, the massive loss of the healthcare workforce.

Wellness or maintaining a state of health is the umbrella construct that encompasses the concepts of well-being, self-care, and resilience (Munn et al., 2022). Well-being has been

traditionally recognized as sustaining quality of life, along with contentment, satisfaction, and flourishing across the lifespan (Lee et al., 2022). Lee et al. (2022) reference this concept as desirable by most people as they seek happiness, balance, security, and growth for life fulfillment, for which self-care is essential. Additionally, well-being is often associated with mental health and outcomes that interfere with, disrupt, or lead to at-risk factors. Schneider et al. (2021) conducted a systematic review acquiring articles from four databases and included 39 studies which were based on the criteria that the study investigated positive and negative factors that impacted the well-being of healthcare workers during global pandemic outbreaks using quantitative outcomes. Thirty-four of the studies reviewed were cross-sectional studies, and five were longitudinal studies. All met the following criteria: they were related to a global pandemic, written in English, and explored factors of psychological well-being in health care workers using quantitative measures (Schneider et al., 2021). Of the final sample of 39 articles reviewed, the researchers found that 10 studies revealed that working in hospital settings where the risk for exposure was heightened due to direct interaction with suspected or infected patients was a catalyst for a decline in mental and physical health (Franza et al., 2020; Schneider et al., 2021; Schwartz et al., 2020). Specifically, they observed a trend that increased risk for anxiety, depression, posttraumatic stress disorder (PTSD), sleep disturbance, and a lower quality of life occurred in healthcare providers who met this profile (Lavoie-Tremblay et al., 2022; Schneider et al., 2021). Furthermore, nurses reported greater concerns for well-being than other healthcare providers, whereas medical doctors reported symptoms like sleep issues and increased stress during the pandemic period (Lavoie-Tremblay et al., 2022; Schneider et al., 2021; Schwartz et al., 2020). Healthcare workers with preexisting diagnoses or symptoms related to psychological disorders were risk factors for compassion fatigue, burnout, a sense of poor quality of life, and departure from work roles (Schneider et al., 2021).

This chapter is organized by the following sections: Theoretical Framework; Strengths and Weaknesses in Resilience Research; Moral Resilience; Moral Adversity, Distress, and Injury; Emerging Societal Issues During the Delta Surge; Vaccine Development and Release; Vaccination Acceptance, Hesitancy, and Refusal; Erosion of Trust; Healthcare Worker Attrition; and Summary. Databases utilized throughout this chapter include ProQuest, SAGE research methods, Roadrunner, NorthCentral University Library, and EBSCO. Search terms identified in this literature review included: frontline staff or healthcare staff or healthcare professionals or healthcare workers, resilience, job turnover, attrition, mental wellness, COVID-19, pandemic, moral resilience, moral suffering, moral distress, altruism, vaccination mandates, well-being, holistic health. Research referenced in this chapter ranged in years from 1981 through 2024. The types of literature employed include online peer-reviewed journals, original dissertations, books, research articles, and literature review articles.

### **Theoretical Framework**

The field of psychological research has defined resilience theory as a shift from a problem-focused to a strength-focused modality (Richardson, 2002). Resilience has been viewed as a multifaceted, developmental process encompassing both a personal trait, and an adaptive outcome. (Hines et al., 2021; Wei & Taormina, 2014). Resilience can be demonstrated following life disruptions, creating opportunities for resilient growth, or alternatively, lead to decline (Hines et al., 2021; Richardson, 2002). Within this context, resilience theory emphasized awareness of one's reaction to stress, the life domains affected, and intentional efforts to grow through adversity (Burton et al., 2010; Lin et al., 2020; Richardson, 2002).

Resilience theory provides a flexible framework for understanding how individuals adapt when previously stable qualities and characteristics are destabilized by change (Burton et al., 2010;

Lin et al., 2020; Richardson, 2002). Furthermore, once resilience strategies have been implemented, they become protective factors that help guard against burnout, frustration, stress, and overwhelm (Burton et al., 2010; Cordes, 2022; Lin et al., 2020; Richardson, 2002) for healthcare workers. Resilience, as a personal quality encompasses four internal domains; (Wei & Taormina, 2014), “endurance, adaptability, determination, and recuperability” (Taormina, 2015, p. 36) which represent an individual’s internal capacity to recover. In addition, resilience also depends on external components, such as environmental stability, social connectedness, and perceived support (Butler et al., 2019; Hegarty et al., 2022; Rushton et al., 2022). Together, these internal and external systems enabled individuals to maintain well-being despite prolonged stress.

Resilience theory was pioneered by Dr. Norman Garmezy who conducted seminal research on child development, stress, coping (Garmezy & Rutter, 1983), marriage of developmental sciences, risk for psychopathology, and resilience (Masten et al., 2021). He laid the foundation for understanding resilience as both a developmental and dynamic process psychopathology (Garmezy & Rutter, 1983; Masten, 2021). Later researchers expanded resilience principles to adult personal resilience (Taormina, 2015), disaster relief, organizational resilience, as well as, across industries and disciplines (Masten, 2021). Over five decades of resilience research consistently shows evidence that protective factors exist and remain central across context regardless of the varied measurement strategies used to study resilience (Luthar et al., 2000; Masten, 2021).

In terms of psychological research, resilience theory is understood as a shift from a problem-focused theoretical orientation to a strength-focused modality (Richardson, 2002; Burton et al., 2010). Thus, being activated when life’s disruptions, be they positive or negative, spark an opportunity for resilient growth or alternatively may lead to remaining in a stagnant comfort zone or worse, a decline (Richardson, 2002). Initially, researchers identified phenomenological

characteristics that were proven to be qualities of resiliency within a person that can be taught, learned (Huey & Palaganas, 2020), nurtured, and developed over time. This was discovered because many of the early resilience studies concentrated on at-risk youth and despite their environment and predispositions some found ways to thrive (Masten, 2021).

Richardson (2002) shared that the first wave of research on resilience was to identify qualities and characteristics of resilience so that the field could further research how qualities like “optimism, self-determination, self-control, humility, self-actualization” (Richardson, 2002, p. 309), and the ability to recover (Huey & Palaganas, 2020) are acquired. Another level of research on resiliency focused on the need for energy and motivation to access and learn how to practice the above qualities for daily living, especially following major life disruptions (Richardson, 2002). The benefits of resilience growth and development can contribute to professional and overall life well-being, workforce sustainability, and quality of care on individual, team, and organizational levels (Lin et al., 2020). Resilience theory proposed that energy is necessary not only to recuperate but to bounce forward and the source of that energy is from a supernatural or spiritual source (Richardson, 2002).

While general resilience theory provides the foundation for adaptation to adversity, moral resilience theory extends this framework into the ethical domain of professional life. Traditional resilience emphasizes recovery following disruption, whereas moral resilience focuses on maintaining or restoring moral integrity when confronted with ethically complex or value-conflicted situations (Rushton, 2016; Rushton et al., 2022). This refinement recognizes that, for healthcare professionals, moral adversity often arises not from personal hardship alone but from systemic constraints, competing duties, and organizational pressures that challenge one’s ethical commitments. Moral resilience theory therefore builds upon and expands resilience theory to

explain how individuals maintain meaning, purpose, and professional integrity in morally distressing contexts such as those faced during the COVID-19 pandemic. Moral resilience theory provides the conceptual foundation for this study, offering a lens to understand how healthcare workers respond to moral adversity, preserve integrity, and sustain professional commitment in ethically complex environments. The concept of moral resilience has evolved in response to growing recognition that healthcare professionals face persistent moral distress, burnout, and ethical dissonance that threaten both well-being and workforce stability (Rushton, 2016; Rushton et al., 2022). It builds upon resilience theory by extending it into the moral domain focusing not only on how individuals recover, but how they restore or maintain moral integrity when external conditions challenge their ethical values.

Research on moral resilience has emphasized both the individual and systemic factors that contribute to ethical sustainability in healthcare. Heinze et al. (2021) defined moral resilience as the capacity to sustain or restore integrity in response to moral adversity and identified contributing elements such as ethics education, value awareness, meaning-making, and self-regulation. Heinze et al. (2021) demonstrated that moral resilience mitigated the impact of moral distress and strengthened a sense of moral purpose. Rushton (2022) further conceptualized moral resilience as a multidimensional framework comprising of personal and relational integrity, buoyancy, self-regulation and awareness, moral efficacy, and self-stewardship. Rushton's framework emphasized that moral resilience is not solely an individual trait but depends on the ethical climate and relational trust within healthcare institutions.

Empirical studies have reinforced these theoretical insights. Kreh et al. (2021) found that exposure to moral adversity during the COVID-19 pandemic strongly correlated with burnout, anxiety, and intentions to leave the profession, underscoring the protective role of moral resilience

when supported by organizational ethics resources. Similarly, Spilg et al. (2022) examined moral injury and burnout among physicians during the pandemic and concluded that cultivating moral resilience requires both individual coping capacities and system-level interventions such as ethical leadership and staffing reform. Antonsdottir et al. (2022) provided qualitative evidence that healthcare workers experiencing ethical conflict during COVID-19 benefited from reflective spaces, supportive leadership, and team cohesion, all external conditions that reinforce moral resilience.

From an integrative standpoint, Delgado et al. (2021) reviewed interventions such as ethics debriefings and mindfulness training aimed at reducing moral distress. Their analysis revealed that while such interventions produced short-term gains in well-being and meaning, evidence for long-term effectiveness remained limited, highlighting the need for sustained institutional strategies to foster moral resilience. Faraco (2022) expanded this view by situating moral resilience within the broader multidimensional model of resilience including biological, psychological, cognitive, spiritual, and relational illustrating how interconnected domains influence healthcare professionals' ethical endurance and recovery.

Collectively, these studies demonstrate that moral resilience functions as both an individual capacity and a systemic outcome, shaped by workplace culture, moral adversity, and available support. When moral integrity and ethical alignment are consistently undermined, healthcare workers experience moral distress and disillusionment that can lead to attrition. Conversely, when moral resilience is cultivated through reflective practices, ethics education, and supportive organizational structures, professionals report greater well-being, moral clarity, and commitment to their roles (Heinze et al., 2021; Kreh et al., 2021; Rushton, 2022; Spilg et al., 2022).

Several existing studies have applied moral resilience theory as a guiding framework to explore healthcare professionals' responses to moral adversity, ethical complexity, and occupational distress. For example, Heinze et al. (2021) used the framework to examine how moral resilience supported nurses in maintaining integrity and ethical clarity in the face of clinical uncertainty. Delgado et al. (2021) implemented moral resilience principles to evaluate interventions such as ethics debriefings designed to reduce moral distress. Spilg et al. (2022) applied the framework to investigate moral injury among physicians during the COVID-19 pandemic, finding that moral resilience functioned as a buffer between ethical strain and burnout. Similarly, Kreh et al. (2021) utilized moral resilience concepts to assess the impact of systemic breakdown and resource scarcity and workforce attrition, confirming that resilience supported meaning and purpose during moral adversity. These studies demonstrate that moral resilience theory has been used to interpret moral distress phenomena in healthcare contexts similar to the focus of this study.

Alternative theoretical approaches were considered for this study including posttraumatic growth theory (Tedeschi et al., 2018; Tedeschi & Moore, 2020) and resilience theory (Richardson, 2002). Posttraumatic growth theory emphasizes positive psychological change following trauma or adversity, and personal transformation through meaning-making, renewed purpose, and strengthened relationships (Tedeschi et al., 2018; Tedeschi & Moore, 2020). While this theory is relevant to understanding growth after adversity, it does not adequately address the moral and ethical dimensions central to healthcare workers' experiences during the COVID-19 pandemic. Resilience theory is expansive, encompassing numerous domains that offer valuable insight into human adaptability (Richardson, 2002), however, the theory's broad scope has prompted scholars

to call for more specified areas of research to address contextual applications, such as those found in healthcare ethics and moral adversity (Masten, 2021).

Moral resilience theory was chosen because it reflects the evolving realities of modern healthcare, particularly under conditions of critical stress. This framework is also relatively new and emerging concept within research, offering opportunities for continued exploration and future study in this area. Moral resilience theory thus provides a strong conceptual fit for this study's focus on healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. The framework aligns with the problem, which addresses rising attrition linked to moral distress; the purpose, which seeks to describe healthcare professionals' experiences and decision-making in ethically challenging environments; and the research questions, which examine how participants experienced moral and systemic challenges, how their moral outlook evolved, and what factors influenced their decisions to remain or leave. Using moral resilience theory enables this study to interpret participants' narratives through empirically supported dimensions, personal and relational integrity, buoyancy, self-stewardship, moral efficacy, and self-regulation, while maintaining the descriptive, participant-centered approach of qualitative research.

Rushton (2016) identified some of those areas of thought including personal resilience with the goal being recovery from painful life experiences while enduring, recuperating, and assigning meaning to those events that may help one grow or experience gratitude for the hardship (Cordes, 2022; Taormina, 2015). Alternatively, organizational resilience seeks to stabilize and rebound a community, agency, or entity system following a disruption or interference. During the COVID-19 pandemic, healthcare workers experienced disruption within their personal life, professional life, and the organizations for which they worked (Baysal et al., 2022). In critical care, healthcare workers faced contradictions to their moral values regularly with obligations to make

the best decisions for patients while acting with personal integrity (Donkers et al., 2021; Hines et al., 2021). However, the Delta wave exposed weighted controversial issues that did not manifest in an earlier phase of the pandemic, creating a perfect storm for safety concerns, moral adversity, and psychological distress, while illness rapidly spread. The influential factors that confounded the state of Texas, along with other states were mask mandates being lifted, while simultaneously capacity restrictions in public places were no longer required due to the release of the emergency-approved COVID-19 vaccines. As organizational vaccine mandates were enforced with staff, worker attrition continued to increase along with elected resignation, and ill staff members unable to return to work. Rushton (2016) identified that there is evidence calling for strategies to help healthcare professionals cultivate moral resilience. Moral resilience is a framework in progress with a dynamic definition consistently referenced as ‘the capacity of an individual to sustain, preserve, or restore their integrity in response to moral adversity (Rushton, 2016; Rushton et al., 2022), including situations that include moral complexity, confusion, distress, or setbacks (Delgado et al., 2021). Key aspects of moral resilience include personal and relational integrity, buoyancy, self-regulation and awareness, moral efficacy, and self-stewardship (Rushton et al., 2022). Moral resilience can guide healthcare workers who seek to maintain integrity in the face of everyday ethical challenges (Delgado et al., 2022; Heinz et al., 2021; Rushton, 2016; Rushton et al., 2022) as well as complex systemic factors enhanced by the COVID-19 pandemic. Understanding the process used by healthcare professionals to demonstrate moral resilience may help improve support to manage or decrease unavoidable moral distress. According to Delgado et al. (2021), moral resilience may be one of the most valuable responses to moral distress. Spilg et al. (2022) suggested future interventions for well-being and resilience promote moral resilience as a protective measure against moral adversities while addressing personal and

organizational resilience strategies. Many areas of research are still being explored and uncovered regarding the COVID-19 pandemic as evidence directs for a more in-depth study of interrelated frameworks.

Masten (2021) suggested that there is growing evidence that supports developing a scalable definition of resilience to support communication. Standardizing language across disciplines and industries may provide an opportunity to continue advancement through research in the field of psychology and resilience. The researcher also proposed a multisystemic process for analysis, with varied methods, to address the multiple needs of different disciplines and subgroups within the field of psychology (Masten, 2021). The researcher encouraged future research to plan and incorporate dynamic systems of analysis to account for the expansiveness of the theoretical framework (Masten, 2021). The COVID-19 pandemic period has influenced momentum to investigate dynamics that have changed our world, societal structures, processes, loss, and trust in systems, such as in the institution of healthcare.

### **Strengths and Weaknesses in Resilience Research**

Resilience research suggests that although resilience is not an innate trait in human beings (Cordes, 2022; Rushton, 2016), resilience can be taught and learned (Cordes, 2022; Joyce et al., 2019). A growing body of research has focused on resilience training, the components of building mentally healthy workplaces, and supporting the long-term wellness of workers (Joyce et al., 2019). Resilience training can spark our awareness to be present, consider alternative perspectives, while simultaneously strengthening our connection to our personal and professional values (Cordes, 2022). As research results point to positive outcomes to strengthen worker resilience (Joyce et al., 2019), the data to support long-term effectiveness of these resilience training programs are limited with mixed results (Cordes, 2022). Furthermore, being able to draw

inferences and generalize results is listed as a limitation in most studies (Cordes, 2022; Joyce et al., 2019; Rushton, 2016).

As the concept of resilience evolves, gaps in the literature expose the need for more specified research within the healthcare industry. More longitudinal studies that show effectiveness of resilience training programs overtime are needed. In the American Nurses Association: Call to Action Report (2016) a list of research priorities included the need for more studies that demonstrate: (1) an elevation in organizational moral resiliency and its impact on health care errors and nursing turnover, (2) that stakeholders and administrators unveil the financial benefits of building an individual's moral resilience, (3) adequate funding is necessary to support the development and implementation of these programs. As well as cultivating a healthy work environment and improving the safety and quality of patient care (American Nurses Association, 2016; Rushton, 2016). Resilience research is at the foundation of moral resilience where the life domains of biological, psychological, cognitive, spiritual, and relational resources interconnect both concepts (Faraco, 2022; Rushton 2016). Amidst the COVID-19 pandemic the focus on creating sustainable systems that support moral resilience in individuals and institutions is at the forefront (Cutler, 2022; Hegarty et al., 2022; Rushton et al., 2022).

### **Moral Resilience**

Rushton (2016) spearheaded further development and exploration of the construct moral resilience in healthcare workers specifically in palliative and critical care. As an early influencer, her call for more research on moral distress in healthcare and how to cultivate moral resilience has sparked an increase in demand for programs to mitigate the moral distress, adversity, and injury that healthcare providers and organizations have been challenged with during the COVID 19 Pandemic (Rushton, 2016; Rushton et al., 2022). Defining moral resilience from a

multidimensional perspective consistently includes one's ability to recover integrity, remaining true to their values and professional intentions following a confrontation with complex moral stressors that invoke confusion, distress, internal and external conflict (Delgado et al., 2021; Faraco et al., 2022; Rushton, 2016). Furthermore, Rushton (2016) proposes that these moral aspects of the human experience exist because life is meaningful under every circumstance and that moral challenges are inevitable, however when addressed with courage build confidence, assuredness, resilience, and fortitude (Rushton, 2016; Rushton et al., 2022).

The American Nurse Association (2016) discussed a need for moral resilience measures to identify symptoms of moral distress, burnout, and related psychological issues such as PTSD, anxiety, or depression. They proposed that measures should also address turnover rate and turnover cost (American Nurse Association, 2016). Heinze et al. (2021) sought to develop the Rushton Moral Resilience Scale (RMRS) and validate the instrument to measure moral resilience (Heinze et al., 2021). The researchers were definitive in describing the six domains of moral resilience which includes personal integrity, relational integrity, buoyancy, self-regulation, self-stewardship, and moral efficacy (Heinze et al., 2021). The researchers noted barriers to further study of moral resilience was a lack of normed measures, so they developed, refined, and conducted psychometric testing on the following types of healthcare providers: Chaplains, nurses, physicians, and social workers (Heinze et al., 2021). The scale was validated as a reliable measure for moral resilience for individuals, however more studies are necessary to evaluate the effectiveness of the scale across domains (Heinze et al., 2021).

Spilg et al. (2021) conducted a quantitative study in Canada using data provided by 962 healthcare worker participants to measure levels of moral distress, mental health symptoms, and moral resilience in healthcare providers exposed to patients with COVID-19. Data were extracted

from a larger online survey of healthcare professionals and administrators during the first wave of the pandemic (Spilg et al., 2021). Researchers found that participants caring for patients ill from COVID-19 reported more severe moral distress, anxiety, and depression symptoms (Spilg et al., 2021). They also found that the participants reported that during the first wave of the pandemic, the frequency and intensity of complex conditions and ethical dilemmas produced higher levels of moral distress (Spilg et al., 2021). Alternatively, less morally distressing outcomes led to reports of better mental health. Furthermore, higher moral resilience was correlated with lower stress, anxiety, and depression symptoms (Spilg et al., 2021). The study's significance shows the synergistic nature between the individual's moral capacity and feeling supported by the organization to obtain higher moral resilience. When support from employers, coworkers, and the organization at large is present and the organization values moral integrity, moral resilience can be strengthened within the organization and the individual. (Spilg et al., 2021). Therefore, when there is fairness and an opportunity for one to stand firm in their values while respecting the values of others, moral resilience is strengthened (Spilg et al., 2021). An organization embracing a shared moral endeavor and interconnection should be at the foundation of every clinical team or organization so that turnover related to moral distress is not the primary focus of healthcare worker attrition.

In more recent research, Faraco et al. (2022) conducted a descriptive qualitative study seeking to identify the strategies of moral resilience in nurse management with a randomly selected sample of 44 nurse managers working in various (30) university hospitals in Brazil. Data were collected using online questionnaires with open-ended questions. Key findings showed that nurse managers at university hospitals rely on personal and organizational strategies to deal with the layers of moral distress that affect them (Faraco et al., 2022). Furthermore, the researchers

emphasize that participants valued a healthy support network that provided formal and informal support to the nurse managers, so that they, in turn, could provide support to those they supervised to help them cope with moral distress. This process of reciprocity also cultivated interconnections with others when moral resilience is vital (Faraco et al., 2022). This study emphasizes that organizations would benefit from using moral resilience-building strategies to re-establish ethical infrastructure focused on creating a cultural conscientiousness of principled practice for all collectively (Faraco et al., 2022). Directing resources to support the individual development of moral resilience and ethical skills while under the protection of an organization promotes confidence in self, and trust within the network of support and the umbrella institution (Faraco et al., 2022).

### **Moral Adversity, Distress, and Injury**

Moral injury is a concept within psychological literature with multiple meanings (Rushton, 2016). Shay (2014) defined moral injury as a betrayal of what is morally right by an individual, person in authority, or an institution in a critical or high-risk situation (Shay, 2014; Kreh et al., 2021; Hegarty et al., 2022). Despite progress much work remains to be done regarding the conceptualization, definition, and operationalization of the moral injury construct, especially in healthcare. Current definitions for moral injury encompass the idea that emotional, psychological, spiritual, and social damage results from exposure to a situation that challenges healthcare workers' deeply valued moral code (Kreh et al., 2021; Rushton et al., 2022). Commonly reported moral injuries for healthcare workers' include working in unsafe conditions, betrayal by institution leadership, making difficult decisions around patient care, losing the ability to advocate for individual patients due to significant resource constraints, systematic disregard for workers' rights, and lastly providing a lower quality of patient care (Denham et al., 2022; Rushton et al., 2022).

Kreh et al. (2021) wanted to explore and identify the primary stressors and associated strategies utilized by healthcare staff to reduce stress reactions during the first wave of the COVID-19 pandemic. The researchers used data from a larger project using a mixed methods approach of quantitative surveys administered online and qualitative interviews and focus groups. For this component of the study, they interviewed 13 experts to access data based on their subjective experiences. During the first wave of the COVID-19 pandemic, many healthcare workers experienced moral injuries due to the massive surge in death, and some were directly impacted by the virus while providing care to COVID-19 infected patients (Kreh et al., 2021). Alternatively, healthcare providers were also experiencing moral adversity in areas where the pandemic needs were not heightened yet but included challenges to healthcare workers' mental health and ethical self-image (Kreh et al., 2021). The researchers highlight that the worldview of healthcare workers and healthcare systems have been severely shaken by this crisis (Kreh et al., 2021). The researchers found that healthcare providers' loss of trust in oneself as helpers as well as loss of trust in the system or in the organizational leadership were common effects of moral injury (Kreh et al., 2021). Additionally, the researchers discussed moral injuries as a mental health challenge that was complicated during the COVID-19 outbreak. Kreh et al. (2021) defined a moral injury as a betrayal of what is morally right by a person in authority where the situation is critical or high risk (Kreh et al., 2021). Furthermore, participants of this study reported effective and efficient support given during the first phase of disaster response was provided on scene by familiar providers within the system that did not treat the emergency healthcare providers like patients (Kreh et al., 2021). This strategy of support during the first phase to reduce stress was the most impactful and beneficial, according to the frontline healthcare providers surveyed for this study.

The COVID-19 pandemic period was an extended period of time with a multi-layered impact on healthcare workers therefore each individual experience of a moral injury may be unique. The researcher extended inquiries to emergency healthcare workers to better identify the characteristics of moral injuries experienced by healthcare workers in Texas during the Delta wave of the COVID-19 pandemic.

During the COVID-19 Delta surge, experiences of institutional betrayal were being reported by healthcare workers raising awareness to another stressor to monitor and observe as layers of frustration for healthcare providers continued to mount complicating their role as providers and limiting their voices as human beings outside of their professional roles. Clark et al. (2022) conducted a qualitative study to explore how resilience, job satisfaction, and moral distress affect emergency department (ED) nurses' workplace engagement used 2018 data. Fifteen nurses with more years of nursing tenure reported increased resilience, supported by their nursing experiences via semi-structured interviews. This is a result also reported in a study of primary health professionals and nurse managers (Clark et al., 2022). Caring for patients and participating in life-saving nursing actions provided significant job satisfaction tied to greater resilience. Similarly, a negative work environment or an unsatisfying experience in a specific position left participants feeling less resilient. Job satisfaction affected workplace engagement when nurses could not make workplace changes or were negatively affected by coworkers (Clark et al., 2022). Resilience and job satisfaction increased workplace engagement whereas moral distress lowered workplace engagement (Clark et al., 2022). Participants described multiple behaviors that increased moral distress, including a lack of teamwork, poor communication, incivility, abundant criticism amidst absent praise and recognition, or inadequate staffing (Clark et al., 2022). Previous research has noted that elevated levels of nursing moral distress were related to poor team

communication, violence or lack of workplace safety, inadequate staffing, and a high number of patient care assignments all contributing to job dissatisfaction (Clark et al., 2022).

### **Emerging Societal Issues During the Delta Surge**

At the onset of the COVID-19 pandemic, the primary goals of all major authorities were to implement measures to preserve life. Without other measures to protect the public and to reduce the spread of COVID-19, the Centers for Disease Control and Prevention (CDC) recommended all individuals 2 years old and up wear face masks and practice social distancing in public places (Tucker et al., 2021). State governments within the boundaries of the United States took the lead in responding for their respective territories (Zhang & Warner, 2020) by instituting protocols for lockdown, social distancing, public space capacity restrictions with re-openings, as well as mask mandates and increased hand washing hygiene to help reduce the spread of illness and control contagion (Semenova et al., 2022; Tucker et al., 2021; Zhang & Warner, 2020). While sickness continued to spread, health experts recommended that each person take measures to self-isolate if infected by quarantining at home, avoidance of touching face, and wearing face masks in public (Semenova et al., 2022; Tucker et al., 2021; Zhang & Warner, 2020). Common community protective measures included school and business closures, social distancing at work and in public places, limitations on group meeting sizes, along with travel restrictions. Earlier in the COVID-19 pandemic, the wearing of face masks became a disruptive cultural issue creating division in choices to comply with CDC recommendations. For example, this trend of disruption continued in socio-political arenas relative to the seriousness of the COVID-19 virus, vaccines, vaccination, effective healthcare treatment protocols, travel regulations, along with quarantine and business closings (Khubchandani et al., 2021).

Zhang et al. (2020) research on dynamic events and policy implementation on the COVID-19 pandemic supports the importance of early intervention strategies to reduce the spread of infection immediately after statewide measures were imposed. The researchers observed that mask mandates were more effective with decreasing the spread of sickness than shutdowns (Zhang & Warner, 2020). The increase in the daily infection growth rate pushed state governments to shut down but reopening led to significant increases in new cases 21-days afterwards. The impact of the lockdown on each state's economy influenced pressures to reopen sooner than health officials recommended. Texas' Governor Abbot authorized childcare facilities, bars, hair and nail salons, and restaurants to reopen at 50% capacity early in the pandemic, placing Texas in the top five states accounting for 44% of total COVID-19 cases by the end of August 2020 (Zhang & Warner, 2020).

Kaine et al. (2022) investigated the differences in people's mask wearing behavior although they held similar intentions to prevent the spread of COVID-19, they wanted to understand why some individuals were willing to change their routine and behaviors and why others were not. The results of the study showed that intentions did not convert to a change in behavior. The ripple effect of this issue is when masks are not worn and vaccinations have not been obtained, these people had a higher risk of being hospitalized if COVID-19 was contracted (Kaine et al., 2022). As opinions, uncertainty, and misinformation infiltrated media outlets, the issues that sparked defiance and opinions with mask mandates in the public continued with vaccination hesitancy (Khubchandani et al., 2021). These opposing opinions were expressed across the nation and have highlighted moral issues for health care professionals that include treating the unvaccinated, refusing treatment to non-mask wearers, and the lack of ability to provide critical care to those in need due to limited resources, supplies, and worker shortages. Furthermore, limited intervention

protocols contributed to decreased autonomy for physicians to treat patients with an individualized treatment plan due to authorizations for only hospital system approved treatments. In some cases, these restrictions limit the autonomy of healthcare professionals to treat patients based on their individual needs. These issues may have contributed to the moral injuries of healthcare providers along with denied requests for exemption from vaccination requirements. Many healthcare workers were released from their provider roles due to their own views and beliefs about the safety of the new COVID-19 vaccine.

### **Vaccine Development and Release**

On December 31, 2020, the World Health Organization approved the Pfizer COVID-19 vaccine for emergency use (Nemr et al., 2022). It was rapidly developed along with several other vaccines manufactured by other companies to be widely used and distributed throughout the world (Khubchandani et al., 2021). Other commonly known vaccines developed within a brief time frame included Moderna (Johnson & Johnson), AstraZeneca, and Sputnik V (Nemr et al., 2022). The WHO recommended that healthcare workers and patients' close contacts be protected to prevent the disease from spreading. Frontline healthcare workers were vulnerable because of overcrowding in emergency rooms, lack of isolation facilities, contaminated environments, and re-used or unsanitary personal protection equipment, all of which contributed to disease transmission among healthcare providers (Nemr et al., 2022). During the first wave, the COVID-19 outbreak continued to pose a serious threat to the public and much emphasis was placed on developing a vaccine rapidly to help end the pandemic. The standard time to develop a vaccine usually takes 5-10 years to conduct the necessary multiple experimental trials; however, it took less than one year to develop the COVID-19 vaccine (Nemr et al., 2022).

Upon the emergency use authorization of the COVID-19 vaccine to be released, the Supreme Court of the United States issued a ruling that federally mandated all healthcare providers in facilities that take Medicare and Medicaid to be vaccinated. The deadline for providers to be fully vaccinated was March 15, 2022. Medical and healthcare providers take oaths that ethically bind them to do no harm and take care of vulnerable patient populations, thus ensuring they do not contribute to contagion by becoming vaccinated (Rao et al., 2022). The State of Texas is the only exception to this mandate due to a preliminary injunction that prevented this requirement for healthcare providers practicing within the state (Rao et al., 2022). Although these provisions were offered statewide for providers in healthcare systems the autonomous choice to become vaccinated exposed moral and ethical dilemmas of emergency healthcare providers, while worker attrition increased at an unprecedented rate (Law et al., 2022; Rao et al., 2022). The Texas Hospital Association documented difficulty obtaining enough nurses to help care for patients during COVID-19 surge periods. This acknowledgement suggested that there were not enough nurses, doctors, and other health professionals to cope with national shortages of healthcare providers due to the pandemic (Law et al., 2022). According to Law et al. (2022), there have not been enough providers trained in the workforce to make up for the deficits (Law et al., 2022; Rao et al., 2022; Zhang & Warner, 2020).

### **Vaccination Acceptance, Hesitancy, and Refusal**

Prior to the pandemic and release of the first COVID-19 vaccine approved for emergency use, the World Health Organization acknowledged vaccine hesitancy as a major global health threat (Hoffman et al., 2022; Khubchandani et al., 2021; Truong et al., 2022). Khubchandani et al. (2021) conducted a quantitative study seeking to identify population subgroups with a higher probability of vaccine hesitancy in the United States before the vaccine was deployed. They sent

online questionnaires to 1,878 people who opted to participate within a community-based sample of Americans (Khubchandani et al., 2021). They found that 22% of the sample reported COVID-19 vaccination hesitancy. Racial and ethnic minorities, people living in rural areas, those with lower household incomes, and lower levels of education were more likely to be hesitant about getting immunized with a COVID-19 vaccine (Khubchandani et al., 2021). Furthermore, females were more likely to be more hesitant about vaccination than males, however, females tended to activate other preventative strategies to remain safe, like mask-wearing and regular handwashing practices (Khubchandani et al., 2021).

Healthcare providers were granted preliminary access to receive the COVID-19 vaccine beginning at the end of 2020, preceding other essential worker groups and the elderly (Khubchandani et al., 2021; Lee et al., 2022; Nemr et al., 2022). Nemr et al. (2022) aimed to explore reasons for vaccine acceptance, hesitancy, and refusal of the current COVID-19 vaccine among healthcare workers. The terms vaccination acceptance and vaccination refusal are terms depicting a final decision, whereas vaccination hesitancy depicts a decision to delay receiving a vaccine, regardless of the access granted to participate in vaccination programs (Nemr et al., 2022). The researchers also wanted to examine factors that influence healthcare workers' perceptions and attitudes toward vaccine acceptance among healthcare professionals. Worldwide, healthcare workers have expressed their reasons for taking the vaccine or refusing it due to health risk, religious beliefs, uncertainty, and other factors (Nemr et al., 2022). Nemr et al. (2022) conducted a cross-sectional, descriptive, online-based study carried out in Egypt from January 2021 to May 2021. A representative sample of 451 doctors, nurses, laboratory workers, and technicians from Egypt were asked to complete a questionnaire that was distributed via social media and WhatsApp groups and took about 4 minutes to complete (Nemr et al., 2022).

Participation was voluntary and each participant was required to give their consent prior to beginning the questionnaire; no compensation was given for their participation. The researchers found that 40.8% of sampled healthcare workers agreed to receive the vaccine and 59.2% disagreed. The acceptance percentage among physicians (55.1%) was much greater than that of nurses (33.2%) however, overall, the responses for vaccine acceptance is still considered low. The primary reasons cited for refusal of the vaccine included: lack of safety, fear of genetic mutation, and new technology, as well as the belief that the vaccines are ineffective (Nemr et al., 2022). Furthermore, older healthcare workers participating in the study stated that the risk factors that the vaccine posed for chronic health conditions were influential for COVID-19 vaccine acceptability (Nemr et al., 2022).

Some healthcare providers opted to postpone or refuse vaccination based on personal preferences while others were willing to request exemptions and uphold their stance on not accepting the vaccine requirements imposed by their state or work institution (Lee et al., 2022). Alternatively, reluctant attitudes towards the vaccine did not necessarily indicate a complete refusal of the vaccine just a delay to vaccination until more research and information was available. In the United States, Lee et al. (2022) explored health care providers' attitudes about employer requirements for vaccination and interviewed 12,875 across 50 states and the District of Columbia excluding Puerto Rico and the U.S. Virgin Islands. The top three common reasons for vaccine hesitancy among healthcare workers were concerns about the lack of long-term studies on their efficacy, safety, and possible side effects (Biswas et al., 2021; Law et al., 2021; Lee et al., 2022).

Biswas et al. (2021) also determined other reasons for COVID-19 vaccination hesitancy were a belief that COVID-19 was not a serious disease, rushed development of vaccines, politics

surrounding vaccine development process, misinformation from social media, previous COVID-19 infection or health conditions, and mistrust in authorities, health experts, and pharmaceutical companies (Biswas et al., 2021). Furthermore, disagreement with mandatory vaccination policies by institutions was viewed by many healthcare workers as an infringement of their autonomy (Rao et al., 2022). Regardless of healthcare workers' views, they are held responsible for the quality of care for their patients despite their personal risks. Consequently, these professionals must balance their own and their loved ones' physical and mental health needs with those of their patients (Donkers et al., 2021). Although vaccinations are developed to protect the public and help keep healthcare workers safe as well as work to limit the risk of contracting and spreading serious illnesses while serving vulnerable populations (Biswas et al., 2021; Najera et al., 2016); balancing healthcare workers' rights with patient care responsibility has led to experiences of moral distress and tarnished the ethical climate in healthcare systems for professionals, recent studies have shown that both are associated with the intention to leave one's job (Donkers et al., 2021). It is estimated that healthcare providers working in Internal and Family Medicine had the highest rate of death, closely followed by mental health nursing professionals (Rao et al., 2022). As vaccine mandates have been enforced for healthcare institutions, shortages of healthcare providers have been on the rise (Rao et al., 2022) across the United States.

Law et al. (2022) conducted a study to determine the ethical considerations associated with mandatory vaccinations among healthcare workers. They suggested the following ethical considerations for healthcare providers as they consider the benefits, risks, effectiveness, equity and justice; autonomy, reciprocity, and trust associated with complying with mandatory requirements (Law et al., 2022) of receiving a vaccination. The institutional response to ethical concerns and expressed need for healthcare worker support was not a uniform response across

institutions or states with many systems using the Supreme Court ruling referencing that healthcare providers who care for Medicare and Medicaid patients must protect their patients' health and safety (Rao et al., 2022). During the COVID-19 pandemic period, physician vaccination has been highlighted as pivotal means to promoting patient trust in the COVID-19 vaccine (Elhadi et al., 2021; Nemr et al., 2022; Truong et al., 2022), despite the mixed concerns healthcare providers held about the COVID-19 vaccine.

### **Erosion of Trust**

New challenges and exacerbated issues present at the onset of the pandemic continued with each new wave of COVID-19. Patients and providers exposed injustices occurring within the walls of once trusted institutions via social media as critically ill patients sought emergency care, some providers became sick, while others left their post voluntarily or were released by their institutions creating the perfect storm for worker shortages. (Klest et al., 2020). With the emergence of the Delta Variant, trust for healthcare systems was being questioned, as misinformation was disseminated in the media contradicting Centers for Disease Control and Prevention and World Health Organization recommendations (Hegarty et al., 2022; Klest et al., 2020). Trust and healthcare have taken center stage highlighting the fact that patients are dependent on health care institutions to meet their needs for care, however, dissatisfaction, bitterness, and uncomfortable interactions result when people mistrust healthcare institutions (Hegarty et al., 2022; Klest et al., 2020). Trust for government, healthcare, and other institutions has declined, creating vulnerability for institutional betrayal experienced by patients and healthcare providers alike (Conn et al., 2022; Klest et al., 2020; Smith, 2017).

Institutional betrayal harm is perpetrated against a person that depends on an institution's services in some way (Conn et al., 2022; Klest et al., 2020). During the COVID-19 pandemic

period, incidents of institutional betrayal have occurred toward patients, families, caregivers, and healthcare providers. Institutional betrayal is linked with fiduciary trust, which is defined as the patients' beliefs regarding their physicians' or an institution's motivation and intention rather than concrete outcomes of treatment (Conn et al., 2022; Klest et al., 2020). In many cases during the pandemic period, this fiduciary trust has been undermined by concrete examples of negative outcomes. As patients and family members have realized that their physician, nurses, or institutional policies were acted upon counter to their best interests these patient and provider reactions have been expressed as moral outrage publicly and privately (Conn et al., 2022; Klest et al., 2020). These reactions to betrayal compel an individual to either confront the transgression or leave the relationship to protect against further harm (Conn et al., 2022; Klest et al., 2020).

Much like patients and families facing institutional betrayal from healthcare institutions, providers who are empowered to speak out are seeking institutional accountability (Smith, 2017). In some cases, the health care providers did so in defiance of their own institution's policies, and others raised alarm about inadequate personal protective equipment (PPE), defiance of provider rights, vaccination requirements, treatment and internal practices, and policies (Klest et al., 2020). Some healthcare providers were censured by their organizations and others were relieved of their work duties. Taken together this can be seen as an institutional betrayal of health care workers by their employers as well as government health agencies. (Klest et al., 2020).

### **Healthcare Worker Attrition**

In 2021, the public along with healthcare workers were hopeful that a vaccine would aid in stopping the spread of COVID-19 and the pandemic (Khubchandani et al., 2021), easing the pressures and stressors relative to their jobs. However, relief was prolonged by many contributing societal factors that complicated public acceptance of the vaccine and increased healthcare worker

role stressors. De los Santos and Labrague (2021) used a descriptive cross-sectional design to study 385 community nurses in the Philippines to explore how the fear of COVID-19 impacted their level of job stress and influenced their intention to leave their jobs. They found that community nurses who participated in the study shared the same experience of fear of COVID-19 as nurses working in hospital settings (De los Santos & Labrague, 2021). The researchers also found that community nurses reported the following experiences: an increased fear of COVID-19, elevated job stress, as well as an increased intention to leave their employer along with consideration to leave the profession (De los Santos & Labrague, 2021). They also found that female nurses reportedly were more likely to be susceptible to fear than their male counterparts. Furthermore, female nurses reported taking extra caution with infection control practices, especially caring for patients with infectious disease, because of perceived vulnerability to infection and as a precaution to avoid infecting their families. Other studies conducted to reflect the impact of COVID-19 on job intention have noted similar findings (De los Santos & Labrague, 2021). Phillips and Kucera (2021) also found that COVID-19 frontline medical staff reported fears of infection and death in addition to possibly contaminating their loved ones. Furthermore, the quality of COVID-19-related patient care was detrimentally impacted leading to ethical dilemmas resulting from deteriorating working conditions and unstable routines (Phillips & Kucera, 2021). Majeed et al. (2021) also investigated the role of perceived fear of COVID-19 between perceived risk of COVID-19 and turnover intention in healthcare workers. They found that the perceived risk of COVID-19 among healthcare workers increases their level of fear of COVID-19, resulting in their turnover intentions (Majeed et al., 2021). These results are consistent with earlier findings, which reported that healthcare workers working with infected patients are more likely to experience fear of contracting the disease and have higher chances of quitting their job (Majeed et al., 2021).

Zhang et al. (2021) examined the predictors of job satisfaction, life satisfaction, and turnover intention of 240 healthcare workers in Bolivia during the COVID-19 pandemic. The main aim of the study was to look at which healthcare workers had job satisfaction and what predictors were consistent with job turnover intention (Zhang et al., 2021). This study showed divergent results whereas mental health and psychological overwhelm were not predictors in the sample studied, nor were age, gender, and education predictors for mental health issues (Zhang et al., 2021). Other studies conducted during the pandemic show these as predictors for mental health issues, however, these unique findings highlight that some predictors may be specific to the culture and the country where the study was conducted (Franza et al., 2020; Schneider et al., 2021; Schwartz et al., 2020; Zhang et al., 2021). The researchers found that healthcare workers' number of office days was a significant predictor of job satisfaction, life satisfaction, and turnover intention (Zhang et al., 2021). Zhang et al. (2021) suggested that future studies focus on healthcare workers, their ongoing working characteristics, conditions, and experiences during the COVID-19 pandemic (Zhang et al., 2021).

Simard and Parent-Lemarche (2021) used quantitative methods to examine the impact of work-organization conditions, abusive leadership on employees' psychological well-being, and intention to quit during the COVID-19 pandemic. They used a snowball strategy to obtain a sample of 921 healthcare workers and social service providers in Quebec to collect data via an online questionnaire for this study (Simard & Parent-Lemarche, 2021). They found that healthcare workers who were allowed to operate within their skillset, autonomy with making decisions within their authority, as well as have social support from coworkers, social support from supervisors, and recognition for their efforts were more likely able to handle heightened psychological demands and all of these factors were directly associated with psychological well-being (Simard & Parent-

Lemarche, 2021). These findings suggest that psychological health problems are likely to develop when job demands are high and job resources are insufficient (Simard & Parent-Lemarche, 2021). Additionally, they found that work-organization conditions where abusive leadership was in place with high psychological demands were directly associated with healthcare workers' intention to quit (Simard & Parent-Lemarche, 2021). Experiencing abusive leadership can lead to loss of trust in the system or in an organization's leadership, researchers have identified these as common effects of moral injury (Kreh et al., 2021). Moreover, the findings support that when moderating factors are in place, healthcare workers are less likely to express intent to quit their jobs (Simard & Parent-Lemarche, 2021). When leadership in organizations extend opportunities for healthcare workers to experience autonomy, moral efficacy with practices that foster self-stewardship, and buoyancy; stability can be experienced with less moral distress (Spilg et al., 2021).

### **Summary**

The COVID-19 pandemic has been the catalyst for disruption of wellness for many healthcare workers treating infected patients. The research highlights that the physical and psychological demands of helping during the pandemic period has compromised some healthcare workers' well-being, leading to a decline in mental and physical health (Franza et al., 2020; Schneider et al., 2021; Schwartz et al., 2020). Specifically, healthcare providers who met this profile were at increased risk for anxiety, depression, posttraumatic stress disorder (PTSD), sleep disturbance, and a lower quality of life (Lavoie-Tremblay et al., 2022; Schneider et al., 2021). Phillips and Kucera (2021) found that COVID-19 frontline medical staff and De los Santos and Labrague (2021) found that nurses reported fears of infection and death in addition to possibly contaminating their loved ones. Moreover, healthcare workers with preexisting diagnoses or symptoms related to psychological disorders were risk factors for compassion fatigue, burnout, a

sense of poor quality of life, and departure from work roles (Schneider et al., 2021). Beyond the physical and psychological toll impacting healthcare workers, many experienced moral adversity, injuries, and distress during the COVID-19 pandemic period that may have contributed to job turnover intention; however, limited research has been conducted to explore this topic. Moral resilience is the capacity of an individual to sustain, preserve, or restore their integrity in response to moral adversity (Rushton, 2016; Rushton et al., 2022;), including situations that include moral complexity, confusion, distress, or setbacks (Delgado et al., 2021). The moral resilience framework guided this study. Key aspects of moral resilience include personal and relational integrity, buoyancy, self-regulation and awareness, moral efficacy, and self-stewardship (Rushton et al., 2022). Moral resilience can guide healthcare workers who seek to maintain integrity in the face of everyday ethical challenges (Delgado et al., 2022; Heinz et al., 2021; Rushton, 2016; Rushton et al., 2022), as well as complex systemic factors enhanced by the COVID-19 pandemic. Understanding the process used by healthcare professionals to activate moral resilience may help improve support to manage or decrease unavoidable moral distress.

Other contributing factors to deteriorating moral resilience and job turnover intention increased with the COVID-19 Delta variant wave. The Delta wave exposed ongoing weaknesses in the healthcare system along with emerging societal issues that have been fueled by opinions, uncertainty, and misinformation. These major issues include choices surrounding mask wearing, vaccine development, vaccinations, treatment protocols, patient care, lack of support and resources for healthcare provider well-being, and healthcare worker attrition. The State of Texas was one of the first states to reopen. Texas' Governor Abbot authorized childcare facilities, bars, hair and nail salons, and restaurants to reopen at 50% capacity early in the pandemic, placing Texas in the top five states accounting for 44% of total COVID-19 cases by the end of August 2020 (Zhang &

Warner, 2020). Governmental mandates directly impacted healthcare systems as more people were infected, thus seeking medical care in emergent cases. Further complexities with vaccination hesitancy and refusal among the healthcare provider community created dilemmas with mandatory vaccination policies and infringement of the autonomy of healthcare workers' right to choose (Rao et al., 2022). Regardless of healthcare workers' views, they were held responsible for the quality of care for their patients despite their personal risks. Therefore, these professionals had to balance their own and their loved ones' physical and mental health needs with those of their patients (Donkers et al., 2021). Although vaccinations are developed to protect the public and help keep healthcare workers safe as well as work to limit the risk of contracting and spreading serious illnesses while serving vulnerable populations (Biswas et al., 2021; Najera et al., 2016); balancing healthcare workers' rights with patient care responsibility has led to experiences of moral distress and tarnished the ethical climate in healthcare systems for professionals, recent studies have shown that both are associated with the intention to leave one's job (Donkers et al., 2021).

The worldview of healthcare workers and healthcare systems has been severely shaken by this crisis (Kreh et al., 2021). The researchers found that healthcare providers' loss of trust in oneself as a helper and loss of trust in the system or organizational leadership were common effects of moral injury (Kreh et al., 2021). During the COVID-19 pandemic period, incidents of institutional betrayal have occurred toward patients, families, caregivers, and healthcare providers. Simard and Parent-Lemarche (2021) examined the impact of work-organization conditions, abusive leadership on employees' psychological well-being and intention to quit during the COVID-19 pandemic. Current studies have explored how the early phases of the COVID-19 pandemic impacted healthcare workers' physical and psychological concerns. However, gaps in the research reveal a need and call for future research that addresses regional

issues on how healthcare workers were impacted during the COVID-19 pandemic, specifically later phases of the pandemic. Zhang et al. (2021) suggested that future studies focus on healthcare workers, their ongoing working characteristics, conditions, and experiences during the COVID-19 pandemic (Zhang et al., 2021). Majeed et al. (2021) recommended that future studies should investigate other factors that predict turnover intention among healthcare workers.

Lastly, Rushton's call for more research on moral distress in healthcare and how to cultivate moral resilience has sparked an increase in demand for programs to mitigate the moral adversity, distress, and injury that healthcare providers and organizations have been challenged with during the COVID 19 Pandemic (Rushton, 2016; Rushton et al., 2022), including healthcare worker attrition as an outcome of the current state of our healthcare system. This study examined how the COVID-19 Delta Surge impacted the moral resiliency of emergency healthcare providers and worker attrition.

### **Chapter 3: Research Method**

The problem addressed by this study was the healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. This qualitative descriptive study aimed to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition during this period. Given the mass exodus of healthcare professionals, examining their experiences provided key insights into the elements that support or hinder moral resilience in times of crisis.

Furthermore, the findings of this study may inform stakeholders on strategies to reduce turnover and develop moral resilience-based initiatives that benefit healthcare organizations, teams, and individual providers. A qualitative methodology with a descriptive design was employed to capture these experiences. The study utilized a diverse sample of healthcare workers across Texas, with data collected through semi-structured Zoom interviews. This chapter also discusses the study's assumptions, delimitations, limitations, and ethical considerations.

#### **Research Methodology and Design**

Quantitative and qualitative approaches are two different means of exploring psychological phenomena (Trochim et al., 2015). There are five essential components to research studies that differentiate quantitative from qualitative designs: purpose, data collection, data analysis, findings, and generalizability (Trochim et al., 2015). Key differences between quantitative and qualitative research include that quantitative research utilizes statistical methods to test hypotheses or make predictions about populations and generally uses structured questionnaires or surveys to collect data from large samples of participants (Trochim et al., 2015; Nassaji, 2015). Alternatively, qualitative research seeks to explore complex phenomena, understand experiences, and gain insights into subjective viewpoints (Hayashi et al., 2019; Trochim et al., 2015).\_Conversely,

qualitative research utilizes in-depth interviews, observations, or open-ended surveys to collect voluminous and nuanced information from smaller samples of participants. Whereas quantitative research employs statistical techniques to analyze data to recognize patterns, test hypotheses, and generalize results to a larger population (Trochim et al., 2015). Qualitative research involves in-depth examination of data using methods like content or thematic analysis to detect patterns, themes, and meanings (Hayashi et al., 2019; Trochim et al., 2015). To enhance validity quantitative research typically produces numerical data in the form of percentages, means, or correlations, while qualitative research generates non-numerical findings often presented as themes, categories, or narratives. Interpreting and expressing findings uniquely distinguish each research design (Trochim et al., 2015). Generalizability in quantitative research aims at generalizing findings to a larger population using statistical methods (Trochim et al., 2015). As an alternative, qualitative research endeavors to gain a more in-depth understanding of a phenomenon by gathering insight from subjective experiences rather than generalizations. The research questions proposed for this study focus on how healthcare workers cope with the stressors of the COVID-19 pandemic and what their experiences were like as healthcare workers during a dynamic period of the pandemic. While it is arguable that such questions could be studied using quantitative approaches, such methods are limited in their ability to capture the nuance, elaboration, and personal meaning-making processes that are central to this topic. Therefore, this research study employed a qualitative method with a descriptive design due to the nature of the COVID-19 pandemic and the novelty of its impact on healthcare providers' resilience and physical, mental, emotional, and moral well-being.

Alternative designs of qualitative research were considered beyond the descriptive method and included the following: phenomenological method, case study, narrative method, and

grounded theory. Phenomenological research seeks to discover and explore what meaning a particular phenomenon or experience holds for an individual (Al-Sheikh Hassan, 2023; Giorgi, 2010). In-depth exploration of the phenomena being examined is a shared characteristic of both descriptive and phenomenological research. For this study, the researcher used only the semi-structured interview to collect data about healthcare workers' experiences. Both phenomenological and descriptive research emphasize participant voices over researchers' preconceptions or hypotheses; this helps researchers gain a more nuanced and accurate understanding of what's being researched (Trochim et al., 2015). Phenomenological research seeks to explore (1) what people experience during a specific type of event, (2) who was impacted, (3) where it occurred, and (4) the participants' interpretation of their experience. Although this type of study was ruled out, it shares similar characteristics to the chosen design. Ultimately, the researcher sought to determine what led to the decision for so many emergency healthcare workers to leave their healthcare jobs and/or the industry at large.

Case study research is a qualitative research method employed in psychology that utilizes observation of complex phenomena or experiences to investigate them in depth. As with any methodology, case study research has both advantages and drawbacks. Some of the advantages of case study research are that it can offer rich, detailed data about an individual, including their experiences, thoughts, and behaviors in specific contexts (Houghton et al., 2010). Specifically, case study research can shed light on complex phenomena which may be difficult to capture through other research methodologies, providing researchers with another avenue of inquiry that meets the research question more efficiently and precisely (Houghton et al., 2010). Moreover, case studies can be highly adaptable and flexible; researchers can adapt research designs to fit individual cases, making this technique particularly helpful when investigating unusual or novel scenarios

which do not easily fit within existing research frameworks. It can also be used to explore multiple cases from various levels of influence offering an opportunity to explore cross-level interventions (Levin-Zamir et al., 2021). Every case offers researchers an opportunity to express lessons learned from each level of influence (Levin-Zamir et al., 2021). Additionally, case study research offers a holistic examination of an individual or phenomenon being researched, considering any social, cultural, and environmental elements relevant to it that might play a part in it. As such, it often leads to more profound insight than traditional forms of investigation (Houghton et al., 2010). Case study research can have some constraints; by its very nature, it only addresses specific cases or groups, so its findings may not apply universally, potentially diminishing its external validity and leading to less robust conclusions (Houghton et al., 2010). Case study research often relies on one or a small group of cases, so there is a risk for researcher bias or subjectivity for all types of qualitative studies, especially when interpreting and presenting data, which may reduce both the reliability and validity of its research results (Levin-Zamir et al., 2021). Case study research can be both time- and resource-intensive, requiring substantial investments of time and energy in gathering and analyzing the data, which may limit researchers with limited resources (Creswell, 2013). Overall, case study research can offer deep and insightful data regarding complex experiences or phenomena, while being highly flexible and adaptable to meet any research question or objective. Nonetheless, it does have limitations regarding generalization, potential biasing effects and resources required for conducting this type of investigation (Creswell, 2013; Houghton et al., 2010). Case studies utilize multiple data sources beyond only interviews such as documents, archival records, direct observations, participant-observation, and physical artifacts. (Creswell, 2013; Houghton et al., 2010). The structure of this research shows that case studies can require timely engagement to activate strategies to create a triangulation of data from multiple

sources collected by researchers from the same pool of participants (Whiteing et al., 2021). Due to the time constraints of the dissertation process, this design method was ruled out for this research study.

Grounded theory was created by researchers Barney Glaser and Anselm Strauss in 1967 (Creswell, 2013; Suddaby, 2006). This design method differs considerably in data analysis and research focus compared to descriptive methods. Grounded theory requires a deeper theoretical analysis that evolves as more data and information is acquired. Researchers constantly revise and update their understanding based on new insights or perspectives gained through ongoing data gathering activities (Glaser, 2002). This design seeks to generate new theories or concepts using participant-collected data (Glaser, 2002; Creswell, 2013). Furthermore, new information collected is constantly compared against existing concepts and theories as the analysis progresses (Creswell, 2013). Grounded theory seeks to develop theories which explain underlying processes or mechanisms driving any phenomenon under study (Glaser, 2002; Creswell, 2013). To answer the research questions posed for this study which is primarily to describe the lived experiences of healthcare workers and not to develop theory, therefore this method was dismissed for use for this study.

Narrative studies and descriptive studies vary regarding data collection and analysis. Specifically, narrative studies focus on the stories that individuals share about their experiences (Venuleo et al., 2020). Researchers may use interviews, diaries, or other sources to collect and analyze these stories. The goal of narrative studies is to understand the meaning that individuals attach to their experiences and how these experiences shape their identities and worldviews (Klaver & Lambrechts, 2021). Narrative studies prioritize the subjective experiences and perspectives of individuals. By focusing on individual stories and experiences, researchers can

gain a more nuanced and contextualized understanding of the phenomenon being studied (Klaver & Lambrechts, 2021). Narrative studies often involve a more interpretive approach to data analysis, as researchers work to uncover the underlying themes and meanings that emerge from the stories they collect (Klaver & Lambrechts, 2021). Overall, while both narrative studies and descriptive studies are valuable qualitative research methods, narrative studies focus on the stories and experiences of individuals and seek to understand the meaning and significance of these stories in a broader context (Creswell, 2013). One major limitation of this research design is that each participant could falsify their story and their experiences, the narrative method was ruled out for this study.

A descriptive qualitative study design offered the researcher an opportunity to acquire information from the frontline healthcare professionals' perspective about their experiences during the Delta variant wave of the COVID-19 pandemic in Texas. Descriptive study research was used to describe and understand a phenomenon or group without trying to manipulate or explain any causal relations (Doyle et al., 2020). The primary focus was on describing who, what, when, and where; data can be obtained from firsthand witnesses through observation, survey, interviews or from books, journals, and other publications (Lee et al., 2022). There are some benefits associated with descriptive study research which include offering an in-depth and in-depth examination of any given phenomenon without imposing preconceived theories or ideas on it (Doyle et al., 2020; Instanboulian et al, 2022; Gamble et al., 2022). This approach can be especially useful when the details surrounding an event or phenomenon remain vague or when manipulation of its variables proves challenging. Additionally, it can identify patterns and trends within data, helping researchers make predictions regarding future behavior or outcomes. Furthermore, descriptive designs can easily be replicated, which allows other researchers to test their validity and reliability

more easily. Replication is especially significant in psychology research, where scientific inquiry requires it (Trochim et al., 2015).

Lastly, a qualitative descriptive research design can be especially beneficial when exploring an unfamiliar phenomenon or group with the purpose of gaining greater insights (Doyle et al., 2020). Descriptive research can serve as the cornerstone for further inquiry and theory development, offering detailed yet thorough understandings of phenomena, uncovering patterns and trends, is easily replicable, exhibiting high external validity, and being suitable for exploratory investigations. In the pursuit of obtaining descriptive information, descriptive content can also add depth to quantitative research, potentially guiding future experiments (Lee et al., 2022). Essentially, descriptive research provides in-depth explorations, flexibility, and investigation and subsequently was the method chosen for further exploration of this study.

### **Population and Sample**

This descriptive study focused on emergency healthcare providers who worked during the Delta wave of the COVID-19 pandemic in Texas. A total of 10 participants were selected to achieve data saturation, the point at which sufficient data has been collected to draw meaningful conclusions, and additional data would not yield new insights (Holroyd et al., 2022). Participants included a diverse group of licensed professionals who provided direct care to COVID-19 patients, such as nurses, doctors, emergency medical technicians, and respiratory therapists. The intent of the study was to understand the lived experience of frontline healthcare workers during a time of increased health care needs; therefore, the demographic requirements allowed for a diverse population. The data were collected from professionals of various ages, genders, and cultures from the state of Texas. The minimum age to participate in the study was 18.

To be eligible for this study, healthcare provider participants confirmed at least one year of working experience in a hospital setting. Additionally, only those who provided direct care to patients during the Delta wave of the COVID-19 pandemic and left their job role or changed industry fields were relevant and eligible to participate in this study. Healthcare workers confirmed eligibility via a participation requirement screening questionnaire to ensure participants met inclusion criteria. Qualified participants received immediate notification of their eligibility to participate and were directed to read the informed consent. To ensure confidentiality, once the participant read the informed consent, they were prompted to check a box at the end to acknowledge they read the informed consent and agreed to participate in the interview. Participants were directed to a calendar to choose a date and time to schedule an individual interview. Study requirements and purpose of the study were clearly stated in the recruitment social media post (See Appendix C), email (See Appendix F) so that professionals who met the criteria were aware prior to volunteering. Participants were recruited through personal contacts, study participant contacts, and social media posts utilizing a recruitment video short sent via text and email. The participants were compensated for their time with a \$25 dollar Amazon gift card upon completion of their interview. All study procedures, including interviews, were conducted in English.

### **Instrumentation**

The researcher developed a script with a set of pre-written questions to conduct the semi-structured interviews to gather data from each participant during the interviews (see Appendix D). The primary protocol for collecting data were guided by asking each participant sixteen (16) open-ended interview questions focus on obtaining stories about the participant's lived experience as an emergency healthcare worker during the Delta wave of the COVID-19 pandemic. Three (3)

questions were specific follow-up questions to ask participants when applicable. The interview questions are constructed to gain insight and answers to the three research questions posed for this study. These questions were developed by the researcher and were not based on any other questionnaires; however, the development of questions was guided by present research findings discussed within the literature review which highlight multidimensional stressors and exposures reported by emergency healthcare workers' during the COVID 19 pandemic period. The guide was developed by narrowing down an original list of 30 questions relevant to the Delta wave COVID-19 period. The most relevant interview questions that aligned with this study's primary research questions were added to the interview guide. The guide meets trustworthiness because the questions are simple and only encompass one question to limit confusion. The interview guide's semi-structured, open-ended question style was designed to evoke thoughtful answers so that participants may elaborate on their lived experiences. Some questions have additional probes to obtain more details. Furthermore, the researcher was the only interviewer and followed the protocol of the interview guide with each participant, decreasing variance of participant experience during the interview process. Dependability was maintained as the research precisely tracked and followed protocol methods within interviews, data collection, analysis and interpretation of each participant's experience. Credibility was reinforced via participant verification checks to ensure they have answered according to their own specific experiences in addition to sharing with participants how data obtained from their interview will be utilized. The researcher used systems to check and recheck data collected and verified multiple times during the analysis to maintain confirmability and decrease researcher and participant bias. Interviews were audio and video recorded through the Zoom platform and NVivo analysis software for data organization purposes. All data were downloaded to an encrypted external hard drive belonging to the researcher protected

with an encrypted password that only the researcher knows. The external hard drive was secured in her business office behind two locked doors. Only the researcher on record had access to those transcribed interviews. Informed consent was obtained prior to the interview. Data were collected from the semi-structured interview. The participant was asked to confirm and attest that they meet all eligibility requirements to participate in the interview. A brief seven (7) question eligibility screener was used to determine participant eligibility. Participation requirements required that each volunteer be 18 years or older, a licensed healthcare worker, provided direct care to patients during the Delta wave of the COVID-19 pandemic, worked in Texas during the pandemic, worked in healthcare for at least one year, and was no longer working for the same institution or left the healthcare field. A snowball sample of 10 healthcare professionals was used, the researcher interviewed participants utilizing a questionnaire as a strategic tool to guide the interview discussion. The length of the interviews averaged 30 minutes. A total of 10 interviews were recorded and transcribed.

Semi-structured interviews are one of the primary data collection techniques employed in qualitative research studies. Semi-structured interviews allow both researchers and participants to freely discuss a given subject matter without being limited by restrictive parameters or rules. Structured interviews do not allow researchers or participants to stray away from their original topic of conversation. Semi-structured interviews allow participants to fully share their experiences related to research questions. The principal investigator (PI) actively responded to participants, with the goal of creating an atmosphere where participants could honestly and authentically share their experiences (Pezella et al., 2012).

## Study Procedures

Semi-structured interviews were conducted to gather data. The National University IRB provided approval, participants were recruited through social media posts on Facebook and LinkedIn. Healthcare professionals are active within both platforms and offer access to health professionals across Texas. Social media posts were posted on the researcher's private page and shared with personal contacts via email, text message, and direct messaging on social media. The brief recruitment video and digital flyer were shared via personal email and social media pages to private contacts who shared their email and social media networks with prior permission. Personal contacts were emailed to request their help in sharing the call for volunteers with their network email list and social media connections. At the conclusion of each interview, each participant was asked to share this research opportunity with fellow colleagues eligible to participate. A QR code and weblink to eligibility criteria questionnaire screener was included on the social media video and social media post for interested participants to complete. Once the screener was completed, the researcher established if a participant met requirements to participate in the study. Qualified participants were granted access to an online document of the informed consent via Qualtrics, the researcher was available to answer any questions about the informed consent, and participants consented digitally by acknowledging via checkbox that they read the informed consent and agreed to participate. Each participant was prompted to schedule a time and date to participate in the interview portion of the study. The researcher's email address was included on all social media and email posting if an interested or qualified participant had additional questions.

Data were collected from audio and video recordings of semi-structured interviews conducted with each participant. A semi-structured interview protocol was developed by the researcher to be used for the interview (Instanboulian et al., 2022) and is found in Appendix B. All

participants who agreed to be interviewed were briefed on the study's nature and purpose prior to the beginning of the interview along with a brief review of their written consent previously taken. The participants were interviewed by the researcher through Zoom utilizing the recording feature on the platform to record and transcribe all data. Permission was obtained to record video and/or audio; participants could opt to participate via audio recording only. All interviews were conducted in English and ranged between 18-45 minutes in length.

The interview recordings were manually reviewed and transcribed through the Riverside.FM platform. The researcher verified the transcriptions for accuracy. The transcribed data were uploaded to NVivo analysis software for data organization purposes. All data were downloaded from Zoom and Riverside.FM to an encrypted external hard drive belonging to the researcher protected with an encrypted password that only she knows. The external hard drive was secured in her business office behind two locked doors. Only the researcher on record had access to those transcribed interviews, all identifying demographic information obtained was destroyed to protect participants' anonymity. Participants received compensation following the completion of their interview via email in the form of a \$25 Amazon gift card.

### **Data Analysis**

The role of the researcher was to collect, analyze, and convey the participants' experiences as accurately as possible. To analyze the data, the researcher chose the thematic analysis method to identify, analyze and report patterns or themes within data (Castleberry & Nolan, 2018). This type of analysis is effective for questions about participants' experiences, can be used to analyze transcripts from individual and focus group interviews, and works well with any sized data set (Clarke & Braun, 2013; Klooster et al., 2022). To effectively analyze the data, the researcher used written notes taken while conducting the interviews to review audio and/or rewatch video to ensure

the accuracy of transcribed data. Riverside.FM is a production platform that allowed the researcher to listen to the interview while the audio-to-text conversion transcript was simultaneously reviewed to address necessary corrections to the transcript. Once interview transcriptions were read, and cross-checked with the audio/video data, the transcribed data were uploaded to the NVivo software to organize collected data. Once the data were uploaded to NVivo, the researcher generated coding and descriptions for the data and identified patterns in the coding. In thematic analysis, a review of the patterns was key for refining and developing relevant themes based on collated codes that expose a broader scope of consistent themes in the data. Once the themes were developed with descriptions, the researcher reviewed the themes and affixed a name on each theme to differentiate them in the study. It was the researcher's job to collect, interpret and convey as accurately as possible participants' experiences to audiences who read these narratives. A summary of the overall results was sent to each participant so they could see the study outcome, verify if their perceptions were accurately presented, and see the impact of their participation. Lastly, the researcher concluded with a detailed written analysis of the findings.

### **Assumptions**

The study aimed to understand the lived experiences of healthcare workers through the Delta wave of the COVID-19 pandemic; therefore, an assumption was that the participants would self-report accurate information about their overall experiences and coping strategies. The needs of healthcare workers to remain in their work role and industry throughout the ongoing pandemic were also explored, and it was assumed that the participants self-reported accurate information about their professional and personal needs to continue working in the field of healthcare.

## **Limitations**

Limitations of qualitative approaches include difficulty with generalizability due to data type limitations (Trochim, 2015). The researcher interviewed 10 participants for this study, which is a small sample; however, it was adequate for this size of study. Participants provided a self-report of their experiences via the semi-structured interview. The researcher is the primary instrument in qualitative interview studies, and through conducting interviews was considered an instrument variable who may influence participants through verbal exchange and interpersonal interaction as experiences were shared (Pezalla et al., 2012). Stacy (2019) notes that it is not uncommon for research participants to feel the need to either exaggerate or minimize certain information due to what is called the Hawthorne effect. Confidentiality and anonymity will be ensured for each participant so that others will not have knowledge of their identity except the researcher and the participant. All participants will receive a random number for identification within data analysis; so that no names or personal information are disclosed within the course of the research. Full disclosure of the recording will be provided at the start of the interviews. All raw data will be kept within password-secured spaces and only kept for three years in case of information verification or further analysis. At the conclusion of the three-year term, all information will be completely erased, shredded, and destroyed.

## **Delimitations**

As this study's participants were limited to licensed healthcare workers actively providing medical support during the COVID-19 pandemic to patients in Texas, requirements were stated clearly in recruitment advertisement flyers, posts and videos to guarantee these participants were appropriate for this research project. The requirements were as follows for each participant:

- 18 years or older
- Licensed Healthcare Worker

- Have Worked in healthcare for at least one year
- Provided direct care to patients during the Delta wave of the COVID-19 pandemic
- Worked in Texas during the pandemic
- No longer working for the same institution or you have left the healthcare field
- Fluent in the English language

Restricting research participants this way ensured that the data collected related directly to the purpose statement and research questions which remained the focus of study.

### **Ethical Assurances**

Institutional Review Board (IRB) approval was secured from National University prior to beginning data collection and each participant was provided with informed consent documentation that included detailed specifications regarding participation requirements and consent terms. The primary investigator read the informed consent and confirmed with each participant their consent to proceed. Furthermore, all participants acknowledged reviewing and understanding the informed consent before the semi-interview questions were asked. Confidentiality standards were upheld through the entire research process; all participant data were protected and stored according to IRB confidentiality requirements. For this study, each participant received an individualized Alpha-numeric code that was randomly generated, yielding both data privacy and a means for identification by the researcher. The researcher will be the sole individual with knowledge of the identity of each participant; no identifying data will be disclosed during data analysis and report generation, and all data were secured according to IRB confidentiality requirements. Electronic files were stored on an external hard drive secured in researcher's practice office behind two locked doors. Files will be protected with an encrypted password that was only known to the primary investigator. Data will be maintained and stored for 3 years.

## Summary

The problem addressed by this study was the healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. While much attention has been paid to the clinical and operational challenges faced by healthcare systems during the pandemic, there remains a gap in research that captures the personal and professional experiences of healthcare workers on the frontlines, particularly during one of the most severe surges in infection rates and hospitalizations.

This qualitative descriptive study sought to address this gap by conducting in-depth, semi-structured interviews with 10 healthcare workers from various roles and settings across Texas. Participants were selected based on their direct involvement in patient care during the Delta wave. The data collected through these interviews were systematically analyzed using qualitative coding methods to identify meaningful codes, categories, and overarching themes that were directly tied to the research questions.

The findings of this study provided valuable insights into the motivations behind healthcare workers' decisions to leave their positions or transition to different roles within or outside the field. Key themes emerging from the data illuminated both external pressures and internal struggles that influenced these decisions, including moral distress, exhaustion, fear, and a perceived lack of support.

The next chapter examines themes identified in the data, including an exploration of the internal and external factors that contributed to the erosion of key elements of moral resilience: personal integrity, self-regulation, emotional buoyancy, moral efficacy, and self-stewardship. By understanding these dynamics, the study aims to inform future strategies for workforce retention, professional well-being, and systemic reform in the healthcare sector.

## **Chapter 4: Findings**

This chapter presents the findings derived from qualitative data collected through semi-structured interviews with 10 healthcare workers who provided care during the Delta wave of the COVID-19 pandemic. The problem addressed by this study was the healthcare worker attrition during the Delta wave of the COVID-19 pandemic in Texas. The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 to December 2021. The results were structured around three research questions that guided this investigation, offering a comprehensive examination of the challenges encountered by healthcare workers during the Delta wave period. Using a thematic analysis approach, a thorough analysis of the emergent themes, supported by direct participant quotes served to illustrate the nuanced experiences of those on the frontline of healthcare in Texas during the COVID-19 pandemic.

This chapter presents a discussion on the trustworthiness of the data, followed by the results obtained from semi-structured interviews conducted with study participants. Themes identified for each of the three research questions were reported. The chapter concludes with an evaluation and summary of the research findings.

### **Trustworthiness of the Data**

Qualitative research relies on the researcher as the primary instrument for data collection and interpretation, therefore potential bias must be acknowledged and mitigated utilizing strategies that enhance the trustworthiness of the findings (Lincoln & Guba, 1985). Trustworthiness encompasses the credibility, transferability, dependability, and confirmability of the findings (Lincoln & Guba, 1985). Each of these aspects is addressed in greater detail below.

### *Credibility*

Credibility in qualitative research substantiates the accuracy and consistency of the information by ensuring its plausibility based on the original data collected from study participants (Korstjens & Moser 2018; Lemon & Hayes, 2022). In this study, the researcher recruited participants from a population of healthcare providers who experienced working on the frontlines of the COVID-19 pandemic in Texas. Interview questions that were used to obtain data about participants' experiences can be found in Appendix A. To enhance credibility, the researcher spent time reading and re-reading interview transcripts comparing data to test and refine interpretations. Initial codes were derived from participants' words, compared across cases to ensure that subthemes, and broader themes remained grounded in participants' narratives. Following data collection, credibility was further enhanced through member checking (Motulsky, 2021; Schaffer & Phillippi, 2025).

The asynchronous member-checking approach used to obtain feedback was adapted from Schaffer and Phillippi's (2025) study which utilized video and internet-based technology to engage participants in sharing findings and requesting their feedback about the preliminary results. The researcher created a video synopsis of preliminary findings and embedded that video in a multimedia, mixed methods web-based survey which was emailed to participants. Utilizing this method of member-checking enabled participants to review and confirm the accuracy of the data and its interpretations, ensuring that their experiences were accurately represented. Additionally, participants from different roles (e.g., nurses, physicians, respiratory therapists, EMS) were interviewed, offering multiple data sources to compare perspectives and assess the consistency of key factors across roles, thereby enhancing the depth and reliability of the findings through triangulation (Schaffer & Phillippi, 2025).

Participants were provided access to their interview transcripts and a 15-minute video summarizing the preliminary findings, proposed implications, and recommendations for practice approximately 10 months after data collection and following the completion of coding, subtheme development, and thematic analysis. Each participant was emailed a copy of their interview transcript to review for accuracy, this method was used to verify the accuracy of the collected data (Kornbluh, 2015). Additionally, participants received a brief video summarizing the preliminary findings, the theoretical framework, proposed implications, and early recommendations for practice. Preliminary findings were shared with participants to help reduce bias and strengthen the overall rigor of the study (Schaffer & Phillippi, 2025).

Participants were invited to provide feedback by completing a brief four-question survey following the video to affirm the accuracy of the findings and offer any clarifications, additions, or suggestions (Creswell & Plano Clark, 2018; Doyle, 2007; Goldblatt et al., 2011; Harvey, 2015; Kornbluh, 2015; Lincoln & Guba, 1985; Tracy, 2010). Furthermore, member checking advanced transactional validity demonstrating respect for participants' expertise, enhanced transparency and confidence in the research process, encouraged participant self-reflection and active engagement, and ensured that final interpretations genuinely resonate with participants' lived experiences (Cho & Trent, 2006; Doyle, 2007; Kornbluh, 2015; Locke & Ramakrishna Velamuri, 2009). The primary investigator also provided participants with contact information for alternative options to respond in the format most comfortable for them via voice message, text, or email. Seven out of ten participants verified their transcripts and provided feedback that they "strongly agree" with the findings affirming the relevance and accuracy of the findings in relation to their lived experiences. All participants were prompted to complete an anonymous questionnaire that followed the video, one responded via email, six responded via questionnaire

with one providing clarification to a specified quote in the transcript, “It was accurate the only thing I would possibly clarify is where I said they told us not to treat patients it was more of a ‘you have to choose to work on which person is more likely to survive.’” Three participants did not respond. Participant feedback clarified potential researcher biases, and supported interpretive resonance with researchers’ representations (Harvey, 2015; Kornbluh, 2015).

### **Table 1**

#### *Member Checking Survey*

Thank you to all the amazing people who contributed to this important research! I am so grateful you were willing to share your stories and support. This page provides preliminary results for your review. Please share your feedback to help strengthen the results
Please review this video and then answer the questions below:
1. Please rate the extent to which you agree with this statement: “These findings feel true to my experience.” (strongly agree, agree, neither agree nor disagree, disagree, strongly disagree)
2. What about these preliminary results do you feel best encompasses your experience?
3. What about these preliminary results do you feel most need further development or improvement?
4. What else do you think we should know? (Any and all feedback is welcome!)
If you prefer to provide your feedback by uploading a video or audio recording, you can do so here or reach out by phone or text

#### ***Transferability***

Transferability refers to the extent to which study findings can be generalized or applied to other contexts, settings, or populations (Adler, 2022; Ahmed, 2024). Although the small sample size of 10 participants limits broad generalizability, transferability was supported by the researcher gathering rich detailed accounts of participants’ experiences and maintaining a comprehensive audit trail to enhance transparency and allow for external evaluation. Audit trail notes included the process of choosing a population and sampling method, data collection methods, steps used for thematic analysis, researcher reflection notes, records of coding decisions, and memos for detailing emerging themes (Baker & Edwards, 2012; Cobern & Adams, 2020). The researcher’s

documentation of decisions and processes allows other researchers to assess the relevance and applicability of the findings to their own contexts and settings as supported by Stahl and King (2020). Based on the results of this study, the findings may be transferable to healthcare professionals in other states, if similar conditions and contexts are present (Adler, 2022; Ahmed, 2024; Lincoln & Guba, 1985).

While healthcare policies and pandemic responses varied by state and country (Rushton, 2024), these differences may also substantiate core themes explored in this research. The emotional toll, ethical challenges, and factors contributing to job attrition among critical care healthcare workers during the Delta wave were fundamental issues relevant across regions. The methodology used for gathering qualitative data through interviews with healthcare providers directly exposed to COVID-19 patients can be replicated in other locations. By focusing on lived experiences, this research provides a nuanced understanding of how healthcare workers coped during this unprecedented time.

### ***Dependability***

Dependability in research refers to the consistency of findings over time and their potential for replication (Lincoln & Guba, 1985). Dependability increases when study findings are repeatable under similar conditions (Stahl & King, 2020). One method to enhance dependability is providing a detailed description of the study's participants, enabling future researchers to sample from a comparable population (Carcary, 2020; Nowell et al., 2017). The researcher has provided a detailed description of the sample for this study (see Table 2).

Dependability is also evidenced through the comprehensive description of its research methods. For this study, a systematic and auditable analytic process was maintained. Initial codes were generated with decision memos documenting when codes were combined and restructured.

These codes were grouped based on similarity and frequency to form preliminary subthemes. As the analysis progressed, codes and subthemes were refined, combined or restructured to reflect deeper patterns and connections within the data, with codebook versions created from NVivo preserved to track decisions. Transcripts were revisited throughout the process to verify the consistency and stability of coding and to ensure that revisions were applied uniformly across cases. The use of semi-structured interviews, snowball sampling, and a focus on capturing detailed accounts of participants lived experiences, enhanced transparency and replicability. Additionally, a detailed account of the data analysis process created an audit trail, enabling other researchers to follow the steps taken and replicate the study if desired (Carcary, 2020; Nowell et al., 2017). These strategies collectively support the replicability of the study's findings.

### ***Confirmability***

Confirmability ensures that research findings are grounded in the data and not influenced by researcher bias (Stahl & King, 2020). Several strategies were used to support confirmability, including the construction of a comprehensive audit trail. The audit trail provides an opportunity for outside researchers, experts, and peers to review the research process which documented key elements such as identifying the research problem, determining the methodology and design, developing research questions, and conducting a thorough literature review. Approval was granted by the National University Institutional Review Board for this dissertation proposal and included recruitment materials, the pre-screening questionnaire, informed consent, and interview protocol questions. Furthermore, the researcher constructed a coding scheme that demonstrated the analysis of identified codes, subthemes, and main themes. See Table 2 for the coding scheme. Documentation of the research process, including data collection, analysis procedures, and decision-making, further enhanced transparency. Detailed descriptions of the coding process, the

development of themes, and the rationale for interpretations strengthened the study's confirmability.

## Results

**Table 2**

### *Main Themes and Codes*

<b>Main Themes</b>	<b>Sub-themes</b>	<b>Codes</b>
<b>Fear of contracting &amp; Spreading COVID-19</b>		Family health concerns Personal health concerns Minimize exposure
<b>Systemic Breakdown and Resource Scarcity</b>	Stress & Exhaustion Ethical Conflicts Patient Care	Reusing PPE Extended wear of PPE Supply Shortages Overtime Job Stress Unknowns Frustration Care dilemma Depersonalization of care
<b>Duty and Calling as Catalysts for Coping and Resilience</b>	Duty and Calling Coping and Resilience	Sense of duty Love helping others Family support Self-care
<b>Erosion of Trust in the Healthcare System</b>		Vaccination Push Standard protocol changes Neg outlook on industry No outlook change for job
<b>Institutional Neglect and Work-life Imbalances</b>	Lack of Support Work-life balance challenges	No moral support No psychological support Money motivated No other work options

### **Study Participants Demographics**

The sample for this study included 10 healthcare providers who were employed across a variety of healthcare settings during the Delta wave of the COVID-19 pandemic. Participants represented diverse professional environments, including community hospitals, Level III trauma centers, private practice clinics, home health agencies, and emergency medicine departments.

They worked across different regions of Texas, specifically the southwest, west, and north Texas areas. Participants ranged in age from 23 to 57 years, bringing a span of professional experience ranging from 2 years to 25 years. Most participants (80%) identified as female, while 20% identified as male. Regarding racial and ethnic identity, 60% identified as Caucasian, 30% as African American, and 10% as Asian. All participants provided healthcare services during the Delta variant surge of the COVID-19 pandemic. Their roles often required evolving care demands, including shifts to high-acuity patient care, expansion of critical care units, while navigating rapidly shifting protocols, frequent breakdowns in communication chains, and institutional demands that often conflicted with their clinical training and ethical standards (Rushton, 2024). Table 3 details participant demographics.

**Table 3**

*Participant Demographics*

<b>Participant #</b>	<b>Participant Gender</b>	<b>Job Role</b>
<b>P1</b>	F	Physician
<b>P2</b>	F	Nurse
<b>P3</b>	F	Nurse
<b>P4</b>	M	EMT
<b>P5</b>	F	Nurse
<b>P6</b>	F	Nurse
<b>P7</b>	F	Respiratory Therapist
<b>P8</b>	F	Nurse
<b>P9</b>	M	Physician
<b>P10</b>	F	Nurse
<b>Total Participants: 10</b>	Total Male: 2 Total Female: 8	Physician: 2 Nurse: 6 EMT: 1 RT: 1

Note: P is for Participant

## Method of Analysis

To ensure confidentiality, all identifying information was removed, and participants were assigned alpha-numerical identifiers. All interviews were downloaded from Zoom to an encrypted external hard drive belonging to the researcher protected with an encrypted password known only by the principal investigator. The external hard drive was secured in her business office behind two locked doors. Only the researcher had access to the transcribed interviews, any identifying demographic information obtained was destroyed to protect participants anonymity.

Reflexive thematic analysis, as outlined by Braun and Clarke (2022), was used to analyze data due to its flexibility in identifying themes and patterns across data sets. Initial open coding of participant responses identified broad preliminary themes related to the research questions. NVivo qualitative analysis software was employed to substantiate and organize these themes. Table 4 details the steps the researcher took during reflexive thematic analysis and how they relate to Braun and Clarke's (2022) Thematic Analysis Framework.

**Table 4**

*Braun and Clarke's (2022) Thematic Analysis Framework*

<p><b>1. Familiarizing with the data by reading and re-reading transcripts.</b></p>	<p>Researcher conducted and transcribed 10 interviews. Transcripts were read several times, compared them with field notes taken during the interviews, patterns in the data began to be evident.</p>
<p><b>2. Generating initial codes from the data</b></p>	<p>Researcher maintained awareness of possible biases and assumptions via researcher notes. The NVIVO software was used to manually code participant transcripts, assist in organizing, and analyzing the data.</p>
<p><b>3. Organizing codes into broader themes</b></p>	<p>Participants were asked 14 interview questions that guided participant recount of experiences. The patterns in the respondents' answers resulted in two themes identified for RQ1. Two themes were identified for RQ2. One theme was identified for RQ3.</p>

<b>4. Reviewing each theme to ensure alignment with the supporting data</b>	Themes were reviewed to ensure inherent biases were not affecting data interpretation and that each theme was supported by participant data.
<b>5. Defining and naming themes with clear working definitions.</b>	Themes were reviewed to construct a brief description and a concise name for each theme.
<b>6. Producing a detailed write-up of the findings.</b>	Research findings were written for the interview questions tying them to a specific research question. Excerpts of participant interviews to provide background and justification for the themes.

### **Process to Derive Themes for Each Research Question**

The study employed 14 semi-structured, open-ended interview questions to explore the factors contributing to participants changing jobs. These questions allowed participants to elaborate on their lived experiences, providing detailed insights unique to each individual. First, the researcher immersed herself in the data by watching the recorded interviews and reading the full transcripts multiple times. This deep engagement allowed the researcher to gain a comprehensive understanding of participant narratives, while noting initial impressions and becoming sensitized to recurring language, emotional tone, and patterns related to stressors and lived experiences during the COVID-19 pandemic.

Next, manual coding was conducted for each transcript. The researcher reviewed each interview line-by-line, identifying, highlighting, and labeling specific stressors, emotions, and experiences mentioned by participants. Each code consisted of a short two-to-three-word descriptive phrase paired with a three-letter acronym to support efficiency and consistency. For example, when a participant described the stress of wearing personal protective equipment (PPE) for extended periods, the researcher generated the code “Extended Wear PPE” (EWP) and marked each relevant reference within the transcript.

As codes were developed, each one was simultaneously recorded on a separate spreadsheet for ongoing reference. This document served as a codebook-in-progress and provided a clear, organized record of all codes, acronyms, and definitions. As additional transcripts were coded, the researcher returned to earlier interviews to apply newly generated codes where appropriate, ensuring consistency and accuracy across all cases.

Themes and subthemes were reviewed and refined to ensure that coded extracts accurately reflected each theme's content and scope. The researcher assessed internal coherence within themes and evaluated their fit across the broader dataset. NVivo's analytic tools were used to examine the frequency of codes and their distribution across participants. Subthemes were considered significant if they were discussed by more than 50% of participants. These were then used to inform higher-level themes, especially in areas where the data revealed overlap or thematic convergence. The researcher developed clear definitions and concise names for each theme and subtheme. This process involved articulating the central idea of each theme, determining its relevance to the research questions, and ensuring it was distinct from other themes.

From the interview questions, themes were identified using Braun and Clarke's (2022) reflexive thematic analysis framework. Table 5 illustrates the themes that resulted from the analysis and the corresponding research question for each theme. Research Question 1 produced two themes. Research Question 2 produced two themes and Research Question 3 produced one theme (see Table 5).

**Table 5***Research Questions and Themes*

Research Questions	Themes
<b>RQ1. How do healthcare workers describe the psychological and moral challenges they faced during the Delta wave of the COVID-19 pandemic?</b>	Theme 1: Fear of contracting & Spreading COVID-19 Theme 2: Systemic Breakdown & Resource Scarcity
<b>RQ2. How do healthcare workers describe the effects of the Delta wave during the COVID-19 pandemic on their moral outlook?</b>	Theme 3: Duty and Calling as Catalysts for Coping and Resilience Theme 4: Erosion of Trust in Healthcare System
<b>RQ3. What contributing factors do healthcare workers identify as reasons for healthcare worker job attrition during the Delta wave of the COVID-19 pandemic?</b>	Theme 5: Institutional Neglect and Work-life Imbalances

Note: RQ means Research Question

From interview data provided by participants, themes were identified for each research question. Table 6 below lists each theme linked to its specific research question, participant response summary, and participant reference (see Table 6).

***Research Question 1***

Research Question 1 was, “How do healthcare workers describe the psychological and moral challenges they faced during the Delta wave of the COVID-19 pandemic?” The purpose of this question was to understand the specific factors and stressors that made this period particularly difficult, and to explore how these experiences influenced healthcare workers’ considerations to leave or change their jobs. Ten study participants’ responses to three interview questions were analyzed. Two themes for psychological and moral challenges emerged were (a) fear of contamination and transmission, and (b) systemic breakdown and resource scarcity related to RQ1 (See Table 6).

**Table 6***RQ1 Themes 1*

<b>Research Question</b>	<b>Theme</b>	<b>Response Summary</b>	<b>Participants</b>
<b>RQ1. How do healthcare workers describe the psychological and moral challenges they faced during the Delta wave of the COVID-19 pandemic?</b>	Fear of Contracting and Spreading COVID-19	Participants expressed fear and worry about potential exposure to the virus, risk to self, family and cross-contamination	P1, P2, P3, P5, P6, P7, P10
	Systemic Breakdown and Resource Scarcity	Participants described physical and emotional strain from long hours, PPE use, and working amid staffing and supply shortages, leading to compromised care and moral distress-	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10

Note: P means participant

**Theme 1.** The first theme to emerge as a psychological stressor during the Delta Wave period for RQ1 was Fear of Contracting and Spreading of COVID 19. Participants expressed fear and worry about potential exposure to the virus, risk to self, and possible spread to family, staff, or other patients. This awareness reflected an ongoing tension that became part of their daily routine and emphasized concerns that extended far beyond their shifts, influencing how they navigated interactions both at work and at home. Participants articulated the internal struggle that healthcare workers experienced by self-imposing isolation from family members to mitigate transmission risks, despite emotional hardship and loneliness.

Seven study participants out of the 10 interviewed cited fear of contamination and transmission as a significant psychological challenge related to their professional work. Participant 1, a physician described rigorous protective measures:

I got to go through a geriatric pregnancy wearing full PPE for every patient encounter.

We're talking N95s, bunny suits, swabbing people, coming home from clinic, you know,

and literally just shedding my scrubs, telling everybody, don't touch me, let me go shower. There were a lot of unknowns, just a lot of uncertainty, lots of prayers, lots of trying not to be afraid, but trying to also be there for our patients and be there for my family.

Participant 1 emphasized the emotional weight of navigating uncertain risks, persistent worries, and the exhausting efforts required to maintain the health and safety of her family during the ongoing uncertainties of the pandemic. Participant 1, a physician stated the following:

I had a newborn, and she couldn't get the COVID vaccine. So just being worried about my health, being worried about my family's health. And... we had patients come in and telling me, 'I don't have to wear a mask. I have my rights.' And we're like, well, we have rights to protect ourselves and to protect our families and to protect other patients. And there's a mandate from the governor printed on the wall, you know, unless you can provide us documentation that you have a condition that would provide an exemption for it. You know, but there was just, there was a lot of political back and forth. And I'm like guys, we're not trying to make this political we're trying to keep everybody alive. We don't have good medicines, you know, especially in 2021. You know, we were still learning so much about COVID. At that point in time, we didn't have great treatments, and it was still... lots of fear and so we were trying to do as much as we could to keep patients safe.

Participant 2, an ICU nurse, described working environments with high sickness acuity, significantly elevating their daily risk of exposure. She recounted the experience of wearing protective suits continuously for 12-hour shifts:

I was working for an agency, a travel nurse agency. So, I worked in the ICU and sometimes I would have two to three patients depending on how much help we had in the ICU that day. And during that time in a 12-hour shift, we would see probably 10 to 12 people that

would die during the shift. And as soon as one would roll out, we would get another one in. So, it was kind of tough and it was mentally draining. Just us having to be in those suits for 12 hours a shift, except when we'd leave for our lunch break, that was pretty tough. Just always having to like be careful about where you're going, where you're sitting, who you're talking to. Because at any time, like that person can have COVID and you can easily get it as well. Thank God, throughout that entire time that COVID was going on, I never had COVID. So, I was blessed with that, but I had many friends that did, and I know some of the nurses that got it and passed away.

Participant 3, an emergency room nurse, expressed that healthcare workers felt the need to distance themselves from family to reduce the risk of transmission. Participant 3 stated, "And so, there was a lot of risk to...Like a lot of us didn't want to be around our family members because we were worried that we would spread it."

Participant 5, a clinic and home health nurse shared the challenge of balancing multiple roles in healthcare while managing the risks associated with different work environments.

Participant 5 stated the following:

So, I did. At the time, I had a couple of different positions I was a fertility nurse, but I also did home health with our elderly patients. So, it was a very difficult dynamic to manage because I was in clinic during the day. And then in the evenings and the weekends, I would have to go to different assisted living facilities, patients' home to care for them. And so that was a bit of a struggle trying to manage the two because you just never knew who was sick. If you're transmitting something to the elderly that are a lot more susceptible and responded, you know, catastrophically to the disease itself. So that

was something that that was a balancing act for myself and then coming home to my family it was a trying time.

Participant 6, a cardiac operating room nurse, described how she was regularly confronted with the most critical case patients who required treatment used for severely ill individuals whose heart and lungs were incapable of adequate function. This responsibility meant she consistently dealt with high-risk patients intensifying her sense of vulnerability and fear of exposure. Participant 6 expressed the following: “And then a lot of us were scared that we were gonna bring the virus home to our families and we didn't know, we were seeing so many people die from it.”

Participant 7, a respiratory therapist with 15 years of experience in both pediatric and adult care, shared that she was in close physical proximity to COVID-19 patients, managing airways and operating life-sustaining ventilation equipment. The tasks she stated often she had to perform alone, carried an inherently high risk of viral transmission. She expressed concern not only for herself but was cautious of spreading it to those at home.

And then coming home, making sure when I came home, I didn't spread it to my husband and my dog. Because when we saw the report that the animals could get it, well, my dog would meet me at the door every morning. So, then we had to stop that because I didn't realize animals could get it.

Participant 10, a renal nurse, shared about the potential personal consequences of exposure to the virus:

Well, psychologically, I was concerned that I was going to bring something home to my family. I was always worried that I was going to get sick and leave, you know, leave my family. I was more worried about getting my family sick and I didn't sleep in room with my husband for a long time because I was afraid I'd get him sick because he has a chronic

condition which it causes his immune system to be not bad, but not the best. So, I was worried I was going to get him sick.

**Theme 2. Systemic Breakdown and Resource Scarcity.** Seven out of 10 participants described experiencing significant supply shortages during the Delta wave of the COVID-19 pandemic. Supply shortages emerged as a significant challenge, with participants describing a persistent lack of essential resources needed to perform their duties safely and effectively. Many recalled the rapid depletion of personal protective equipment (PPE) and other critical supplies, creating uncertainty and added stress in an already overwhelming work environment.

Furthermore, the systemic changes implemented in response to the COVID-19 crisis, such as rapidly shifting policies, visitation restriction, office occupancy changes for patients, and converted treatment areas. These abrupt changes often forced clinicians to operate outside of their preferences, compounding their moral and professional distress. In addition, these systemic disruptions directly impacted patient care and outcomes. Participants noted that patients and their families experienced confusion and frustration as their expectations for care, such as timely attention, consistent providers, or standard procedures, could no longer be met. The erosion of normalcy and predictability in care delivery deepened the emotional toll on both patients and providers, contributing to a widespread sense of disconnection, helplessness, and loss of trust in the system.

Participant 1, a physician stated:

Some patients were wonderful, some of them were very grateful and thanking us. But some of them were horrible. They're like, 'I can't believe that I can't come inside.' I'm like, we're trying to keep you from all the other diseases that are inside it was just, there was a lot of mental beat-down from people just from the way we were treated.

Participant 2, an ICU nurse, reflected, “Seeing everything that was going on how we had, like, the shortage of supplies and different things like that.”

Participant 3, an ER nurse explained, “There was a lot of the PPE that they said we were supposed to be wearing at all times, but it ran out very quickly,” emphasizing the dissonance between mandated safety protocols and actual supply availability.

Participant 6, an OR nurse stated, “We had a lot of issues with supplies, you know, the supplies that you normally would have.” Participant 7, a respiratory therapist shared the anxiety of entering each shift with no guarantee of protection, “Not knowing if I was going to have enough equipment and not knowing if I was going to have the supplies to cover myself.”

For many, the shortages left them feeling helpless and unprepared. Participant 8, an ICU nurse described it as a "hands-are-tied scenario where we didn't have resources that we needed," capturing the paralyzing effect of equipment scarcity on their clinical practice. PPE reuse became a recurring and ethically troubling practice. Participant 4, an EMT recalled, “We weren't allowed to change masks for weeks or months at a time, even though the masks are only designed for one use.”

Participant 6, an OR nurse added, “We usually had about three different masks that we were assigned that we had to keep reusing. So that right there, it goes against all our principles because nowadays almost everything besides instrumentation is disposable.” Disparities in PPE distribution further fueled the sense of inequity. This uneven allocation left some units more vulnerable than others, despite similar risk levels. Participant 7, a respiratory therapist noted:

You would get a certain amount of mask assigned to you for your shift... I worked in the labor and delivery, high risk labor and delivery... so I would get a little bit more than my coworkers who were working in, like, say, the ER or the ICU.

Resource allocation also impacted patient care. Participants recalled the overwhelming patient load and the heartbreaking reality of prioritizing life-saving interventions and supplies for those most likely to survive due to limited resources. Despite their best efforts, many felt powerless, as there were simply too many patients in need and not enough hands to help. The emotional toll of feeling unable to provide sufficient care compounded the stress and burnout among healthcare workers. Many participants expressed distress over having to choose between protecting themselves and their families or providing care to critically ill patients. Others described the moral strain of being unable to administer life-saving interventions due to institutional policies. Some struggled with the pressure of deciding which patients would receive ventilators or emergency care when resources were scarce.

Participant 2, an ICU nurse, described the urgent need for additional staff during the crisis, highlighting how untrained individuals were quickly brought in to assist with patient care despite minimal preparation:

We didn't have a lot of trained people that were out there on the floor. It was just people that wanted to help. And they just basically gave them an eight-hour video to watch and being told that they can go out and help as far as CNAs.

Participant 3, an ER nurse, shared the impossible choices healthcare workers had to make, balancing their own safety with their duty to care for critically ill patients:

We were having to, like make the decision, either you're gonna treat your patients and probably get sick yourself or you're not gonna treat your patients. And it was something that I hadn't experienced prior to that. And it was very stressful and just debilitating to have to make that choice.

Participant 4, an EMT, reflected on the critical role of emergency medical services, recalling how ambulance teams became the only means of hospital transport for patients in life-threatening conditions:

Like you would go into a nursing home to pick up somebody that needed to go to the hospital, who could not get to the hospital without your ambulance because they had life-threatening problems.

Participant 6, an OR nurse, explained the difficult triage decisions healthcare providers faced, where life-saving surgeries were only performed in the most extreme cases, “If they were gonna die without the surgery, like immediately, then we had to do it.”

Participant 8, an ICU nurse, described the overwhelming patient load, emphasizing the struggle to provide care to everyone in need, “It was hard to get to everybody that needed treatments and stuff, because there was just so many.”

Participant 10, a physician expressed the emotional toll felt as a provider, “The major stressor was I felt like there was not enough that I could do.”

Participant 3, an ER nurse, described harrowing ethical dilemmas:

So, I would say the biggest thing and like the first thing you're taught as a healthcare professional, right, is CPR, life support. Lifesaving care is like the first thing you're taught, you had to choose to work on which person was more likely to survive. If somebody had a really bad case of COVID and they had premeditating factors, like, you know, they already had cancer or they had COPD, emphysema, something like that. And they started coding. They went into cardiac or respiratory arrests. If there was basically a criteria to say how likely they were to survive, and if they didn't meet a certain criterion, they wanted us to not provide lifesaving care to these people. And that's extremely difficult, I feel like for anyone,

but especially for healthcare providers, because that's what we went into this work to do. We went into it to save lives. So, to be told, don't save this person's life was extremely morally difficult. And it felt like we were just signing somebody's death sentence.

Inadequate access to critical medications compounded the problem. Participant 8, an ICU nurse recalled, "Reusing PPEs and not having some of the medications available and things like that, there was a lot of constraints as far as that was concerned."

Participant 2, an ICU nurse, shared a personal example of how extreme safety protocols, implemented without adequate consideration for healthcare providers' basic needs, created ethically challenging conditions that restricted self-care:

I got a UTI twice. By having to stay in those suits all day long because it's like they had to literally like tape those suits on you in order for you to stay safe. So sometimes I would just go the whole day without drinking water just so I wouldn't have to go to the bathroom until I got off shift.

Participant 7, a respiratory therapist, recounted the devastating reality of having to determine which patients would receive a ventilator when resources were critically low, "So just trying to choose who would get a ventilator, you know, based on everybody's vitals looking horrible."

As an experienced ICU nurse like Participant 8, the inability to uphold patients' spiritual and end-of-life wishes became a source of moral distress. "I just felt bad for the patients because we couldn't always respect wishes that they wanted under those circumstances," she recalled. Hospital policies prevented family visitation, implemented to limit viral spread, clashed with patients' deeply held religious beliefs and needs for human connection during their final moments. Participant 8 highlighted how even sacred rituals such as last rites were disrupted.

"Some last rites were given, but it's not in the direct way that they normally are done, you know, like over the person or with the person or with the family."

Adding to the moral weight was the overwhelming patient volume. "Just the mass amount of people, that, you couldn't get to everyone in the way that you felt you needed to on a normal basis or would be able to," she said. The emotional strain of having to prioritize care, compromise values, and deny patients the full expression of their humanity left healthcare workers like Participant 8 emotionally depleted and ethically burdened. These situations often forced them to reconcile their professional roles with personal values in a setting where systemic constraints left little room for compassionate flexibility.

Ninety percent of participants (n=9) cited stress and exhaustion as the most significant psychological challenge related to their professional roles during the Delta wave. Participants described pervasive, multidimensional stress characterized by relentless emotional strain, extreme physical fatigue, and chronic uncertainty. Participants articulated being trapped in cycles of continuous overtime shifts and unprecedented workloads, compounded by insufficient staffing levels and relentless exposure to suffering and death. Participant 2, an ICU nurse recalled the conditions in the ICU:

So, I worked in the ICU and sometimes I would have two to three patients depending on how much help we had in the ICU that day. And during that time in a 12-hour shift, we would see probably 10 to 12 people that would die during the shift. And as soon as one would roll out, we would get another one in. So it was kind of tough and it was mentally draining.

Participant 1, a physician, recounted experiencing profound stress before shifts that their well-being suffered, describing it as: "I was very, very stressed. I was throwing up before work

most days and it was not a good place to be in." Such severe physical manifestations highlight how deeply stress infiltrated even routine aspects of daily living. Similarly, Participant 6, an OR nurse revealed direct health consequences from the job stress, noting repeated hospitalizations: "I kept ending up in the emergency room with hypertensive crisis, just because the job was stressful, but the position I was in was also stressful."

The magnitude of patient volume created an environment of chaos and perpetual crisis. Participant 3, an ER nurse, illustrated this vividly, saying: "We were working a lot of overtime because every day was so packed. We had people in beds in the hallways because we didn't have any space in rooms." Participant 7 added to this picture of physical depletion, noting basic self-care became a luxury: "Sometimes I wouldn't hydrate. I wouldn't get to hydrate like I should. And it's just like, you really are just running on fumes."

Additionally, the continuous workload strained interpersonal dynamics and workplace morale. Participant 4, an EMT, described this oppressive weight, stating:

Even your days off, you're just trying to catch up from that extreme work period that you had. So, I'd say it never felt like there was time off, which they don't adequately prepare you for in school...Nobody said that. Nobody pulled us aside and gave us a heads up that it's worse. So, my main word is exhaustive, but another word I would say is just oppressive. I'd say the weight was oppressive."

Participants consistently emphasized the severe consequences of chronic exhaustion and unrelenting demands. Participant 8, an ICU nurse, captured the cumulative emotional and physical impact clearly: "Just sheer exhaustion. Just that it was a lot of emotional and physical exhaustion." Likewise, Participant 10, a renal nurse described working seemingly endless shifts of 18 to 24 hours, summarizing the despair vividly:

And sometimes we'd work 18, 24 hours. And it was just like it was never ending. I could see myself going down a hole and getting depressed. You know, cause all there was to do was work 16 hours, go to bed, get up, do 16 hours.

## Research Question 2

Research Question 2 focused on “How do healthcare workers describe the effects of the Delta wave during the COVID-19 pandemic on their moral outlook.” Table 7 connects the interview responses to Research Question 2, the corresponding interview questions, themes that emerged through analysis, and a summary of study participant responses. Ten study participants’ responses were analyzed for themes for RQ2. Three themes emerged that were (a) duty and calling, (b) coping and resilience, and (c) erosion of trust in the healthcare system.

**Table 7**

### *RQ2 Themes 1*

<b>Research Question</b>	<b>Theme</b>	<b>Response Summary</b>	<b>Participant #</b>
<b>RQ2. How do healthcare workers describe the effects of the Delta wave during the COVID-19 pandemic on their moral outlook?</b>	Duty and Calling as Catalysts for Coping and Resilience	Participants discussed their ability to endure challenges through purpose, personal dedication to patient care, and adaptive strategies that helped them navigate the emotional and physical toll of their work.	P1, P3, P4, P5, P6, P7, P8, P9, P10
	Erosion of Trust in the Healthcare System	Participants discussed challenges with adaptability while simultaneously expressing disillusionment with a system that failed to support them.	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10

**Theme 3.** Duty and Calling as Catalysts for Coping and Resilience emerged as a significant theme, with 10 out of 10 participants acknowledging this as a dynamic of their work as healthcare providers. Despite the immense challenges they faced, many participants expressed a

deep sense of duty and calling that compelled them to continue their work, even at great personal cost. They described the internal struggle of balancing their professional responsibilities with their obligations to their own families, often feeling torn between the two. Many participants spoke of their commitment to providing the best possible care, even when systemic barriers limited their ability to do so. Some felt a heightened sense of responsibility, not only for their patients but also for less experienced colleagues who relied on their guidance. Others reflected on the core reasons they chose their profession, emphasizing that their commitment to nursing or emergency care was driven by a fundamental desire to help people. For some, their sense of calling was deeply tied to their faith, leading them to offer prayers or final moments of comfort to dying patients when no one else was present. This profound dedication, while fulfilling, also contributed to emotional and physical exhaustion, as participants grappled with the weight of their responsibilities in an environment that often felt overwhelming. Participants found strength in their deep sense of purpose and commitment to their profession. Many described their love for nursing and patient care as a driving force that kept them going despite the hardships they faced. Their passion for helping others provided a source of motivation, allowing them to find meaning in their work even when conditions were overwhelming. Some viewed their roles as a calling or civic duty, reinforcing their resilience and determination to continue providing care. Others found fulfillment in knowing they were making a difference, focusing on the positive impact they had on patients' lives. This strong personal connection to their work helped them cope with the emotional and physical toll of the pandemic, giving them a sense of stability and perseverance in an otherwise unpredictable and exhausting environment. Participant 3, an ER nurse, reflected on the ethical dilemmas emergency workers faced, recalling the frustration of being restricted in how much life-saving care they could provide:

As emergency workers, we always wanted to provide the best care we wanted to save lives. And we weren't, it felt a lot like we were being, that you can only save lives if you go so far. And then if you go any farther than that, you have to stop.

Participant 1, a physician, described the emotional struggle of balancing professional responsibilities with personal commitments, trying to support both patients and family during the crisis:

I guess the anger that would get expressed to us when we would try to talk about good medicine, you know, hey, it's not good medicine for me to just call in an antibiotic for you, or it's not good medicine for me to tell you to go drink some ivermectin that's made for horses, you know, over and over and over again.

Participant 4, an EMT, highlighted their strong sense of duty and commitment to their work, believing that continuing forward was always the right thing to do, “But at the end, you always keep going because it's your civic duty because you believe no matter what you've done, this is the right step.”

Participant 5, a clinic and home health nurse, reflected on the core motivation that drove them and their colleagues to persevere, emphasizing the deeper purpose behind choosing a career in nursing, “But we became nurses for a reason. At least that's how I perceived it for myself.”

Participant 6, an OR nurse, highlighted the unwavering dedication of healthcare workers, explaining how they did whatever was necessary to prioritize patient well-being:

We just did whatever we could, what was best for the patients. It's the only job I know and I love taking care of patients. You know, I got into nursing because I wanted to make a difference and to take care of people. My mom also wanted me to be a nurse so that also helped. She was living vicariously through me because she wanted to be a nurse, but

because she had me and my brother, she couldn't. But I just, once I got into it, I just loved it. So, I love my coworkers, my, most of my friends, actually all of my friends, I think are techs or nurses, but basically my entire group of friends are medical professionals.

Participant 7, a respiratory therapist, shared the profound emotional weight of being the sole person in the room during end-of-life moments, turning off life support and offering prayers in solitude:

So, a lot of the times I was the only person in the room turning off the life support. I'm a Christian, I'm just like, I'll say a prayer. It's like nobody else would come in the room and then we would sort of just like leave them.

Participant 8, an ICU nurse, reflected on caring for patients and their family members:

You have that guilt of them seeing their (loved ones) through windows and not even that sometimes. So, a lot of times with my patients, I would take my phone in and let the families FaceTime with them just so they could hear their voice, even if they were on the bench, so they could hear them and talk to them and, you know, sing to them and see them because they weren't allowed in. So, you feel really guilty about that when they can't do that.

Participant 9, a physician, also conveyed a strong sense of moral duty and professionalism that motivated him to step into an unfamiliar role during the pandemic. As a physician who specialized in urology, recounted how he was tasked with overseeing the rollout and administration of COVID-19 vaccines for the county hospital district. "I oversaw who was getting the vaccine and made sure that they were following the guidelines of the state at the time, whatever the guidelines were, because they changed them..." he explained. Although vaccine distribution fell outside his specialty, he embraced the responsibility out of a sense of obligation to public health and the community. Concerned about informed consent, he took the initiative to revise and expand the

consent forms to better reflect the risks identified in the emerging literature. "I added extra pages and warnings based on what we were seeing in the literature," he said, demonstrating a proactive and ethically grounded approach to provider and patient care. When first responders contracted COVID-19 between the first and second vaccine doses, he made evidence-based decisions to withhold the second dose, citing the original research protocol that guided the trials. "I pulled the research protocol for the shots... If they got COVID after the first shot, they didn't give them the second shot. I was afraid of them having a really bad reaction to the second shot." His choices were not without controversy. He described friction with a city-level medical directors who wanted access to distribute vaccines independently. "They were a little bit peeved because the county hospital district got the shots before they did," he said. Yet he remained steadfast, protecting his medical license, insisting that evidence guide practice. "It was my NPI, it was my license on the line." When questioned by the city's medical director, he defended his stance with research-backed documentation, which eventually became accepted policy. "I pulled up their research protocol, and I gave it to them. I showed them the exact part of it... they thanked me for doing that."

Participant 10, a renal nurse, expressed a deep sense of duty, emphasizing their personal calling to serve and help others despite the overwhelming challenges, "Well... I never compromised my morals. I always, you know, when you're a nurse, you take an oath to take care of patients and do the best you can for them. So, I just did it."

Participant 1, a physician, expressed fulfillment in their role, appreciating the opportunity to continue helping patients by ensuring their needs were met:

And so, I relied on my faith system that things were going to work together for good somehow. I didn't see how, but I knew that where I was, was not sustainable. And so, I left and walked into something, walked away with the hope of something better and found

something better. And so, I learned that I am more resilient than I realized. I also learned that leaving a bad situation doesn't make you a quitter. I was raised, you don't quit, you don't quit, you don't quit, never quit. Like you always press through, but I realized that you don't have to take abuse just for the sake of that. And that sometimes walking away is a greater sign of strength than staying in a bad situation.

Participant 2, an ICU nurse, shared their deep passion for nursing, emphasizing that their love for the profession kept them committed despite the challenges, "It has made me appreciate life and it made me want to teach others how to be safe in the healthcare field was one of the reasons why I started the school."

Participant 3, an ER nurse, recalled their lifelong calling to help others, explaining that nursing had always felt like the natural path for them:

I'd only been a nurse for, I think, three years when COVID hit. And I was initially very timid about standing up to superiors. I didn't, you know, I didn't want to rock the boat. And I think since then, and I think since then, I really don't hesitate because to me, it's like, I already felt like I compromised my morals once in this field and I'm not gonna do it again.

Participant 4, an EMT, expressed the following:

Like I said, I think overall I got stronger, but definitely at the time, at the time it definitely waned and waxed as it came in and out, depending on people. I'd say after I finally got out of emergency medical care, it was as if enough weight had been lifted.

Participant 5, a clinic and home health nurse, reflected on their motivation for becoming a nurse, reminding themselves that their genuine love for caring for people kept them going:

And I did a lot of soul searching, a lot of praying, a lot of talking to Jesus, trying to figure out like, God, if this is what you want me to do, if this is where I really need to be, then I will be it and I will be here all in. But if it's not, I need you to give me signs. So that was the big struggle during that specific time

Participant 6, an OR nurse, shared their deep connection to their profession, emphasizing that nursing was all they had ever known and truly loved:

You know, where before I wouldn't have ever argued with a patient if they didn't want blood, we'd say, okay. But now you have to be more blunt because their rationale isn't even religious purposes. It's just fear of, I guess, of the unknown.

Participant 8, an ICU nurse, expressed a deep sense of purpose in their role, believing that caring for others was their true calling in life:

I guess a lot more aware of those needs for those, you know, those types of situations just a better understanding of that. Cause it was hard. That part was really hard. know, people not getting to say goodbye and all that. So, I really try to encourage that with families now, you know, if they've got a family member, there's a lot more openness to that and try to encourage them to be a part of that process.

Participant 9, physician, described the personal satisfaction and joy they found in their work, which ultimately motivated them to stay in the field, "I like what I do. The enjoyment that I get from my job and satisfaction made me stay."

**Theme 4.** Erosion of trust in the healthcare system emerged as a theme with eight out of 10 participants expressing concerns about the lack of support, shifting priorities, and overall disillusionment with the industry. Many participants described feeling abandoned by their institutions, noting that decisions often seemed driven by financial concerns rather than patient

care or staff well-being. Some expressed skepticism toward the motives of pharmaceutical companies and healthcare corporations, perceiving a system that prioritized profit over public health. Others highlighted a deep sense of betrayal, as they witnessed hospitals and administrations failing to provide adequate protection, resources, or recognition for frontline workers. This perceived neglect led to diminished confidence in healthcare leadership, with some stating they would hesitate to seek medical care themselves due to doubts about the system's integrity. The combination of these factors resulted in feelings of frustration, cynicism, and, for some, the decision to leave their jobs or reconsider their place in the profession altogether.

Participants described navigating policies and procedures that often felt contradictory to best practices or failed to support frontline workers. Participant 1 reflected, "So there were some issues with not having my voice heard in pretty much anything," pointing to the top-down decision-making that ignored worker input. Furthermore, participants described ethical dilemmas related to vaccination mandates, these mandates posed significant moral and professional conflicts, leaving healthcare workers feeling trapped between their deeply held personal beliefs, professional autonomy, and financial necessity. Participants vividly depicted the mandates not merely as organizational policies but as emotionally charged ultimatums that intensified workplace tension, exacerbated feelings of powerlessness, and heightened distrust toward institutional leadership.

Participant 2, an ICU nurse, during the Delta wave, expressed profound frustration and skepticism regarding the vaccine requirement, stating:

I got the vaccine to work and pay my bills. I felt like they were pushing a vaccine on us because they had pushed this disease on us... it's like they create a disease, then they create a drug. Big pharma. That's how I feel about it. We had to have them, or we couldn't work. So, I got mine done.

This sentiment of coercion and compromised autonomy was echoed by Participant 10, a renal nurse who described the mandate starkly: “It was pretty much take it or don't work. If you don't take it, you're not working.” Similarly, Participant 3, an ER nurse underscored the ultimatum, succinctly capturing the severity of the institutional policy: “You had to be vaccinated, or you were fired.”

The communication strategies surrounding the mandates intensified the sense of mistrust and unease. Participant 7, a respiratory therapist, perceived the process as deceptively subtle, recalling:

They were very sneaky about it, in my opinion. They sent out sort of like an email, and it was like, ‘please upload your vaccine if you have gotten the vaccine.’ And I was like, well, that's odd.

Participant 6, an OR nurse, highlighted the gradual escalation of vaccine expectations, noting the subtle shift in organizational messaging: “Initially, I think it wasn't mandatory, but it was like recommended. Then towards, I think towards the end, they made it mandatory.” These requirements had direct and tangible consequences for healthcare workers, threatening their financial security and career stability. Participant 4, an EMT recounted that those hesitant to comply faced immediate repercussions: “We were told that we had to get vaccinated or we would lose hours until we chose to.” Participant 8, an ICU nurse captured the decisiveness of these institutional demands, stating, “But there came a time when they were pretty solid on, ‘Get it done or be fired.’” Participants grappled with profound discomfort around forced compliance, often viewing it as a betrayal by the very healthcare systems they served. This sense of coercion and mistrust significantly amplified existing stressors, contributing further to participants' emotional

exhaustion and demoralization, ultimately challenging their sense of identity, professional integrity, and job security.

Additionally, participants frequently recalled institutional decisions characterized by abrupt protocol shifts, contradictory messaging, and rapid policy reversals all implemented without meaningful consultation with the frontline providers who would be directly impacted. Over time, these institutional actions significantly diminished healthcare workers' trust and confidence in organizational leadership and decision-making processes, reshaping their view of the system they once respected and relied upon.

Participant 6, an OR nurse, described these abrupt and frequent procedural changes, stating simply: "The way that we handled doing procedures in the ICU changed, you know." Such continual changes without frontline input fostered confusion, creating instability and frustration among staff. Similarly, Participant 10, a renal nurse, echoed this uncertainty, highlighting the ongoing disruptions that undermined confidence: "And then the other stressor was with personnel and how the rules seem to change a lot as we went along."

Participant 8, an ICU nurse, offered a compelling portrayal of how longstanding protocols and standards became flexible or discarded during the pandemic, only to later revert without acknowledgment of prior exceptions:

Well, you know, all the things that we were grilled over...I've been a nurse for 28 years and you know, before it's 'you have to do this, you have to do that, you have to do this.' It got really lax during COVID...now that COVID has kind of gone by the wayside, they're kind of going back to, 'you can't reuse this, you can't reuse that, you can't change this,' but we did it for two and a half years, you know. So, there's a lot of wavering. Some of the confidence is kind of, you know, not gone, but...I don't know, what they used to

tell us was mandated, then they changed it during COVID, now they're trying to go back to it. It's kinda like telling a kid they can't have something, then giving it to them, then taking it back.

Participant 1, a physician, reflected on this erosion of support directly, noting a tangible shift toward negativity and reduced trust in the healthcare industry, stating clearly: "It became more negative. I just felt there was not nearly enough support for us."

Participant 10, a renal nurse's perspective was particularly stark, viewing the damage as permanent and deeply structural, "Nursing will never recover. The field of nursing will never recover from the COVID-19 pandemic. Healthcare has not become healthcare. It's become corporate."

Participant 3, an ER nurse, expressed significant disillusionment regarding organizational priorities, observing:

I think that I saw a lot of people who really wanted to help. And I saw a lot of people who were willing to do whatever they had to do to help. And on the flip side of that, I saw a lot of organizations who saw how much money they were losing and were trying to cover their losses. I think it made a lot of us lose faith in the system.

Participant 4, an EMT, shared their perspective which highlighted a more personal shift, indicating hesitancy to utilize emergency healthcare services unless absolutely necessary. Their hesitation to call 911 unless facing a life-threatening emergency reflects a loss of confidence in the system's ability to provide safe, effective, or compassionate care.

Like, I don't know if I'd ever call 911 for anything that wasn't an immediate threat to my life. I feel like I'd just be like, alright, throw me a bandage and some ice, let's get out of here.

Participant 6, an OR nurse, acknowledged that they experienced eroding trust in the healthcare system by stating:

It did a little bit just because they kind of put us, they put us in awkward positions that I didn't agree with, you know because they didn't know what to do. They mandated a lot of things that a lot of us didn't agree with like reusing supplies, reusing instruments, things that we never would have done.

Participant 7, a respiratory therapist, captured the emotional impact of feeling undervalued, prompting significant career and personal reflections:

I was looking for jobs. I was looking for purpose. I was really feeling like, why am I at a place where I care so much about people, but my facility doesn't care about me? I ended up leaving that facility.

Participant 8, an ICU nurse, clearly summarized the diminished trust in institutional leadership, describing administrative support as inconsistent and unreliable:

Just, it's very wishy washy sometimes. And they don't...they didn't have our backs then.

Participant 8 further reinforced this erosion by stating explicitly, "So the confidence level (I have) in our administration and stand behind is very lacked on that.

### ***Research Question 3***

Research Question 3 focused on “What contributing factors do healthcare workers identify as reasons for healthcare worker job attrition during the Delta wave of the COVID-19 pandemic?”

### **Table 8**

#### *RQ3 Themes 1*

<b>Research Question</b>	<b>Theme</b>	<b>Response Summary</b>	<b>Participant Contribution</b>
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RQ3. What contributing factors do healthcare workers identify as reasons for healthcare worker job attrition during the Delta wave of the COVID-19 pandemic?	Institutional Neglect and Work-life Imbalances	Participants described a lack of employer support and the struggle to prioritize their well-being while balancing personal and professional demands during the pandemic.	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10
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**Theme 5.** Institutional Neglect and Work-life Imbalances emerged as a significant theme among all 10 participants who highlighted challenges related to inadequate staffing, insufficient protective equipment, and a general absence of institutional backing. Many described feeling overworked and undervalued, expected to function in high-stress environments without the necessary tools or reinforcements. Participants expressed that there was "none" or "nothing" available in terms of support or resources, with statements reflecting the widespread absence of crucial services such as psychological healthcare or even basic material needs. Participants described a profound absence of institutional support and critical resources, highlighting systemic inadequacies such as insufficient staffing, scarce protective equipment, minimal psychological care, no moral support, and profit-driven leadership. These external challenges exacerbated the internal struggle of maintaining a healthy work-life balance. Participants recounted intense pressure, emotional exhaustion, and compromised personal well-being, often feeling forced to prioritize professional responsibilities over personal health, family relationships, and self-care. The resulting emotional, physical, and financial strain significantly contributed to burnout, moral distress, and ultimately influenced healthcare workers' decisions to exit their roles or seek less stressful professional environments. Several participants noted that their employers were more focused on profit than on providing adequate support for staff, reinforcing the perception that healthcare institutions prioritized business over the well-being of their workers. Additionally, the lack of mental health support left many workers to navigate the emotional toll of the crisis on their

own, contributing to burnout, moral distress, and, in some cases, the decision to leave the profession altogether.

Participant 1, a physician, stated plainly that there was no support provided during the crisis, “None. None.”

Participant 10, a renal nurse, immediately confirmed that they did not receive any support from their organization, “None. I can tell you that right now”

Participant 2, an ICU nurse, echoed the sentiment, emphasizing the complete absence of assistance, “None.”

Participant 4, an EMT, noted that while there were no major forms of support, there was nothing particularly significant offered, “There was never anything major.”

Participant 5, a clinic and home health nurse, reflected on the lack of support, attributing it to the business-driven nature of healthcare institutions, “Not a whole lot. I don't, from either facility, because at the end of the day, it's a business to them, and they're in the business of making money.”

Participant 7, a respiratory therapist, described the lack of options available, feeling as though there was no choice in the matter, “Nothing. It was you either get this or you don't.”

Participant 8, an ICU nurse, confirmed that they had received absolutely no support during the crisis, “Nothing. Nothing at all, actually. There wasn't anything.”

Participant 10, a renal nurse, reiterated that there was no support provided by their employer, “There was none. Not with the company that I worked with.”

Participant 1, a physician, again confirmed the absence of support, “None.”

Participant 2, an ICU nurse, elaborated on the lack of psychological support, emphasizing that no resources were made available, “And there were no opportunities for support, nothing to access virtually, nothing to use that they offered for psychological healthcare.”

Participant 7, a respiratory therapist, described how there was not even a small gesture of support to provide relief, “I would say nothing. I can't recall anything that would like even just give us a moment of peace.”

Participant 8, an ICU nurse, restated the complete absence of support, " Nothing. Nothing at all."

Participant 9, a physician, succinctly confirmed that no support was offered, " None, Nothing."

The theme reflects the deep tension healthcare workers faced in balancing their dedication to their profession with the need for self-care and family time. Participant 1 reflected on their struggle to focus on their own well-being during the crisis, “I was not good at prioritizing myself.”

Participant 1, a physician expressed:

I left clinical medicine in September of 2021, did not have another job lined up at that point, but just knew that I needed for my own sanity to get out. I'm sitting in my home office right now. I was able to get up and work out this morning which has been great for my mental health to be able to do that. And then I feel like I get to help patients still because I'm able to look at things and try to get as much stuff covered for them as I can. So, it's been a really good, really good fit for me.

Participant 2, an ICU nurse, shared the following:

I stayed in because I absolutely love what I do as a nurse. I've always loved being a caregiver and teaching others how to be a caregiver as well. So that's the reason why I'm still in the healthcare industry as a nurse. I now teach. So, I'm not at bedside anymore because, I mean, I still go bedside when I take my students to clinicals, but as far as my full -time job being a bedside nurse, no, I don't do that anymore.

Participant 3, an ER nurse, expressed the following:

I mean, I knew I didn't want to work 12-hour shifts once I had a family. So that was a little bit of a factor, but I probably would have stayed in the emergency room just doing like eight-to-10-hour shifts if COVID had never happened.

Participant 4, an EMT, described a personal tendency to emotionally withdraw as a way of dealing with overwhelming circumstances:

I was scared of the lack of care I felt about my patients. I was scared that that would mean that I would not provide the utmost or my best for them. Like I said, at certain points, some of them felt like numbers to me and that truly terrified me. And when I realized that I was fighting harder for one client than another; is when I definitely knew I had to leave. But another factor is just nobody ever offered any help monetary wise.

Participant 6, an OR nurse, acknowledged that their stress management was ineffective, leading them to seek a less demanding work environment

I really didn't manage it (stress) very well, which is part of the reason that I ended up in the hospital I work at now was to decrease the stress.

Participant 5, a clinic and home health nurse, expressed concerns about the financial impact of making a career change to alleviate stress:

I feel like during the height of the pandemic, if I would not have been as scared of what would have happened to my children, I would have left then and went into emergency medicine. To see my fellow nurses struggling, providers struggling that genuinely care about patients. That was hard to sit back and watch

Participant 7, a respiratory therapist, expressed the following about the impact of livelihood if changing jobs was their only option:

I was looking around me, and you know, people that had trained me and taught me, they were like, 'Yeah, I'm done.' I mean, retiring at 45 and just like, just done. So, I look at it as I feel like this is my purpose to care for people. And the money in the healthcare field is pretty good too. So, then it was like, if I do lose half of my income for going somewhere else, how is that gonna look for my home life?

## **Evaluation of the Findings**

### ***Research Question 1***

Research Question 1 (RQ1) explored the psychological and moral challenges healthcare workers faced during the Delta wave of the COVID-19 pandemic. Two interconnected themes emerged from participant interviews. The first theme, fear of contamination and transmission, was a significant psychological burden for many participants. Seven out of ten participants expressed concern about being exposed to the virus and potentially spreading it to their families, staff, or patients. Participant 1 worried about their own and their family's health, while Participant 5 described the difficulty of balancing work in different environments while protecting vulnerable elderly patients.

Prior research supports the significant psychological impact of fear of contracting and spreading COVID-19 in healthcare workers (Beck & Daniels, 2023; Capabarka et al., 2020; Phillips & Kucera, 2021). One study found that fear of being a carrier and transmitting the disease to family members was the biggest concern conveyed by all participants (Banerjee et al., 2020; Eftekhari Ardebili et al., 2021). Vyas et al. (2024) found statistically significant associations between frustration at work and fear of infection and between fear of infection and turnover intention among healthcare workers, suggesting that frustration at work contributed to turnover intention only when it caused healthcare workers an increase in fear of infection. Additionally, the

indirect effect of frustration at work on turnover intention through fear of infection was statistically significant, suggesting that healthcare workers' fear of infection intensified the impact of workplace stress, making them more likely to consider leaving their jobs.

The second theme, systemic breakdown and resource scarcity, encompassed psychological exhaustion, supply shortages, ethical conflicts, and compromised patient care. Participant 1 described vomiting before work due to stress, while Participant 2 reflected on the mental toll of witnessing constant patient deaths in the ICU. Previous research indicated that stress and exhaustion were prevalent psychological challenges faced during the COVID-19 pandemic, with lethargy among the most reported symptoms by healthcare workers (Chew et al., 2020; De los Santos & Labrague, 2020; Schneider et al., 2021). Contributing factors like overwhelming workloads, long hours, and emotionally demanding situations, significantly predicted poor mental health outcomes in high-risk environments (Brooks et al., 2018; Schneider et al., 2021).

Supply shortages were a substantial challenge. Five out of ten participants noted a lack of essential resources necessary for safe and effective patient care. Participant 2 highlighted the added stress of caring for patients without adequate supplies, while Participant 7 expressed daily anxiety over whether they would have protective equipment. One study found that many healthcare workers prioritized adequate resources over psychological support (Pujari et al., 2021). Another study demonstrated that access to and trust in PPE influenced adherence to infection prevention guidelines (Eftekhari Ardebili et al., 2021) and exacerbated stress and risk exposure (Banerjee et al., 2020; Cramer et al., 2023).

Ethical conflicts were a recurring challenge for many participants. Eight out of ten participants reported moral distress related to ethical decisions, such as balancing self-protection

and patient care or rationing resources. Participant 3 recalled the distress of being instructed to withhold life-saving care, while Participant 8 described how end-of-life care practices had to be altered due to resource limitations. These findings are consistent with prior studies. Rushton (2024) highlighted that moral distress can lead to moral injury, a persistent sense of betrayal, and lost trust (LeClaire et al., 2022). Ethical dilemmas were unavoidable during the pandemic as care was rationed (Donkers et al., 2021) and clinicians experiencing burnout and compromised integrity were more likely to consider leaving (LeClaire et al. (2022).

Patient care challenges were also prominent. Six out of ten participants described difficulties providing adequate care due to understaffing, resource limitations, and inadequate preparedness. Participant 2 emphasized the need for more staff while Participant 3 discussed choosing between treating critically ill patients and safeguarding their own health. Moral injuries linked to patient care challenges were well documented, including institutional betrayal, and compromised advocacy for patients (Denham et al., 2022; Rushton et al, 2022). Caro-Alonso et al. (2023) found that healthcare workers experienced frustration and helplessness due to their inability to provide optimal care, leading to guilt and mental distress. Donkers et al. (2021) identified inadequate emotional support for patients and families as top cause of moral distress.

### ***Research Question 2***

Research Question 2 (RQ2) explored how the Delta wave affected the moral outlook of healthcare workers. Two major themes emerged. The third theme, duty and calling as catalysts for coping and resilience, highlighted the deep sense of responsibility that compelled many participants to continue working despite overwhelming challenges. Nine out of ten participants acknowledged this dynamic, describing the balance between professional obligations and

personal struggles. Some were the sole people present during end-of-life moments; others emphasized their duty to patients. D'Alessandro-Lowe et al. (2024) found that pride and passion played key motivators to remain in the profession. Researchers reported that 61.9% of healthcare workers viewed their professional duty as their primary motivation (Eftekhar Ardebili et al., 2021). Caro-Alonso et al. (2023) highlighted moral courage, wherein healthcare workers upheld ethical responsibilities despite systemic failures. Regaining self-confidence plays a crucial role in maintaining resilience during healthcare crises (Eftekhar Ardebili et al., 2021). Caro-Alonso et al. (2023) found that healthcare workers demonstrated a complex interplay of healthy and unhealthy coping strategies. Participants emphasized that despite the extreme challenges, they had no regrets about becoming nurses and viewed the crisis as part of their duty to care. These findings align with existing literature that suggests a strong professional identity and adaptive coping mechanisms can mitigate the psychological toll of high-stress environments.

The fourth theme, erosion of trust in the healthcare system, reflected growing disillusionment. Eight out of ten participants cited lack of institutional support, shifting priorities, and feeling abandonment. Some expressed a loss of faith in the healthcare system along with frustration over leadership decisions and inadequate responses to their concerns. These findings align with research on moral injury, which suggests that healthcare providers experience a loss of trust not only in the system but also in themselves as helpers (Kreh et al., 2021). Institutional betrayal has been increasingly recognized as a contributor to provider dissatisfaction and attrition (Conn et al., 2022; Klest et al., 2020; Smith, 2017). When these institutions fail, providers experience vulnerability and mistrust. Moreover, broader research indicates that trust in healthcare institutions is crucial for both providers and patients. When healthcare workers lose faith in their employers, it exacerbates feelings of dissatisfaction, bitterness, and emotional

distress (Hegarty et al., 2022; Klest et al., 2020). The erosion of trust has also been linked to declining trust in government and other public institutions, further intensifying the challenges faced by frontline workers (Conn et al., 2022; Smith, 2017).

### ***Research Question 3***

Research Question 3 examined the factors contributing to healthcare worker job attrition during the Delta wave. The fifth theme, institutional neglect and work-life imbalances, underscored the widespread feeling of abandonment. Nine out of ten participants reported that they received little to no institutional support, citing inadequate staffing, a lack of protective equipment, and the absence of mental health services. Research shows that social support is critical in mitigating psychological distress among healthcare workers, while fear of contamination and intolerance of uncertainty have been key contributors to worker attrition. Perceived social support is negatively associated with psychological distress (Ortiz-Calvo et al., 2022) yet, during the Delta wave, frontline providers received minimal institutional support, exacerbating feelings of undervaluation, exhaustion, and emotional strain (Beck & Daniels, 2023). Despite the known protective role of social support (Elbay et al., 2020), many healthcare institutions failed to provide psychological resources to frontline workers (Pappa et al., 2020; Hendrickson et al., 2022) which reinforced a sense of neglect and helplessness, ultimately prompting many to reconsider their roles.

Work-life balance challenges highlighted the immense difficulty eight out of ten participants faced in managing their personal and professional responsibilities. Some described emotional withdrawal as a coping mechanism, while others shared how financial concerns and job-related stress made it difficult to prioritize personal needs. These findings align with prior research, which suggests that without institutional support, healthcare workers struggle to

manage both personal and professional demands (D'Alessandro-Lowe et al., 2024). Studies on past pandemics also link work-life conflicts to psychological distress and professional dissatisfaction (Brooks et al., 2018). Wrestling with the costs and benefits of staying in their roles, many chose to leave, citing exhaustion, lack of acknowledgement, and systemic failures as primary factors in their decision (D'Alessandro-Lowe et al., 2024).

Collectively, these themes illustrate the complex emotional, psychological, and structural challenges that contributed to healthcare worker attrition during the Delta wave. The findings reinforce the need for institutional support, work-life balance interventions, and trust-building strategies to sustain the healthcare workforce during crises.

### **Summary**

This study explored the experiences of 10 frontline healthcare workers in Texas during the Delta wave of the COVID-19 pandemic. The problem addressed by this study was the healthcare worker attrition during the Delta Wave of the COVID-19 pandemic in Texas. The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas and the factors contributing to healthcare worker attrition between May 2021 and December 2021. The credibility of the findings was strengthened by strategies to ensure trustworthiness, including member-checking, triangulation across roles, and a detailed audit trail.

This section discussed the five themes that emerged from the research: Fear of Contracting and Spreading COVID-19. Participants expressed ongoing anxiety about becoming infected and transmitting the virus to their families and vulnerable patients. This fear was magnified by scarce resources, extended wear of PPE, inconsistent supply access, and frequently changed protocols. The second theme, Systemic Breakdown and Resource Scarcity, highlighted repetitive institutional failures participants reported. Accounts included inadequate staffing,

overextended ICU capacity, poor communication from leadership, and critical shortages in lifesaving equipment and medications. The third theme, Duty and Calling as Catalysts for Coping revealed how moral duty, personal integrity, and loyalty to teams and patients sustained many participants through the worst moments of the Delta wave, functioning as a buffer against despair. In contrast, the fourth theme, Erosion of Trust in the Healthcare System captured deepening disillusionment with institutional leadership and broader public systems, posing long-term risks to workforce retention. The fifth theme, Institutional Neglect & Work-Life Imbalance further illustrated how sustained overwork, lack of rest, and personal sacrifice led to profound emotional depletion, often recognized only after the crisis subsided. These themes expand upon existing research, reinforcing the need for comprehensive institutional support (Ortiz-Calvo et al., 2022), clear and ethical leadership, and accessible mental health interventions (Schwartz et al., 2020; Tayyib et al., 2021). The synergistic relationship between individual providers and the organizations they serve remains central to fostering moral resilience (Heinze et al., 2021; Rushton et al., 2022; Rushton, 2024). These themes captured both the individual and systemic challenges shaping moral resilience and job attrition.

Overall, the findings underscore the immense psychological and moral burdens healthcare providers carried, the critical influence of organizational conditions in sustaining or eroding resilience, and the complex tension between personal conviction and systemic failure. These results deepen understanding of the Delta wave experience and emphasize the urgent need for structural, ethical, and workforce support to sustain healthcare workers in future crises.

## **Chapter 5: Implications, Recommendations, and Conclusions**

The problem addressed by this study was the healthcare worker attrition during the Delta Wave of the COVID-19 pandemic in Texas. The purpose of this qualitative descriptive study was to explore the lived experiences of healthcare providers in Texas during the Delta Wave of the COVID-19 Pandemic and the factors contributing to healthcare worker attrition during this heightened period between May 2021 to December 2021. These findings contribute to the growing body of research on healthcare worker well-being, moral distress, and moral resilience (Heinze et al., 2021; Rushton et al., 2022). They also respond to documented calls for region-specific research exploring how moral adversity and systemic factors influence workforce sustainability (Zhang et al., 2021; Rushton, 2016).

Semi-structured interviews were conducted via Zoom with a snowball sample of ten healthcare professionals from across Texas. Thematic analysis was used to identify patterns in participants' narratives, resulting in key themes related to the psychological burden of fear and uncertainty, systemic failures, moral distress, lack of support, and work-life imbalance. These themes revealed how deeply the Delta wave impacted the moral fabric of healthcare work and contributed to workers' decisions to change jobs or disengage.

The COVID-19 pandemic sparked a catastrophic chain of events that fundamentally disrupted the U.S. healthcare infrastructure. It also exposed longstanding fractures within the healthcare system, particularly related to staffing, operations, supplies, provider support, and predictability. The sudden surge in patients during the Delta wave pushed hospitals and providers well beyond their capacities, with destabilized workflows and systems that previously supported standard medical care and critical care. These experiences caused many healthcare workers to

reconsider their place within systems that failed to support them and that no longer aligned with their core values of care.

This chapter presents a discussion of the findings in the context of existing literature, offers implications for clinical practice and policy, and provides recommendations for future research. The chapter concludes with a reflection on the study's contributions and the importance of moral resilience in sustaining the healthcare workforce through future crises

The findings of this study in relation to each research question contribute to the existing literature and theoretical framework on moral resilience described in Chapter 2. Furthermore, this chapter also addresses potential influences on interpretation, identifies the most significant implications, and considers their broader relevance of these implications. While the COVID-19 pandemic was an unprecedented crisis, it revealed systemic vulnerabilities that had long been ignored, forcing healthcare professionals into conditions that severely compromised their ethical values, professional identities, and personal well-being.

## **Implications**

### ***Research Question 1: Role-Reality Disruption***

How do healthcare workers describe the psychological and moral challenges they faced during the Delta wave of the COVID-19 pandemic?

The first implication of this study is that chaotic and prolonged crisis conditions can fundamentally disrupt the alignment between a healthcare workers' pre-crisis understanding of their role and realities they were required to navigate in a sustained emergency. The role-reality disruption undermined moral resilience by creating a gap between what providers were trained and committed to do, and what they were tasked with doing during the pandemic period. When operational demands diverged from participants' job expectations, personal integrity and relational

integrity were strained, even when their sense of duty remained intact. Participants described lived experiences where the work they were trained to perform, and the ethical commitments they had long-upheld no longer matched the realities they faced. This persistent misalignment eroded their ability to reconcile purpose with practice and accelerated the depletion of moral resilience.

Over time, the unresolved gap between what providers were trained and committed to do, and what they were asked to do, during the extended COVID-19 pandemic period became a catalyst for moral distress, disengagement, and discontentment with the work role, leading to job changes, retirements, and for some, exit from the healthcare field. These behaviors translated into workforce instability, manifesting as sudden departures of healthcare workers' that destabilized staffing, schedules, and continuity of care. These findings extend existing research on burnout and moral distress (Heinze et al., 2021; Kreh et al., 2021; Rushton et al., 2022; Spilg et al., 2022) by illustrating how moral distress and systemic failures contributed to workforce instability. For some participants, leaving a role rather than the profession itself represented an act of moral resilience. This decision to leave a job but remain in the profession reflected self-preservation and integrity, as it allowed them to withdraw from untenable conditions that compromised their ethical values and well-being while preserving their long-term commitment to the calling of healthcare. In this sense, leaving a job was not abandonment, but an adaptive choice that safeguarded their ability to continue practicing in alignment with their values. The findings from the current study suggest that resilience-focused interventions must go beyond crisis debriefings or reactive support, as participants indicated that they did not feel cared for or considered, were expected to continue working without adequate resources as the crisis persisted and were denied a voice in decision making regardless of their professional experience and judgement. Study narratives show that recovery and support were not planned for or provided to healthcare workers during the Delta

wave. The lack of support and recovery time depleted self-regulation and buoyancy leaving healthcare workers feeling unsupported. Skills such as self-regulation, buoyancy, self-stewardship, and moral efficacy help individuals manage adversity while remaining in roles that align with their values and support psychological health (Rushton et al., 2022). During the COVID-19 pandemic, Spilg et al. (2022) examined the connections between moral distress, moral resilience, and mental health symptoms recommending that future interventions protect the well-being and integrity of healthcare workers by addressing the root causes of moral distress. Spilg et al. (2022) emphasis on integrating moral resilience with systemic supports aligns with the need to address not only individual coping capacities but also the structural and cultural reforms necessary to sustain ethical practice and retention across healthcare systems.

It is important to acknowledge that these findings from the current study are based on, which may be influenced by participants' emotional distance from the Delta wave or their current professional circumstances. Additionally, the sample reflects the experiences of Texas healthcare workers, which may limit generalizability to other regions. Nevertheless, the consistent patterns across participant narratives highlight the need for early intervention and proactive support as essential strategies for workforce retention and sustaining moral resilience. While role–reality disruption underscores the personal and professional misalignment that can destabilize moral resilience, the second research question points to the relational dimension of this challenge, specifically, how systemic failures and shifting public perception influence trust between providers, patients, and institutions.

### ***Research Question 2: There is a Path Forward***

How do healthcare workers describe the effects of the Delta wave during the COVID-19 pandemic on their moral outlook?

The second implication of this study is the recognition that there is a path forward to sustaining healthcare workers' moral resilience, but it requires intentional investment in the ethical foundations of healthcare environments. Findings from this study demonstrate that while a strong sense of duty and calling can preserve personal integrity in the short term, it cannot compensate for sustained ethical misalignment and inconsistent organizational standards. A major implication of this rupture is that without relational integrity, organizational trust and loyalty, workforce retentions and institutional credibility erode. This erosion can be understood through the lens of institutional betrayal, which is closely tied to fiduciary trust, the belief that a healthcare institution would act in the best interests of patients and staff, instead of their own interests (Conn et al., 2022; Klest et al., 2020). Fiduciary duty is not a claim of a legal fiduciary duty owed to employees; rather, it captures the organizational conditions that sustain trust, moral efficacy, and relational integrity (Conn et al., 2022; Klest et al., 2020). Perceived indifference to staff well-being during the Delta wave left healthcare workers disillusioned, weakening fiduciary trust, and accelerating disengagement and attrition (Klest et al., 2020; Hines et al., 2021; Conn et al., 2022; Spilg et al., 2022). Moral resilience therefore requires both internal capacities such as self-regulation, self-stewardship, moral efficacy, and external system-level support that make those capacities usable in practice. Findings for this study imply that personal integrity was often compromised by systemic failures and a lack of opportunities for self-regulation and self-stewardship.

Findings indicate that preserving moral resilience is not solely the responsibility of individual healthcare workers; it depends on organizational ethical infrastructure that leaders can either enable or disable (Rushton et al., 2022; Rushton, 2024). Ethical infrastructure includes transparent leadership, policies aligned with professional values, credible avenues to raise and act on ethical concerns, and accessible recovery resources. When these conditions are present, moral

distress and intent to leave decline, morale improves, and relational integrity tends to rebound (Faraco et al., 2022; Simard & Parent-Lemarche, 2021; Spilg et al., 2022). Consistent with multisystem resilience, improvements are most durable when individuals, teams, and organizations adapt together rather than leaving workers to cope alone (Masten, 2021).

When these structures are absent, inconsistent, or misaligned, even the most committed healthcare professionals will experience moral distress, question their role within the system, and ultimately disengage (Simard & Parent-Lemarche, 2021; Spilg et al., 2022). Some individuals will leave their positions entirely, while others may seek alternative roles or environments where they can continue to practice in alignment with their values. These findings address the study problem by revealing how failure to invest in ethical infrastructure undermined healthcare workers' moral outlook and increased attrition. This current study contributes to the literature by reinforcing that moral resilience depends not only on individual fortitude but also on transparent leadership, psychological safety, and organizational cultures that uphold human dignity (Klest et al., 2020; Conn et al., 2022; Rushton et al., 2022). The findings extend prior research on moral distress and institutional betrayal by providing qualitative, region-specific evidence that aligns with Masten's (2021) call for multisystemic approaches to resilience. The findings also emphasize that fostering moral resilience requires shared investment from both individuals and institutions.

### ***Research Question 3: Moral Resilience is a Shared Responsibility***

What contributing factors do healthcare workers identify as reasons for healthcare worker job attrition during the Delta wave of the COVID-19 pandemic?

The third key implication of this research is the recognition that moral resilience is not an individual responsibility alone; it is a shared responsibility between healthcare workers, healthcare teams, leadership, and the broader healthcare system. Preserving moral resilience consistently

arises from environments that foster ethical alignment and psychological safety. Moral resilience depends on the synergy between individual healthcare workers and the organizational ethical infrastructure that leaders can either enable or disable (Rushton et al., 2022; Rushton, 2024). Ethical infrastructure includes transparent leadership, policies aligned with professional values, credible avenues to raise and act on ethical concerns, and accessible recovery resources. When these conditions are present, moral distress and intent to leave decline, morale improves, and relational integrity tends to rebound (Faraco et al., 2022; Simard & Parent-Lemarche, 2021; Spilg et al., 2022).

When the ethical infrastructure within healthcare systems is absent, inconsistent, or misaligned, they not only undermine individual resilience but also contribute to workforce dissatisfaction, disengagement, and attrition. Moral resilience is most effectively preserved within environments that uphold the dignity of providers, recognize their humanity, and actively support their capacity to navigate moral adversity. This implication is consistent with Masten's (2021) concept of multisystem resilience. The findings suggest that improvements are most durable when individuals, teams, and organizations adapt together rather than leaving workers to cope alone (Masten, 2021).

Healthcare leaders and systems play a central role in creating conditions where moral resilience can flourish. This includes fostering transparent communication, supporting workforce well-being, and ensuring providers feel empowered to navigate moral adversity. When organizations neglect this responsibility, even the most committed healthcare workers face limits to how long they can endure adversity. The alignment of these results with broader workforce research emphasizes the critical need for shared responsibility as a prerequisite for sustainable moral resilience and workforce retention.

These findings should be interpreted with consideration of the study's small sample size and the absence of perspectives from administrative leadership, whose experiences may differ. Nevertheless, the alignment of these results with broader workforce research emphasizes the critical need for shared responsibility as a prerequisite for sustainable moral resilience and workforce retention.

### **Recommendations for Practice**

The findings of this qualitative descriptive study revealed significant challenges to healthcare providers' ability to maintain moral resilience in the context of the COVID-19 pandemic. Participants described experiences of moral distress, misalignment between personal values and organizational expectations, and barriers to practicing integrity. These findings, situated within the moral resilience framework, suggest the need for both individual and systemic level strategies to strengthen moral resilience, reduce the risk of moral injury, and promote professional sustainability among healthcare workers. Based on these findings, the following recommendations for practice are proposed.

The recommendations proposed here are grounded in participants lived experiences and reinforced by existing scholarship on moral resilience, burnout, and workforce retention. These recommendations are organized to reflect the interdependence of three levels of intervention: individual, peer relations, and systemic. Together, these recommendations aim to address gaps in individual awareness, peer support structures, and organizational accountability, all of which are critical to fostering environments where healthcare providers can consistently engage in ethical, value-aligned, care.

## Individual-Level Recommendations

### Values Clarification and Moral Alignment Self-Assessment

The first recommendation emphasizes the importance of supporting healthcare providers in cultivating self-awareness through intentional reflection on personal values and moral alignment. Healthcare workers should be provided with structured opportunities to clarify their core values and assess the extent to which their daily actions, professional behaviors, and organizational environment align with those values. Through this process, providers can identify recurring patterns of moral compromise, misalignment, or unresolved distress that may erode their moral resilience. The Moral Resilience Wheel was created as a visual tool used to assess and understand the different components of moral resilience to increase awareness and promote personal and posttraumatic growth (See Figure 1-2).

Figure 1: Moral Resilience Wheel

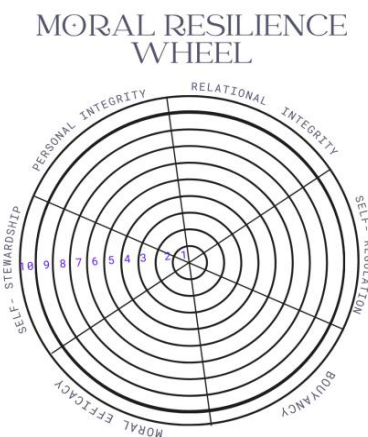
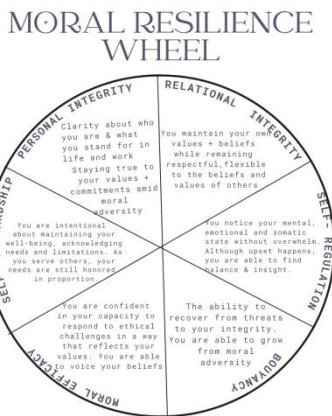


Figure 2: Moral Resilience Wheel Assessment



Once these patterns of moral compromise, misalignment, or unresolved distress are recognized, healthcare workers should be encouraged to develop realistic, proactive alternatives to mitigate risks to their integrity and well-being. Engaging in individual skill-building, such as mentorship, or guided resilience practices can help foster greater self-compassion, emotional regulation, and the ability to navigate moral challenges more effectively (Rushton, 2024). Such

strategies may include investing time in practices that enhance self-regulation and strengthen capacity to activate buoyancy when needed. Examples of the previously listed activities include meditation and prayer, scheduling time off to recalibrate, engaging in regular exercise, setting clear boundaries, managing health needs, or exploring career transitions if necessary (Butler et al., 2019).

Equipping providers with effective communication avenues to raise ethical concerns and proposing solutions is also critical to promoting alignment and reducing moral distress. Such avenues may include structured ethics consultation services, anonymous reporting systems, and regularly scheduled team debriefings or moral rounds where concerns can be openly discussed without fear of reprisal. Organizations may also establish dedicated liaisons or ombuds services to act as trusted points of contact, implement open-door leadership policies that normalize dialogue about ethical concerns, and facilitate interdisciplinary case review forums that bring multiple professional perspectives to ethically complex situations. Structured ethics consultations and forums for open dialogue not only reduce moral distress but also enhance trust in leadership and foster organizational learning (Epstein et al., 2019; Rushton, 2016). These pathways ensure that providers have both formal and informal means of voicing concerns and proposing solutions, which reduces isolation, fosters accountability, and prevents the accumulation of unresolved moral distress. This individualized process of values clarification and alignment serves as a foundational step in strengthening moral resilience and supporting long-term professional sustainability. Research supports that the cultivation of self-awareness, self-regulation, and self-stewardship requires intentional space and time to develop and align with one's core values (Richardson, 2002; Taormina, 2015; Rushton, 2016). This reflective process allows individuals to build an inherent

trust in their own wisdom and integrity which are capacities essential for navigating moral adversity and distress.

While individual providers play a critical role, they are part of a broader system that must be synergistically prepared to engage in collaborative spaces with teams and leadership to foster morally resilient cultures (Berbés-Blázquez et al., 2022; Lin et al., 2020). Foundationally, individuals must be supported in cultivating awareness of their inner landscape, by increasing their attunement to who they are and how they want to practice. Research further emphasizes the need for synergistic strategies that both strengthen organizational systems and provide supportive interventions for individuals cultivating ways of being, understanding, and acting is essential to achieving this goal (Rushton, 2024).

Recent findings further emphasize the importance of ongoing psychological assessment and resilience-based interventions at the individual level. Cooper-Bribiesca et al. (2023) found that individual resources, including resilience, influence whether moral distress can be alleviated, while moral injury may persist for months within an ongoing crisis period. Their study recommends regular psychological assessment of frontline providers to identify coping resources and emerging symptoms, noting that timely interventions to strengthen individual reserves and organizational strategies may help prevent long-term psychological harm after morally injurious events. This evidence underscores the value of structured self-assessment tools, such as the Moral Resilience Wheel, as part of routine professional well-being practices.

Rushton (2016) emphasized the importance of social connectedness and relationships in buffering against moral adversity and sustaining moral resilience, reinforcing the value of relational accountability in ethically challenging environments. Finally, providers are encouraged to normalize help-seeking by utilizing available mental health resources and to engage in regular

self-assessment as a way to monitor their well-being and proactively address moral distress over time. As Rushton et al. (2016) highlight, self-assessment and reflective tools are essential in helping clinicians remain aligned with their values and maintain moral integrity throughout their professional journey.

### **Peer Support Mentorship**

Building upon individual self-assessment, the second recommendation advocates for the implementation of structured peer support mentorship programs within healthcare organizations. To promote psychological safety and authentic dialogue, peer mentors should be selected from within the healthcare team but should not occupy direct supervisory, managerial, or formal leadership roles over the healthcare worker. At a minimum, quarterly check-ins should be scheduled between the healthcare worker and their chosen peer mentor, with flexibility to adjust the frequency of meetings based on individual needs. These sessions should incorporate brief, self-assessment tools designed to provide a measurable snapshot of the healthcare worker's current moral resilience across key domains, including integrity, self-regulation, buoyancy, moral efficacy, and self-stewardship. The results of these assessments offer an individualized baseline from which realistic goals can be established and progress monitored over time. Providing this consistent, non-hierarchical support structure fosters meaningful connection, accountability, and the development of practical strategies to maintain moral integrity and self-stewardship. A supportive workplace environment is strongly associated with reduced experiences of moral injury, while stressful, unsupportive environments correlate with increased moral injury among healthcare providers (Hines et al., 2021). One of the key elements of moral resilience is the ability to cultivate meaningful interconnections with others.

Rushton (2016) emphasized that seeing oneself as part of a broader moral community creates a psychological safety net in the face of ethically complex or morally distressing situations, particularly in high-stakes settings such as critical care. Strong social connections have been shown to enhance both physical and emotional well-being, and the knowledge that one is not alone in navigating moral adversity can significantly reduce despair and isolation (Rushton, 2016; Hines et al., 2021). Intentionally seeking the support and engagement of others through one-on-one conversations with colleagues, team-based discussions, or connections with trusted family and friends serves as a powerful buffer against moral distress and strengthens a provider's ability to remain ethically grounded in the face of ongoing challenges (Rushton, 2016).

### *Systemic-Level Recommendations*

#### **Role-Preparation and Anticipatory Training**

Healthcare systems should proactively prepare providers to anticipate, interpret, and reconcile role shifts during emergencies. Study findings revealed that sudden, unprepared role disruptions compounded moral distress and contributed to attrition. Structured training should explicitly address the moral and operational variability of crisis care, integrate ethical dilemmas into professional identity formation, and provide organizational support when role-reality tensions emerge.

Such anticipatory training reframes role disruption as a feature of professional calling rather than as evidence of institutional failure. By preparing providers before crises arise, healthcare systems can sustain moral resilience, reduce attrition, and preserve continuity of ethical practice.

### **Annual External Assessment of Organizational Moral Resilience**

The final recommendation addresses systemic contributors to moral distress by advocating for an annual, third-party assessment of moral resilience within healthcare teams, leadership structures, and organizational culture. To ensure objectivity and transparency, this assessment should be conducted by an independent entity, such as an external consulting group, academic partner, or specialized organizational assessment firm. The evaluation should examine healthcare workers' perceptions of the ethical climate, leadership behaviors that support or hinder moral resilience, alignment between institutional values and operational practices, and systemic barriers that contribute to moral compromise. A mixed-methods approach incorporating both qualitative and quantitative data is recommended to provide a comprehensive understanding of moral resilience across system levels.

This recommendation aligns with the work of Delgado et al. (2021), who emphasize that most organizational strategies for addressing moral distress have focused too heavily on individual coping, neglecting the collective responsibility of institutions. They advocate for structural solutions that promote shared accountability and foster environments where moral resilience can flourish. Delgado et al. (2021) propose that Communities of Practice (CoPs) have the potential to generate practical wisdom by providing a structured yet relational space for dialogue, reflection, and meaning-making around ethically complex situations; offering ways to explore moral distress through social support and professional connectedness. However, they also note a significant gap in understanding how CoPs can contribute to change across different organizational levels, emphasizing the need for formal assessments that evaluate the role of leadership, culture, and systemic alignment (Delgado et al., 2021).

Building on this perspective, Rushton (2024) recommends adopting synergistic strategies that address moral adversity within healthcare systems by using the Conscious Full Spectrum Response (CSFR) which is a framework designed to universally create and sustain cultures of ethical practice. This approach emphasizes the importance of integrated, system-wide efforts to strengthen moral resilience not only at the individual level but across the organizational ecosystem (Rushton, 2024). Together, these perspectives underscore the need for formal, recurring assessments that can evaluate how institutional structures and leadership behaviors either support or hinder the cultivation of morally resilient environments.

Assessment findings should be compiled independently and shared transparently with healthcare workers, leadership, and relevant stakeholders. The resulting report should include practical, evidence-informed strategies to strengthen moral resilience, enhance ethical alignment, and address identified organizational gaps. Clear, actionable recommendations for leadership development, policy refinement, resource allocation, and the establishment of measurable goals should accompany the report. Integrating an unbiased, recurring assessment process into healthcare systems fosters accountability, builds trust, and contributes to an institutional culture where healthcare providers can engage in ethically grounded work without compromising their integrity or well-being. Furthermore, organizations benefit not only from the workforce and financial advantages of this process, but also by rebuilding trust among healthcare providers when they demonstrate a willingness to respond to assessment findings and implement meaningful improvements. When systems and the leaders within them are perceived as responsive and accountable, it reinforces psychological safety, enhances ethical culture, and strengthens workforce retention.

At the organizational level, healthcare systems have a responsibility to create environments where providers can engage in ethically grounded work without compromising their integrity or well-being. Findings from this study revealed that systemic conditions, including misalignment between organizational values and operational practices, lack of recovery time, and inconsistent leadership support, significantly contributed to moral distress and workforce dissatisfaction.

### **Recommendations for Future Research**

While this study provides important insight into the role of moral resilience in mitigating workforce distress and supporting healthcare providers, several areas for future research are recommended to strengthen and expand the knowledge base. Given the complexity of moral resilience and its interaction with organizational and individual factors, continued research is necessary to explore how this construct functions across varied healthcare contexts. Expanding the evidence base will not only deepen theoretical understanding but also support the development of practical, scalable interventions that promote workforce well-being and ethical practice.

First, future studies should examine moral resilience across diverse healthcare settings, disciplines, and geographic regions to enhance the generalizability of these findings. The current study was limited by its sample size and regional scope, which may not reflect the experiences of healthcare providers in other contexts. There is a critical need to study moral resilience among respiratory therapists, a group that played a vital yet often underrecognized role during the COVID-19 pandemic (Heinze et al., 2021). Including respiratory therapists and other allied health professionals in future research will provide a more comprehensive understanding of how moral resilience operates across healthcare teams and systems and will help ensure that interventions are inclusive and responsive to the needs of all members of the workforce.

Second, future research should focus on developing and validating practical assessment tools to measure moral resilience among healthcare settings. While this study highlighted the relevance of moral resilience in mitigating workforce distress and attrition, there remains a need for empirically tested instruments that are still needed to reliably measure moral resilience at both individual and team levels. Researchers are encouraged to build upon existing frameworks by adapting wellness tools, such as the Moral Resilience Wellness Wheel Assessment (See Figure 2) introduced in this study, into formal assessment instruments. This process should follow established psychometric testing protocols, including expert content validation, pilot testing, and reliability and validity analyses with diverse healthcare populations (Rushton, 2024). Future studies should also explore the predictive utility of such tools by examining whether moral resilience scores correlate with critical workforce outcomes such as burnout, job satisfaction, and intent to leave. Developing and validating a reliable assessment instrument would not only advance moral resilience research but also provide healthcare organizations with a practical means of monitoring workforce well-being and evaluating the impact of targeted interventions.

Third, there is a need to design and evaluate peer mentorship programs that intentionally foster moral resilience among healthcare providers, particularly early-career professionals. Participants in this study consistently identified peer relationships as essential sources of informal support when navigating moral distress, yet few formal structures currently exist to cultivate these connections. Future research should develop and pilot structured mentorship initiatives that integrate moral resilience skill-building, including self-regulation, relational integrity, and moral efficacy. Evaluating the effectiveness of these programs in reducing moral distress, enhancing preparedness, and promoting workforce retention will contribute to both theoretical and practical advancement of moral resilience in healthcare.

Finally, future research should explore the relationship between moral resilience and the changes in diversity, equity, and inclusion (DEI) initiatives within healthcare organizations. As some healthcare systems face increasing external pressure to scale back DEI efforts (Iheduru et al., 2025), it is essential to examine how these organizational changes impact moral resilience across all workforce levels, including providers, adjunct staff, leadership, and administration. Understanding the effects of diminished DEI structures on ethical climate, relational integrity, and workforce well-being, particularly for members of marginalized groups, will provide critical insights to inform policies that uphold both moral resilience and inclusive, equitable work environments.

Collectively, these areas of future research will deepen an understanding of the complex factors influencing moral resilience and provide the evidence base necessary to guide meaningful interventions that support healthcare providers, teams, and systems. Continued investigation into these topics will not only advance scholarly knowledge, but also inform practical strategies that promote workforce sustainability and ethical practice. In doing so, future research has the potential to improve healthcare delivery by fostering environments where providers can uphold their moral integrity while delivering safe, compassionate care.

## **Conclusions**

This qualitative descriptive study explored the lived experiences of healthcare providers in Texas during the Delta wave of the COVID-19 pandemic. The problem addressed was the limited understanding of healthcare workers' lived experiences during the Delta wave of the COVID-19 pandemic, specifically in Texas, and the factors contributing to healthcare worker attrition. This study examined how psychological, moral, and systemic burdens affect workforce retention and moral outlook. The findings revealed that moral resilience, while a critical protective factor, cannot

be sustained through individual effort alone. Instead, it requires shared responsibility across individuals, teams, organizational leadership, and healthcare systems. The study answered three research questions, revealing five central themes: fear of contracting and spreading COVID-19, systemic breakdown and resource scarcity, duty and calling as a catalyst for coping, erosion of trust, and institutional neglect and work-life balance. These themes illustrate the cumulative impact of prolonged moral adversity and highlight both internal and external threats to the sustainability of ethical healthcare practices.

This study advances the literature on moral distress, burnout, and the Moral Resilience Framework (Rushton, 2016; Heinze et al., 2021; Delgado et al., 2021) by contributing region-specific qualitative evidence that adds nuance to how individual and systemic factors interact to shape workforce well-being. (Rushton, 2016; Heinze et al., 2021; Delgado et al., 2021). While participants demonstrated admirable levels of personal integrity, duty, and moral commitment, the absence of institutional alignment, ethical infrastructure, and adequate recovery opportunities led to the erosion of relational integrity, self-regulation, buoyancy, and self-stewardship. These findings reinforce and build upon existing literature emphasizing that moral resilience depends not only on individual skill-building but also on transparent leadership, psychological safety, and organizational cultures that uphold human dignity and support ethical practice (Rushton et al., 2022; Spilg et al., 2022).

The overarching take-home message of this study is clear: moral resilience is not an individual trait to be cultivated in isolation, but a capacity that is strengthened through shared, systemic responsibility. Both healthcare organizations and the individual healthcare workers' within them must intentionally invest in practices that foster moral resilience at every level. Strengthening the capacity for moral resilience at every level through self-assessment, peer

mentorship, transparent leadership, and recurring organizational evaluation can mitigate moral distress, rebuild trust, and promote sustainable workforce retention. While limited in geographic scope and retrospective self-reporting, this study contributes valuable qualitative insight to the field and lays the groundwork for future research on moral resilience interventions, measurement tools, and ethical organizational practices. Healthcare systems that recognize and operationalize this shared responsibility are more likely to preserve ethical culture, support workforce retention, and improve long-term patient care outcomes.

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## Appendix A Interview Guide

Thank you for your time and willingness to participate in this study and thank you for your service as a healthcare provider. I invite you to relax as we simply have a conversation about you and your experiences. Before we begin, a couple of quick baseline questions for you, do you prefer tea or coffee? Ok great, consider this an opportunity to partake in virtual tea/coffee with me as we chat, how's that sound. Cheers! So, let's begin. The following questions are related to your experiences during the COVID-19 Delta Variant surge in Texas. Follow-up questions will be asked when applicable.

1. What major stressors can you identify that were difficult to overcome?
2. In what ways did you manage your own stress during this time?
3. What stressors can you identify in your professional work that were not present prior to the COVID-19 Delta Variant surge in Texas?
4. What work environment changes occurred during the Delta surge COVID-19 pandemic period?

**The following questions are related to ethical and moral injuries**

5. What ethical or moral injury/ injuries did you experience during the COVID-19 Delta Variant surge in Texas?
6. If an ethical and moral injury occurred, how were you impacted by the ethical/moral issue that you described?
7. Please describe any changes you have noticed regarding your own moral resiliency levels since the COVID-19 Delta Variant surge in Texas
8. What types of support were provided by your employer to address health care providers' moral and ethical concerns?
9. What types of support were provided by your employer to address health care providers' mental, emotional, and psychological concerns?
  - a. Which opportunities for support did you access and use?
  - b. If support was used, how often did you engage or use the support offered?
  - c. How did these offered supports-help or hinder your ability to continue providing healthcare services during the pandemic?
10. During the COVID-19 Delta Variant surge in Texas, how did your employer respond to vaccine mandates for healthcare worker staff and employees?
  - a. If mandated compliance was required by your institution/ employer for healthcare workers' to take a vaccine, how did your employer respond to healthcare workers' refusal of taking a vaccine?
11. How did the employer's response change your outlook on your job?
12. How did your outlook on the healthcare industry change during this period?

**The following questions are related to job attrition:**

13. Did your employer discontinue your employment for any reason?

14. What factors influenced you to stay in the health care industry?
  - a. If you chose to stay in the healthcare industry, did you remain at the same job employed by the same institution?
  - b. If you chose to stay in the healthcare industry, did you leave or change your job?
  - c. If so, when did you leave your job?
  - d. What factors influenced you to leave your job?
  - e. If you chose to leave the field of healthcare, what factors influenced you to leave the health care industry?

## **Appendix B**

### **Informed Consent**

#### **Introduction**

My name is Shahidrah Roberts Cowgill, and I am a doctoral student, at National University (NU). I am conducting a research study on the lived experiences of healthcare workers during the Delta Wave of the COVID-19 pandemic. The name of this research study is Examining the Lived Experiences of Healthcare Workers during the COVID-19 Pandemic Delta Surge. I am seeking your consent to participate in this study. Please read this document to learn more about this study and determine if you would like to participate. Your participation is completely voluntary, and I will address your questions or concerns at any point before or during the study.

#### **Eligibility**

You may participate in this research if you meet all the following criteria:

1. 18 years or older
2. A Licensed Healthcare Worker
3. Provided direct care to COVID-19 patients during the Delta wave
4. Worked in Texas during the pandemic
5. Willing to answer questions about your experiences as a healthcare worker during the Delta wave of the COVID-19 pandemic, and coping strategies
6. Are no longer working for the same institution or left the healthcare field

#### **Activities**

If you decide to participate in this study, you will be asked to do the following activities:

1. Participate in a 1:1 online interview over Zoom for 30-45 minutes

During these activities, you will be asked questions about:

Your professional experiences with providing health care services during the COVID-19 pandemic, stressors, moral injury, turnover intention, and environmental supports. All activities and questions are optional: you may skip any part of this study that you do not wish to complete and may stop at any time. If you need to complete the activities above in a different way than I have described, please let me know, and I will attempt to make other arrangements.

### **Risks**

There are no foreseeable risks associated with this study. However, please be aware that describing your lived experiences may lead to some discomfort. You can still skip any question you do not wish to answer, skip any activity, or stop participation at any time.

### **Benefits**

If you participate, there are no direct benefits to you. This research may increase the body of knowledge in the subject area of this study.

### **Privacy and Data Protection**

I will take reasonable measures to protect the security of all your personal information, but I cannot guarantee confidentiality of your research data. In addition to me, the following people and offices will have access to your data:

- My NU dissertation committee and any appropriate NU support or leadership staff
- The NU Institutional Review Board

This data could be used for future research studies or distributed to other investigators for future research studies without additional informed consent from you or your legally authorized representative.

I will securely store your data for 3 years. Then, I will delete electronic data and destroy paper data.

### **How the Results Will Be Used**

I will publish the results in my dissertation. I may also share the results in a presentation or publication. Participants will not be identified in the results.

### **Recording**

I would like to audio or video record your responses with Zoom during the interview.

### **Compensation**

After you complete the research activities outlines in the Activities section of this consent, you will receive a \$25 USD Amazon gift card. The card will be sent to the mailing address of your choice. Addresses will not be saved for confidentiality. An e-gift card option is also available to be sent to an email address of your choice.

### **Mandated Reporting**

My professional role outside of NU requires me to report suspicion of child or elderly abuse, suspicion of possible harm to self or others, and committed crimes to the appropriate authorities.

### **Contact Information**

If you have questions, you can contact me at: [s.cowgill0075@0365.ncu.edu](mailto:s.cowgill0075@0365.ncu.edu)

My dissertation chair's name is Dr. Donna Smith. She works at National University and is supervising me on the research. You can contact her at: [dsmith5@nu.edu](mailto:dsmith5@nu.edu). If you

have questions about your rights in the research or if a problem or injury has occurred during your participation, please contact the NU Institutional Review Board at [irb@nu.edu](mailto:irb@nu.edu) or 1-888-327-2877 ext 8014.

### **Voluntary Participation**

Participation in this study is voluntary. If you decide not to participate, or if you stop participation after you start, the participant will not receive an Amazon gift card for incomplete participation. The gift card benefit is only for those who complete the study.

## Appendix C

### Social Media Flyer

# CALL FOR

# ***VOLUNTEERS!***

## FOR RESEARCH STUDY



Are you age 18 + and a licensed healthcare worker in TEXAS who provided direct care services to COVID-19 patients during the Delta Wave of the pandemic? Were you faced with a difficult choice to stay or to leave your job in the healthcare field? If so, please consider participating in a research study on the experiences of healthcare professionals during the Delta Wave of the COVID-19 pandemic.

### Participation involves:

- Complete a 30-45 min online Zoom interview

If you participate you will be asked questions about your professional experiences as a healthcare provider during the pandemic, moral adversity, and coping strategies utilized during the pandemic.

### You may qualify if:

- You are 18 years or older
- You are a Licensed Healthcare Worker
- You have worked in healthcare for at least one year
- You provided direct care to patients during the Delta Wave of the COVID-19 pandemic
- You worked in Texas during the pandemic
- **YOU ARE NO LONGER WORKING FOR THE SAME INSTITUTION OR YOU HAVE LEFT THE HEALTHCARE FIELD**
- You are fluent in the English language

### Benefit

Participation is voluntary and participants will be compensated with a \$25 Amazon gift card after the interview via email.

For More Information: Please contact Shahidrah Cowgill  
Doctoral Candidate at National University

✉ [s.cowgill0075@o365.ncu.edu](mailto:s.cowgill0075@o365.ncu.edu)

## Appendix D

### Letter of Request to Access Social Media Group

Dear Group Administrator:

My name is Shahidrah Cowgill and I am a doctoral candidate at National University I am conducting a research study on the lived experiences of healthcare workers during the COVID-19 pandemic. The name of this research study is **Examining the Lived Experiences of Healthcare Workers during the COVID-19 Pandemic Delta Surge**. I am seeking your consent to post information about this study in hopes of gaining participants for the study. The eligibility criteria is as follows:

Participants must be, 18 years or older, a licensed healthcare worker, provided direct care to COVID-19 patients, worked in Texas during the pandemic, and willing to answer questions about their experiences as a healthcare worker during the COVID-19 pandemic. I hope to include 10-15 people in this research.

Therefore, I am seeking your consent to conduct our research on your participants in your Facebook group. Should you require any further information, please do not hesitate to contact me. My contact details are as follows: Shahidrah Cowgill [s.cowgill0075@o365.ncu.edu](mailto:s.cowgill0075@o365.ncu.edu)  
I look forward to a favorable response to this request. Thank you for your time.

Sincerely,

Shahidrah Cowgill

## Appendix E

### Participant Screening Questionnaire

1. Are you age 18 or older? Yes \_\_\_\_ or No \_\_\_\_
3. Are you a licensed healthcare provider? Yes \_\_\_\_ or No \_\_\_\_
4. Have you worked in healthcare for at least one year? Yes \_\_\_\_ or No \_\_\_\_
4. Did you have direct contact with patients during the Delta wave Covid 19 pandemic period (2021)? Yes \_\_\_\_ or No \_\_\_\_
5. Did you work in the state of Texas in 2021? Yes \_\_\_\_ or No \_\_\_\_
6. **Employment Status (Please select)**
  - Employed at same institution as pandemic period
  - I am employed at a different institution than during the pandemic period
  - I am self-employed or a consultant in another sector of the healthcare industry
  - I left the healthcare industry
  - Out of work and looking for work
  - Out of work but not currently looking for work
  - Retired
7. Do you speak English fluently? Yes \_\_\_\_ or No \_\_\_\_

**Appendix F**  
**Recruitment Email Request**

Subject Line: Seeking Assistance for Dissertation Research

Dear XXX,

I hope this email finds you healthy and well. I am pleased to share that I am currently in the final stages of completing my dissertation. As I prepare to submit my proposal to the Institutional Review Board (IRB), I am reaching out to my circle of healthcare providers who may have colleagues that qualify to participate and am reaching out to seek your support.

Before proceeding, I am kindly requesting your permission to share a recruitment email or research announcement post via social media with your network of licensed healthcare providers. Your assistance in this matter would be invaluable to me. Please read the official letter of request below and thank you in advance for considering this request. I deeply appreciate all prayers and support as I push to finish this academic journey.

My name is Shahidrah Cowgill and I am a doctoral candidate at National University. I am conducting a research study on the lived experiences of healthcare workers during the COVID-19 pandemic. The name of this research study is **Examining the Lived Experiences of Healthcare Workers during the COVID-19 Pandemic Delta Surge**. I am seeking your consent to share information to your email list and/or social media network of healthcare professionals about this study in hopes of gaining participants for the study. The eligibility criteria is as follows:

Participants must be 18 years or older, a licensed healthcare worker, worked in healthcare at least 1 year, provided direct care to COVID-19 patients, worked in Texas during the pandemic, is no longer working for the same institution or left the healthcare field, fluent in the English language and willing to answer questions about their experiences as a healthcare worker during the COVID-19 pandemic. I hope to include 10 people in this research.

Therefore, I am seeking your consent to conduct research on eligible participants in your network. Should you require any further information, please do not hesitate to contact me. My contact details are as follows: Shahidrah Cowgill |s.cowgill0075@o365.ncu.edu- I look forward to a favorable response to this request. Thank you for your time.

Sincerely,

Shahidrah Cowgill

