ICU NURSE MORAL DISTRESS

ETHICS OF THE ORDINARY, AMPLIFIED IN THE INTENSIVE CARE UNIT – NURSES' RESPONSES TO MORAL DISTRESS EXPERIENCED IN THEIR PROFESSIONAL PRACTICE DURING THE COVID-19 PANDEMIC

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TITLE: Ethics of the ordinary, amplified in the intensive care unit – nurses' responses to moral distress experienced in their professional practice during the COVID-19 pandemic

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LAY ABSTRACT

Nurses working in intensive care units are at high risk for experiencing moral distress, a response to an ethical event, in which a nurse recognizes or partakes in an action that does not align with their values. In response, nurses may experience negative health effects and leave the workforce, negatively impacting patient care and the stability of healthcare organizations. The purpose of this interpretive description study was to explore intensive care unit nurses' responses to moral distress experienced during the COVID-19 pandemic. Forty intensive care unit nurses completed a demographic questionnaire, the Measure of Moral Distress – Health Care Professionals tool, and one-to-one interviews. Findings indicated that these nurses regularly experienced moral distress under the interplay of two broad conditions: (1) when their voices were not heard, and (2) when patient care was substandard. Moral distress resulted in several negative psychosocial and physical health outcomes for nurses, which drove feelings of burnout and attrition. To cope, nurses engaged in patterns of action, avoidance, and acquiesce. Nurses' recommendations for interventions to mitigate moral distress, rooted in their desire to be heard, are summarized.

ABSTRACT

Background: Nurses working in intensive care units are at high risk for experiencing moral distress, a response to an ethical event, in which a nurse recognizes or partakes in an action that does not align with their values. In response, nurses may experience negative health effects, which drives attrition. This can negatively impact patient care and the stability of healthcare organizations. There is a scarcity of high-quality and effective organizational interventions to mitigate moral distress, and even lesser work has been done to understand nurses' practice-based needs to ameliorate moral distress. New conditions of moral distress in the context of COVID-19 have increased the relevance of these shortcomings.

Aim: The purpose of this study was to learn about intensive care unit nurses' responses to moral distress experienced in their professional practice during the COVID-19 pandemic.

Methods: This interpretive descriptive study explored the experiences of 40 intensive care unit nurses, who self-reported experiencing moral distress in their professional practice during the COVID-19 pandemic (March 2020 – Sept 2021). Data generation included a demographic questionnaire, including the Measure of Moral Distress - Healthcare Professionals survey, and one-to-one semi-structured virtual interviews. The categorization and synthesis of the data was guided by methods of reflexive thematic analysis and rapid qualitative analysis.

Results: Findings indicated that nurses regularly navigated pre-existing and novel ethical events in practice, which were exacerbated in the context of the COVID-19 pandemic. In response, they often experienced moral distress under the complex interplay of two overarching and broad conditions: (1) when nurses' voices were not heard; and (2) when patients received substandard levels of care, that was not patient-centered, pain free, or that did not align standards of care. Moral distress experienced by nurses resulted in negative outcomes across serval health domains, that drove feelings of burnout and attrition. To cope, nurses engaged in patterns of action, avoidance, and acquiesce. Finally, they made recommendations for mitigative interventions rooted in their desire to be heard, in efforts to optimize patient care and nurse well-being.

Conclusion: Intensive care unit nurses' voices need to be amplified and valued, in the context of various healthcare organizations (e.g., practice, research, education and polity), to mitigate moral distress and the associated negative outcomes.

Keywords: moral distress, COVID-19, nursing, intensive care, nursing ethics

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LIST OF ABBREVIATIONS

AACN	American Association of Critical-Care Nurses
CACCN	Canadian Association of Critical Care Nurses
COVID-19	Coronavirus disease 2019
CRRT	Continuous renal replacement therapy
ECMO	Extracorporeal membrane oxygenation
ICU	Intensive care unit
MMD-HP	Measure of Moral Distress Scale - Healthcare Professionals
PPE	Personal protective equipment
PTSD	Post-traumatic stress disorder

DECLARATION OF ACADEMIC ACHIEVEMENT

This master's thesis is an original report by the student Paige Gehrke, conducted under the supervision of Dr. Susan Jack, and committee members Dr. Ruth Hannon and Dr. Jennifer Tsang. This thesis consists of four chapters, two of which are manuscripts prepared for publication (Chapter 3 and 4). Paige Gehrke is the first author on both manuscripts, and as such was responsible for: generation of the research question, research design, participant recruitment, data collection and analysis, interpretation of findings, writing of manuscripts, and revisions based on committee feedback. Co-authors include all committee members, as well as Dr. Karen Campbell, who contributed to revision of the manuscripts.

SUMMARY OF THESIS CHAPTERS

This thesis consists of four distinct chapters, including two manuscripts prepared for submission for peer-review. Chapter 1 includes background information, a literature review and theoretical scaffolding to underpin the rationale for conducting this study, concluding with study aims. Chapter 2 provides a detailed description of the study design and research methods used to address the study aims. Chapter 3 (manuscript one) consists of findings from the study focused on describing the properties and dimensions of moral distress experienced by ICU nurses during the COVID-19 pandemic. The study findings that address nurses' perceived outcomes of and personal reactions to moral distress, and their recommendations for organizational level interventions to mitigate moral distress, are then included in Chapter 4 (manuscript 2).

CHAPTER 1: BACKGROUND AND THEORETICAL SCAFFOLDING

In this chapter, background information is provided to establish the context in which this research study was conducted. Then, aligning with the principles of interpretive description methodology, the two main elements of study scaffolding are presented to highlight the rationale for conducting this study: the literature review and the theoretical forestructure. Finally, this chapter is concluded with a description of the overall study aims.

Moral distress is a response to an ethical event where the individual identifies or participates in an action that does not align with their values (Fourie, 2015; Morley et al., 2020). Moral distress has increasingly been recognized as occurring among registered nurses working in the intensive care unit (ICU) setting (Browning & Cruz, 2018; Bruce et al., 2015; Dodek et al., 2016; Forozeiya et al., 2019; Henrich et al., 2016; McAndrew et al., 2016; Mealer & Moss, 2016; Rushton, 2017). Nurses' experiences of moral distress negatively impact nurse well-being and patient health outcomes, and present significant challenges for healthcare organizations and systems.

Nurses who work in the ICU are responsible for the care of individuals who are critically ill, and whose clinical health status may rapidly deteriorate. Given the nature and severity of these patient conditions, nurses working in the ICU regularly participate in implementing invasive, life-sustaining measures when outcomes are uncertain or potentially futile (Crowe et al., 2021; Forozeiya et al., 2019; Henrich et al., 2016; Mealer & Moss, 2016). Therefore, ICU nurses may witness patients experiencing pain and suffering, secondary to such intensive clinical treatments and disease outcomes. They also often engage in end-of-life or organ donation care (Epstein et al., 2020; Forozeiya et al., 2019; McAndrew et al., 2016). Nurses in this clinical setting may also experience powerlessness in decision-making, due to multifaceted team-dynamics and inherent power hierarchies between professionals or across levels of decision-makers and organizational structures (Browning & Cruz, 2018; Dodek et al., 2018; McAndrew et al., 2020).

Working amidst such precarious circumstances requires nurses to frequently navigate and participate in situations where complex, ethical events may arise. Moral

distress is a response that occurs when ethical events, often bounded by systemic barriers or personal limitations, result in nurses recognizing or partaking in actions that misalign with their core beliefs or values. Responses to moral distress experienced by ICU nurses vary, and can include a multitude of psychological and physical outcomes, or social implications (Arnold, 2020; Deschenes et al., 2020; Forozeiya et al., 2019; Henrich et al., 2017).

Extraordinary conditions, such as natural disasters, mass traumas, and global pandemics, may amplify ethical challenges that exist for nurses working in critical care settings, beyond those experienced in their regular practice (Canadian Nurses Association, 2008). In Canada, with the emergence of the coronavirus disease 2019 (COVID-19) pandemic, the rapid spread of the virus and the severity of the disease process created considerable demand for ICU beds (Murthy et al., 2021). Healthcare professionals working in ICUs quickly responded and navigated complex care environments, characterized by shortages of personal protective equipment (PPE), mass mortalities, high viral transmission rates, and continually evolving information about effective treatments and outcomes. The constant influx of new information led to frequent policy changes, such as visiting hours, family engagement in care, and contact tracing (Fiest et al., 2021; Lapum et al., 2021). Within these extenuating circumstances, ICU nurses faced increased workloads and work hours, risk of exposure, risk of transmission to family members or other household contacts, and drastic changes to patient care (Adams & Walls, 2020; Canadian Nurses Association, 2020; Cyrus et al., 2020; Gauthier & Guest, 2021; Greenberg et al., 2020; Lapum et al., 2021)

Previous research has explored the various nuances of moral distress experienced by ICU nurses, including defining attributes, contributing factors, and associated outcomes. However, there is a need for more information about effective interventions, including nurse-driven and empirically supported designs on how organizations can respond to nurses' experiences of moral distress. The global pandemic has underscored the gravity of this phenomenon, as early predictions and observations of heightened ethical events and experiences of moral distress have been identified. Therefore, the focus of this interpretive descriptive qualitative research study was to explore with nurses, what types of responses or supports they require to mitigate moral distress, and the associated negative outcomes.

Background

Defining Intensive Care

There is significant variation in the global definition, organization and classification of intensive care (i.e., critical care) (Marshall et al., 2017). Following a scoping review and collaborative discussion by the World Federation of Societies of Intensive and Critical Care Medicine (Marshall et al., 2017), a proposed definition for the term ICU was created to facilitate consistency across this field of medicine:

> An intensive care unit (ICU) is an organized system for the provision of care to critically ill patients that provides intensive and specialized medical and nursing care, an enhanced capacity for monitoring, and multiple modalities of physiologic organ support to sustain life during a period of acute organ system insufficiency. Although an ICU is based in a defined geographic area of a hospital, its activities

> often extend beyond the walls of the physical space to include the emergency department, hospital ward, and follow-up clinic (p. 274).

Healthcare professionals working in these units seek to support individuals that are experiencing acute or emergent health needs, hosting some of the sickest individuals in the hospital (Marshall et al., 2017).

Classification of Intensive Care Units

Intensive care units are commonly organized according to type (i.e., population served or focus of service) and level of care provided (i.e., amount/type of interventions available), dispersed amongst community and academic centers (Canadian Institute for Health Information, 2016; Marshall et al., 2017). Intensive care units are staffed by teams of individuals from various disciplines, with advanced and focused training to meet the complex needs of critically ill individuals. These teams may include physicians, nurses, respiratory therapists, nurse practitioners, physiotherapists, pharmacists, dietitians, and personal support workers.

Types of Intensive Care Units

Intensive care units can be classified by the primary type of service or population that the unit supports. Broadly, this can include: general adult, specialized adult (e.g., burn, cardiac, neurosurgery, trauma, respirology), pediatric, or neonatal (Canadian Institute for Health Information, 2016). General adult ICUs, found in both tertiary or community hospitals, provide assessment, intervention, and resuscitation for acutely ill individuals. Specialized units, often located in academic centers, support critically ill patients with advanced and unique healthcare needs. This is achieved by employing individuals that have received enhanced training to support rigorous medical activities,

such as advanced neurological monitoring, burn treatments, or trauma care (Marshall et al., 2017). There are also step-down units (i.e., progressive care units, intermediate care units) that may support individuals with healthcare needs that do not require the highly comprehensive or invasive level of services provided in an ICU, but need a higher level of care than a general medical ward can offer (Marshall et al., 2017). These units help individuals transition to the next stage in their healthcare journey, such as discharge home or transfer to a general medical ward.

Levels of Intensive Care Units

Simply, most ICUs are categorized based on the local capacity to provide certain measures of invasive interventions. However, there are many factors that can be considered when categorizing an ICU. Marshall et al. (2017) recommends categorizing ICUs based on twelve variables:

> (1) availability of skilled medical personal (2) nursing personnel and (3) other specialists (e.g., respiratory therapists, physiotherapists); (4) capability to monitor acutely ill patients; (5) availability of resources for organ failure support; (6) structure of physical space; (7) ICU outreach services; (8) presence of formal education and professional development for staff; (9) dedicated house staff or expert personnel; (10) research and quality improvement activities; (11) role in referral for the hospital/community/country; and (12) ability to respond to natural or human-made disasters/outbreaks (p 274).

Per these categorical recommendations, not *all* criteria are required to meet a particular level of classification (Marshall et al., 2017). With this in mind, most healthcare systems categorize ICUs based on a numeric scale (i.e., Level I, II or II)

(Canadian Institute for Health Information, 2016; Marshall et al., 2017). These categories may be known synonymously as primary, secondary and tertiary (Marshall et al., 2017). A Level I (primary) ICU provides the most basic level of advanced medical care, including the ability to provide simple supports for single organ failure, and the use of non-invasive monitoring and interventions (e.g., supplemental oxygen via face mask, transcutaneous continuous electrocardiogram monitoring) (Marshall et al., 2017). These sites may employ staff that do not have extra intensive care training, and physicians work primarily during the day. At these sites, minimal formal specialized intensive care education or research programs may exist (Marshall et al., 2017). A Level II (secondary) ICU is capable of providing short-term invasive respiratory support and monitoring, post-operative care, and single-organ failure intervention (Critical Care Services Ontario, 2020; Marshall et al., 2017). These sites are staffed by specialty-trained healthcare professionals, with potentially formal ICU training (Marshall et al., 2017). A physician is typically immediately available, and nurses care for a maximum of three patients (Marshall et al., 2017). These sites tend to have formal quality improvement programs, and have the capability to act as referral sites for other local hospitals of lower levels (Marshall et al., 2017). Finally, a Level III (tertiary) ICU has the capability of providing the highest level of acute care, including prolonged invasive monitoring, and maximum ventilatory support and life-sustaining treatments for patients with multiple-organ failure (Ontario Critical Care LHIN Leadership Table, 2006; Marshall et al., 2017). These advanced medical interventions can include extracorporeal membrane oxygenation (ECMO), continuous renal replacement therapy (CRRT), proning, and invasive neurological monitoring (Marshall et al., 2017). Highly trained ICU healthcare

professionals provide 24-hour care, with nurses typically caring for a maximum of two patients (Marshall et al., 2017). Level III ICUs typically provide services and coverage for a larger geographic region, and are available to provide care during global emergencies (Marshall et al., 2017).

Teaching and Research Status

Hospital classification is often related to the priority and level of engagement in teaching, quality improvement, and research activities. Generally, community (i.e., non-teaching) hospitals are considered healthcare centers that serve a local community with the principal mandate of providing both acute and non-acute services, and lesser academic or research priorities (Gehrke et al., 2019). Traditionally, the lack of academic or research endeavours in community hospitals results in less healthcare research funding from both public and private agencies, comparative to their academic counterparts (Gehrke et al., 2019). This often delays the implementation of evidence-based practices and decreases access to resources or necessary infrastructure (DiDiodato et al., 2017; Gehrke et al., 2019). Academic (i.e., teaching) institutions disperse their priorities equally among healthcare, research, and educational activities. Consequently, most healthcare funding is awarded to these centers because their aim is to advance patient care and pioneer research activities (Gehrke et al., 2019). Those funds enable further program development and clinical activities, which further encourages funding agencies to invest. This creates a cycle, in which community centers may have difficultly accessing research funding to establish similar programs, advance care, and improve quality of services.

Canadian Intensive Care Units

Structure. Classification of Canadian hospitals and beds with ICU capacity are comparative to the definitions discussed. However, variation exists across provinces and regions based on differences in funding, administrative, and healthcare models (Fowler et al., 2015; Tsang et al., 2021). For example, in Ontario as of August 2020, classification of adult critical care unit levels was changed from the commonly used 3-tiered Level system to a 6-tiered Level system. This new classification system now includes: Level 2 Basic, Level 2 Advanced, Level 2 Coronary, Level 3 Basic, Level 3 Advanced, and Level 3 Coronary, with most ICUs categorized as Level 3 Advanced (34%) (Bailey et al., 2020).

According to the Canadian Institute of Health Information (2021), the total number of hospital beds staffed and in operation during 2019-2020 (excluding Nunavut, all provincial nurseries, and all neonatal ICU beds) was 91,511. Of those beds, 4,567 (5%) were dedicated ICU beds (Canadian Institute for Health Information, 2021b). The province of Ontario reported the largest number of ICUs in Canada, with approximately 1,783 ICU beds across approximately 76 hospitals (Canadian Institute for Health Information, 2021b). These hospitals are mostly concentrated in the southwestern region. Quebec holds the next largest number of ICU beds (n=1261), followed by British Columbia (n=480), Alberta (n=382), Manitoba (n=164), New Brunswick (n=144), Nova Scotia (n=121) and Saskatchewan (n=108) (Canadian Institute for Health Information, 2021b). Fewer than 100 beds are located provincially in Newfoundland and Labrador (n=96), Prince Edward Island (n=24), Yukon (n=4), and the Northwest Territories (n=0) (Canadian Institute for Health Information, 2021b). Generally, occupancy of Canadian

ICUs ranges from 50% at smaller facilities to up to 90% at larger facilities, under non-pandemic conditions (Canadian Institute for Health Information, 2016).

The number of available ICU beds at any given time is variable, depending on hospital funding and clinical demands. For example, the COVID-19 pandemic has led to an increased demand of ICU beds across Canada (Murthy et al., 2021). Therefore, given the relative frequency of changes to ICU capacity during the COVID-19 pandemic, statistics for the number of ICU beds since March 2020 are not included in this thesis. Furthermore, due to limited data availability, accurate reporting on the number of beds per specialty units (i.e., burn units, neurotrauma units) or at each level is not possible.

Patient Population. Critical medical conditions that require ICU admission may include: sepsis, injuries related to trauma (e.g., motor vehicle accidents, burns), acute cardiac (e.g., myocardial infarction, heart failure, arrythmias), neurological (e.g., stroke) or gastrointestinal events (e.g., intestinal bleeding, obstruction), exacerbations of respiratory infections or conditions (i.e., chronic obstructive pulmonary disease, pneumonia), drug toxicity, post-operative complications, or diabetic emergencies (Canadian Institute for Health Information, 2016). Patients admitted to the ICU may also be individuals that require intensive monitoring for reasons such as, post-operative care (e.g., cardiac valve replacement, aneurysm repair), post-cardiac arrest, or following extensive neurological damage (Canadian Institute for Health Information, 2016).

In 2019-2020, approximately 60% of Canadian ICU patients were male and the largest age group (44%) ranged from 65 to 84 years of age (Canadian Institute for Health Information, 2020). Between March 2019 to December 2020, there were over 380,000 admissions to Canadian ICUs, mostly associated with a major cardiac

diagnosis (Canadian Institute for Health Information, 2021c). The number of unplanned admissions related to acute respiratory conditions in March to December 2019 was 5,579, and in March to December 2020 was 9,188, representing a total change of 65% (Canadian Institute for Health Information, 2021a). Comparatively, in 2013-2014 there were 230,800 individuals admitted to Canadian ICUs, mostly associated with urgent medical needs (undefined) (Canadian Institute for Health Information, 2016).

Site of admission depends on a number of factors, including the medical condition of the individual (i.e., determines level of support required), geographical location, and availability of beds. In Ontario, the service *CritiCall* is used by healthcare professionals to coordinate and triage the delivery of emergent, critical care healthcare services, which may include transferring patients to higher levels of care (CritiCall Ontario, 2021).

An individual's length of stay in any type of ICU is dependent on multiple factors, including their required level of continued support. The average length of stay for an individual is three days (Canadian Institute for Health Information, 2016). However, some individuals may be admitted for an extended period of time (e.g., several months or even beyond a year). The daily cost of a Canadian ICU bed being occupied is approximately $4,000 CAD (Canadian Institute for Health Information, 2016). High costs can be attributed to the wages of highly-trained staff, staffing-ratios, technology dependency, interventions and equipment (Canadian Institute for Health Information, 2016).

Canadian Intensive Care Registered Nurses

Nurses that provide direct patient care in ICUs have highly specialized knowledge and skills. Intensive care nurses continuously assess, monitor, and manage the optimal physiological balance of an individual's health in a highly-technological environment (Canadian Association of Critical Care Nurses, 2017). Furthermore, these nurses directly communicate with and support patients' families, under periods of high stress, to manage the goals of patient care.

Skills and Responsibilities. In the highest level, adult-ICU setting, a registered nurse typically cares for one patient over the course of a twelve-hour shift. When staffing levels are low, nurses may be required to care for multiple patients. Comparatively, a nurse working in a lower level or transitional critical care unit may care for two patients on a more regular basis, due to a lower level of acuity. Care for ICU patients requires nurses to complete skilled assessments, implement interventions, interpret clinical and laboratory data, and monitor treatments. Based on nursing assessments, ICU nurses implement interventions (e.g., administration of high-risk medications, request change in ventilation settings) while monitoring and evaluating patient responses. Other nursing interventions may include advanced life-support, such as ECMO or CRRT. In emergency situations, ICU nurses also act on or lead the Code Team (i.e., emergency response team), responding to cardiac or respiratory arrests within the unit and across the hospital. Furthermore, ICU nurses may be required to care for potential organ donors or support end-of-life care (Critical Care Services Ontario, 2018). In addition to direct patient care, a considerable amount of ICU nursing time is required to attend to administrative activities, such as documentation and

processing of physician orders. As members of the interdisciplinary care team, ICU nurses collaborate with colleagues to develop patient care plans. These nurses also partner with patients and their family members to identify goals of care, provide emotional support, deliver health teaching and aid in navigating their complex healthcare journey. Nurses may also engage in research activities, such as data collection, administration of study interventions (e.g., medication), and implementation of research-based approaches into practice.

Education. Building upon the foundational nursing knowledge acquired from baccalaureate or diploma nursing education, most ICU nurses utilize the advanced theoretical knowledge acquired from post-degree education to care for critically ill individuals. For others, expertise is drawn from years of clinical experience that has resulted in advanced critical care nursing competencies. The Canadian Nurses Association offers certification in Critical Care Nursing (Adult), a credential recognized across all territories and provinces. Nurses can also seek education at local colleges, many of which offer post-degree certificates in critical care nursing. This certification is commonly composed of 300 hours or more of combined clinical practice and classroom education (Critical Care Services Ontario, 2019a). Such critical care education can include advanced theoretical knowledge of systems assessment, physiology, cardiac care, ventilatory support, critical thinking, and professional leadership. Certification programs may differ across provinces with regards to organization and structure of content, expectations, and standards. In 2017-2018, approximately 68% of nurses working in Ontario ICUs received specialized critical care certification (Critical Care

Services Ontario, 2019a). Additional training may include advanced cardiac life support, CRRT, ECMO, and critical care response team training.

Recruitment, Retention, and Turnover. The demanding and high-stress practice environment of the ICU creates challenges for recruiting and retaining skilled nurses (Adams et al., 2019; Sawatzky et al., 2015). Moreover, the experience of moral distress in this setting has been found to be a contributing factor to nurse recruitment, retention, and turnover (Adams et al., 2019; Deschenes & Kunyk, 2019; Dodek et al., 2016; McAndrew et al., 2020; Wilson, 2017).

The Ontario Context. Critical Care Services Ontario (2019b) completed a province-wide online survey of critical care nurses during 2017-2018, collecting data on important information, including: ICU nurse demographics, workforce utilization, recruitment, and retention. A total of 11,437 nurses (adult-ICU nurses, n = 8,538) completed the survey (mean age = 30-39 years, with majority less than 40 years of age). Respondents identified that recruitment strategies frequently utilized by both Ontario neonatal and adult-patient ICU settings included seeking nurses from other units (54%), utilizing flexible scheduling (21%) and enlisting mentorship (17%). Respondents also reported regular meetings with leadership (46%), education/training events (39%) and flexible staff scheduling (33%), as the most frequently used retention strategies. Employee wellness initiatives provided hospital-wide (27%) and by critical care units (3%) were reported as some of the most infrequently used strategies (Critical Care Services Ontario, 2019b). Comparatively, strategies perceived as most effective included education/training events (52%), flexible staff scheduling (33%), and employee

recognition (47%). Only 16-18% respondents reported wellness strategies as “very effective” (Critical Care Services Ontario, 2019b).

The turnover of nurses in the ICU and the amount of sick time requested by this group of professionals are significant workforce concerns, specifically during the COVID-19 pandemic, and are associated with high costs for healthcare systems and risks to patient safety (Critical Care Services Ontario, 2019; Kok et al., 2020; Papathanassoglou & Karanikola, 2018). In Ontario, during 2017-2018, compared to neonatal and pediatric colleagues, adult-ICUs reported the highest rates of sick time (Critical Care Services Ontario, 2019a). Furthermore, about 10% of critical care nurses working in an adult-ICU setting left their position (Critical Care Services Ontario, 2019a). Amongst those who left their position (n=832), the primary reasons reported for leaving bedside nursing positions included: leaving for another nursing role (43%), retirement (18%), and relocating to another department (15%). Other reasons included “other” (16%), promotions (7%), and leaving the nursing profession all together (1%) (Critical Care Services Ontario, 2019a)

A second Critical Care Services Ontario (2019b) survey included questions to measure burnout among ICU healthcare professionals from 99 critical care units. A total of 1,826 healthcare professionals completed the survey, with 71% participants identifying as bedside registered nurses (Critical Care Services Ontario, 2019b). Burnout was defined as “occupational condition characterized by emotional exhaustion, depersonalization, and a low sense of personal accomplishment" (Critical Care Services Ontario, 2019a, p. 3). Experiencing moral distress in professional practice has been demonstrated as one contributing factor to the development of burnout (Deschenes et

al., 2020; Dodek et al., 2018; Epstein et al., 2020; Greenberg et al., 2020; Kok et al., 2021; Phoenix Australia & Canadian Center of Excellence - PTSD, 2020). Burnout scores of nurses alone were not reported, however, collectively 37% of all respondents reported feeling “definitely burning out” (Critical Care Services Ontario, 2019a, p5).

The Impact of COVID-19 on Intensive Care Units

In ordinary circumstances, despite growing advances in science and medicine, critical illness is often characterized by unpredictability and uncertainty. This was heightened in the pandemic context, where patient conditions had the potential to rapidly change, however, best practice was unknown. With the onset of the COVID-19 pandemic, conditions demanded those working in ICUs to be on the forefront of rapidly developing treatment plans for the most acutely ill. Comparative to healthcare systems around the world, which experienced devastating and unparallel demands that reached far beyond their available resources, the Canadian healthcare system did not exceed its ICU capacity in 2020 (Murthy et al., 2021). In fact, the average occupancy rate of Canadian ICUs at that time was 65% (Government of Canada, 2020b). However, in subsequent waves of the pandemic, varying rates of occupancy and unit stress were noted. Despite this affirmative stance, the COVID-19 pandemic greatly impacted the Canadian healthcare system. For example, in Ontario, the emergence of multiple COVID-19 variants in early 2021 resulted in substantial stress on healthcare systems and ICUs. Ontario data revealed that COVID-19 variants increased the risk of ICU admission by 103% and risk of death attributable to COVID-19 by 56%, correlating with similar patterns around the world (Tuite et al., 2021). Clinicians across the country described their adaptive responses to COVID-19. For example, many ICUs required

additional beds to meet increased needs, and consequently claimed beds on neighboring units or separate floors, including pediatric settings. Furthermore, in efforts to reduce exposure and transmission, prioritization of healthcare services occurred. Many scheduled interventions and procedures were placed on hold to divert resources to areas of practice that were most acutely impacted by COVID-19. This required significant human resources to restructure and reorganize healthcare services, and affected the quality of life for those impacted. These changes to structure and flow were dynamic in response to the different COVID waves.

Theoretical Scaffolding

The principles of interpretive description guided this research study. Interpretive description is an applied qualitative health research method utilized to answer research questions derived from clinical practice (Thorne, 2016). As a key characteristic of interpretive description, scaffolding acts as the skeleton or framework of the study; it is the foundation upon which the study can be built (Thorne, 2016). The two main elements that compose the study scaffold are (1) a literature review and (2) a theoretical forestructure.

A literature review allows the researcher to develop a comprehensive understanding of the phenomenon of interest and strengthens the research question. The review should include a summary of the “state of the science” and must clearly conclude that experts in the field do not have adequate amount or the quality of information required to address the clinical issue of interest, justifying the necessity of the study (Thorne, 2016, p. 60; Thorne et al., 2015). This will also aid in developing a precise research question that will address a specific gap in our disciplinary nursing

knowledge, to facilitate a meaningful contribution to practice. In this study, this was accomplished by thoroughly searching multiple data sources and attending scholarly conferences to develop a deeper understanding of the phenomenon.

Literature Review

The concept of moral distress and its associated outcomes for nurses, the patients they care for, and the healthcare systems in which they work, has been discussed and developed for over three decades (Morley et al., 2021; Musto et al., 2015). Particular attention has been given to ICU nurses, due to the multitude of complex ethical challenges that commonly occur within this practice setting.

The purpose of this literature review is to define and describe the concept of moral distress. Factors that increase an individual's risk of experiencing moral distress, as well as the individual, patient, and system outcomes associated with registered nurses' experiences of moral distress will then be described. Finally, a critical review of interventions developed and evaluated to prevent or ameliorate the outcomes associated with moral distress will be summarized, with specific recommendations in the context of a pandemic.

A comprehensive search of three electronic databases (CINAHL, PubMed, and Web of Science) was conducted in 2020. Each database was searched using the key words "moral distress", AND "nurse*" [OR NUR], AND "intensive care unit*" [OR "critical care*" OR "ICU*"]. Each search was limited to peer-reviewed, English-language, journal articles published between 2015 and 2020. The findings from the databases CINHAL, PubMed and Web of Science resulted in 128, 138 and 244 citations respectively (see Appendix A – General Search). Following this first search, a second literature search

was conducted in 2020 to further understand the phenomenon of interest, but within the specific context of care during a pandemic. The previous search results were combined with the additional key words “outbreak”, OR “disease outbreak”, OR “pandemic”, OR “epidemic”. This search resulted in minimal findings. The findings from the databases CINAHL, PubMed and Web of Science resulted in 2, 15 and 1 citation respectively (see Appendix A – Pandemic Search). The search was broadened to include settings outside of intensive care, and outside of the date range, resulting in more general description of the nursing experience during global disease outbreaks. A second search method included an exploration of the grey literature using Google scholar, employing the key phrases “moral distress”, “intensive care”, and “nurse.” This search method also led to some findings, including conference proceedings, policies, and government documents. A final method of searching for relevant literature included hand-searching reference lists of key articles. Reference lists were scanned, and relevant citations were selected for review. Results of each of these searches were reviewed; duplicates and unrelated citations were removed with relevant entries flagged for further review. This included excluding articles situated in the context of pediatrics or neonatal intensive care.

Moral Distress

Ethical issues in nursing have been well described in the literature as an inherent part of practice, due to the complex and intimate challenges associated with caring for individuals with health care needs. *Ethics* are the “study of morality or standards of conduct, and critical reflection or evaluation of moral choices that are made” (Morton & Fontaine, 2017, p. 79). Ethics in nursing can be influenced by professional standards (i.e., principles or values) or ethical frameworks (e.g., nursing, biomedical, or public

health ethics). An *ethical event* is a situation in practice where there are competing ethical priorities, including questioning of morals (Morton & Fontaine, 2017). *Morals* are the commonly shared beliefs within a society about what is right and wrong, learned through personal experiences (e.g., religion, cultural traditions) (Morton & Fontaine, 2017). Morals are influenced by *values*, which are ideals that have significant meaning and influence an individual's priorities (Keatings & Smith, 2010).

Within occupational well-being and health sciences, there has been an emergence and identification of multiple unique responses (e.g., burnout, compassion fatigue, moral distress) to ethical events, critical incidences, or workplace hazards. These conditions and responses are complex and overlapping, creating challenges when describing and differentiating moral distress from other phenomena (Deschenes et al., 2020). Despite this ambivalence, it is clear that moral distress differs from other emotional responses to professional practice issues or stressors, and it exceeds the experience of emotional turbulence. The component of this process that differentiates moral distress from other responses to workplace stress, is the interaction with an ethical event in practice that leads to the distress. To provide clarity, definitions of each of these related terms are provided in Table 1.

Table 1.

Workplace Distress Responses and Conditions

Term	Definition
Moral Distress	• A response to an ethical event, in which an individual identifies or participates in an action that does not align with their values (Fourie, 2015; Morley, et al., 2020)
Burnout	• Emotional exhaustion, depersonalization, and feelings of reduced personal accomplishment secondary to multiple workplace related stressors (Rushton et al., 2015)

Post-Traumatic Stress Disorder	• A psychiatric disorder diagnosed for those who suffer from intensely disturbed thoughts or feelings related to an experienced or witnessed trauma (e.g., natural disaster, serious accident, sexual trauma, violence). (Salmon & Morehead, 2019)
Compassion Fatigue	• Symptoms of burnout, in combination with psychological and physical distress related to repeated secondary traumatic stress (i.e., cost of caring) (Kelly & Lefton, 2017; van Mol et al., 2015)
Secondary Traumatic Stress	• Physical and psychological response to indirect exposure to trauma or distress (van Mol et al., 2015).
Vicarious Trauma	• Worldview shift secondary to repeated engagement in care for patients who have experienced trauma. Physical, behavioural, psychological and spiritual changes can occur. (Huggard et al., 2017.)

Similarly, over the last few decades, the definition and operationalization of the term moral distress has evolved. Originally, Jameton (1984) defined moral distress as a psychological response to an ethical situation, in which a nurse is prevented (i.e., constrained) from pursuing a course of action that aligns with what they believe is right (Fourie, 2015, 2017; Jameton, 2017). This concept was defined based on observations of nursing students in their clinical practice (Jameton, 2017). Over time, this definition has been expanded based on work examining additional key components, contributing factors or causes, and how moral distress is manifested in varied populations of healthcare professionals. This has included examination of moral distress among professionals including physicians, respiratory therapists, and social workers working in multiple practice settings (Epstein et al., 2019; Fourie, 2017).

Within the context of this work to understand moral distress, there is an inherent tension in the literature on how this concept should be defined. Some authors remain aligned with Jameton's constraint-based definition (Epstein & Delgado, 2010), while

others have argued for a broadened definition (Fourie, 2017; Morley, Bradbury-Jones, et al., 2020; Wilson, 2017). Those who argue for an expanded definition state that moral distress is not only caused by a constraint (e.g., barriers or obstacles), rather, it can also be caused by other ethical events. Fourie (2017) and Morley (2019, 2020) believe that minimizing moral distress to a constraint-based definition, not only devalues other ethical events that lead to moral distress, but also prevents the development of relevant interventions. Moral events (defined in Table 2) are categories of ethical events that precede (e.g., moral constraint, tension, conflict, uncertainty) or follow moral distress (e.g., moral residue, injury, uncertainty, resilience) (Fourie, 2017; Morley 2020; Wilson, 2017). An ethical event can be categorized as more than one type of moral event.

The ambiguity amongst moral events, as well as moral distress and related concepts, can be further attributed to the inconsistencies and variations that exist in the use of these terms by different authors. For example, Jameton (1984), Fourie (2017) and Morley (2019, 2020) describe moral dilemma, moral uncertainty, and moral conflict with subtle differences. Although the broadened definition of moral distress integrates new knowledge and recognizes advances in understanding, the ambivalence that exists amongst the literature poses significant challenges for those studying the phenomenon, conducting research, providing education, and designing interventions (Wilson, 2017).

Table 2.

Categories and Types of Moral Events

Moral Events	Definition
Precede Moral Distress	
Moral Constraint	Inability to carry out an action that is perceived as ethically correct, due to barriers or obstacles (Fourie, 2015; Morley, Ives, et al., 2019).
Moral Tension	Internal struggle, where one perceives something as wrong, but does not articulate it openly or act on it (Morley, Bradbury-Jones, et al., 2019).
Moral Conflict	External struggle, involves voicing and acting on ethical concerns in a way that challenges others in an attempt to address ethical event (Morley, Bradbury-Jones, et al., 2019).
Moral Dilemma/Conflict	In response to an ethical event, an individual identifies multiple ethical values that are applicable, but must choose one value to prioritize (Canadian Nurses Association, 2017; Morley, Bradbury-Jones, et al., 2019); or none will result in a satisfactory outcome; or prioritizing one consequently eliminates the equivalently valuable options.
Moral Uncertainty	Knowing something is wrong but not being able to identify what is wrong, or what the right action could be taken (Fourie, 2017; Morley, Bradbury-Jones, et al., 2019).
Follow Moral Distress	
Moral Residue	Repeated episodes of moral distress results in accumulation or compounding effect of distress (Epstein & Delgado, 2010) May result in desensitization or burnout (Bruce et al., 2015)
Moral Injury	"Deep emotional wound" unique to those who bear witness to trauma and partake in "immoral" action (violates moral beliefs/conscience). Outcomes are long-lasting, including internal dissonance. Differs from moral distress and moral residue, but needs further exploration. (Cartolovni et al., 2021, p 6)
Moral Disengagement	Coping strategy. Disregard of ethical commitments. A nurse may then become apathetic or disengaged to the point of being unkind, non-compassionate or even cruel to other healthcare providers and/or persons receiving care (Canadian Nurses Association, 2017).
Moral Resilience	The capacity of an individual to sustain or restore their integrity in response to moral complexity, confusion, distress or setbacks (Canadian Nurses Association, 2017; Rushton et al., 2016).

Moral Distress Theory. Since Jameton's (1984) first definition and conceptualization of moral distress, researchers and theorists have worked to further

refine key concepts (e.g., antecedents, outcomes). Early theoretical work to deepen our understanding of the concept of moral distress, was expanded upon by Dr. Mary Corley, who later developed the Moral Distress Theory (2002) (Wilson, 2017). The primary purpose of the Moral Distress Theory is to delineate a nurse's response to ethical conflict experienced in their professional practice (Corley, 2002). Corley (2002) describes the contributors to moral distress as internal (i.e., the nurse's psychological response) and external factors (i.e., work environment, institutional barriers) (Wilson, 2017). Eight moral concepts impact the course and outcomes of distressing ethical conflicts experienced by nurses. These moral concepts include: commitment, sensitivity, autonomy, sense making, judgement, conflict, competency and certainty (Corley, 2002; Wilson, 2017). The complex and dynamic interaction of these concepts influence outcomes, resulting in either moral distress or moral comfort (Wilson, 2017).

As a middle range theory, the Moral Distress Theory is useful for outlining key concepts and processes, aiding in the identification of gaps in knowledge (Wilson, 2017). Wilson (2017) completed a formal evaluation of this theory using Walker and Avant's theory analysis framework (Walker & Avant, 2011). Wilson's (2017) primary critique of this theory, was that it was underpinned by Jameton's (1984) outdated and ambiguous definition of moral distress. In this same critique, Wilson highlighted several shortcomings of this theory related to the advancement of knowledge in the field of moral distress. Some of the most significant criticisms included:

- The theory has a lack of representation of the nurses' personal values as a predictor of moral distress, and the differences that exist between those personal beliefs and an organization's ethical guidelines

- The assumption that moral distress will result if an identified moral action is not carried out, and that moral comfort will occur if that action is carried out
- The theory does not acknowledge moral distress frequency and intensity
- The use of a single pathway (in the visual depiction of the theory) does not represent the cyclical relationship that occurs between propositions and concepts
- The simplicity of the model does not accurately reflect the complexity of the phenomenon

Despite substantial critique and recommendations for a revised Moral Distress Theory, Wilson (2017) does not provide an alternative theory or model. Wilson (2017) stated that several researchers have tested and evaluated the Moral Distress Theory. However, upon a review of the literature, little work was found that described an evaluation of the Moral Distress Theory. Rather, it appears that significant work has been done to evaluate the concepts and definitions that exist within the theory (e.g., moral distress, injury, suffering).

Measures of Moral Distress. In parallel to this theoretical work, researchers exploring this phenomenon have sought ways to empirically measure moral distress. Giannetta et al. (2020) completed a systematic review of moral distress measurement tools used with healthcare providers from several disciplines. This review included 32 articles and identified six instruments measuring moral distress. These tools were categorized by two groups: (1) those based on Corley's (2002;2005) Moral Distress Scale and (2) those not based on the Moral Distress Scale. The authors of this review did not clearly delineate what studies belonged to what groups, nor did they highlight the six instruments. Rather, they reported on all of the tools used across the 32 studies

included in the review. This made it confusing to understand the six main tools. Adding to the confusion, the authors inconsistently described adaptations and revised versions of the Moral Distress Scale, or those that were completely independent.

Experts and researchers in this field have described that threats to validity may occur when measuring moral distress, due to the inconsistencies of moral distress conceptualization used within measurement tools across the literature (Hamric, 2012; Morley, Ives, et al., 2019). Hamric (2012) argued that due to the complex nature of this phenomenon, multiple tools may be needed, and underlying definitions must be delineated by those designing future measurement scales.

An in-depth review of available literature revealed that a small number of moral distress measurement scales are consistently used by researchers to study this phenomenon as experienced by critical care nurses, with the Moral Distress Scale (Corley, 2002; Epstein et al., 2020) being cited most frequently. This scale measures moral distress intensity and frequency, using 32 items, in a 7-point Likert format (little/almost never, to great), with a focus on clinical situations encountered in the ICU environment (Corley, 2002). This scale had three factors: individual responsibility (20 items), not in the patient's best interest (7 items), and deception (3 items) (Corley et al., 2005). Corley et al. (2005) revised the original Moral Distress Scale, to include items about pain management, managed care, or incompetent care by healthcare providers and updated the tool to include a Likert-scale (0-6; none to very) for both intensity and frequency, and a new total of 38-items. Expert evaluations concluded 100% content validity, and Cronbach's alpha was 0.98 for the intensity scale and 0.90 for the frequency scale (Corley, 2005). This scale has since been adapted for use with various

populations, and translated into a range of different languages (Hamric, 2012). Recognizing the breadth and advancement of research in the field of moral distress ranging across disciplines, the scale has subsequently been revised again, named the Moral Distress Scale-Revised, in 2009 and 2012 by Hamric in collaboration with Corley (Epstein et al., 2020; Hamric et al., 2012). The revised scale aimed to include root causes of moral distress, expand beyond the ICU-setting, and increase the target population to include multiple healthcare disciplines (6 versions) (Hamric et al., 2012). This scale includes 21 items, showing good reliability (Cronbach >0.75) and validity using hypothesis testing (Epstein, 2020). Hamric (2012) reported a personal communication with Corley, stating she advised to use this scale instead of the original Moral Distress Scale. This revised scale has been widely used, and adapted to several nursing contexts beyond the six originally adapted versions (Morley, Ives, et al., 2019).

The Moral Distress Thermometer is a tool used to measure real-time or short-term moral distress (Epstein et al., 2020; Hamric et al., 2012). This visual analogue scale asks the participant to identify the level of and reasoning for moral distress (Hamric et al, 2012). This tool contains a single-item, 11-point scale, asking the participant to identify “how much moral distress you have been experienced related to work in the past 2 weeks, including today” (Wocial & Weaver, 2013, p 169). Wocial and Weaver (2013) had participants complete the Moral Distress Scale (2009) and the Moral Distress Thermometer, to test for validity (the Moral Distress Thermometer and Moral Distress Scale moderately correlated; $r= 0.40$; $P<0.01$). Authors described that this tool is useful for assessing intervention effectiveness (Wocial & Weaver, 2013).

Most recently, the Measure of Moral Distress for Healthcare Professionals (MMD-HP) was created to: include newly identified root and system level causes, capture a larger range of health professionals, and measure frequency and level of moral distress (Epstein et al., 2019, 2020). This scale is considered a revision of the Moral Distress Scale-Revised (Epstein, personal communication, January 7, 2021). This scale captures the intensity and frequency of moral distress experienced by the healthcare provider. There are 27-items, based on root causes of moral distress, in which an individual identifies the frequency (0-4) and level of distress (0-4). To generate an item score, the frequency score and distress scores for each item are multiplied, for a total item score of 0 to 16, and then added to generate a composite score (0-432). There are also two questions related to attrition, not included in the final score. Initial testing showed good reliability (Cronbach's 0.93) (Epstein et al., 2019). This tool also allows participants to add their own examples of moral distress, and level of distress and frequency, that may not have been captured in the 27-items.

Intensive Care Unit Nurses' Levels of Moral Distress. Many studies have used these tools to demonstrate that ICU registered nurses have some of the highest scores of moral distress, and higher scores in comparison to other nursing specialities, other ICU colleagues, and healthcare professionals from other disciplines (Browning & Cruz, 2018; Dodek et al., 2018; McAndrew et al., 2016, 2020; Rodney, 2017). For example, Whitehead et al (2014) surveyed American healthcare providers (n=592), including nurses (n=395), in one hospital, utilizing the Moral Distress Scale-Revised. Statistically significant results revealed that ICU healthcare professionals (n=214) had the highest mean score (M=89) of moral distress comparative to their non-ICU (n=375,

M=70.5), general adult (n=494, M=81.1) and pediatric (n=98, M=57.9) colleagues (Whitehead et al., 2014). Overall, nurses were found to have the highest mean moral distress score (M=82.9) compared to physicians (M=65.8) and “other” healthcare professionals (M=66.4) (Whitehead et al., 2014). Hamric et al. (2012b) also utilized the Moral Distress Scale-Revised to survey ICU healthcare professionals, registered nurses (n=169) and physicians (n=37), across eight ICUs in one American hospital. Mean moral distress scores were higher in ICU nurses (M=91.5) than ICU physicians (M= 65.6) (Hamric et al., 2012b). Dodek et al. (2018) surveyed Canadian ICU healthcare professionals, across multiple hospitals, with respondents including nurses (n=428), other health professionals (n=211) and physicians (n=30). This survey utilized the Moral Distress Scale-Revised (Dodek et al., 2018). The mean moral distress scores measured were highest in nurses (M=83), followed by “other” professionals (M=76) and then physicians (M=57) (Dodek et al., 2018).

Factors That Contribute to Moral Distress. The development of measurement tools to facilitate empirical evaluation of moral distress experienced by healthcare providers, specifically ICU nurses, has provided important insights about factors contributing to and causes of moral distress. Although variation exists amongst the language used to describe both causative or contributing factors to moral distress, researchers in this field most often categorize the contributing factors of moral distress as internal (i.e., self-imposed) and external (i.e., others-imposed) (McAndrew et al., 2016; Mealer & Moss, 2016; Morley, Ives, et al., 2019; Wilson, 2017). Hamric et al., (2012b) also described specific clinical situations in which healthcare professionals may

experience moral distress. For the purpose of this review, causes and contributing factors will be categorized as external and internal.

External. External causes reflect the practice environment, systemic, infrastructural, organizational, or cultural factors that create perceived barriers for nurses, which prevent them from pursuing actions that align with their moral values or that create challenging ethical events (Henrich et al., 2016; Hiler et al., 2018; McAndrew et al., 2016; Rushton et al., 2016). The external factors that have been most frequently attributed to moral distress experienced by ICU nurses in their professional practice include poor interdisciplinary collaboration (e.g., lack of or poor communication amongst the interdisciplinary team, inconsistent care plans), formal and informal power dynamics, staffing shortages, increased patient acuity, inappropriate patient assignments, excessive documentation requirements and intervention constraints due to cost or accessibility (Bruce et al., 2015; Dodek et al., 2016; Epstein et al., 2020; Hamric et al., 2012; Henrich et al., 2016; Hiler et al., 2018; McAndrew et al., 2016, 2020; Mealer & Moss, 2016). Particularly, participating in end-of-life care or invasive care for potentially futile patient outcomes have been reported as some of the most frequent sources of moral distress for this population (Browning & Cruz, 2018; P. Dodek et al., 2016; Epstein et al., 2020; Henrich et al., 2016; Hiler et al., 2018; McAndrew et al., 2016; Mealer & Moss, 2016).

Contextual factors that contribute to heightened periods of stress and changes to clinical work environments, such as the COVID-19 pandemic, may also act as external causes of moral distress (American Association of Critical Care Nurses, 2020; Kok et al., 2020; Lapum et al., 2021; Mehta et al., 2021). For example, during a pandemic,

nurses are required to respond to novel and emerging stressors, such as restricted interventions for patients, limited PPE, and risk of infection or transmission to family members (Adams & Walls, 2020; Rushton, 2015; World Health Organization, 2020).

Internal. Internal factors are an individual's characteristics that affect their response to ethically challenging events. These factors have been studied less than external causes, and conflicting findings exist (McAndrew et al., 2016). Examples of individual characteristics that may contribute to moral distress include: demographic variables, personality traits, or coping skills that impact their ability to respond to or manage ethically challenging situations (Dodek et al., 2018; Forozeiya et al., 2019; Hamric et al., 2012; Wilson, 2017).

Demographic factors that impact nurses' experience of moral distress have been minimally investigated. A systematic review by McAndrew et al. (2016) included a summary of findings of sociodemographic factors that contribute to moral distress. Limited findings suggested that female nurses, nurses that draw upon religious beliefs to guide practice decisions, and nurses working in certain European regions (Italy, Greece, Spain, Belgium, Germany) experience greater moral distress (McAndrew et al., 2016). McAndrew et al. (2016) emphasized the inconsistency of findings from studies exploring demographic variables and moral distress. Dodek et al. (2016) surveyed ICU healthcare personnel across 13 hospitals in British Columbia, measuring moral distress scores and collecting demographic data (age, sex, years of service). Similarly, inconsistencies were found across disciplines. For example, age was found to be inversely correlated with moral distress scores for "other" healthcare professionals, but not for nurses or physicians (Dodek et al., 2016). Furthermore, moral distress scores

were found to be greater amongst nurses with more years of experience, which was not the same for the "other" disciplines (Dodek et al., 2016). Hiler et al. (2018) explored predictors of moral distress for American critical care nurses, including age. Reported findings suggested that age was a statistically significant predictor, but the author did not mention the direction of the relationship (Hiler et al., 2018).

The influence of personality traits on the experience of moral distress may include perceptions of power, ability to identify ethical issues (i.e., moral uncertainty), self-doubt, lack of knowledge, and level of moral sensitivity and moral resilience (Hamric et al., 2012; Young & Rushton, 2017). This area of research has been less explored than external factors, however previous findings have suggested that character traits such as openness, extraversion, and conscientiousness can impact an individual's coping strategies or ability to manage moral events (Dodek et al., 2018).

Coping strategies are the efforts made by an individual to manage appraised internal or external demands that have the ability exceed personal abilities (Forozeiya et al., 2019). Nurses may engage in different strategies to cope with moral distress, such as problem-focused coping (i.e., directly addressing cause of moral distress) and emotion-focused coping (i.e., avoidance or distancing) (Forozeiya et al., 2019). Forozeiya et al. (2019) interviewed nurses (n=7), from two different Canadian ICUs, about their experiences of moral distress and their coping strategies. She found that most nurses engaged in problem-focused coping strategies, including seeking social support from colleagues and interventions to alleviate the cause of moral distress, which align with previous findings (Forozeiya et al., 2019). The ICU nurses in this study also described avoidance tactics, which included distracting oneself with care activities,

calling in sick, and avoiding thoughts of the situation (Forozeiya et al., 2019). Another concept, coping self-efficacy, is a process in which one appraises their capacity to manage a threatening situation (Shahrour & Dardas, 2020). Levels of coping self-efficacy are related to other responses to workplace trauma, such as such as acute stress disorders and post-traumatic stress disorder (PTSD) (Shahrour & Dardas, 2020). Therefore, it is hypothesized that an individual's level of coping self-efficacy could impact their ability to cope with traumatic events, and in turn, moral distress (Rushton et al., 2016; Shahrour & Dardas, 2020). No information was found that delineated an individuals' history of exposures (i.e., history of trauma, PTSD) and the risk of developing moral distress. However, repeated experiences of moral distress may result in moral residue, which can shift ones thoughts and perceptions of self (Epstein & Delgado, 2020).

The exploration of resilience and its relationship with moral distress has also been examined. Resilience is the capacity to sustain or restore integrity in response to stressful or adverse experiences (Stutzer & Rodriguez, 2020). Therefore, moral resilience is an individual's ability to sustain or restore integrity in the context of morally or ethically stressful circumstances (Canadian Nurses Association, 2017; Rushton, 2017; Young & Rushton, 2017). Some studies have shown that building upon individual resilience, specifically moral resilience, can aid in preventing the negative consequences of moral distress (Young & Rushton, 2017).

In addition to personal beliefs, personality characteristics or coping abilities, the values inherent to the healthcare, such as nursing standards or epistemology, public health principles, or biomedical ethics may drive conflict with practice that results in

moral distress. Ethical values rooted in nursing include: client well-being, client choice, privacy and confidentiality, maintaining commitment, truthfulness, and fairness (College of Nurses of Ontario, 2019). When nurses' ethical values related to personal, professional, or organizational priorities are in conflict, moral distress may occur.

Outcomes of Moral Distress. Experiences of moral distress have been found to influence nurse, patient and organizational (system) outcomes (Arnold, 2020; Browning & Cruz, 2018; Epstein et al., 2020; Forozeiya et al., 2019; Henrich et al., 2017; McAndrew et al., 2016; Mealer & Moss, 2016; Papathanassoglou & Karanikola, 2018).

Nurses. For nurses, quality of life is greatly impacted by the physical, psychological and social outcomes manifested in response to moral distress experienced in their professional practice (McAndrew et al., 2016; Mealer & Moss, 2016). As described, responses may differ due to variations in an individual's capacity to endure or cope with stress, or their level of moral resilience (Rushton et al., 2016; Young & Rushton, 2017). Psychological and behavioural responses can include feelings of anger, depression, anxiety, frustration, exhaustion, insomnia, nightmares, addictive behaviors, disengagement, loss of self-worth, withdrawal and burnout syndrome (Arnold, 2020; Bevan & Emerson, 2020; McAndrew et al., 2016; Mealer & Moss, 2016; Rushton et al., 2016). Nurses may also experience a plethora of physical responses, such as nausea, heart palpitations, gastrointestinal issues, insomnia, headaches, fatigue, fluctuations in weight, and higher susceptibility to illness (Arnold, 2020; Rushton et al., 2016). These may impact a nurse's ability to engage in meaningful relationships, cope with other stressors, and impact their overall personal identity (Arnold, 2020).

ICU nurses must cope with these potential outcomes of moral distress, while also managing other physical and psychological stressors in the workplace, such as performing patient resuscitation, providing end-of-life care, working long hours, practicing shift-work scheduling, and working short-staffed. Additional pressures of the COVID-19 pandemic may exacerbate these stressors, and potentially result in an increased incidence of moral distress (Dunham et al., 2020).

Some researchers have commented on the positive outcomes of moral distress, which have been cited as including opportunities for self-reflection, post-traumatic growth or opportunities to engage in advocating for system level change (Canadian Nurses Association, 2017; Deschenes et al., 2020; Rushton et al., 2016). Rushton (2016) discussed the "alternative view," in which an individual can capitalize on their experiences to feel empowered (p 44). This perspective views moral distress as an opportunity to engage in moral resilience.

Patients. Manifestations of moral distress experienced by ICU nurses have been shown to affect workplace performance, which in turn, affects patient satisfaction and potential threats to patient outcomes (McAndrew et al., 2016; Mealer & Moss, 2016). Furthermore, high levels of attrition linked to moral distress in this population contributes to decreased quality of care and increased risks to patient safety (Critical Care Services Ontario, 2017; P. Dodek et al., 2016; McAndrew et al., 2016; Mealer & Moss, 2016).

Organizations. At the organizational level, moral distress among the nursing workforce presents challenges for staff recruitment, retention, and attrition. Organizations must anticipate the time and costs associated with locating, hiring, and training qualified critical care nurses. Replacing an ICU nurse has been estimated to

exceed a cost of approximately $14,000 CAD (Secretariat, 2006). This becomes timely and costly for organizations, especially when nursing turnover rates are high. For example, Critical Care Services Ontario (2019a) reported some of the largest organizational cost incurrences as temporary nursing replacements and the decreased productivity of new hires. Organizations must also consider the cost of covering nursing sick time (e.g., overtime for covering sick calls) and the implications of poor patient outcomes.

Interventions to Address Moral Distress*.* Despite the notable amount of evidence that highlights the negative outcomes of moral distress experienced by ICU nurses, interventional studies designed to mitigate or reduce moral distress amongst most groups of healthcare workers, including nurses, is limited (Dacar et al., 2019; Epstein & Hamric, 2017). Epstein et al. (2017) described three categories of interventions aimed to mitigate moral distress experienced by healthcare professionals: (1) direct: targeted at moral distress; (2) indirect: targeted at other issues, but impact moral distress; and (3) general: aimed at all aspects of healthcare, which may contribute to institutional factors that cause moral distress. Rushton (2016) also suggested that such interventions can be directed at individual, team, and institutional levels.

Amongst the dearth of interventional studies designed to mitigate moral distress, sample populations vary. These studies can include broad groups of healthcare professionals from various disciplines, groups from multiple nursing specialties (e.g., critical care, oncology, surgical), or groups from a single nursing specialty. Epstein et al. (2017) reported on the impact of a health system-wide moral distress consultations services. Authors noted the substantial amount of work that went into the development

of the program, but it ultimately resulted in significant use and improved understanding of moral distress across the organization. However, authors did not formally measure outcomes of the program (Epstein & Hamric, 2017).

Interventions designed to mitigate or reduce moral distress experienced specifically amongst the ICU nursing population, particularly those aimed at organizational interventions or system level change, has been evaluated even less in the literature (Forozeiya et al., 2019; McAndrew et al., 2020; Mealer & Moss, 2016). In a systematic review completed by Dacar et al. (2019) that evaluated interventions to address moral distress experienced by critical care nurses, authors highlighted the overall low quality of studies, with moderate to high risk of bias.

Some empirically tested moral distress interventions designed for the ICU-adult nursing population include: reflective debriefing (Browning & Cruz, 2018), educational interventions (Bevan & Emerson, 2020; Beumer, 2008), and facilitated discussion (Chiafery, 2018; Fontenot & White, 2018). Browning and Cruz (2018) facilitated a pilot study intervention. This was a social worker-led moral distress education/debriefing program provided over six months (one session/month) to 42 ICU nurses (Browning & Cruz, 2018). The Moral Distress Scale-Revised score was obtained from nurses both pre- and post-intervention (Browning & Cruz, 2018). Not one nurse attended all sessions and the difference in pre and post Moral Distress Scale-Revised scores were not found to be statistically significant, however, all participating nurses requested to continue the sessions following the completion of the study (Browning & Cruz, 2018). Bevan et al. (2020) completed a transformative, mixed-methods, pre/post designed study, to test a Freirean-based conscientization intervention, which aimed to raise

awareness and address disempowerment with 13 critical care nurses that had experienced moral distress in their professional practice. Freirean-based conscientization theory focuses on problem-posing education to increase the power of oppressed groups (Bevan & Emerson, 2020). Qualitative data were obtained using semi-structured, one-to-one interviews (Bevan & Emerson, 2020). Quantitative data were acquired using the Moral Distress Scale-Revised, the Psychological Empowerment Scale and the Conditions of Work Effectiveness Questionnaire-II (Bevan & Emerson, 2020). Results showed reduced moral distress, and mixed findings in perceived personal and group empowerment (Bevan & Emerson, 2020).

Other suggested interventions, not evaluated or rigorously tested, include; the implementation of a protocol in which nurses could perform non-clinical duties or be temporarily deployed to another unit; ethics education; ICU culture change; integration of a palliative care team; or promoting workplace coping and venting with colleagues (Browning & Cruz, 2018; McAndrew et al., 2020; Mealer & Moss, 2016; Rushton et al., 2016). Some of these suggested interventions are based on findings from different disciplines (e.g., police officers, firefighters), other nursing populations (e.g., oncology) or fields of research (e.g., psychology). Some organizations and networks offer supports or guidelines, to help those experiencing moral distress. For example, The American Association of Critical Care Nurses (AACN) has done significant work to provide resources for nurses, accessible on their website (https://www.aacn.org/clinical-resources/moral-distress). This includes an official statement to organizations calling for support, relevant research, practice alerts, webinars, corporate social investment

projects, books, journal articles and continuing education for assessing and managing moral distress.

Pandemic Recommendations. The limited number of interventions with proven effectiveness to mitigate moral distress experienced by ICU nurses is made further problematic in the context of a pandemic. Minimal studies have explored how to support nurses providing direct patient care during a pandemic, with the aims to mitigate or reduce moral distress. This is concerning given the increased number of distressing ethical circumstances during a pandemic (Dunham et al., 2020; Morley, Grady, et al., 2020). Several organizations have taken it upon themselves to develop guidelines for healthcare workers providing frontline care during the pandemic, some based on mental health recommendations from previous global pandemics. Most of these guidelines address persevering mental health, with a few specifically focused on coping with moral distress. In Canada, the Canadian Institute of Excellence-PTSD and Phoenix Australia (2020), the Mental Health Commission of Canada (2020) and the Canadian Medical Association (2020) have created documents outlining recommendations for individual healthcare workers and healthcare organizations to maintain the psychological safety. Nursing organizations such as the AACN, Canadian Nurses Association and the Canadian Association of Critical Care Nurses (CACCN) have released position statements and provided recommendations for healthcare institutions and nurses. Furthermore, globally, the World Health Organization (2020) and the Institute for Healthcare Improvement (2020) have created evidence-based recommendations for healthcare worker mental health and well-being.

Theoretical Forestructure

Within the context of qualitative health research and interpretive descriptive methodology, there is a recognition that a researcher's experiences, values, and beliefs inherently influences all facets of the research inquiry process (Thorne, 2016). Developing a theoretical forestructure identifies and acknowledges this influence. This process requires the researcher to (a) locate ones' theoretical allegiances, (b) locate oneself within a discipline (disciplinary orientation), and (c) locate ones' personal values, beliefs and assumptions about the phenomena under study, before entering the study (Thorne, 2016). Identifying and describing elements of the theoretical forestructure helps the researcher understand their influence on the project. The student researcher has provided a position statement to delineate my perspectives and identify factors that influence my understanding and perceptions of the concepts understudy. The student researcher also maintained a reflexive journal throughout the research process to document recognize the influence of my ideas on data collection and generation (Thorne, 2016).

Theoretical Allegiance

Typically, research designs are informed by theoretical frameworks that strictly frame methodological decisions and language. Paradoxically, interpretive description studies are not aligned with or guided by one specific theory (Thorne, 2016). Rather, at the beginning of the study, researchers engaged in this work must declare the theoretical influences of their choice (i.e., one or multiple) that are associated with their conceptualization of the phenomenon of interest. Those theoretical influences shape the assumptions and values that influence all methodological components of the study.

Proclaiming theoretical allegiances is supported by the aligned coded language, and indicates the larger body of work that the study will ultimately contribute to (Thorne, 2016).

In nursing, as described earlier in this chapter, moral distress has been formally theorized by authors Jameton (1997) and Corley (2002). I have highlighted the significant criticism that these theories have received over the past three decades, as nursing science has evolved. Many researchers have endeavored to study and define moral distress, however there is considerable lack of consistency across fields and disciplines, potentially related to the complexity of the phenomenon. I have described the implications for practice, research, and education, related to the inconsistencies of this phenomenon within the literature. Therefore, in this study, my understanding of moral distress comes from the work of multiple nurse researchers that have endeavored to expand the definition of moral distress beyond the constrictive definition first established by Jameton. This includes work done by Morley (2019; 2020) and Fourie (2015; 2017), who both emphasize that moral distress moves beyond the inability to pursue an action because of barriers, but also includes situations of moral uncertainty, moral tension, and moral conflict. Eliminating these other types of responses that cause moral distress would disregard and invalidate many experiences that cause moral distress for ICU nurses. Additionally, Epstein's (2019; 2020) research in this field, specifically data measurement tool development, plays an important role in my understanding of the phenomenon of moral distress. Key concepts from these theories will inform data collection and analysis.

Disciplinary Orientation

Developing the theoretical forestructure also includes grounding research within a disciplinary orientation. Disciplinary orientation (i.e., clinician perspective, disciplinary lens) describes how a researcher's experience as a healthcare professional influences their observations, interpretations, and sense-making of the world around them. The purpose of integrating a disciplinary orientation throughout the study design is to ultimately generate findings that will meaningfully contribute to the health discipline, affecting those situated in or impacted by the phenomenon of interest (Campbell et al., 2019). This is founded in the belief that only those credibly grounded in their disciplinary field or mandated profession can generate findings that will profoundly impact their domain of practice (Thorne, 2016). It may be challenging for researchers to differentiate theoretical allegiances and disciplinary orientation, as many disciplinary views are shaped by certain values, theories or assumptions (Thorne, 2016). This can be addressed through reflection, specifically on the disciplinary nature of the study, and how the design and findings aligns with the disciplinary knowledge (Thorne, 2016).

In the applied health field, disciplinary orientation is the discipline's epistemology (Thorne, 2016). Epistemology describes the way of knowing, and informs the justification and evaluation of knowledge development (Luciani, Jack, et al., 2019). Therefore, my disciplinary orientation as a nurse indicates that the worldviews of nursing will inherently influence the construct of this study, which is also intrinsic to this study design. Nursing epistemology can be challenging to describe, considering the complex nature of nursing. Simply, a nurse's way of knowing is the combination of clinical, conceptual, and empirical knowledge (Thorne et al., 2015; Vinson, 2000).

Therefore, nursing research questions rooted in disciplinary orientation must acknowledge both clinical experience and theoretical knowledge as credible sources, to answer research questions that aim for action (Thorne et al., 2015). Such questions will involve "normative moral imperative," aiming to improve upon or solve an actual clinical practice problem that will ultimately benefit individuals or health systems (Thorne, 2016, p. 74). Nursing epistemology also seeks to discover and value the individual's experience, while noting the generalizable experiences of the population (Thorne et al., 2015). This is accomplished while concurrently acknowledging that contextual changes of the healthcare settings influence experiences (Thorne et al., 2015). Therefore, in this study the lead student researcher's disciplinary orientation will be rooted in clinical nursing experience and conceptualization of moral distress in this context.

Relationship with Ideas

A final and equally valuable component of developing a theoretical forestructure is the declaration of the researcher's personal ideas, perspectives and experience that influence the study. The purpose of proclaiming these ideas is to inform the readers of any biases and motivations that impact the study. The information included in this postulation must only be that which is essential and relevant to understand the researchers personal influence on the study (Thorne, 2016). In this study, a position statement is provided by the lead student researcher, acting as the declaration of disciplinary orientation and relationships with the topic of interest.

Position Statement. I identify as an educated, professional woman, with feminist values. My clinical, research and academic experience is varied. I hold a Bachelor of Science in Nursing degree and a Critical Care Nursing Certificate. I have more than

seven years of nursing experience in various practice settings, predominantly including adult-patient critical care in a Level 3 ICU, all of which is situated in a community hospital setting. As an ICU nurse, I engaged in several volunteer research activities within numerous ICU research committees and networks, which contributed significantly to my research knowledge.

This study research question was derived from my nursing education and my practice as a registered nurse. As an undergraduate nursing student consolidating in an inpatient mental health unit, I observed signs of burnout and compassion fatigue amongst the nursing staff. This experience prompted me to explore concepts of healthcare worker well-being, and motivated me to provide nursing education on compassion fatigue to the staff on that unit. After transitioning into a licenced nurse role, I continued to observe several colleagues experiencing varied psychological and physical responses to stressors in their professional practice. Furthermore, within my own practice, I recognized several organizational and systemic structures that created barriers to engage in ethical nursing practice. My most recent clinical endeavour as an ICU nurse highlighted these difficulties faced by nurses. Informal conversations with peers revealed experiences of hopelessness, frustration, and exhaustion in response to ethical events faced in the workplace. Such experiences, in combination with shiftwork, understaffing, and a clinically stressful work setting, negatively impacted quality of work-life and decreased job satisfaction. Furthermore, I noted minimal organizational efforts made to support and retain nurses working in this intense healthcare setting. These experiences prompted several of my colleagues, and myself, to seek time off work, transition to other units, or to leave the nursing profession all together. My long-held

intentions to pursue graduate studies were set in motion, once I identified a practice-based issue that I was truly passionate about and worth exploring. Thus, my clinical experience compelled me to investigate ICU nurses' responses to moral distress experienced in their professional practice, with the goal of identifying potential interventions as suggested by nurses.

My experience in this practice setting informs the beliefs and assumptions I hold about nurses' experiences of moral distress. One assumption I hold is that that most ICU nurses experience moral distress. I also assume that ICU nurses and hospitals would benefit from organizational interventions to prevent or reduce moral distress. As the lead student researcher, engaging in self-reflection through the use of a reflexive journal was key to recognizing assumptions, evaluating them, and reflecting on how they may influence the research process. Furthermore, engaging and utilizing strategies to reduce my distress, such as regular reflective supervision, was essential to ensure preservation of my own psychological safety during the conduct of this work.

Purpose

In this review, the documented outcomes of moral distress experienced by ICU nurses have been highlighted. Furthermore, the paucity of high-quality, rigorous interventional studies exploring how to support ICU nurses experiencing moral distress have been described. The absence of such interventions, coinciding with the increased relevance of moral distress in the current global context, threatens multiple poor outcomes for ICU nurses, patients, and healthcare organizations. Historically, it is unclear if ICU nurses have contributed to research designs, specifically informing interventional studies, addressed at their own moral distress. Research informed by

those affected or impacted by the implications, is known to have better uptake and applicability (Thorne, 2016). Therefore, to support ICU nurses' practice and help mitigate their experiences of moral distress, and in turn, the negative outcomes associated with this phenomenon, it is important to first understand their responses to moral distress, and specifically how the context of a global pandemic influenced their responses and needs. This includes learning about the organizational supports, resources, or system level changes they would like to see integrated into their practice. My study design facilitated the collection of information that contributed to recommendations rooted in the expressed needs of those impacted by the phenomenon of interest.

The purpose of this study was to (a) deepen our understanding of how pandemic conditions exacerbate moral distress for ICU nurses; (b) identify ICU nurses' current personal or professional practices that they rely on to ameliorate moral distress; and (c) to identify their practice needs and recommendations for organizational supports or changes that are required to mitigate the experience of moral distress. Findings from this study will be useful in providing relevant, contextual, and nurse-informed evidence, that can be instrumentally utilized to enhance nursing education curriculum, organizational policy, and the development and evaluation of novel interventions designed to mitigate moral distress experienced by ICU nurses. This study purpose aligns with one of the CACCN most recent calls to action, which outlines the need for governments and employers to immediately put in place supports, including mental health services, to prevent a collapse of the ICU nursing workforce (Gauthier & Guest, 2021).

CHAPTER 2: METHODS

This chapter provides a comprehensive description of the methods used to conduct this applied qualitative health research study, including the rationale for selecting interpretive description design to answer the research question, the study context, sampling, recruitment, data collection, data analysis, and ethical considerations. Strategies used to promote rigor and credibility are also described.

Design: Interpretive Description

The conduct of this applied qualitative health research study was informed by the principles of interpretive description. The purpose of interpretive description methodology is to improve clinicians' understanding of a practice-based issue by generating novel, clinically relevant data, while building upon previous knowledge and clinical expertise (Thorne, 2016). Interpretive description was developed by Thorne to create a methodology suitable for applied health disciplines, specifically nursing (Teodoro et al., 2018; Thorne, 2016; Thorne et al., 1997). Although Thorne recognized the value of qualitative methodologies grounded in the social sciences (i.e., anthropology, sociology, and psychology), the limitations of these methods, which result in theoretical findings, were not always suitable for practical, applied health inquiry (Thorne, 2016).

Interpretive description was selected as an appropriate research design to advance my understanding of ICU nurses' responses to moral distress experienced in their professional practice. Specifically, this methodology was identified as a useful design to help researchers comprehensibly understand ICU nurses' practice challenges that lead to moral distress in the context of the COVID-19 pandemic, and then to learn about nurses' personal coping strategies, as well as the organizational supports or practice changes they would like to see implemented to mitigate their experiences of moral distress. Aiming to advance nursing science, this methodology facilitated the exploration of a research and practice gap, helping to produce new and useful knowledge, that will have utility in informing the development of subsequent nursing interventions or organizational responses to moral distress.

Research Question

Professionals immersed in the clinical field can often easily identify research questions derived from their own practice challenges and experiences (Thorne, 2016). However, these inquires may lack the refined features required of a formal research question (Thorne, 2016). In this study, clinical observations and experiences motivated an exploration of ICU nurses' responses to moral distress experienced in their professional practice. A subsequent review of the literature revealed specific gaps in knowledge and practice in this field, and helped to cultivate a research question suitable for an interpretive description study.

The overarching research question posed to address the study objectives was: How do registered nurses, who provided direct patient care in Canadian ICUs during the COVID-19 pandemic, describe their responses to moral distress experienced in their professional practice?

Study Context

In this study, nurses' responses to moral distress during the COVID-19 pandemic was explored within the context of their work in ICUs located in hospitals across Canada. This included nurses working in either community or academic hospitals, at any ICU level of care, serving adult-patient populations. Pediatric and neonatal ICUs were excluded.

Sampling

In qualitative research, the overarching goal is to recruit individuals who are capable of providing detailed insights about the complex phenomenon of interest under study (Kalu, 2019; Luciani et al., 2019). Furthermore, identifying participants with

firsthand experience helps to produce rich, relevant findings that resonate with research consumers (Thorne, 2016). To locate such individuals, the flexible approach of interpretive description design permits researchers to thoughtfully identify sampling strategies that meet the needs of the study purpose. Typical approaches to sampling used in interpretive description include purposeful, convenience, and theoretical sampling (Teodoro et al., 2018; Thorne, 2016). In this study, we utilized purposeful and theoretical sampling strategies to identify participants who could speak to the phenomenon of interest under study. Therefore, to understand the practice-based interventions or changes that ICU nurses need in the context of a pandemic to mitigate or cope with moral distress, these sampling strategies were utilized to locate and invite ICU nurses who self-reported experiencing moral distress in their professional practice during the COVID-19 pandemic.

Purposeful Sampling

Purposeful sampling involves identifying a sample that can best describe the phenomenon of interest due to their extensive experience or in-depth understanding of the topic (Gentles et al., 2015). These information-rich cases are most suited to answer the research question, and to help understand patterns in practice, as well as the range of ways that the phenomena under study is experienced (Gentles et al., 2015; Luciani et al., 2019; Thorne, 2016). The study inclusion criteria used to identify a purposeful sample of nurses included: 1) an individual with a current registered nursing license from a Canadian province or territory; who 2) worked in a Canadian hospital adult-ICU; 3) at some point between March 2020 and September 2021; and who 4) self-reported

experiencing at least one episode of moral distress in their professional practice during the COVID-19 pandemic.

Theoretical Sampling

Thorne (2016) encourages the use of theoretical sampling during data generation, whereby evolving theory development and conceptualization during the first stage of data collection guides future sampling (Gentles et al., 2015; Palinkas et al., 2013). This is accomplished by seeking additional participants, if those individuals that are enrolled in the study cannot fully describe the properties and/or dimensions of a concept based on their experiences or knowledge. This sampling strategy ensures that insights about themes and patterns move beyond assumptions made by the researcher (Thorne, 2016). Initial recruitment efforts solely focused on inviting ICU nurses working in community hospitals to participate in the study, to explore the phenomenon of interest within the unique context of this setting. However, as preliminary analysis of their data commenced, and recognizing the influence of external factors (i.e., systemic, organizational) on moral distress, a decision was made to expand recruitment to also include ICU nurses working in academic hospitals.

Sample Size

Unlike the prescriptive nature of quantitative inquiry, in interpretive description design the study sample size is estimated by considering the nature of the phenomenon being studied, the existing literature exploring the phenomenon, and the expected level of theoretical development (Teodoro et al., 2018). Previous qualitative studies of moral distress experienced by ICU nurses in their professional practice include samples that range from 7 to 65 nurses (Browning & Cruz, 2018; Forozeiya et al., 2019; Henrich et

al., 2016; Jarden et al., 2018; Morley, Bradbury-Jones, et al., 2019). We estimated that a sample of 20 ICU nurses would help us learn about their personal responses to moral distress, as well as their recommendations for organizational strategies to mitigate moral distress, during the COVID-19 pandemic. However, during concurrent data collection and analysis, the decision was made to expand the sample size to 40. This decision was informed by theoretical sampling, which revealed the need to expand our sample so that additional details about factors, conditions, processes, and outcomes associated with moral distress could be identified and documented. This decision was further supported by the remarkable response from ICU nurses, interested in participating in this study in efforts to share their experiences.

Recruitment

To achieve a comprehensive description of the phenomenon of interest, interpretive description design encourages a combination recruitment strategies to help identify the most suitable individuals (Teodoro et al., 2018). Therefore, three recruitment strategies were used to locate a purposeful sample of ICU nurses that experienced moral distress while providing direct patient care during the COVID-19 pandemic; a) an electronic dissemination of study recruitment materials (e.g., study poster) (Appendix B) via social media platforms; b) invitations to participate sent through established ICU professional organizations' member communication strategies (e.g., newsletters and emails); and c) snowball sampling. To allow nurses to ascertain if they experienced moral distress, a definition was included in all recruitment material. Whereby the restrictions of the electronic platform limited characters, a link to the AACN website

page on moral distress (https://www.aacn.org/clinical-resources/moral-distress) was included.

Social Media

Facebook and Twitter were utilized to share study recruitment material. This material included images and information from the study poster. A Facebook page was created (not linked to a personal account) as a form of study advertisement. Facebook posts (Appendix C) included the study poster and the ACCN moral distress webpage link. The page did not allow for comments or posts from users. However, users could "follow" the page to receive notifications of posts or updates, and could share the study page and information. The study poster on was also shared and distributed on Twitter.

Networks and Organizations

The student researcher aimed to access existing networks, organizations, and communities of practice that included ICU nurses as members. These organizations included the Canadian Association of Critical Care Nurses (CACCN) and the Canadian Community ICU Research Network. These organizations have well established social media accounts and commonly send out emails and newsletters to members, containing various information such as recruitment for ICU-related studies. Following communication with the organizations, the Canadian Community ICU Research Network agreed to share the study information via their Twitter account. The CACCN shared recruitment materials and study information via an organization-wide email to approximately 1,400 members, every month for three months. They also shared the study information on their website (https://caccn.ca/) and social media accounts.

Snowball Sampling

Snowball sampling, which is often utilized as a recruitment technique, calls on participants enrolled in the study to identify other individuals of interest and of similar characteristics that may be suitable participants (Luciani et al., 2019; Palinkas et al., 2013). This strategy was deemed fitting for this study, as encouragement from colleagues has been documented as an effective recruitment strategy in another interpretive descriptive study exploring healthcare worker moral distress (Thorne, 2018). In this study, at the end of each interview, each participant was asked to share study material, that included my professional contact information, with individuals whom they believed to be candidates for study participation.

Data Collection

A characteristic of interpretive descriptive studies is the triangulation of data types (Teodoro et al., 2018; Thorne, 2014, 2016). In this study, three types of data were collected from a: 1) survey; 2) one-to-one (1:1) in-depth, semi-structured, virtual interview; and 3) field notes.

Data Collection Tools

Survey. Each participant was asked to complete an electronic survey that included a demographic questionnaire (i.e., age, years of practice, education level) (Appendix D) and the Measure of Moral Distress – Health Care Professional tool (Appendix E). The purpose of this survey was to obtain sample demographics and to describe the baseline level of moral distress experienced by the sample, to then be compared to the literature (Epstein et al., 2019, 2020). Permission to include the

Measure of Moral Distress Scale – Healthcare Professional tool in this study was obtained from the author (Epstein, E., personal communication, January 7, 2021).

Interviews. To learn about the different ways in which ICU nurses experience moral distress and how they have coped with navigating moral and ethical events during the COVID-19 pandemic, in-depth semi-structured interviews were conducted with each participant. This method facilitated the collection of information necessary to meet the primary goals of this study. In this study, each participant was invited to participate in up to two interviews, and given the personal and sensitive nature of the topic, these interviews were done in a 1:1 format (Luciani et al., 2019). The purpose of the first interview was to review the definition of moral distress, briefly discuss morally distressing situations experienced in their professional practice during the COVID-19 pandemic, explore their responses to the morally distressing situation (i.e., coping strategies), and promote discussions about what types of innovations might be useful to ameliorate moral distress. There were no participants that required a second interview to clarify key concepts. A copy of the interview guide is included in Appendix F.

Given restrictions on in-person data collection during the COVID-19 pandemic, interviews were conducted virtually. The interview mode, time and date were mutually determined between the researcher and the study participant. Two interview modalities were offered to participants: a) telephone, or b) videoconference, using one of McMaster University's secure accounts (e.g., Zoom, WebEx, or Microsoft Teams). A back-up plan for technological issues was established with each participant (Gray et al., 2020). Permission to digitally record the audio and/or visual (i.e., if using

videoconference) of the interview was included in the consent and was confirmed at the beginning of each interview. Each interview was planned to be 60 minutes.

The digital audio from each interview were recorded, and securely transferred and transcribed. To store, manage, and code data, a qualitative data analysis software Dedoose (https://www.dedoose.com/) was used.

Field Notes. In this study, field notes were maintained for each interview. Field notes are written notes of observations made by the researcher during the interview, such as nonverbal behaviour, emotional reactions, and methodological reflections (Teodoro et al., 2018). The purpose of field notes are to contextualize the data and maintain the integrity of participant's responses (Teodoro et al., 2018; Thorne, 2016). They help to paint the picture of the entire interview. In this study, field notes were kept throughout and immediately following the interview, on dedicated section of the printed interview guide.

Analysis

Demographic data and responses from the Measure of Moral Distress Scale - Healthcare Professional were analyzed using SPSS Version #28 to produce descriptive statistics. Furthermore, as a process of theoretical triangulation, qualitative data from interviews and open-ended responses to the Measure of Moral Distress Scale, which asked nurses to identify any additional causes of moral distress not captured in the scale, were reviewed and compared to the 27 scenarios included in the scale.

All qualitative data were analyzed using reflexive thematic analysis. Thematic analysis is an approach to data analysis that systematically identifies common themes in the data set, to provide meaning and to help answer the research question (Braun &

Clarke, 2012). The purpose of reflexive thematic analysis is to develop a deeper and richer description of the data, that moves beyond a summative narrative (Braun & Clarke, 2019). This analytic technique acknowledges that each researcher brings their own positionings to the study, which will naturally impact the interpretation of the data and construction of themes (Braun & Clarke, 2019).

This was a non-linear process, in which ongoing and congruent interpretation of data informed future data collection (Teodoro et al., 2018; Thorne, 2016). For example, the student researcher identified a gap in nurses' description of the nature and type of events that caused moral distress, and then prompted to explore this concept in later interviews. A broad review of information (e.g., interview transcripts, field notes, survey data), was followed by focused comprehension of data. This was accomplished by complete immersion in the data (i.e., reading the data several times), while comparing findings within and between sources.

Following immersion in the data, specific procedural steps associated with reflexive thematic analysis were used to further categorize and theme the data (Braun & Clarke, 2019). Reflexive thematic analysis of the data was informed by six steps: 1) familiarizing oneself with the data; 2) generating codes; 3) constructing themes; 4) reviewing potential themes; 5) defining and naming themes; and 6) producing the report (Braun & Clarke, 2019; Campbell et al., 2021). Constant comparative analysis was used during step three. Constant comparison is the process of continuously comparing findings against new pieces of data to further develop concepts. In this study, the student researcher reviewed each transcript in its entirety at least 2 times, followed by open coding. Using the codes from the line-by-line coding of the initial 10 transcripts, a

list of key categories/domains was developed. To facilitate the construction of the overall themes, steps from rapid qualitative analysis were utilized (Hamilton, 2020; Hamilton & Finley, 2019). Rapid qualitative analysis is an efficient yet robust qualitative methodology, whereby a template informed by the study framework or interview guide is used to create focused summaries of the data (Hamilton, 2020; Hamilton & Finley, 2019). These templates are then entered into a matrix and used to produce findings. The template used to guide rapid qualitative analysis in this study can be found in Appendix G.

During step four, the student researcher sought the thoughtful clinician test from supervisory members. The thoughtful clinician test, a key concept of interpretive description, is a valuable analytic technique whereby a clinician recognized as an expert in their field reviews and validates findings of the study. These expert clinicians are thought to be a rich source of insight to clinical patterns and themes, with their validation helping to increase the power and impact of study findings (Thorne, 2016). In this study, the thoughtful clinician test was integrated by engaging two research team members: a nurse practitioner with extensive experience as an ICU frontline nurse and educator (RH) and an experienced nurse researcher (SJ). The final steps included synthesis of meaning, theorizing of relationships, recontextualizing of data, and interpretation of findings (Thorne et al., 2004).

Rigor and Credibility

In this study, Thorne's (2016) concepts of credibility were applied to ensure strategies of rigor that align with interpretive descriptive design were implemented. These measures to address credibility include epistemological integrity, analytic logic,

representative credibility, interpretive authority, disciplinary relevance, moral defensibility, pragmatic obligation, contextual awareness, and contextual truth. The purpose of these evaluative criteria is to ensure that overall, the theoretical allegiances and methodological decisions were congruent (Thorne, 2016).

Epistemological integrity seeks research questions that are philosophically grounded (Thorne, 2014). This study research question was congruent with the purpose of interpretive description and was grounded in the nursing epistemology. Representative credibility ensures claims of methodological strategies are consistent throughout the research process (Kimber, 2020; Thorne, 2016). All methodological decisions in this study aligned with theoretical scaffolding, such as the sampling population inclusion and exclusion criteria. Analytic logic demands a clear connection between theoretical forestructure and knowledge claims (Kimber, 2020; Thorne, 2016). In this study, the research process was documented using an audit trail. Interpretive authority proposes that there is enough data to support claims, and that those claims represent the truth (Thorne, 2016). Data were triangulated by utilizing multiple sources (e.g., interview data, survey data) to provide evidentiary support for truth claims and conclusions. Moral defensibility requires the researcher to thoughtfully consider how findings will be applied to practice, and consider safety of implementation (Thorne, 2014). The researcher has provided rationale to defend the need for this study; to attend the gap in the literature, and to contribute to research and advances in science to work towards improving ICU nurses' quality of life, patient care, and organizational outcomes. Disciplinary relevance ensures that the aims of the study are useful for the real world, and pragmatic obligation speaks to practical application of data, not purely

situated in theory (Thorne, 2016). Outcomes of this research will serve to impact the clinically relevant issue of moral distress experienced by ICU nurses. Finally, contextual awareness states that findings are timely, therefore will not be applicable to all contexts at all times. It was be made clear that findings from this study are contextual to the setting and time, specifically, the COVID-19 pandemic.

Ethics

This study was approved by the Hamilton Integrated Research Ethics Board (Project #13074). The core principles of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, respect for persons, concern for welfare and justice guided this study (Government of Canada, 2020b). One participant had a professional relationship with the primary student researcher. To address any conflict of interest, Dr. Susan Jack completed the interview. The issue of inconvenience and cost was addressed in multiple ways. The study was completed at a time mutually determined between the participant and the researcher. The interview time frame of 60 minutes was an attempt to reduce burden on the individual, but also allow sufficient time to engage in rich conservation and establish rapport. It was made clear during each interview that the conversation could end at 60 minutes or continue only if the participant was interested and consented. At the beginning of each interview, to promote equity and fairness, the student researcher emphasized my role as an investigator rather than a healthcare provider.

Informed Consent. In this study, all participation was voluntary, and consent was informed and ongoing. Informed consent was collected electronically using LimeSurvey (https://surveys.mcmaster.ca/limesurvey), which has been approved by the

Privacy Officer for McMaster University (McMaster University, 2021). At the beginning of each interview, all study participants reviewed informed consent form with research interviewer (Appendix H). A signed copy was returned to each participant. A record log of the dates and time that consent was obtained was maintained.

Honorariums. Given the immense demand on ICU nurses during the period of data collection, spending time to complete an interview had potential to be burdensome. In recognition of their willingness to participate, each participant that consented to and attended an interview received an honorarium of $25.00 to Tim Hortons or a local department store.

Confidentiality. Audio copies of interviews were saved to the student researcher's password protected computer. Recordings were sent to the transcriptionist via McMaster's MacDrive, an online, secure, encrypted and password-protected cloud service. Identifying data was removed from interviews in the transcription, and anonymized transcripts were then returned to the student researcher using MacDrive. Anonymized transcripts were used for data analysis and quotes from interviews were used in the final study product. Consent to include direct quotes was obtained

Distress Protocol. Sensitive topics, like that of moral distress, may increase the risk of anxiety experienced by participants (Draucker et al., 2009; Richards & Schwartz, 2002). Participants were informed of the potential distress they may experience during the interview, with reassurance of strategies in place for distress management. To maintain respect and concern for welfare of the participants, Draucker's (2009) strategies to minimize this risk of participant distress were utilized, including: development of a distress protocol (Appendix I), monitoring of participants emotions,

facilitation of breaks during interviews, offering of debriefing, and provision of referral to psychosocial services. Furthermore, participants were informed on the process of study withdrawal, being made aware they can withdraw at any time, up until two weeks following the completion of their interview.

Concern for welfare strategies applied for participant safety were applied similarly to the research team, as the risk for emotional distress related to the sensitive focus of the study has the potential to impact research members (i.e. interviewer, transcriptionist, data analyst) (Dickson-Swift et al., 2008; Orr et al., 2021). The distress management protocol included tactics to mitigate emotional distress experienced by the research team, including debriefing post-interview with a supervisor or peer-mentor, and allowing for substantial time between each interviews to decompress and reflect (Dickson-Swift et al., 2008). Furthermore, to maintain justice, the student researcher reflected on her role as a researcher through reflexivity. This helped to avoid assuming a therapeutic role during interviews.

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Chapter 1 & 2

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CHAPTER 3

This chapter consists of a manuscript prepared for submission to the *Canadian Journal of Critical Care Nursing*, to fulfill the requirements for the Canadian Association of Critical Care Nursing Research Grant awarded in June 2021. In this manuscript, data from the interpretive description study are analyzed to answer the following research question: What are the properties and dimensions of moral distress experienced by intensive care unit nurses during the COVID-19 pandemic? In the findings, the conditions and sub-conditions under which moral distress occurs, grounded in the participants' descriptions of moral distress experienced in their professional practice, are described. The manuscript is concluded with descriptions of the dimensions of the moral events that were antecedents to nurses' moral distress.

Properties of moral distress experienced by Canadian intensive care unit nurses during the COVID-19 pandemic: An interpretive descriptive study

Abstract

Background & Purpose: In response to the highly ethical nature of clinical care provided in intensive care units, nurses working in this setting frequently experience moral distress. The properties of moral distress, including the types of precedent moral events and contributing factors have been well defined. However, within the context of the COVID-19 pandemic, little is known about the characteristics and properties of moral distress experienced by intensive care unit nurses. This subsequently affects the advancement of our knowledge of moral distress, specifically, effective mitigative interventions. The purpose of this analysis is to describe the key properties and dimensions of moral distress experienced by intensive care unit nurses during the COVID-19 pandemic.

Methods & Procedures: Guided by interpretive descriptive design, a purposeful sample of 40 Canadian ICU nurses described their experiences of moral distress within the context of their professional practice during the COVID-19 pandemic. Data generation included a demographic questionnaire, the Measure of Moral Distress - Healthcare Providers survey, and one-to-one semi-structured virtual interviews (May 2021 – September 2021). Categories and themes were developed using reflexive thematic analysis and rapid qualitative analysis techniques.

Results: Nurses experienced moral distress under the complex interplay of two overarching and broad conditions: (1) when nurses' voices, driven by efforts to optimize patient care at an exceptionally high standard, were not heard; and (2) when patients received substandard levels of care, that was not patient-centered, pain free, or that did not align with organizational, professional, or personal standards. These two broad conditions were influenced by three sub-conditions: (1) lack of respect for nurses' expert knowledge; (2) cultures and systems of communication and (3) responses to safety and staffing. The moral events that were antecedent to moral distress varied across three dimensions: (1) origin, (2) nature, and (3) impact.

Discussion: Moral distress experienced by Canadian ICU nurses is a complex phenomenon. These findings advance and refine our knowledge of key components of moral distress. We learned about the pre-existing and novel conditions within Canadian ICUs that generate moral distress for nurses, and we identified properties of the antecedent moral events. Future approaches to mitigate moral distress need to address the broad conditions under which moral distress occurs.

Key words: COVID-19, nursing, intensive care, moral distress, nursing ethics

Background

Given the precarious health status of critically ill patients cared for in intensive care units (ICUs), often supported by invasive, life-sustaining interventions, the clinical work environment is embedded with ethical decision-making. Consequently, healthcare workers in this setting, including registered nurses, are confronted with moral events daily (Morley et al., 2020; Morton & Fontaine, 2017). In response to moral events that occur in professional practice, registered nurses are at high risk for experiencing moral distress (Browning & Cruz, 2018; Bruce et al., 2015; Forozeiya et al., 2019; Henrich et al., 2017; McAndrew et al., 2016; 2020). Nurses working in ICUs typically report higher moral distress scores compared to nurses working in other clinical contexts (McAndrew et al., 2016; Sirilla et al., 2017) or to other ICU healthcare professionals (Bruce et al., 2015; Dodek et al., 2016; Henrich et al., 2017). In response to moral distress, nurses can experience several negative outcomes that greatly impact their quality of life, such as changes to physical, psychological, and behavioral health (Henrich et al., 2017; McAndrew et al., 2016). Consequently, outcomes of moral distress experienced by ICU nurses can influence their professional integrity (Epstein et al., 2020; Forozeiya et al., 2019; Henrich et al., 2017) and attrition (Sheppard et al., 2022), affecting both patient health outcomes and financial expenditures within health systems.

Extreme social or environmental changes such as global pandemics, natural disasters, or events resulting in mass casualties often result in the need for rapid responses and disruptions to the day-to-day practices in critical care environments. Since March 2020, critical care services have been inundated by the increased demand to care for critically ill patients, under rapidly changing pandemic conditions (Gibney et

al., 2022; Sharma et al., 2021; Vranas et al., 2021; Wahlster et al., 2021). Global ICU admissions for individuals with COVID-19 has ranged from 5-38%, resulting in high occupancy, mechanical ventilation, and mortality rates (Murthy et al., 2021; Vranas et al., 2021; Wahlster et al., 2021). From 2020-2021, with each wave of the pandemic, Canadian ICUs experienced increased admissions for respiratory illnesses, with a reported 28% mortality rate in 2021 (Gibney et al., 2022). Consequently, the COVID-19 pandemic has resulted in evolving and often stressful conditions of care, creating new or amplified moral events in practice. Recent reported examples of moral events have been situated within increased patient-to-nurse ratios, which increase the risk for unsafe or compromised care, shortages of effective personal protective equipment (PPE), and increased anxiety with respect to virus transmission to family and friends (Binnie et al., 2021; Morley, Grady, et al., 2020; Simonovich et al., 2022). Furthermore, rapid changes to unit and organizational policies, including restrictions on patient visitors (Fiest et al., 2021), created new circumstances where actions and decisions conflicted with personal or professional values, increasing the potential for moral distress.

Conceptualizations of Moral Distress

The study of moral distress, including its definition, associated risk indicators, and health outcomes, has been a long-standing focus of nursing. Moral distress was first described as a constraint-based phenomena (Jameton, 1984); an experience in which a nurse is prevented from pursuing a course of action that aligns with what they believe is right (Jameton, 2017). Subsequently, nursing scholars have argued for an expanded definition to acknowledge the complexity of moral events (see Table 1) beyond constrained-based scenarios (Epstein et al., 2019; Fourie, 2017; Morley,

Bradbury-Jones, et al., 2020; Wilson, 2017). Aiming to advance prior definitions, Morley (2019) defines moral distress as 'the psychological distress that is causally related to a moral event' (p 4). Moral events are categories of ethical events that can precede (moral constraint, conflict, tension, dilemma, uncertainty) or follow (moral residue, injury, resilience, disengagement) moral distress. Ethical events can be categorized as more than one type of moral event (Morley et al., 2019). Aligning with Morley's (2019) broadened definition, in this study we describe moral distress as a response (often psychological distress) causally linked to a moral event, in which a nurse identifies or participates in an action that does not align with their values.

Table 1.

Categories and Types of Moral Events

Moral Events	Definition
Precede Moral Distress	
Moral Constraint	● Inability to carry out an action that is perceived as ethically correct, due to barriers or obstacles (Fourie, 2015; Morley, Ives, et al., 2019).
Moral Tension	● *Internal* struggle, where one perceives something as wrong, but does not articulate it openly or act on it (Morley, Bradbury-Jones, et al., 2019).
Moral Conflict	● *External* struggle, involves voicing and acting on ethical concerns in a way that challenges others in an attempt to address ethical event (Morley, Bradbury-Jones, et al., 2019).
Moral Dilemma/Conflict	● In response to an ethical event, an individual identifies multiple ethical values that are applicable, but must choose one value to prioritize (Canadian Nurses Association, 2017; Morley, Bradbury-Jones, et al., 2019); *or* no choice will result in a satisfactory outcome; *or* prioritizing one consequently eliminates the equivalently valuable options.
Moral Uncertainty	● Knowing something is wrong but not being able to identify what is wrong, or what right action could be taken (Fourie, 2017; Morley, Bradbury-Jones, et al., 2019).
Follow Moral Distress	

Moral Residue	● Repeated episodes of moral distress results in accumulation or compounding effect of distress (Epstein & Delgado, 2010), may result in desensitization or burnout (Bruce et al., 2015)
Moral Injury	● "Deep emotional wound" unique to those who bear witness to trauma and partake in "immoral" action (violates moral beliefs/conscience). Outcomes are long-lasting, including internal dissonance. Differs from moral distress, moral residue and post-traumatic stress disorder, but needs further exploration. (Cartolovni et al., 2021, p 6)
Moral Disengagement	● Coping strategy. Disregard of ethical commitments. A nurse may then become apathetic or disengaged to the point of being unkind, non-compassionate or even cruel to other healthcare providers and/or persons receiving care (Canadian Nurses Association, 2017).
Moral Resilience	● The capacity of an individual to sustain or restore their integrity in response to moral complexity, confusion, distress, or setbacks (Canadian Nurses Association, 2017; Rushton et al., 2016).

Nurse scholars have also developed complex theoretical models, including the Moral Distress Model (Morley et al., 2021), to identify the contributing factors, causes, responses, and outcomes associated with moral distress. However, variation exists in the application of language used to define these concepts. This has resulted in inconsistent reporting of key concepts, such as the causes of moral distress, and the external and internal contributing factors that influence these events. External contributing factors account for elements of the environment, organizational systems or culture that contribute to moral distress. Participating in end-of-life or invasive care for potentially futile patient outcomes is often cited as one of the most recurrent and significant external causes of moral distress for ICU nurses (Browning & Cruz, 2018; Dodek et al., 2016; Epstein et al., 2020; Henrich et al., 2017; Hiler et al., 2018; McAndrew et al., 2016; Mealer & Moss, 2016). Internal contributing factors are an individual's personal characteristics that influence their experience of moral distress,

such as their personality traits, personal beliefs, coping abilities, or demographic variables (Dodek et al., 2016; Forozeiya et al., 2019; Hamric, 2012). These factors have been less explored. Comparatively, in the Moral Distress Model, Morley (2021) defined "compounding factors" as avoidable and unavoidable factors that influence moral events, and exacerbate or mitigate moral distress (i.e., epistemic injustice, roster lottery, personal vs. professional values, advocacy, team dynamics). These factors can also be the moral events themselves (Morley et al., 2021).

Study Purpose

The semantic and theoretical ambiguity that exists in describing the properties and dimensions of moral distress has resulted in inconsistent application of these concepts in research, education, practice, and policy. This gap in knowledge is further affected by extreme contextual changes, that influence our knowledge of these concepts under fluctuating conditions. This subsequently influences the advancement of nursing knowledge about moral distress, specifically, impacting our ability to develop and promote interventions to mitigate moral distress experienced by ICU nurses. Without this advancement, we fail to mitigate negative outcomes of moral distress for nurses, patients, and organizations. Therefore, the purpose of the analysis presented in this paper is to describe the properties and dimensions of moral distress experienced by ICU nurses during the COVID-19 pandemic.

Methods and Procedures

Research Design

The principles of interpretive description methodology informed study design. Driven by disciplinary inquiry, the purpose of this applied health research methodology is to address the gaps and insufficiencies in existing knowledge of a practice-based issue by generating novel data to be utilized pragmatically in the field (Thorne, 2016). Furthermore, this methodology aims to highlight the valuable insight of clinicians with expertise in the field or phenomena under investigation (Thorne, 2016). We achieved this by scaffolding the study and developing a research question derived from clinical practice (Thorne, 2016). Scaffolding of the study included a thorough review of existing literature, and development of a theoretical forestructure. The theoretical forestructure integrates and acknowledges the worldview of the researcher, recognizing the value of the researcher's disciplinary lens and expertise. In this study, scaffolding was informed by nursing epistemology and modern conceptualizations of the moral distress (Epstein et al., 2020; Hamric, 2012; Morley et al., 2019, 2021; Rushton et al., 2016; Thorne, 2018). As a critical care registered nurse, the principal investigator (PG) engaged in continuous reflexive practice throughout the duration of the project. Analysis and interpretation of the findings were further informed and refined by study co-investigators, who brought insights grounded in their research and clinical experiences in critical care practice (JT, RH), nursing education (RH, KC, SMJ), and nurse well-being (KC, SMJ).

Context

Interpretive description methodology seeks to include participants with firsthand experience because of their expert knowledge and rich insights into the phenomena of

interest (Thorne, 2016). Not only does this add to the rigour of the study, but it also helps to produce findings that resonate with relevant research consumers (Thorne, 2016). Therefore, the exploration of the properties of ICU nurse moral distress experienced in their professional practice during the COVID-19 pandemic was investigated in the context of their work in ICUs that serve the adult-patient population, located in both academic and community hospitals across Canada.

Sampling and Recruitment

To achieve a purposeful sample, nurses were invited to participate in this study if they identified as: 1) an individual with a current registered nursing license from a Canadian province or territory; who 2) worked within an adult ICU in a Canadian hospital; 3) at some point between March 2020 to September 2021; and who 4) self-reported experiencing at least one episode of moral distress in their professional practice during the COVID-19 pandemic. This sample facilitated the exploration of nurses' varied patterns and experiences of moral distress.

Initially, we estimated that a sample size of 20 nurses would provide us with an understanding of the properties of moral distress experienced in the context of the COVID-19 pandemic. However, during the process of concurrent data collection and analysis, as diversity in nurses' experiences of moral distress became evident, the need to expand the sample size was recognized. This process of *in situ* theoretical sampling allowed us to collect additional data about both the properties and dimensions of moral distress experienced by ICU nurses (Gentles et al., 2015; Palinkas et al., 2013). This analytic need, combined with a tremendous response from ICU nurses seeking to share their experiences by participating in this study, meant that the decision to double the

sample size to 40 participants was made. Participants were recruited via social media platforms, invitations distributed by established ICU professional organizations, and snowball sampling.

Data Collection

In this study, a combination of data generation strategies and sources were employed (Teodoro et al., 2018; Thorne, 2014, 2016). Data were collected through the use of a demographic questionnaire, the Measure of Moral Distress – Healthcare Professional (MMD-H) survey, and interviews. The MMD-HP is a validated tool (Cronbach's 0.93) used to calculate a moral distress score, by having participants rate the frequency (1-4) and level of distress (1-4) for 27 clinical scenarios. The frequency and level of distress is multiplied by one another for each item, and then cumulatively added to produce a composite moral distress score. There are also two multiple choice questions about attrition, and space for open-ended responses to describe causes of moral distress that were not captured in the questionnaire (Epstein et al., 2019; Guttormson et al., 2022). Permission to use the scale was received (Epstein, E., personal communication, January 7, 2021).

In-depth, semi-structured interviews were conducted with all participants via telephone or videoconference. During the interview, all participants were asked to reflect on at least one practice episode of moral distress experienced since March 2020, and then to describe the constructs of the moral event that led to moral distress. We also sought to learn about their responses to moral distress, as well as their recommendations for mitigative interventions. A summary of the interview questions is

provided in Table 2. Field notes were maintained by the researcher during each interview.

Table 2.

Semi-Structured Interview Guide (Summary)

Concept	**Question: Can you describe…**
Experience of moral distress	…an example of moral distress that you experienced in your professional practice since March 2020?
Moral distress concepts	…the moral event, values, and/or contributing factors that were central to your example of moral distress?
Personal coping strategies	… your responses to your example of moral distress?
Organizational strategies	…any organizational interventions or actions taken to mitigate the moral distress you experience in your professional practice?
Recommendations	…any interventions that you would like to see from leaders, organizations, or researchers to mitigate moral distress experienced by ICU nurses?

Data Analysis

Aligning with the flexible principles of interpretive description methodology, multiple approaches to analysis were applied to achieve both detailed descriptions and interpretations of the data. Quantitative data, including demographics and MMD-HP responses were analyzed with descriptive statistics using SPSS Version #28.

Contextual practice changes reported by nurses were labeled per the conceptual "4 Ss" framework (Anesi et al., 2020) (Table 4). As a part of a larger model for hospital preparedness and surge planning during emerging infectious diseases, the "4 Ss" outlines factors to be considered when hospital services are expected to be required

beyond normal capacity and include: staff, space, stuff, system (Anesi et al., 2020). Although our analysis does not use the model in its entirety, the review of this theory and familiarity with these concepts allowed for further refinement and definition of the categories and themes developed for this study. Additionally, contributing factors to moral distress were categorized based on socioecological model, which recognizes and highlights the influences of various levels of social systems and relationships on individual behavior (Golden & Earp, 2012). To align with this model, corresponding internal and external contributing factors have been categorized as interpersonal, and organizational, community or public policy, respectively.

Reflexive thematic analysis was used as the overarching process to categorize and synthesize the data, and the following steps were followed: 1) data familiarization; 2) code generation; 3) themes construction; 4) a review for potential themes; 5) defining and naming of themes; followed by 6) production of the final reports (Braun & Clarke, 2019; Campbell et al., 2021). To increase familiarity with the data, the principal investigator (PG) completed the transcription of the first four transcripts. The remaining audio recordings were securely sent to a professional transcriptionist for verbatim transcription with identifying information removed. Each transcript was then read in its entirety at least two times by the study lead (PG), before open coding was initiated. From the coding of the initial 10 transcripts, a list of core codes and categories were generated. To facilitate the construction of the overall themes, steps from rapid qualitative analysis, an efficient yet robust qualitative methodology, were utilized (Hamilton, 2020; Hamilton & Finley, 2019). The steps of rapid qualitative analysis included creating a template that would facilitate a focused summary of data from each

transcript. Then, findings from each template were then entered into a matrix and used to help produce findings (Hamilton, 2020; Hamilton & Finley, 2019). The template used to guide this process can be found in Appendix G. In the final stages of analysis, to ensure consistency with pre-existing theories as well as to identify gaps within these theories, moral events defined in Table 1 and in the Moral Distress Model (2021) were used to label, sort, and organize qualitative findings.

Results

In this study, nurses' experiences of moral distress in the context of the COVID-19 pandemic are shared. We describe the properties of moral distress, which includes two overarching conditions, as well as sub-conditions, in which moral events occurred. Three dimensions used to categorize the characteristics of the moral events encountered by ICU nurses in their professional practice are also described.

Participant Characteristics and Moral Distress Scores

A total of 40 ICU nurses completed the survey and an interview for this study (n=32 by videoconference, n=8 by telephone) between May to September 2021. The mean length of interview was 58 minutes (range 33-94 minutes). At the time of the interview, 93% (n=37) of participants continued to work in an ICU, with 7% (n=3) having left this clinical setting between March and July 2021. Slightly more than half of the study participants' age was between 21-30 years (55%; n=22), with most holding 3-5 years critical care nursing experience (35%; n=14) (Table 3). Nurses' mean moral distress score was 139.4 (standard deviation [SD] = 58.23; range=31-252), with half (50%) of the group falling within the moderate interval (score = 86-171; n=20, mean=

131.40) of this sample. Further analysis of nurses' moral distress scores can be found in [Gehrke et al., 2022, unpublished manuscript].

Table 3.

Participant and Workplace Characteristics

Sociodemographic Variable	*Freq*	*%*
Age		
21-30	22	55
31-40	13	32.5
41-45+	5	12.5
Gender		
Female	39	97.5
Male	1	2.5
Other	0	0
Nursing Practice		
Current ICU Nurse		
Yes	37	92.5
No	3	7.5
Years Nursing (total)		
< 2	3	7.5
3 - 5	14	35
6 – 10	14	35
11 – 20	5	12.5
21 +	4	10
Years ICU Nursing		
< 2	13	32.5
3 - 5	14	35
6 – 10	6	15
11 – 20	5	12.5
21 +	2	5
CCRN Certificate		
Yes	29	73
No	10	25
Enrolled	1	2
Job status		
Full-time	27	67.5
Part-time	11	27.5
Casual	1	2.5
Missing	1	2.5
Avg. hours/week		
12-24	4	10
25-36	5	12.5

37-48	28	70
48+	3	7.5
Workplace Characteristics		
Province		
Alberta	4	10
British Columbia	3	7.5
Manitoba	6	15
New Brunswick	0	0
Newfoundland and Labrador	0	0
Northwest Territories	0	0
Nova Scotia	1	1
Nunavut	0	0
Ontario	25	62.5
Prince Edward Island	0	0
Quebec	0	0
Saskatchewan	1	2.5
Yukon	0	0
Hospital Status		
Academic	25	62.5
Community	15	37.5
ICU Level		
Level I	7	17.5
Level II	2	5
Level III	23	57.5
Unknown	8	20

Note. n=40

Contextual Changes to Practice Reported by Nurses

In their narratives, the nurses started by identifying and describing the multiple changes that occurred within their work environment during the COVID-19 pandemic that influenced moral events. These changes (Table 4) impacted the physical environment (i.e., space) in which they worked, and the number, workload and well-being of professionals within the unit (i.e., staff). An emergent need to limit COVID-19 transmission resulted in rapidly evolving demands on available physical resources (i.e., stuff) and frequent changes to unit policies (i.e., systems).

Table 4.

Staff, Space, Stuff, Systems – Nurses' Reported Contextual Changes to Practice

Space	Expansion/conversion of units/floors to support ICU patient care Cohorted groups of patients based on COVID-19 status Canceling of elective/non-emergent surgeries
Staff	Shortages of staff (e.g., nurses, physicians, support staff) Changes to staffing models (e.g., team-nursing, pod-nursing, new/unqualified staff) Decreases in orientation and training for new staff Increases in burnout, exhaustion, stress Starting shifts with many unknowns (e.g., assignment, role, safety) Implementation of mandatory overtime for nurses Increases in nurse-to-patient ratio
Stuff	Unknown effective treatment and interventions for COVID-19 patients Introduction of new interventions (e.g., proning, protected intubation) Changes to personal protective equipment protocols and use Feeling like "guinea pigs" for personal protective equipment use Wearing operating room scrubs Lack of "resources" (e.g., medical supplies, staff)
Systems	Frequent policy changes (i.e., visiting, nursing documentation, interventions) Out of hospital/province patient transfers Increased number of admissions and changes to patient population

Note. Adapted from Anesi, G. L., Lynch, Y., & Evans, L. (2020). A conceptual and adaptable approach to hospital preparedness for acute surge events due to emerging infectious diseases. *Critical Care Explorations, 2*(4), e0110. https://doi.org/10.1097/CCE.0000000000000

Conditions of Moral Distress: Being Heard in the Pursuit of Comprehensive, Patient-Centered Care

Nurses described 182 episodes of moral distress, extracted from interviews (n=125) and the MMD-HP open-ended questions (n=57). All episodes of moral distress were then categorized by moral event type, resulting in a total of 192 moral events. Among those 192 moral events, most were categorized as events that precede moral

distress, including moral constraint (n=81) and moral dilemmas (n=64), followed by moral conflict (n=16) and moral tension (n=15). Other types of moral events described by nurses included stories of moral residue (n=3), moral resilience (n=2), moral disengagement (n=2) and moral uncertainty (n=3).

Across the nurses' descriptions of their moral distress during the pandemic, it became evident that two overarching and co-existing conditions underpinned all of the associated moral events that led to moral distress: (1) when nurses' voices were not heard; and (2) when patients' health, safety, and comfort were perceived to be compromised. Central to nurses' pursuit to have their concerns heard, validated, and acted upon by key decision-makers, were nurses' fundamental motivations to provide comprehensive and person-focused care to promote the emotional and physical well-being and safety of their patients. Nurses in this study described valuing their capacity to provide comprehensive care that upheld personal or professional standards, that aligned with patients' self-reported priority needs, and that reduced patients' experiences of suffering or "torture." Circumstances at each socioecological level of the healthcare system, where nurses' voices and concerns were not heard, respected, or validated, prevented nurses from engaging in this highly valued comprehensive care, resulting in critical conditions in which they experienced moral distress. Moreover, practice conditions that threatened risks to patients' welfare, influenced by factors outside of the nurses' control, led to moral distress, and further motivated them to seek opportunities to "be heard" in efforts to promote person-focused care. Therefore, moral distress occurred within the context of the complex interplay of nurses' needs to have

their concerns about patient care and care conditions be heard, validated, and acted upon and conditions of compromised quality of patient care.

Typically, ICU policies demand rigorous standards of care, including frequent nursing documentation, monitoring, assessment, and intervention. Nurses described their pride in providing high levels of comfort, care, and support, during times of critical illness and end-of-life. As working conditions rapidly changed during the pandemic, nurses perceived that organizations were acceptive and supportive of lower standards of care due to “emergency measures”, and encouraged nurses to “lower your practice expectations”. Regardless of these organizational changes, as one nurse explains, it was challenging for nurses to accept that patients might receive a substandard level of care,

> With COVID, our patients are not sicker than the patients we used to get, but our workload has doubled and the resources from the hospital have not. So, we were already busy in our 12-hour shift with our one patient, and now they’ve doubled our workload. So, we’re having a hard time achieving the same standards that we would achieve before. So, the patients are not getting standard [care] …they’re not getting ICU level care anymore. They’re getting a big step below that because we just can’t keep up. So, I would say the hospital probably deems that we’re doing an appropriate job, but any ICU nurse worth her salt is not happy with what the current [situation is like].

Moral distress occurred when nurses were not able to adhere to the usual standard of care, as well as their personal expectations for patients’ well-being. This was exceptionally distressing when nurses could not provide patients with the care they “deserved”, particularly during end-of-life. These conditions of moral distress were influenced by high nurse-to-patient ratios, which resulted in less time available to dedicate to each patient, and to comprehensively review their health history and medical charts (e.g., laboratory values, medical imaging). This prevented nurses from

establishing a holistic understanding of their patient, and was a barrier to creating a *"*checklist*"* of patient care needs to address with the team. When nurses felt unprepared for interdisciplinary rounding, they described moral distress, shame, and guilt. They also reported moral distress when they did not have time to provide interventions at the standard interval (e.g., repositioning, mouth care, perineum care), which lead to patient discomfort, suffering, or poor outcomes (e.g., compromised skin integrity, tooth decay). Normally, these regular intervals of care also allowed for nurses to complete comprehensive assessments. When this could not occur, nurses described that they "missed things," like new sites of bleeding, bed sores, or subtle changes to respiratory patterns and cardiac rhythms. This further compounded nurses' moral distress.

Several nurses described circumstances of "torture;" one nurse with over 21 years of ICU nursing experience stated, "You'll hear a lot of ICU nurses talk about—they feel like they're torturing people." Nurses defined torture as pain and suffering, secondary to (a) prolonged interventions and/or (b) invasive interventions for outcomes that did not align with; (i) patient-centered goals of care (i.e., per their advanced care directive or verbally expressed) or (ii) the nurses' perception of quality of life. Nurses perceived a poor quality of life, as one riddled with pain, suffering, or significantly less physical, social, or emotional capacity than pre-hospital. Some commonly described instances of "torture" included prolonged intubations, leading to degrading skin integrity and muscle wasting, and providing advanced cardiac life support, which was perceived as painful or "more harm than good". These events were particularly distressing when the patient was previously diagnosed with a poor prognosis. In several cases, because of patients' fluctuating levels of consciousness, cognition, or overall well-being, family

members or clinicians would dictate the goals of care. For many, this meant that the care was often prolonged or included several invasive interventions, such as intubation, positive pressure ventilation, central or peripheral venous devices, or sedation. When nurses perceived that these actions were not aligned with the patient's goals of care, moral distress occurred.

Sub-Conditions of Moral Distress

Underpinning these two dominant, co-existing conditions of moral distress, were pre-existing and novel sub-conditions of organizational culture and systemic processes. Pre-existing conditions were those which were present prior to the pandemic, and which may have been exacerbated in response to the new contextual changes to practice. In this study, the sub-conditions that contributed to the broad conditions under which moral distress occurred, included the pre-existing lack of respect for nurses' expert knowledge, and poor cultures and systems of communication (e.g., within the healthcare team, and between the healthcare team, patients, and their loved ones). Novel sub-conditions that emerged under the unique contextual circumstances of the pandemic, and influenced moral events, included responses to safety and staffing.

Lack of Respect for Expert Nursing Knowledge

At the bedside, nurses described feeling like a *"puppet"* or an *"actor"*, whereby, despite their expert nursing knowledge, patient concerns expressed by nurses were frequently disregarded by other team members, at each level of the healthcare system. Consequently, moral distress occurred when nurses felt they had to carry out orders against their personal or professional beliefs, that prolonged patient suffering or resulted

in care that was not patient-centered. This culture was influenced by power hierarchies within the healthcare team and nurses' scope of practice. As one nurse described,

> I don't get to make the big decisions, but I am the agent that's doing those big decisions. And so, it becomes where I don't have a decision about how the care is being decided upon, sometimes, because it's a physician's decision or it's a family decision, but I'm the actor in the actual role of the decision….

Many nurses reported that other members of the healthcare team "don't care what nurses think," describing situations where they advocated and shared their expert knowledge on several occasions, to multiple different clinicians, however, they perceived that their contributions continued to be dismissed.

At a systems level, nurses experienced exclusion from decision making that directly affected their work, most notably, decisions or policies that impacted their ability to provide quality, patient-centered care, or the safety and well-being of themselves and others. The consequence was that nurses were left feeling "in the middle", whereby they were responsible for upholding organizational policies without knowledge of the justification or decision-making processes from leadership. Several nurses described the many layers of moral events associated with enforcing frequently changing policies related to the number of visitors and visiting hours, particularly at end-of-life. Nurses described the shame and moral distress they experienced when they could not keep up with the rapidly fluctuating policies, and struggled to keep patients and loved ones informed with up-to-date information. Moreover, nurses felt morally distressed when enforcing restricted visitation, and asking patient's family and friends to select preferential visitors. They also experienced moral distress when enforcing the requirements for visitors to don PPE, preventing families from having physical touch at

end-of-life or during times of uncertainty, while also recognizing the importance of mitigating transmission. One nurse with more than 21 years of ICU nursing experience, described the difficulty in enforcing these policies. She stated,

> …they can't have that physical touch. And when people are dying, that— being able to sit and hold a hand, and being able to hug somebody, and give them that last kiss goodbye. That's part of the humanity of nursing, and… To have that taken away, and being told that, "No you can't" …. It's, at what point do we have to say, 'Let's take the calculated risk', but give them that final little piece of closure that they got to kiss their mom goodbye…. It just feels wrong, is the only way I can put it. It's that, fundamentally, we're supposed to be able to be with people.

At a community level, nurses described significant frustration with both public policy and leadership at all levels of government, and public accountability and behaviour in response to public health guidelines. At local, provincial, and federal government levels, nurses' voices and input were excluded from important conversations and decision-making in response to the pandemic. Moreover, nurses witnessed political actions such as nursing staffing cuts and wage suppression, and the disregard for evidenced-based practice when establishing infection prevention and control policies. Nurses' emotional reflections of such decision-making at a public policy level demonstrated the downstream effect on healthcare professionals that created and exacerbated conditions of moral distress.

Culture and Systems of Communication

Nurses reported several issues with communication that created conditions in which moral distress occurred. Nurses described inconsistent and unclear communication between members of the healthcare team, and between the healthcare team and families. Most nurses described poor communication about goals of care,

prognoses, and end-of-life care. This included inconsistent approaches to or exclusion of goals of care and prognoses conversations. Nurses described that many clinicians were not equipped with the knowledge, tools, or confidence in leading these discussions, and therefore, these topics of conversations were delayed, avoided, or ambiguous. Furthermore, within this space of discomfort, clinicians tried to “spare feelings” by minimizing the poor outcomes or prognoses. When this type of response occurred, nurses perceived that patients and families were left with unclear and dishonest information about their overall status. Bounded by the limits to the nursing scope of practice, nurses felt conflicted or constrained from openly discussing care plans or prognoses with patients and families, which further contributed to their moral distress. One nurse described the moral distress that occurred in response to the knowledge disparity between nurses, patients, and their families; “it [pause] makes it worse in the end…. Just not being truthful. This person has so much trust in you, they don't know any better, and to not be honest with them in such a hard time…” Nurses described that without adequate discussions of prognoses or end-of-life care, patients and families could not make informed decisions about goals of care, which often delayed decision-making and prolonged invasive, high-levels of care, affecting the overall well-being of the patients.

Nurses reported that these moral events were prevalent prior to the COVID-19 pandemic, related to pre-existing poor levels of staffing, high nurse to patient ratios, and burnout. However, the emerging staffing crisis, as well as increased burnout, contributed to a higher frequency of these events. In response to increased patient acuity and number of admissions, physicians had less time to spend completing

interdisciplinary rounds. Nurses perceived that less formal time to communicate their concerns to the broader team significantly impacted their ability to address the patient needs they had identified. Moreover, challenges with virtual communication and restricted visiting policies contributed significantly to poor quality of communication between healthcare teams and families. Nurses described that in the context of the COVID-19 pandemic, where their workload was at times increased by fourfold, they were also responsible for navigating these new barriers to communication. Furthermore, initially, electronic devices (i.e., phones, iPads) were not consistently available for patients, as not all organizations provided ICUs with an adequate number of devices. Without families at the bedside, conversations occurred via telephone or videoconference. These discussions included general updates about the patient's status, as well as sensitive topics such as prognoses, end-of-life care, and goals of care. As reported by nurses, moral events occurred when nurses did not have the time to provide detailed updates, or when the quality of their time connecting with patients' caregivers was deemed inadequate. This also contributed to delayed decision-making and prolonged suffering. The complexity of communication challenges increased further when there was limited family engagement in care planning, differences in languages, or personal care needs that influenced the length and level of care provided.

Responses to Safety and Staffing

Safety Prioritization: Self vs. Others. In response to the COVID-19 pandemic, drastic changes to nurses' day-to-day practice threatened their ability to provide holistic, comprehensive patient care, and posed risk to their personal safety and well-being. Nurses recalled regularly navigating the risk of transmissible diseases in the context of

their pre-pandemic practice, however, we learned that during COVID-19, new moral events related to risk of transmission occurred. To reduce exposure, nurses were asked to bundle care, which was an approach where tasks were grouped together to limit the number entries into the patients' room. They were also asked to don appropriate PPE. Nurses recognized that bundled care and PPE were imperative to their own safety but described that it delayed responses to emergent and non-urgent patient care needs. In emergent situations, like during episodes of acute respiratory distress or a cardiac event, nurses could not quickly enter the room to provide nursing interventions such as suctioning, medications, or emotional support. In some cases, this delayed care resulted in significantly poor outcomes for patients. Nurses identified these scenarios as moral events, describing the moral distress they felt when prioritizing their safety against the well-being of their patient and making statements like, "Oh, it's totally goes against what I've... learned as a registered nurse."

Moreover, nurses described that PPE limited their ability to engage in therapeutic touch (i.e., holding hands, hugging) with patients and their caregivers. This affected their ability to engage and establish trusting therapeutic relationships. Nurses perceived that the quantity and restrictiveness of the PPE limited the humanistic aspect of patient care, causing moral distress. As one nurse described, "now we're just in the science part of nursing, and now we're just dealing with numbers, and people, and machinery." This experience was further highlighted by another nurse, who stated:

> What makes it [nursing] so unique is, not only the science behind it but the human connection. Being able to physically touch our patients with our hands, help them…. we're staring at them through 5 layers of PPE on; the mask, goggles, face shield-headband on. So, they don't even really know who their nurses— what their nurses look like. So, I think it really affects that human

> interaction, and really dehumanizes the whole experience…. plus they're so scared. So, I think the whole situation is really awful, and it makes us feel terrible

Across all narratives, pervasive conflict occurred between values of promoting the collective good and reducing the risk of transmission, alongside the need to provide patient-centered care characterized by dignity and respect.

Seeing Colleagues Struggle. In the context of the COVID-19 pandemic, where nurses became responsible for several patients and team-nursing leadership, the prior collaborative work environment shifted to one characterised more by isolated work. As one nurse described, "you're in your own zone and you don't generally leave that zone, 'cause you don't have time." Consequently, nurses' stories revealed patterns of moral events grounded in witnessing peers' difficulties with managing their workload. Nurses described consistently evaluating their capacity to assist a colleague with patient care while managing their own increased, complex workload. Moral dilemmas occurred as nurses contemplated the safety and well-being of their own patients, versus that of their peers and their patients, recognizing that the standard of care for all patients was at risk, regardless of their actions. Similar moral events also occurred for a subset of charge nurses in this study, who were responsible for overseeing the day-to-day activities of the unit, supporting staff, managing conflict, and facilitating patient flow. All participants who assumed charge nurse roles reported moral distress in response to making nursing assignments. They described their attempt to balance nurse and patient safety when assigning patients to new or redeployed nurses, when creating team-nursing assignments, or when allocating nurse breaks. One participant, who was a charge nurse for the first time during the pandemic, described:

> …the ethical dilemma, for me, in this situation, with being in charge, was trying to make sure that the staff were practicing safely and that the patients were safe, and trying to manage all that. And trying to get people for their own breaks because [pause] they need them. We needed them. Especially during the pandemic, everybody was so exhausted.

Similarly, nurses described the moral distress they experienced when they were asked by the organization to pick up over-time or extra shifts. Moral conflict occurred while they considered the outcomes of leaving their peers working understaffed, versus their own physical and mental well-being.

Staffing Model*.* In response to high patient acuity, an increased number of patient admissions, and worsened staffing shortages, most organizations initiated a team-nursing model of care. Although this model varied between organizations and across provinces, typically, ICU nurses were assigned as team leaders for a group of healthcare providers that were responsible for 4-6 patients, and between 8-10 when covering breaks. These healthcare providers were often nurses that were recruited from retirement or redeployed from other units, where they were responsible for patients of much lower acuity, different populations (e.g., pediatrics), or from an out-patient setting. Therefore, ICU nurses were responsible for overseeing patient care and providing critical care nursing interventions (e.g., titrating and administering high-risk drugs, assessment of cardiac rhythms) for all patients assigned to the team. Consequently, ICU nurses had to prioritize who would receive care and the immediacy of that care.

Making these decisions in the context of the new staffing model resulted in concerns about the quality and standard of care, which then heightened their concerns about patient safety and well-being. Moreover, participants described many moral events that were related to the provision of care by unqualified staff. The complexity of

the experience of moral distress related to the relationship between ICU staff and new team members was threefold; (1) ICU nurses felt conflicted between respecting their peers' expert nursing knowledge while also recognizing their lack of specialized skills; and (2) trusting peers to provide an acceptable standard of care, make correct clinical decisions, document appropriately, or catch the subtle clinical changes indicative of significant shifts in a patient's status, (3) for which the ICU nurse would ultimately be the responsible care provider.

Given that most organizations provided little orientation or critical care training to redeployed staff, all ICU nurses in this study empathized with the limitations of their peers' training and were grateful for their support. Nurses highlighted the importance of strong team dynamics centered around trusting collegial relationships to facilitate a safe, efficient, and healthy work environment. Nurses emphasized how such teamwork is vital in the ICU, particularly in emergencies, where they rely on one another to make quick, critical decisions, and delegate responsibilities. However, moral distress occurred when unqualified staff, limited by their skills, were not able to meet the needs of the team, and ultimately, the patient. One nurse, explained the difficulty in delegating tasks to non-ICU nurses in the context of an emergency:

> …if a patient arrests or is deteriorating suddenly, you need to get help, but if somebody comes besides you, [and says] 'Oh, I can help.' But if you don't know that person—maybe she's a float in from other unit, maybe she's a new hire. I don't feel safe to leave my patient to her…. or maybe [I] do not feel comfortable to ask her to do something for me... for example, mix some drugs. It's takes me time to think. Then have a second thought, 'Is that right? The way she does it [mix medications], was that right?' That's really... Sometimes in that critical situation, every second matters.

Aligning with the sentiments of many other nurses in this study, she described that this distrust, centered around the desire to uphold high patient care standards and safety, negatively impacted interpersonal relationships with new team members and overall team dynamics.

Furthermore, to compensate for the lack of orientation and training, ICU nurses were responsible for teaching new staff essential skills, policies, and procedures, and orienting them to unit resources and flow. One nurse reported positive outcomes of teaching, however, most ICU nurses described the moral distress that occurred when having to prioritize patient care over teaching.

Dimensions of Moral Events

Moral events varied with respect to three dimensions: origin, nature, and impact.

Origin

The contextual origin of moral events was described with respect to the onset of the pandemic. Therefore, moral events, as well as their associated contributing factors (Table 5), were categorized as either “pre-existing” or “novel.” Pre-existing moral events were those that were prevalent in the pre-pandemic context of ICU professional practice. Comparatively, novel moral events were those that transpired in the context of practice during the COVID-19 pandemic. During the COVID-19 pandemic, many pre-existing contributing factors to moral distress were heightened or exacerbated. For example, several nurses described that prior to the pandemic, moral distress occurred when they were unable to provide end-of-life care that was patient-centered and that reflected respect for life and dignity. These moral events were influenced by factors such as poor communication between the healthcare team and family members, and

limited capacity to support and facilitate end-of-life conversations. However, in the context of the pandemic, poor communication was exacerbated in response to several novel factors. Adding further to the complexity and dimensionality of moral distress, some contributing factors described by nurses were identified as moral events themselves.

Table 5.

Factors Contributing to Moral Distress

Level	Contributing Factor
Intrapersonal	*Thinking of patients as family* *Moral residue* Risk of transmission* Increased patient acuity* Increased mortality rates*
Interpersonal	*Team dynamics/power hierarchy* *Perception of nurse role* *Poor communication with families/caregivers; particularly with respect to end-of-life care or patient prognosis* *Poor communication between ICU team members* Rapid adoption and implementation of virtual communication strategies between staff and between staff and patients/caregivers* Team-nursing*
Organizational	*Unsafe staffing levels* Unfamiliar work environments/settings* Limited resources: medical supplies, PPE* Policy: general and end-of-life visitor rules* Policy: “Emergency” Standards of Care”* Number of admissions*
Community	*Lack of accountability for end-of-life care or advance care directives* Knowledge/understanding of COVID* Influence of social media on the perception of health and COVID-19*
Public Policy	*Policy: advance care directives* Dissemination of COVID-19 education*

Note. Informed by Golden, S. D., & Earp, J. A. L. (2012). Social ecological approaches to individuals and their contexts: Twenty years of health education & behavior health

promotion interventions. *Health Education & Behavior, 39*(3), 364–372. https://doi.org/10.1177/10901
98111418634
* = novel contributing factors that emerged during the COVID-19 pandemic
Italicized = exacerbated existing contributing factors

Nature

From nurses' accounts of moral distress, we learned that clinical scenarios or practice conditions central to moral events also existed across a spectrum of nature, or disposition. Consequently, events could be classified according to nature, as either a "major" or "mundane." When asked to describe an episode of moral distress, most nurses started by describing major moral events, which were those that existed outside the norm of typical nursing practice. These events were often acutely traumatic or chaotic in nature, with stories of heightened intensity and severity of patients' suffering, caused by invasive interventions or acute events that involved "inflicting pain." To the contrary, nurses also described mundane moral events that transpired in the day-to-day, typical context of nursing practice. Frequently across interviews, nurses described the pride they take in caring for patients and treating them with the same level of respect that they would give to their "own family member." However, new challenges for nurses arose during the pandemic, with respect to responding to patients' needs in the timely and empathetic manner that they normally would. As one nurse discussed:

> …if you have somebody who's hypoxic and lonely and scared, normally [pre-COVID-19] you go in and you help them. And sometimes it's just sitting with them and being with them for even 5 minutes to calm them down and tell them they're okay. But now we're having to do it via (giggles), their call-bell system, where I'm talking to them overhead and just telling them that their numbers look okay, everything is okay, we'll be in there when we can. But you know, that's not really helpful to hear that overhead on a call bell system, as it is to have a human being in the room….

Nurses also shared stories of “extreme” versions of every-day, mundane events. These were often cases of suffering or pain, related to prolonged, invasive treatments for ultimately a poor prognosis. For example, participants described episodes of prolonged invasive ventilation, while continuous seizing occurred, delirium progressed, or while tissue damage caused by pressure ulcers was exacerbated, risking further complications (e.g., pain, decreased mobility, infection).

Impact

When asked to describe an episode of moral distress, nurses commonly started with a moral event that had a profound personal and professional impact, that was “burned into their memory.” A cue to this type of event occurred when participants started their description with a statement such as, “I gotta tell you two just off the top of my head, that have really stuck with me” or “the one [event] that always comes to mind”. When those impactful moral events occurred, variation existed across the type of moral event, and both the dimensions of origin and nature. In fact, many nurses described that mundane moral events resulted in higher levels of moral distress than major events. As one nurse described, *“*… even though the examples I gave you were more extreme parts of my job, I would say the moral distress that I feel is more in my day-to-day duties.” Paradoxically, nurses had difficulty reflecting on those mundane, day-to-day parts of practice that led to moral distress, and often started the discussion by describing a major moral event. It seemed that major events were so prevalent in their mind, that the morally distressing parts of everyday practice were more difficult to identify. This was illuminated by one nurse, who described that time spent away from

practicing in the ICU allowed her to reflect on how the everyday parts of her practice were causing her moral distress. When asked about the nature of moral events in her practice, she explained:

> I really think it depends on the moment. I think the conversation almost would've been different if we would've had this 2 months ago, because those big moments that were impacting me. And they do, they do sit with me. But now that things have calmed down that's where I, I think I hold the most guilt. I had… I had some pretty traumatic cases in the second wave. I'm… I've gone to counselling. I seek help for it. I'm still not over it, but I've accepted it a little bit better. Whereas, those little moments to moments I find myself carrying...

Discussion

The purpose of this interpretive descriptive study was to document the various ways in which Canadian ICU nurses experienced moral distress in their professional practice during the COVID-19 pandemic. This study advances our conceptualization of moral distress and identifies novel and contextual changes that influenced this phenomenon. Nurses in this study confirmed that moral distress is an extremely common and complex experience that occurs in response to moral events that take place in their professional practice (Browning & Cruz, 2018; Bruce et al., 2015; Dodek et al., 2016; Henrich et al., 2016; McAndrew et al., 2016). The Moral Distress Model (Morley, 2021) served as a useful framework to explore concepts of moral distress with ICU nurses, specifically to learn about the types of moral events that preceded moral distress.

Analysis of our data identified that moral distress manifests for ICU nurses in response to the complex interplay of two overarching, broad practice conditions: (1) when nurses' voices, driven by efforts to optimize patient care at an exceptionally high

standard, from both a biomedical and psychosocial perspective, are not heard, and (2) (2) when patients received substandard levels of care, that was not patient-centered, pain free, or that did not align with organizational, professional, or personal standards.

Authors have previously described causes of moral distress as both practice level factors or events, and broad conditions. In a systematic review by Atashzadeh-Shoorideh et al. (2021), authors summarized several unit and system level factors that contribute to or cause ICU nurse moral distress, including: lack of adequate resources (e.g., staff, skills, support from organizations), poor interdisciplinary collaboration, poor quality of care, and violence. Comparatively, in the Moral Distress Model, Morley (2021) describes overarching factors that create contexts in which moral distress occurs, including: epistemic injustices (e.g., lack of respect for expert knowledge), roster lottery, conflict between personal and professional responsibility, and team dynamics. Our study uniquely describes two, overarching meta-conditions of moral distress, while also describing sub-conditions and contributing factors. We also developed three dimensional categories to capture the variation that existed across all types of moral events that preceded moral distress (origin, nature, and impact). This categorical information strengthens our understanding of the moral events and advances the conceptualization of moral distress.

Confirming Conditions of Moral Distress

Among existing findings of moral distress experienced by ICU nurses, other authors have similarly described the role nurses' voices and the influence of patient conditions on moral distress, in both pre-pandemic and pandemic contexts. Caram et al. (2018) explored moral distress through a lens of virtue ethics, with a sample of ICU

nurses (n=11) and surgical nurses (n=5). Their findings highlight how in the “real” context of practice, nurses deviate from their nursing *telos* (e.g., goal of practice) and are often left unseen during ethical challenges, which leads to moral distress (Caram et al., 2018). Further substantiating our findings, in a qualitative descriptive study with 111 ICU nurses, McAndrew (2020) also highlighted how the marginalization of nurses’ voices interacts with organizational cultures, practices, and priorities, that influence patient suffering, to generate moral distress. These findings are reinforced in a scoping review by Riedel et al. (2022), that mapped studies of moral distress, moral stressors, and moral injury experienced by healthcare workers during COVID-19. Among several factors contributing to morally stressful situations, authors highlighted the lack of respect for nurses’ autonomy and their exclusion from decision making, as well as conditions of unsafe or substandard care (Riedel et al., 2022). Moreover, years of work in this field have documented that substandard care, ineffective pain control, or inadequate patient conditions are central to nurse moral distress (Atashzadeh-Shoorideh et al., 2021; McAndrew et al., 2016). Nurses’ confirmed this narrative, and that participating in end-of-life care, or invasive, aggressive care, for potentially futile patient outcomes are one of the most frequent and impactful sources of moral distress (Browning & Cruz, 2018; Dodek et al., 2016; Epstein et al., 2020; Henrich et al., 2016; Hiler et al., 2018; McAndrew et al., 2016; Mealer & Moss, 2016)

Our findings also highlight the underlying, pre-existing cultures, systems, and processes, at various levels of the healthcare system, that contribute to or compound the overarching, broad conditions in which moral events occur. Aligning with the literature, nurses’ feelings of powerlessness, influenced by the culture and beliefs of the

nurses' role within the healthcare team, and consequently, the disregard of their expert knowledge, prevented nurses from equally contributing to patient care decisions (Caram et al., 2018; McAndrew et al., 2020). Nurses' accounts also confirmed pre-existing challenges with interdisciplinary collaboration, partial to cultures and systems of poor communication, inconsistent approaches to care, and informal and formal hierarchies, contributed significantly to moral events (Bruce et al., 2015; Epstein et al., 2020; Hamric, 2012; Hancock et al., 2020; Henrich et al., 2016, 2016; Hiler et al., 2018; McAndrew et al., 2016, 2020).

Capturing Contextual Influences on Moral Distress

In the context of our study, during the COVID-19 pandemic, pre-existing moral events were further amplified in both frequency and intensity, and novel moral events also emerged. Consequently, conditions in which nurses' voices were not heard or validated and situations of compromised patient care, were exacerbated (Moore et al., 2022; Trachtenberg et al., 2022). Nurses in this study emphasized the severe impact of COVID-19 on the quality of care, due to factors like poor staffing levels, increased number of patient admissions, heightened patient acuity, and barriers to communication such as virtual modalities and restrictive visitor policies.

With extreme levels of uncertainty, and lack of knowledge and understanding of the novel virus, there was a priority to reduce transmission to staff, their loved ones, as well as patients and their families. Consequently, on a regular basis, nurses evaluated and prioritized their own safety, against the needs of their patient— a significant shift in the guiding culture of nursing practice. Trachtenberg et al. (2021) described that amongst a sample of 18 ICU healthcare workers, nurses (n=16) experienced moral

distress when they were required to risk the safety of themselves and their loved ones, to meet patient care needs. Although nurses in our study commented on the moral distress they experienced in response to fear of transmission, most were more concerned about limiting their interaction with their patients, and the implications on quality of care. Nurses also described that pre-existing staffing shortages were amplified, and drove organizations to develop and integrate new models of team-nursing care. They emphasized that this response to short staffing caused significant moral distress, as it posed risk to the quality of care and patient safety because of the high nurse-to-patient ratio and provision of care by unqualified staff (Andersson et al., 2022; Romero-García et al., 2022). This compounded their moral distress, as they felt conflicted about valuing the role of their redeployed peers, and about their prioritizing the responsibility to provide bedside training against their patient needs.

Strengths and Limitations

The credibility of this study was maintained and informed by Thorne's (2016) evaluative criteria. The epistemological integrity and disciplinary relevance of this study was achieved through the development of a research question that was congruent with the purpose of interpretive description and was grounded in the nursing epistemology. The application and consistent use of scaffolding, informed by a theoretical forestructure, maintained representative credibility and analytic logic. Interpretive authority was achieved through the triangulation of data multiple sources (e.g., interview and survey data) and thoughtful clinician test, to provide evidentiary support for truth claims and conclusions. Finally, our findings address and discuss contextual

awareness, recognizing the unique influence of the COVID-19 pandemic on nurses' experiences of moral distress.

A few limitations are noted. First, given the size of the study sample (n=40), findings from this study may not explicitly reflect the experiences of all Canadian critical care nurse. Furthermore, we recognize that those who expressed interest to participate in this study inherently represent nurses who have experienced moral distress in their practice and may have different experiences from those who have not. Second, given the large percentage of female nurses in this study, these findings may not reflect the experiences of male nurses. Finally, the demographic survey distributed to nurses in this study was developed at the beginning of 2021, and therefore, novel concepts that emerged in response to the evolving pandemic (e.g., team-nursing) were not captured in the survey.

Conclusion

This study advanced and refined our knowledge of key components of moral distress. Nurses confirmed existing knowledge about the types of moral events experienced in their professional practice, while also highlighting novel contextual changes that influenced pre-existing and emergent moral events. However, it is most important to focus on the broad conditions in which moral distress occurred, as these were prevalent across pre-pandemic and pandemic contexts. We learned that circumstances in which nurses' voices are not equally valued in decision-making at each level of the healthcare system and conditions of substandard levels of patient care, were further exacerbated in the context of a global pandemic. Therefore, it is

important that in the next steps of research, particularly interventional studies, seek to explore strategies that influence these broad conditions of moral distress.

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Chapter 3

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CHAPTER 4

This chapter is a manuscript prepared for submission to an intensive care nursing journal focused on promoting excellence in critical care nursing. This manuscript describes ICU nurses' experiences of moral distress. First, nurses' demographic characteristics and levels of moral distress, measured using the Measure of Moral Distress – Health Care Professionals tool are reported. Then, moral distress experienced by nurses in the context of their practice in the ICU is described, including nurses' appraisal of both ethical and moral events, and their responses. These responses included nurses perceived outcomes of moral distress, and personal coping strategies and reactions are described. Finally, nurses' recommendations for interventions to mitigate moral distress are summarized.

Canadian intensive care unit nurses' experiences of moral distress and their recommendations for mitigative interventions: An interpretive descriptive study

Abstract

Background: Nurses working in intensive care units frequently encounter ethical events, which increases the likelihood of experiencing moral distress and the associated negative health outcomes. Individual-focused strategies are typically recommended to mitigate these outcomes, despite the recognition that significant structural factors contribute to moral distress. Amongst the dearth of high-quality organizational interventions to mitigate moral distress, few evidence-based strategies have proven effective, and few studies have highlighted nurses expressed needs when experiencing moral distress. Even lesser is known about effective strategies to mitigate moral distress in the context of a global pandemic.

Objectives: To understand ICU nurses' contextual experiences of moral distress and their recommendations for mitigative interventions.

Methods: Guided by interpretive descriptive methodology, a purposeful sample of 40 Canadian ICU nurses completed a demographic questionnaire, the Measure of Moral Distress – Health Care Professionals survey, and one-to-one interviews between May 2021 – September 2021. Techniques from reflexive thematic analysis and rapid qualitative analysis were employed to categorize and interpret the interview data.

Findings: In this sample of ICU nurses, the mean moral distress score was 139.40 (standard deviation [SD]=58.23); with 50% reporting a moderate level of moral distress (M=131.40, SD=26.28). In the presence of an ethical event, nurses appraise and interpret if it is a moral event. When a moral event results in moral distress, nurses experience immediate and long-term effects across multiple psychosocial and physical health domains. To cope, nurses discussed varied reactions to moral distress including action, avoidance and acquiescence. Finally, nurses made recommendations for organizational interventions and changes to mitigate moral distress, and the associated health outcomes.

Conclusion: Shifting cultures to facilitate equal respect and recognition of nurses' expert opinion are crucial for the well-being of patients and healthcare systems, and to mitigate negative outcomes experienced by nurses in response to moral distress. This is particularly valuable in contexts of global healthcare crises, where nurses can provide important and essential insight into nuanced practice-based issues that contribute to conditions of moral distress.

Key words: COVID-19, nursing, intensive care, moral distress, nursing ethics

Background

Throughout the coronavirus disease 2019 (COVID-19) pandemic, healthcare professionals, including registered nurses, working in intensive care units (ICUs) responded rapidly to identify and address the care needs of the new population of patients. The abrupt change in this care context, where little was known about the novel virus, including transmissibility and effective treatment options, heightened conditions of moral distress (Canadian Nurses Association, 2020; Lapum et al., 2021; Morley, Field, et al., 2021; Gehrke et al., 2022, unpublished manuscript). *Moral distress* is a response to a moral event, in which an individual identifies or participates in an action that does not align with their values. A *moral event* is a category of an ethical event that precedes or follows moral distress. An *ethical event* is a situation in practice where there are competing ethical priorities, including questioning of *morals,* where one's personal beliefs about what is right and wrong may be challenged (Morton & Fontaine, 2017).

While experiences of moral distress have been linked to some positive outcomes for nurses, including opportunities for self-reflection, post-traumatic growth, and advocacy for changes to practice (Deschenes et al., 2020; Rushton et al., 2016), it is more likely that nurses will experience negative psychological, physical, social, and behavioural outcomes (Henrich et al., 2017; McAndrew et al., 2016). These outcomes include feelings of anger, depression, frustration or anxiety, use of substances, disengagement, loss of self-worth, withdrawal, decreased stress tolerance, and burnout (Arnold, 2020; Bevan & Emerson, 2020; McAndrew et al., 2016; Mealer & Moss, 2016; Rushton et al., 2016). Physical responses can include nausea, heart palpitations, gastrointestinal issues, insomnia, headaches, fatigue, fluctuations in weight, and higher

susceptibility to illness (Arnold, 2020; Rushton et al., 2016). These outcomes may impact nurses' social capacity, including the ability to engage in meaningful relationships (Arnold, 2020). Experiences of moral distress among ICU nurses has also been linked to increased rates of attrition (Sheppard et al., 2022). Given that ICU nurses typically require additional training or the completion of a critical care nursing certificate, as well as a substantive role orientation, the organizational costs to onboard a new ICU nurse are estimated to exceed $14,000 CAD (Gibney et al., 2022; Health Canada, 2008). Consequently, there are high costs to healthcare organizations when members of the nursing workforce experience moral distress and its associated health effects. In the context of the global healthcare crisis, where rates of nurse attrition have reached unprecedented high levels, unsafe and inappropriate staffing ratios threaten the health outcomes for patients and the stability of healthcare organizations (Gibney et al., 2022)

There is limited evidence about the type of personal strategies employed by nurses to mitigate the health effects associated with moral distress (Arnold, 2020; Forozeiya et al., 2019). What is most typically documented has been nurses' use of coping strategies, which have been categorized as either adaptive (e.g., self-care or directly addressing cause of moral distress) and maladaptive or evasive (e.g., avoidance or distancing) (Arnold, 2020; Forozeiya et al., 2019). Examples of adaptive strategies used by ICU nurses may include, focusing on patient care, seeking psychological counselling, and looking at ethical events through different perspectives (Arnold, 2020). Maladaptive strategies may present as changes in professional behaviour, such as decreased time providing direct patient care or avoidance of potential ethical events in the workplace (Arnold et al., 2020; Epstein et al., 2020;

Forozeiya et al., 2019; Henrich et al., 2017). These responses may negatively affect workplace performance, which can influence patient satisfaction and outcomes.

Of the large body work on moral distress, most focuses on describing and defining key concepts and outcomes, while a lesser proportion examines mitigative interventions (Deschenes et al., 2020). Moreover, our understanding of the current landscape of organizational practices to address or mitigate moral distress is limited. Since 2019, five comprehensive reviews have been conducted to summarize and evaluate moral distress interventions of healthcare workers (Amos & Epstein, 2022), nurses (Deschenes et al., 2021; Morley, Field, et al., 2021), and critical care nurses (Dacar et al., 2019; Emami Zeydi et al., 2022). Among all reviews, a range of diverse interventions are described. Amos and Epstein (2022) reviewed 22 studies, including studies of ICU staff (n=11) and pediatric ICU staff (n=3), all of which showed minimally or non-statistically significant results. Across all studies, most interventions were healthcare worker education and reflective practice (Amos & Epstein, 2022). A review by Morley et al. (2021) (n=16) reported a total of seven statistically significant interventions and one qualitative study that reported positive outcomes. These findings included nurses in various practice contexts, including studies with samples of adult-ICU nurses alone (n=6), adult- and pediatric-ICU nurses (n=1), and adult- and neonatal-ICU nurses (n=1). Multiple studies included education as the primary intervention or concurrently with others, such as facilitated discussion (n=3), self-reflection (n=1), narrative writing (n=1), and special consult services (n=2) (Morley, Field, et al., 2021). Overall, Morley et al. (2021) described the quality of studies as very poor and lacking scientific rigor, calling for future research in this field to adhere to improved

methodological quality. These findings align with systematic reviews by Dacar et al. (2019) and by Deschenes et al. (2021), which evaluated interventions to address moral distress experienced by critical care nurses. Dacar et al. (2019) highlighted the overall low quality of studies (n=7), with moderate to high risk of bias and weak effectiveness to reduce moral distress levels and incidences. Emami Zeydi et al. (2022) also completed a systematic review for the same purpose (n=8), but excluded grey literature and qualitative studies. These authors categorized interventions as individual and collaborative approaches, both centred mostly around education interventions. Emami Zeydi et al. (2022) stated seven studies were effective in reducing moral distress, however, one study did not use a validated tool, one was not statistically significant, and another did not report the measurement tool. Furthermore, despite the authors highlighting the importance of collaborative and organizational approaches, like ethics education and mentorship, these strategies ultimately still place the responsibility on nurses to change their practice and behaviours to reduce moral distress. This aligns with findings from Deschenes et al.'s (2021) review (n=10), where 70% of included studies, mostly workshops, were interventions that targeted change at the nurse level rather than the organizational level. According to Deschenes et al. (2021), this review of interventions showed no "clear pattern" of what strategies are consistently effective to reduce or mitigate moral distress (p. 2). Across all these reviews of interventions, it remains unclear if nurses with lived experiences of moral distress were consulted in the intervention development phase.

In the context of COVID-19, where novel conditions of moral distress have emerged [Gehrke et al., 2022, unpublished manuscript], it is critical to learn about the

ways in which ICU nurses experience moral distress, and what strategies they perceive will be helpful to mitigate moral distress. It will then be important to use this information to inform interventions or programs that will resonate with end users— ICU nurses.

Methods

Research Question and Objectives

To document and explore the different ways in which ICU nurses experience moral distress in their professional practice during the COVID-19 pandemic, we conducted an interpretive descriptive study to answer the overarching research question: How do registered nurses who provided direct patient care in Canadian intensive care units during the COVID-19 pandemic describe their responses to moral distress experienced in their professional practice? In a separate analysis, our findings illustrate that ICU nurses experience moral distress under two broad, inter-dependent conditions: (1) when nurses' voices, driven by efforts to optimize patient care at an exceptionally high standard, were not heard; and (2) when patients received substandard levels of care that was not patient-centered, pain free, or that did not align with organizational, professional, or personal standards [Gehrke et al., 2022, unpublished manuscript]. In this article, we report on the analysis of data from this same study, focused on: (a) describing how nurses experienced their perceived outcomes of moral distress; (b) documenting how ICU nurses cope with moral distress; and (c) exploring nurses' recommendations for organization level interventions to mitigate moral distress.

Research Design

This study was guided by the tenets of interpretive description methodology, an approach to applied qualitative health research that aims to advance knowledge through the examination of practice-based issues, through the lens of individuals with relevant clinical expertise (Thorne, 2016). Highlighting the insights of ICU nurses with practice-based experiences, helps situate findings and recommendations that are relevant to clinical practice and knowledge users (Thorne, 2016). Flexible principles of interpretive description methodology permit the use of a combination of approaches to sampling, data collection, and analysis, while ensuring researchers commit to methodological decisions that align with the purpose of the research question. A detailed description of study methods can be found in [Gehrke et al., 2022, unpublished manuscript].

Setting

While participants for this study were recruited from many different academic and community hospitals from across Canada, nurses' experiences of moral distress were all explored within the boundaries and context of adult-patient ICUs.

Ethical Approval

The study protocol was approved by the Hamilton Integrated Research Ethics Board (#13074). Informed consent was collected using LimeSurvey, and verbally reviewed and confirmed at the beginning of each interview. A copy of consent signed by the research team member was then returned to the participant. Participants were advised that the conversation could elicit an emotional response, and that a distress protocol (Appendix I) was available to implement during or after the interview.

Participants were also given the opportunity to take a break or permanently end the interview at any time.

Participants

Purposeful sampling was used to recruit nurses with expertise in delivering care in an ICU and who experienced moral distress during the COVID-19 pandemic. Study inclusion criteria were: (1) an individual with a current registered nursing license from a Canadian province or territory; who (2) worked within an adult ICU in a Canadian hospital, (3) at some point since March 2020; and who (4) self-reported experiencing at least one episode of moral distress in their professional practice during the COVID-19 pandemic. We estimated an initial sample size of 20 nurses, however, theoretical sampling during concurrent data collection and analysis revealed the need to expand the sample size to collect additional data about key concepts identified in the early stages of analysis. This was further supported by an exceptional response to recruitment from many ICU nurses interested in sharing their stories and experiences. Consequently, the sample size was doubled to 40 participants. Participants were recruited by distributing the study poster through various social media platforms, sharing invitations via ICU professional organizations, and snowball sampling.

Data Collection

Following informed consent, participants completed a demographic survey and the Measure of Moral Distress – Health Care Professional (MMD-HP) tool (Epstein et al., 2019). The MMD-HP is a validated tool (Cronbach's 0.93) used to measure an individual's current level of moral distress (Epstein et al., 2019). Participants rate the frequency (1-4) and level of distress (1-4) for 27 clinical scenarios. These ratings are

then multiplied by one another for each scenario, and then added cumulatively to produce a composite moral distress score. There are also two multiple choice questions about attrition, and space for open-ended responses to describe causes of moral distress not captured in the scale. With the use of this tool, frequency and distress levels are not to be analyzed separately, because both dimensions necessitate moral distress (Epstein, E., personal communication, January 7, 2021). Findings are presented as *sample* "cut scores" (low, medium, high), or means and standard deviations (SD) correlated with the respondent's current intention to leave practice. Permission for use of the scale was received from its developer (E. Epstein, personal communication, January 7, 2021).

Each nurse was then invited to complete a single, semi-structured, one-to-one virtual (i.e.., videoconference or telephone) interview at a mutually agreed upon time. If requested, a participant copy of the interview guide was available for review prior to the scheduled interview. In the interview, nurses were first asked to describe at least one episode of moral distress they had experienced as part of their professional practice in the ICU after March 2020. Then, nurses were asked to describe their personal responses to moral distress, including their perceived outcomes and personal reactions. They were then asked to discuss the actions their organizations took to support nurses and mitigate moral distress, and their personal recommendations for mitigative interventions. Field notes were maintained by the researcher during each interview.

Data Analysis

Quantitative data, including demographic and MMD-HP survey data, were analyzed with descriptive statistics using SPSS Version #28. All interviews were

recorded and transcribed verbatim, with identifying information removed. To achieve a robust interpretation of nurses' narratives, concurrent data collection and analysis was completed by the lead researcher (PG), informed by principles of reflexive thematic analysis (Braun & Clarke, 2019). Interpretation of nurses' experiences of moral distress were compared and contrasted to the Moral Distress Model (Morley, Bradbury-Jones, et al., 2021). Then, to efficiently and comprehensively construct higher level themes, rapid qualitative analysis was utilized (Hamilton, 2020; Hamilton & Finley, 2019). Theoretical triangulation of the qualitative data was achieved through comparison of interview data, with data from the MMD-HP open-ended responses and field notes.

Findings

Participant Characteristics

Forty Canadian ICU nurses, working in hospitals from six Canadian provinces, consented and participated in this study between May to September 2021. Demographic and workplace characteristics of the sample are reported in Table 1. All interviews were conducted virtually (n=32 by videoconference, n=8 by telephone), with a mean duration of 58 minutes (range=33-94 minutes).

Table 1.

Participant and workplace characteristics *N=40*

Sociodemographic Variable	*n*	*%*
Age (years)		
21-30	22	55
31-40	13	32.5
41-45+	5	12.5
Gender		
Female	39	97.5
Male	1	2.5
Other	0	0

Nursing Practice		
Current ICU nurse		
Yes	37	92.5
No	3	7.5
Nursing experience (total in years)		
< 2	3	7.5
3 - 5	14	35
6 – 10	14	35
11 – 20	5	12.5
21 +	4	10
ICU nursing experience (total in years)		
< 2	13	32.5
3 - 5	14	35
6 – 10	6	15
11 – 20	5	12.5
21 +	2	5
Critical Care Nursing Certificate		
Yes	29	73
No	10	25
Enrolled	1	2
Job status		
Full-time	27	67.5
Part-time	11	27.5
Causal	1	2.5
Missing	1	2.5
Avg. hours worked per week		
12-24	4	10
25-36	5	12.5
37-48	28	70
48+	3	7.5
Workplace Characteristics		
Location of ICU Workplace by Province		
Alberta	4	10
British Columbia	3	7.5
Manitoba	6	15
New Brunswick	0	0
Newfoundland and Labrador	0	0
Northwest Territories	0	0
Nova Scotia	1	1
Nunavut	0	0
Ontario	25	62.5
Prince Edward Island	0	0
Quebec	0	0
Saskatchewan	1	2.5

Yukon	0	0
Hospital Status		
Academic	25	62.5
Community	15	37.5
ICU Level		
Level I	7	17.5
Level II	2	5
Level III	23	57.5
Unknown	8	20

Nurses' Moral Distress Scores

Within this sample of participating ICU nurses, the mean moral distress score was 139.4 (SD=58.23; range=31-252), with half of the nurses (50%) reporting a moral distress score within the moderate interval of scores reported by the sample (n=20, mean=131.40, SD=26.28) (Table 2). Within the remainder of the sample, 20% of participants reported scores in the "high" interval of moral distress, with the remaining 30% reporting "low" moral distress scores. Those who considered leaving their practice (n=18), reported a higher moral distress score (mean=156.89, SD=56.78), compared to those who were not considering leaving (n=20, mean=120.15, SD=56.73). The mean difference was 36.74, but was not statistically significant (p=0.54, CI=-0.67). Of those who left their practice due to moral distress (n=3), this decision was made between March to July 2021.

Table 2.

Measure of Moral Distress – Healthcare Professional Survey Results

Moral Distress Score (Level of Moral Distress)	n	%	M	SD
Low Score (31-85)	8	20	58.13	15.13
Moderate Score (86-171)	20	50	131.40	26.26
High Score (172-252)	12	30	206.92	28.11
Intent to Leave				
Have you ever left or considered leaving a clinical position due to moral distress?				
No	4	10	96.00	30.76
Yes, but did not leave	26	65	132.58	54.46
Yes, left	9	22.5	172.22	64.91
Missing data	1	2.5	NA	NA
Are you considering leaving your position now due to moral distress?				
Yes	18	45	156.89	56.78
No	20	50	120.15	66.73
Missing	2	5	NA	NA

Note. n=40; Possible MMD-HP score range from 0-432. Cut scores represent the low, moderate, and high range of the sample. M=mean, SD=standard deviation.

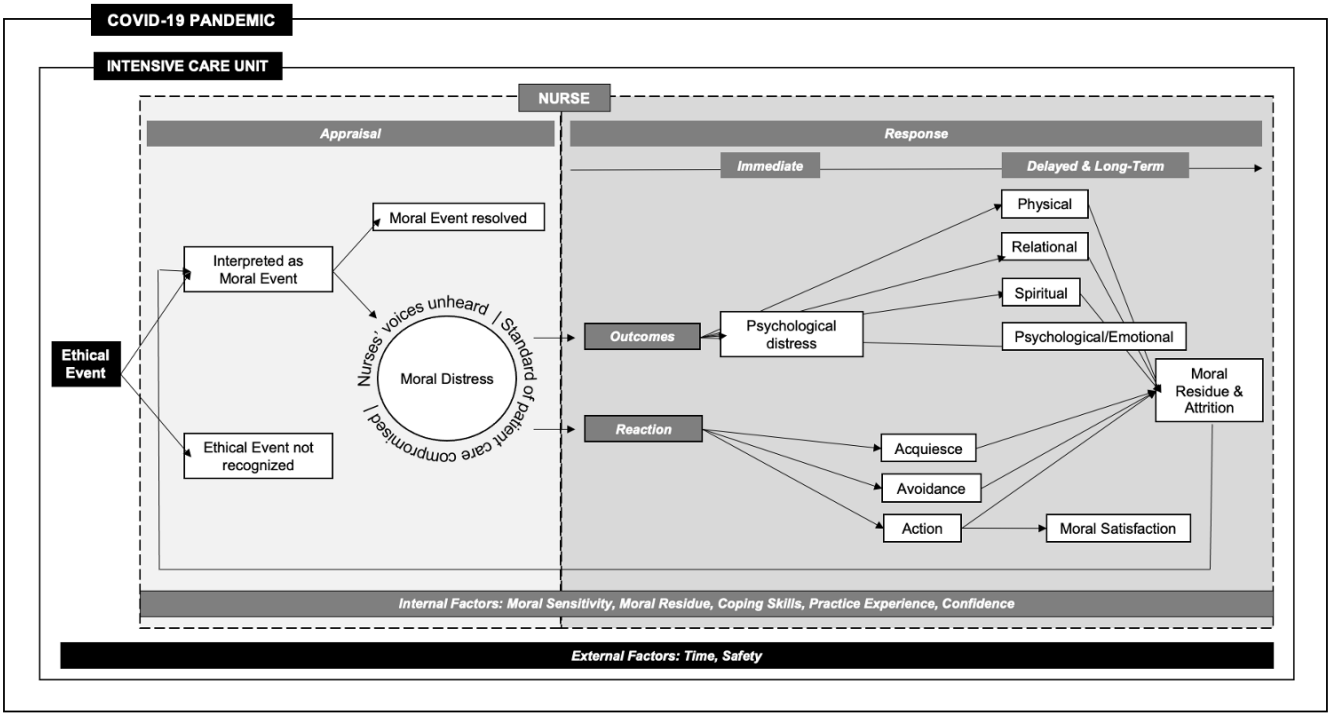
How Nurses' Experienced Moral Distress

Nurses encountered ethical events, including moral events, on a regular basis in practice. Nurses reported 182 moral events, of which 87 events were reported as open-ended text responses in the MMD-HP tool, and an additional 125 events were described narratively during the interviews. We describe nurses' appraisal of and responses to these moral events, including moral distress, and illustrate this process in Figure 1. We highlight the internal and external factors that influence their interpretations of these events. We then describe the range of immediate, delayed, and long-term outcomes of moral distress perceived by nurses, as well as their personal reactions and coping

strategies. Finally, we summarize nurses' desired organizational responses to mitigate moral distress.

Figure 1.

Nurses' experience of moral distress in the context of the intensive care unit during COVID-19



Nurses' Appraisal and Responses to Ethical and Moral Events

In this study, nurses' appraisal of ethical events resulted in two responses: (1) the nurse did not recognize the ethical event in practice, and thus it was not interpreted as a moral event; or (2) the nurse recognized the ethical event and interpreted it as a moral event. Then, through a process of appraising the moral event, a second pair of responses occurred: (2a) the moral event was resolved before moral distress occurred; or (2b) moral distress transpired. Typically, moral distress occurred within the context of

two co-existing conditions: (a) when nurses' voices were not heard, and (b) where patients' standard of care (e.g., health, safety, and comfort) were perceived to be compromised [Gehrke et al., 2022, unpublished manuscript] (Figure 1).

Factors Influencing Nurses' Appraisal and Responses to Ethical and Moral Events. In the nurses' descriptions of varied types of ethical and moral events, internal and external factors were identified that influenced their experiences of moral distress. Internal factors, or personal characteristics, such as their levels of moral sensitivity, moral residue, coping skills, practice experience, and confidence, affected how an individual nurse experienced the event, as well as the subsequent meaning they applied to the event. However, nurses perceived that external factors, or the environmental and contextual factors outside their locus of control, were most influential on their appraisal of and responses to both ethical and moral events. Specifically, factors of time and safety critically influenced nurses' abilities to process or address ethical or moral events, or attend to or voice their moral distress. Nurses described that their workload and the condition of the unit (e.g., chaotic, calm) affected the amount of time available to attend to their immediate moral distress. Other factors, such as team dynamics, including power hierarchies and level of support, influenced nurses' feelings of psychological safety. Without the presence of psychological safety, nurses did not feel comfortable voicing or addressing the causes and feelings of moral distress with their team.

Nurses' Perceived Outcomes of Moral Distress

Nurses described how their experiences of moral distress had a multi-faceted impact on their health and well-being, which were experienced at various points in time. Immediately following the appraisal of a moral event that resulted in moral distress,

most nurses experienced psychological distress, which included one or more negative emotions. In situations where nurses could not immediately attend to their moral distress in the ICU, then their emotional response was usually delayed to a later time, most frequently during a break at work or on the drive home following the shift. Long-term effects nurses associated with their oral distress manifested over time, after repeated exposure to, or lack of resolution of, multiple episodes of moral distress (i.e., moral residue).

Across all time points, moral distress affected multiple domains of nurses' health, including their physical, relational, spiritual, psychological, and emotional well-being (see Table 3). Several nurses described significant changes in their personalities, attributing this response to moral residue, in combination with other personal and professional stressors that occurred during the COVID-19 pandemic. Nurses described this response as a shift in their overall demeanour, and described themselves as dark, cynical, negative, irritable, and unhappy. For some, they were able to recognize this change themselves, while others were confronted by their co-workers who were concerned for their well-being. Moreover, some nurses described that this change occurred slowly overtime, while others stated that there was an episode of moral distress that "broke the camel's back," and led to a "flipped the switch" or caused the "beaker [to] spill over." As one nurse described,

> I was just someone who always would go the extra mile and…. then all of a sudden—like a switch flipped— then, I just was totally done. I started applying to different jobs. I thought about leaving nursing. And I just couldn't…cope at all.

Feelings of depression, sadness, and anger influenced other aspects of their personal and professional lives. This contributed to social withdrawal from friends and family,

which was perpetuated by differences in personal beliefs and health behaviours during the COVID-19 pandemic. Moral distress affected their professional identity (Table 4), contributing to burnout, attrition, and feeling like a “bad nurse,” which was characterized by feelings of shame, guilt, self-doubt, and insecurity in response to their inability to provide comprehensive standards of care to their patients.

Table 3.

Nurses’ perceived delayed and long-term outcomes of moral distress

Health Domains	Outcomes
Relational	Social withdrawal Feelings of disconnection from friends and family
Physical	Exhaustion and fatigue Elevated heart rate Restlessness Nausea
Spiritual	Doubt of personal spiritual beliefs
Psychological/Emotional	Personality change: from happy to cynical, dark, negative, unhappy Blurred boundaries between home and work: thoughts of moral events experienced at work drift into personal lives Sleep disturbances: nightmares, irregular sleep patterns, dreams about work and patients, night sweats Lack of motivation Expressions of feeling “traumatized” “Emotional”: labile mood, reactive, tearful for “no reason”, decreased emotional capacity Decision-fatigue Difficulty with concentration Expressions of: Grief Anxiety: generalized and situation-specific (e.g., going into work) Anger, resentment Powerlessness, helplessness Hopelessness Stress

	Sadness Depression Defeat Overwhelm Frustration Impatience Irritability (at work and home) Shame and guilt (e.g., for leaving unit, quality of care; see 'Bad Nurse'' in Table 5

Table 4.

Nurses' perceived professional outcomes of moral distress

Outcome	Description
Burnout	Decreased job satisfaction Emotional exhaustion Perceived decreased work efficacy
Attrition and related feelings	Left position to work on another unit, in a different setting, or role Considered applying for other jobs Dreaded going into work every shift Considered calling in sick for every shift
'Bad Nurse'	Doubted abilities and skills as a nurse Feeling guilty for the effect of burnout on patient care (e.g., unmotivated) Feeling guilty for being unable to provide high standards of care in the current context of practice (e.g., time constraints)

Nurses' Personal Reactions to Moral Distress

In response to moral distress, ICU nurses engaged in patterns of active (i.e., action, avoidance) and passive (i.e., acquiesce) reactions to mitigate the conditions and outcomes of their distress. When nurses chose to actively engage in strategies to mitigate the cause of moral distress, they were motivated to manage outcomes for themselves, their peers, and their patients. Patterns of action were demonstrated through acts of advocacy at every level of the healthcare system. At the bedside, nurses

reported advocating to family members and the healthcare team for comprehensive, patient-centered care. At a unit and system level, nurses advocated for adequate levels of resources and staff to facilitate safe care. In hopes of improving their overall well-being and mitigating outcomes of moral distress, they also urged organizations to increase nurses' personal benefits, such as approved vacation and health care coverage. Two nurses in this study also described acts of advocacy taken at a provincial and national level.

Nurses also described actively engaging in individual-level strategies of self-care (e.g., creative hobbies, exercising), exploring organizational supports, and seeking out connection in efforts to be heard (e.g., therapy, socializing). Although, in some cases, nurses reported that their previously effective coping strategies were no longer effective, as their experiences of moral distress intensified in frequency and level during the pandemic. Nurses heavily relied on the support of their peers, who validated their experiences of moral distress. This took place in formal workplace discussions, such as debriefings or support groups, and during informal conversations. Connecting with loved ones who did not work in the healthcare field was ineffective in mitigating moral distress. For most nurses, this was because their feelings of loneliness, anxiety, and sadness were often exacerbated when they felt that they had to justify or explain their feelings of moral distress, as well as recount moral events.

In circumstances where nurses recognized that they could not change or influence the moral event, they actively shifted their attention and efforts to further prioritize and optimize comprehensive patient care and well-being. This was particularly

prevalent in circumstances where nurses perceived compromised patient-centred care or comfort as central to the moral event. As one charge nurse described,

> …what I say to nurses that I know are clearly struggling with the idea of, maybe futility of care…. is that, if you can honestly say to yourself, 'Is your patient suffering? If the answer is yes, what can you do to control that, to mitigate that, to alleviate that?' We have control over that. We haven't got control over what a family wants to do, as far as; de-escalation of care, withdrawal of care, moving to comfort care—whatever it might be— putting limits to care, changing health care advanced directives.… But I always say that, if you can answer those questions, at a point, it has to be okay with you.

Nurses in this study also described patterns of avoidance or numbing, whereby they engaged in activities to distract themselves from the outcomes of moral distress. Numbing presented as increased substance use, excessive exercise, "doom" scrolling on social media, or distracting oneself with a busy schedule. A final pattern of nurse behaviour in response to moral distress was to acquiesce, or the passive acceptance of moral distress without protest. Nurses' patterns of acquiescence were influenced by moral residue and burnout, which affected their capacity or willingness to actively address conditions of moral distress.

Drivers of Attrition and Moral Residue

Among this sample of nurses, outcomes of moral distress experienced across all time periods (i.e., immediate, delayed, and long-term) and their personal reactions (i.e., action, avoidance, acquiesce) contributed to feelings of moral residue, burnout, or attrition. Moral residue contributed to a cycle, in which nurses entered practice with existing levels of moral distress that influenced their responses to new moral events, and consequently, compounded previous distress and outcomes. Burnout in response to moral distress was evidenced by nurses' descriptions of emotional exhaustion, and

decreased workplace satisfaction and professional efficacy. Nurses' burnout, in combination with other negative outcomes of moral distress, contributed to feelings of defeat and decreased motivation to strive for comprehensive, patient-centered care, and drove their considerations to leave practice. Comparatively, when the nurse was able to successfully address the condition or cause of moral distress, nurses reported feeling morally satisfNurses' Recommendations for Organizational Strategies to Mitigate Moral Distress

Nurses described their organizational responses, actions, or interventions to mitigate moral distress among staff, as well as their perceptions about the effectiveness of these types of interventions currently in place. In the context of COVID-19, nurses understood that healthcare leaders and human resource staff were also "just treading water" under unprecedented circumstances. Despite their empathetic recognition of the challenges experienced by organizations at this time, nurses desired more action and support for themselves and their colleagues, especially given that they experienced moral distress prior to the pandemic.

Most organizational interventions that influenced nurses' experiences of moral distress were not specifically targeted at moral distress, but were aimed to help with general healthcare worker well-being or addressed other workplace issues. Nurses perceived organizational interventions as helpful, when they were authentic, genuine, and were designed to change the conditions that contributed to moral distress. However, these interventions were perceived as unhelpful when they were poorly or quickly implemented, as it often resulted in increased nursing workload. For example, inadequate training of redeployed staff required ICU nurses to spend time teaching,

which took time away from critical patient needs. Nurses expressed their gratitude for acts of appreciation, like employee discounts or formal recognition, but did not perceive these strategies as effective in mitigating moral distress. Organizational interventions were thought to be less effective when they did not address the conditions or causes of moral distress, were viewed as tokenistic, were difficult to access, or placed the responsibility and burden on the individual nurse to increase their levels of engagement in self-care. Some nurses perceived employee assistance programs or onsite counseling services as important and valuable, but most reported concerns related to confidentiality, the provider's qualifications, ease of use, accessibility, and effectiveness. Similarly, unit huddles, formal debriefing, and open forums with unit level teams and hospital leadership were viewed as salient, but many nurses voiced concerns of psychological safety and authenticity.

A few nurses reported positive experiences of organizational interventions, grounded in organizational cultures where resources had been invested in addressing conditions of moral distress. One nurse described the organization's efforts to genuinely engage bedside nurses in discussion, seeking their feedback and giving opportunities to be genuinely heard. Interventions perceived as helpful by this nurse included: an advanced practice nurse-led quality improvement initiative to evaluate quality of patient care (e.g., communication, end-of-life care), advanced practice nurse-led team meetings to discuss decision making processes, open communication with leaders at each level (e.g., critical incidence debriefings, weekly town-halls) and consistent feedback about unit outcomes (e.g., statistics, newsletters). This nurse described,

> …we learned so much along the way. And the fact that we adapted to those things as we learned them… that was… was helpful for mitigating moral distress and because… When-when your leadership— you identify a problem that's causing an issue with the staff, or compromising patient care, or whatever— leadership says, “Oh okay, that's something we’ve got to fix. These are the things that we can do right now. [And] This is a longer kind of thing, that we can't fix right now, but we're working on it.” That was really helpful.

Although some of these organizational services and interventions were described by other nurses in this study, the differences in organizational approaches (e.g., authenticity, closed-loop communication) to these strategies influenced the nurses’ perceived effectiveness.

In their own words, nurses identified their practice-based needs and desired organizational interventions, in various organizational contexts (Table 4). Ultimately, nurses’ personal strategies and recommendations to mitigate moral distress were situated in their pursuit to be heard, in efforts to change conditions under which moral distress occurred [Gehrke et al., unpublished manuscript, 2022] and mitigate the associated negative outcomes for nurses and patients.

Table 6.

Nurses’ recommendations for organizational interventions to mitigate moral distress

Type/Level of Organization	Nurses’ Recommendations to Mitigate Moral Distress
Healthcare System - Unit	• Infrastructure and skilled staff to facilitate accessible and confidential nursing support groups to specifically address moral distress • Education to support clear communication systems, processes, and skills within healthcare team, and between family and healthcare team • End-of-life education for all healthcare team members to promote confident, consistent, and quality approaches to end-of-life and prognostic conversations • Formal multi-disciplinary debriefing, to address moral distress

	• Dedicated human resources (e.g., clinical nurse specialist) and evidenced-based tools to identify, measure, and evaluate practice-based issues that contribute to conditions of moral distress
	• Inclusion of comprehensive ethics education in ICU nursing orientation, that review concepts of moral distress and teach pragmatic approaches to ethical events
	• 'Good Nurse Manager': An individual who is visible, present, accountable. They authentically seek nursing input and provide feedback, create safe space to share concerns, advocate for nurses, and engage in clear communication.
	• Emergency Preparedness:
	  • Comprehensive nursing education for re-deployed staff and ICU team leads
	  • Adequate number of electronic communication devices
	  • Clear communication between organizational leadership about policy changes and decision-making processes

Healthcare System – Organization Wide	• Clear and accessible processes for nurses to take personal or mental health days • Formalized focus and human resources to engage in nursing retention, recruitment, and safe staffing levels at baseline • Formalized policies that mandate bedside nurses at decision- and policy-making tables • Authentic and transparent communication with all staff
Community	• Resources and tools to support mandated advanced care planning in community settings (e.g., family practitioners' offices) • Public health education focused on advanced care planning
Public Policy	• Mandated attendance of bedside nurses at local, provincial, and federal decision-making tables
Nursing Advocacy Groups and Unions	• Advocate and negotiate for increased number of paid mental health days and increased psychological service coverage (e.g., greater than $800.00/year) • Advocate and negotiate for adequate staffing levels to support safe practice and coverage to support approved time off for nurses
Nursing Education Program	• Inclusion of ethics education in critical care and baccalaureate nursing programs to empower nurses with the knowledge and confidence to respond to ethical clinical practice scenarios

Discussion

The findings of this study highlight Canadian ICU nurses' experiences of moral distress in response to ethical events that took place in their professional practice. We described nurses' moral distress scores and their responses to moral distress, including their rich descriptions of how they reacted to moral distress, the multifaceted effect of these experiences, and their recommendations for organizational level interventions to address and mitigate moral distress.

Advancing Our Understanding of Intensive Care Unit Nurse Moral Distress

As part of the reflexive thematic analysis process, each concept or process that was identified during the analysis of the nurses' narratives was diagrammed, resulting in Figure 1. As The Moral Distress Model (Morley, Bradbury-Jones, et al., 2021) was consulted and informed the analysis phase, there will be similarities in how key concepts, actions, or reactions are labelled. Therefore, our findings do not represent a revision of this model, rather it acts as a representation of how we perceived this sample of nurses experienced moral distress. Nurses reported similar responses to moral distress, including: satisfactory resolution (e.g., resolved), acquiesce, fight (i.e., action), moral residue, burnout and attrition (Morley, Bradbury-Jones, et al., 2021). However, some differences did exist. We compared and described differences in the conditions of moral distress in another paper [Gehrke et al., 2022, unpublished manuscript].

The MMD-HP served as a useful tool to quantify nurses' experiences of moral distress. Across this sample, self-reported moral distress score varied, however, most participants declared a moderate or high scores. Similar to other studies of ICU nurse

moral distress, it is interesting to note that those who had greater intention to leave their practice reported a higher moral distress score (Romero-García et al., 2022; Sheppard et al., 2022). Although, this finding was not statistically significant given the small sample size. Variation exists amongst the reporting of MMD-HP scores in studies of both ICU nurses, and nurses in other settings. Authors of the tool (Epstein et al., 2019) reported on moral distress experienced by healthcare professionals working across a range of practice settings, including ICUs. Nurses' (n=397) mean moral distress score was 112, and individual scores for ICU nurses were not reported (Epstein et al., 2019). In other studies that included ICU nurses, moral distress scores were reported as means and SDs based on intent to leave (Epstein et al., 2019), SDs and means of the group scores (Sheppard et al., 2022), SDs alone (Romero-García et al., 2022), or described categorically (without any information about the category interval) (Romero-García et al., 2022; Silverman et al., 2022). Given the differences in reporting of moral distress scores, it is challenging to compare findings with other groups of ICU nurses. However, MMD-HP findings from our study serve as foundational knowledge about ICU nurses' levels of moral distress during the COVID-19 pandemic. Consistent reporting of MMD-HP scores will help to develop benchmark scores, to help make more accurate comparisons in future research of ICU nurse moral distress.

Our findings confirm long-standing evidence documenting the multitude of negative outcomes nurses experience in response to moral distress (Guttormson et al., 2022b). Prior to the pandemic, authors have described psychological, physical, and behavioural outcomes of moral distress that align with those reported by nurses in our study (Arnold, 2020; McAndrew et al., 2016). An interpretive synthesis by Arnold (2020)

described the “the valley of pain” that critical care and emergency nurses experience in response to moral distress, which included emotional outcomes of anger, stress, depression, despair, guilt, frustration and sadness, and physical outcomes of nausea and hypertension. Many of the outcomes of moral distress described by nurses in this study also overlap with trauma responses like moral injury and post-traumatic stress disorder (PTSD) (Arnold, 2020; Browning & Cruz, 2018; Epstein et al., 2020; Forozeiya et al., 2019; Henrich et al., 2017; McAndrew et al., 2016). An extensive body of work has examined PTSD among ICU healthcare workers (Cartolovni et al., 2021; Guttormson et al., 2022a; Plouffe et al., 2021), and findings have shown that critical care nurses have a higher risk for PTSD compared to nurses working in other units (Moss et al., 2016). In the context of the pandemic, where healthcare leaders, researchers, and clinicians predicted poor outcomes for individuals working in the healthcare field, specifically in the ICU, there has been an increased research focus on moral distress, mental health, and well-being concepts (Salmon & Morehead, 2019). In a recent study of ICU nurses (n=177), Guttormson et al. (2022a) reported that both burnout and moral distress were moderately to highly correlated with anxiety, depression, and PTSD symptoms. Similarly, Plouffe et al. (2021) reported significant bivariate correlations between moral distress and psychiatric conditions, including burnout, depression, anxiety, and PTSD, experienced by Canadian healthcare workers (n=1362) during the COVID-19 pandemic. These conditions, disorders, and symptoms are all complex and intersectional responses, and authors have argued that more research is required to understand the relationships and differences between moral

injury, PTSD, and moral distress (Guttormson et al., 2022a; Marvaldi et al., 2021; Moore et al., 2022; Trachtenberg et al., 2022).

McAndrew et al. (2016) also described the impact of moral distress on ICU nurses' professional practice, which included similar descriptions of avoidance, withdrawal, depersonalization of patients, and compromised patient care (Cartolovni et al., 2021). The impact of moral distress on the quality of patient care was not directly described by nurses in this study. Arnold (2020) also described professional outcomes that included an intent to leave practice and personal distancing from moral events.

Moving Towards Nurse-Driven Interventions for Moral Distress

We learned that in response to conditions of moral distress [Gehrke et al., 2022, unpublished manuscript], ICU nurses desire organizational culture changes and mitigative interventions that promote and amplify nurses' voices, to optimize patient care and the safety and well-being of nurses. These findings align with McAndrew et al. (2020), which is one of few studies to describe recommendations for organizational interventions and resources to mitigate moral distress identified by nurses. Like those in this study, nurses recommended strategies, actions, and changes that address both the overarching conditions and the sub-conditions of moral distress (McAndrew et al., 2020). At a macro level, nurses verbally expressed their need to be heard (McAndrew et al., 2020). This need was further substantiated by nurses in this study, demonstrated through personal acts of advocacy at various levels of the healthcare system (e.g., unit, organization, government) in an attempt to amplify their voices, and in the pursuit of better care for patients and working conditions for their colleagues. At a meso and a micro level, nurses indicated the role and value of ethics education for nurses, to feel

empowered to address conditions of moral distress (McAndrew et al., 2020). Moreover, they also desire improved education for patients and families to make better informed choices and improved palliative care integration, which also align with recommendations by nurses in this study (McAndrew et al., 2020).

To mitigate moral distress, it is vital for organizations to include critical care nurses in clinical decision-making discussions and valuing their expert clinical and holistic knowledge. However, as authors have highlighted, given the complexity of moral distress, developing interventions to address the intersectional conditions and contributing factors of moral distress is difficult (Morley, Field, et al., 2021; Thorne, 2018). Yet, as knowledgeable and skilled healthcare professionals, nurses in this study demonstrated that they possess valuable insights into the practice cultures, processes, and factors that contribute to challenges that they face in their professional practice, that contribute to moral distress. Future interventional studies should strive to collaborate with nurses, the end-users, to develop relevant and pragmatic strategies to mitigate moral distress (Deschenes et al., 2021; Morley, Bradbury-Jones, et al., 2021; Slattery et al., 2020; Thorne, 2018).

Strengths and Limitations

Thorne's (2016) evaluative criteria were upheld to ensure credibility. We identified a knowledge gap, made further relevant in the context of the global pandemic, to highlight moral defensibility. Several components of methodological decision making maintained epistemological integrity and disciplinary relevance throughout the study, including a research question rooted in nursing epistemology, data sources congruent with the study purpose and question, and the application of the thoughtful clinician test.

Triangulation of multiple data sources (e.g., interviews and survey data), and preservation of an audit trail, supported representative credibility and interpretive authority. Finally, pragmatic obligation was achieved by providing recommendations situated in the field of study and informed by end-users.

A few limitations are noted. Firstly, even with the use of multiple efforts to recruit nurses from across Canada, nurses were located across 6 provinces, with the majority (63%) from Ontario. Therefore, given the sample size and the uneven geological distribution of the sample, findings may have limited transferability to other contexts, and in particular to provinces where no nurses were recruited from. Secondly, we recognize that those who expressed interest to participate in this study inherently represent nurses who have experienced moral distress in their practice and may have different experiences from those who have not. Thirdly, given the large percentage of female nurses in this study, these findings may not reflect the experiences of male nurses. Finally, the demographic survey distributed to nurses in this study was developed at the beginning of 2021, and therefore, novel concepts that emerged in response to the evolving pandemic (e.g., team-nursing) were not captured.

Conclusion

Given the known structural, systemic, and environmental factors that contribute to moral distress, and ultimately burnout and attrition, it is the responsibility of organizations to develop strategies to change the conditions under which moral distress occurs [Gehrke et al., 2022, unpublished manuscript]. However, to date, there has been a scarcity of high-quality interventions that have been effective in mitigating moral distress. Moreover, few studies have clearly identified and attempted to engage nurses

in the development of such interventions. Nurses possess valuable insight into the practice issues central to moral distress, that have significant implications for all members of the healthcare teams, patients, and systems. Therefore, it is essential that nurses' voices be included in the development of future interventions, as well as central to the interventions themselves.

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Chapter 4

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APPENDICES

Appendix A

Moral Distress Literature Review – General Search:

A1. CINAHL

EBSCOhost

Saturday, August 29, 2020 10:19:56 AM

#	Query	Limiters/Expanders	Last Run Via	Results
S8	S1 AND S2 AND S6	Limiters - English Language Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	127
S7	S1 AND S2 AND S6	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	128
S6	S3 OR S4 OR S5	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	43,737
S5	"ICU*"	Limiters - Published Date: 20150101-20201231 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	17,271
S4	"critical care*"	Limiters - Published Date: 20150101-20201231 Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	15,288
S3	"intensive care unit*"	Limiters - Published Date: 20150101-20201231 Expanders - Apply equivalent	Interface - EBSCOhost Research Databases	31,098

A2. PubMed

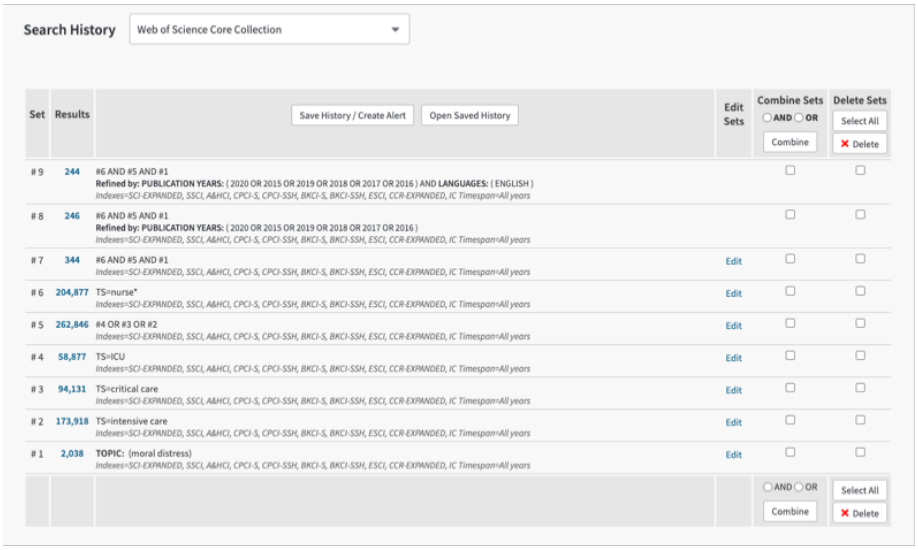
History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#7	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))** Filters: **in the last 5 years, English**	138	10:32:52
#6	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))** Filters: **English**	249	10:32:46
#5	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))**	252	10:32:25
#4	···	›	Search: **((intensive care) OR (ICU) OR (critical care)**	495,419	10:31:47
#3	···	›	Search: **((intensive care*) OR (ICU*)) OR (critical care)**	491,616	10:31:24
#2	···	›	Search: **nurse***	415,015	10:30:55
#1	···	›	Search: **moral distress**	2,390	10:30:47

Showing 1 to 7 of 7 entries

A3. Web of Science

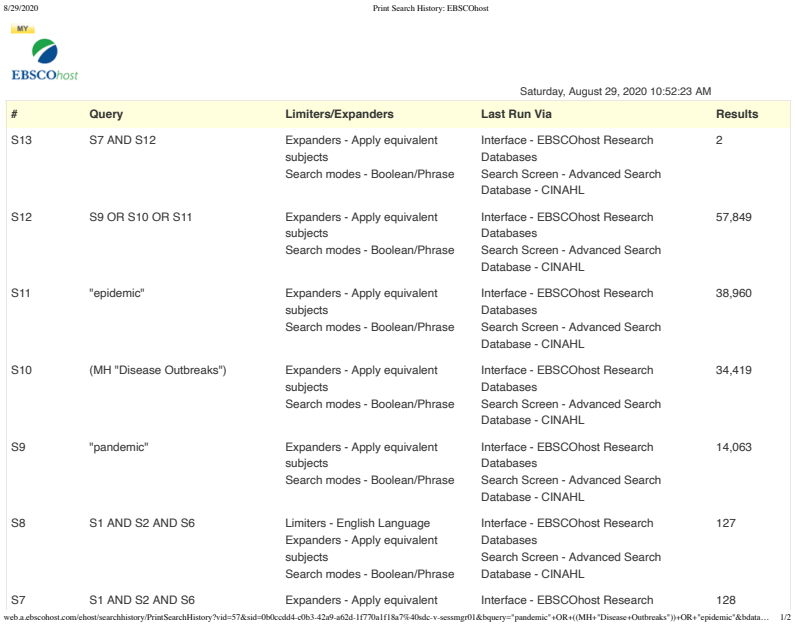


Search History — Web of Science Core Collection

Set	Results		Edit Sets	Combine Sets	Delete Sets
		Save History / Create Alert · Open Saved History		AND OR Combine	Select All · Delete
# 9	244	#6 AND #5 AND #1 **Refined by: PUBLICATION YEARS:** (2020 OR 2015 OR 2019 OR 2018 OR 2017 OR 2016) AND **LANGUAGES:** (ENGLISH) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*			
# 8	246	#6 AND #5 AND #1 **Refined by: PUBLICATION YEARS:** (2020 OR 2015 OR 2019 OR 2018 OR 2017 OR 2016) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*			
# 7	344	#6 AND #5 AND #1 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 6	204,877	TS=nurse* *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 5	262,846	#4 OR #3 OR #2 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 4	58,877	TS=ICU *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 3	94,131	TS=critical care *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 2	173,918	TS=intensive care *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 1	2,038	**TOPIC:** (moral distress) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
				AND OR Combine	Select All · Delete

Moral Distress Literature Review – Pandemic Search

A4. CINAHL



8/29/2020 Print Search History: EBSCOhost

EBSCOhost

Saturday, August 29, 2020 10:52:23 AM

#	Query	Limiters/Expanders	Last Run Via	Results
S13	S7 AND S12	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	2
S12	S9 OR S10 OR S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	57,849
S11	"epidemic"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	38,960
S10	(MH "Disease Outbreaks")	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	34,419
S9	"pandemic"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	14,063
S8	S1 AND S2 AND S6	Limiters - English Language Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	127
S7	S1 AND S2 AND S6	Expanders - Apply equivalent	Interface - EBSCOhost Research	128

web.a.ebscohost.com/ehost/searchhistory/PrintSearchHistory?vid=57&sid=0b0ccdd4-e0b3-42a9-a62d-1f770a1f18a7%40sdc-v-sessmgr01&bquery="pandemic"+OR+((MH+"Disease+Outbreaks"))+OR+"epidemic"&bdata… 1/2

A5. PubMed

History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#12	···	›	Search: **(((pandemic AND ((y_5[Filter])) AND (english[Filter]))) OR (epidemic AND ((y_5[Filter])) AND (english[Filter])))) OR (outbreak AND ((y_5[Filter])) AND (english[Filter]))) AND ((y_5[Filter])) AND (english[Filter]))) AND (((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care)) AND ((y_5[Filter])) AND (english[Filter]))** Filters: **in the last 5 years, English**	15	10:46:19
#11	···	›	Search: **((pandemic AND ((y_5[Filter])) AND (english[Filter]))) OR (epidemic AND ((y_5[Filter])) AND (english[Filter])))) OR (outbreak AND ((y_5[Filter])) AND (english[Filter])))** Filters: **in the last 5 years, English**	658,709	10:46:02
#10	···	›	Search: **outbreak** Filters: **in the last 5 years, English**	633,310	10:45:46
#9	···	›	Search: **epidemic** Filters: **in the last 5 years, English**	631,823	10:45:34
#8	···	›	Search: **pandemic** Filters: **in the last 5 years, English**	37,034	10:45:28
#7	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))** Filters: **in the last 5 years, English**	138	10:32:52
#6	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))** Filters: **English**	249	10:32:46
#5	···	›	Search: **((moral distress) AND (nurse*)) AND (((intensive care) OR (ICU) OR (critical care))**	252	10:32:25
#4	···	›	Search: **((intensive care) OR (ICU) OR (critical care)**	495,419	10:31:47
#3	···	›	Search: **((intensive care*) OR (ICU*)) OR (critical care)**	491,616	10:31:24
#2	···	›	Search: **nurse***	415,015	10:30:55
#1	···	›	Search: **moral distress**	2,390	10:30:47

Showing 1 to 12 of 12 entries

A6. Web of Science

Search History:

Save History / Create Alert | Open Saved History

Set	Results		Edit Sets	Combine Sets (AND / OR) Combine	Delete Sets Select All / Delete
# 14	1	#13 AND #9 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 13	255,631	#12 OR #11 OR #10 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 12	131,673	TS=outbreak *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 11	114,225	TS=epidemic *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 10	39,928	TS= pandemic *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 9	244	#6 AND #5 AND #1 **Refined by: PUBLICATION YEARS:** (2020 OR 2015 OR 2019 OR 2018 OR 2017 OR 2016) AND **LANGUAGES:** (ENGLISH) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*			
# 8	246	#6 AND #5 AND #1 **Refined by: PUBLICATION YEARS:** (2020 OR 2015 OR 2019 OR 2018 OR 2017 OR 2016) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*			
# 7	344	#6 AND #5 AND #1 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 6	204,877	TS=nurse* *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 5	262,846	#4 OR #3 OR #2 *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 4	58,877	TS=ICU *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 3	94,131	TS=critical care *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 2	173,918	TS=intensive care *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
# 1	2,038	**TOPIC:** (moral distress) *Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years*	Edit		
				AND / OR	Select All

Appendix B

Study Poster

RESEARCH STUDY PARTICIPANTS NEEDED

ARE YOU a RN that has worked in a Canadian ICU, at some point since March 2020?
HAVE YOU experienced moral distress at work?

What is moral distress?
Moral distress occurs when you know the ethically correct action to take but you are prevented from taking it. Moral distress may result in the following health affects:

- Psychological (i.e. anxiety, nightmares, burnout)
- Physical (i.e. fatigue)
- Social (i.e. avoidance, withdrawal)

Why are we doing this study?
We are looking to understand what nurses need at work to help prevent, manage or reduce the experience of moral distress

What does this study involve?

- Complete a short demographic questionnaire
- Complete a short moral distress measurement survey
- Participate in a 60 minute telephone or Zoom interview
- Receive a $25.00 Tim Hortons or Shoppers Drug Mart e-gift card

If interested, please contact:
Paige Gehrke RN, BScN
MSc Student
gehrkep@mcmaster.ca

McMaster University
School of Nursing

Version 2.0 2021-05-07
This study has been reviewed by the Hamilton Integrated Research Ethics Board under Project 13074

Appendix C

Facebook Page

Facebook Post Script #1:

> Are you: A RN that has worked in a Canadian community hospital ICU, at some point during the COVID-19 pandemic (March 2020-present)?
>
> Have you: Experienced moral distress in your professional practice?
>
> To-date, research has focused on understanding the causes and outcomes of moral distress. However, little is known about effective interventions to prevent or mitigate moral distress, especially in the context of a pandemic.
>
> We are interested in interviewing ICU nurses about their responses to moral distress during the COVID-19 pandemic, with the goal of understanding nurses' desired organizational interventions to mitigate moral distress.
>
> If you would like more information about this study, or are interested in participating, contact:
> gehrkep@mcmaster.ca
> Paige Gehrke, BScN, RN
> MSc Student
> McMaster University, School of Nursing

Facebook Post Script #2: Moral Distress Information

> What is moral distress?
> Moral distress (hyperlink: https://www.aacn.org/clinical-resources/moral-distress) occurs when you know the ethically correct action to take but you are prevented from taking it. Moral distress may result in the following health effects:
> - Psychological (i.e., anxiety, nightmares, burnout)
> - Physical (i.e., fatigue)
> - Social (i.e., avoidance, withdrawal)

Appendix D

Electronic Demographic Survey (LimeSurvey)

1) Unique Study ID (e.g, RN_078): _____

2) What is your age group?
- Less than 21 years
- 21 – 25
- 26 – 30
- 31 – 35
- 36 – 40
- 41 – 45
- 45 +

3) What gender do you choose to identify with?
- Female
- Male
- Non-Binary
- Prefer not to respond
- Other_____

4) Do you currently work in an intensive care unit as a bedside registered nurse?
- Yes
- No

[Question 4 -Stem: If you no longer work in the ICU, please indicate the time period since March 2020 that you last worked in the ICU (month/year)]: _____

5) How many years of nursing experience do you have in total?
- < 2
- 3 - 5
- 6 – 10
- 11 – 15
- 16 – 20
- 21 +

6) How many years of intensive care unit nursing experience do you have in total?
- < 2
- 3 - 5
- 6 – 10
- 11 – 15
- 16 – 20
- 21 +

7) Do you have a critical care nursing certificate?
- Yes
- No
- Currently enrolled, completing
- Currently enrolled, not planning to complete

If you are no longer working in an ICU as a bedside registered nurse, please answer the following questions pertaining to ICU nursing practice based on your time practicing as an ICU bedside registered nurse during the time period of March 2020-present.

8) What province or territory do you practice in?
- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland and Labrador
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon

9) Do you work in a community hospital or academic hospital? (Community hospital: serves a local community with the principal mandate of providing both acute and non-acute services, and lesser academic, teaching or research priorities)
- Academic

- Community
- Unknown

10) What Level ICU do you practice in?
- Level I
- Level II
- Level III
- Other _____
- Unknown

11) How many intensive care unit beds are on your unit?: _____

12) On average, what is the number of patients you are assigned to care for at one time (since March 2020)?
- 1-2
- 2-3
- 3-4
- Other _____

13) What is your job status?
- Full-time
- Part-time
- Casual
- Other _____

14) On average, how many hours do you work a week?: _____

Appendix E

Measure of Moral Distress – Healthcare Professionals (MMD-HP)

Moral distress occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of constraints or barriers. This survey lists situations that occur in clinical practice. If you have experienced these situations they may or may not have been morally distressing to you. Please indicate how frequently you have experienced each item. Also, rank how distressing these situations are for you. If you have never experienced a particular situation, select "0" (never) for frequency. Even if you have not experienced a situation, please indicate how distressed you would be if it occurred in your practice. Note that you will respond to each item by checking the appropriate column for two dimensions: *Frequency* and *Level of Distress*.

	Frequency					**Level of Distress**				
	Never				Very frequently	None				Very distressing
	0	1	2	3	4	0	1	2	3	4
1. Witness healthcare providers giving "false hope" to a patient or family.										
2. Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.										
3. Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.										
4. Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.										
5. Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.										
6. Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.										
7. Be required to care for patients whom I do not feel qualified to care for.										
8. Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.										
9. Watch patient care suffer because of a lack of provider continuity.										
10. Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/family.										
11. Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.										

12. Participate in care that I do not agree with, but do so because of fears of litigation.										
13. Be required to work with other healthcare team members who are not as competent as patient care requires.										
14. Witness low quality of patient care due to poor team communication.										
15. Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.										
	Frequency					**Level of Distress**				
	Never				Very frequently	None				Very distressing
	0	1	2	3	4	0	1	2	3	4
16. Be required to care for more patients than I can safely care for.										
17. Experience compromised patient care due to lack of resources/equipment/bed capacity.										
18. Experience lack of administrative action or support for a problem that is compromising patient care.										
19. Have excessive documentation requirements that compromise patient care.										
20. Fear retribution if I speak up.										
21. Feel unsafe/bullied amongst my own colleagues.										
22. Be required to work with abusive patients/family members who are compromising quality of care.										
23. Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.										
24. Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.										
25. Work within power hierarchies in teams, units, and my institution that compromise patient care.										
26. Participate on a team that gives inconsistent messages to a patient/family.										
27. Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.										

If there are other situations in which you have felt moral distress, please write and score them here:										

Have you ever left or considered leaving a clinical position due to moral distress?

- No, I have never considered leaving or left a position.
- Yes, I considered leaving but did not leave.
- Yes, I left a position.

Are you considering leaving your position now due to moral distress?

- Yes
- No

Appendix F

Semi-Structured Interview Guide

Study 13074

Participant study id	
Interview date	
Interview #	
Interview mode (e.g., telephone, zoom)	
Length of interview (minutes)	
Demographic questionnaire/mmd-hp completed	Yes/no
Informed consent received	Yes/no
Honorarium sent	Yes/no
Forward study results	Yes/no

Introduction:

- Hello, my name is Paige Gehrke, I am a Masters of Science student enrolled in the school of nursing at McMaster University.
- Thank you for your interest in participating in this study, and for arranging a time to speak with me.
- I am a registered nurse. However, I would like to emphasize that i am here today in a research capacity only and cannot offer any kind of health or professional advice.
- I would like to confirm that you have completed the LimeSurvey demographic questionnaire.
- I would like to confirm that I have the correct email to provide you with your honorarium. You will receive this honorarium immediately after the interview. Which gift card would you prefer, a Tim Hortons or Shoppers Drug Mart e-gift card?

Purpose:

- The purpose of my study is to explore ICU nurses' responses to moral distress experienced in their professional practice, specifically during the covid-19 pandemic
- In particular, I am interested in understanding what current resources ICU nurses are utilizing, and what supports they would like introduced into practice to reduce or prevent the experience of moral distress.

Consent

- I would like to confirm that you have completed the consent form
- I would like to confirm that you have received the sign copy of your consent form
- Do you have any questions about the consent information, or would you like clarification?

Withdrawal, Privacy & Confidentiality

- The plan is to talk for approximately 60-minutes, however we can pause or stop the

interview at any time.

- The topics we are discussing may involve sensitive subject matter and may result in an emotional response. Please indicate that you would like to stop or take a break by saying, “stop”. Then please inform me if you would like to permanently end the interview. You can do this at any time.
- You will receive the $25.00 Tim Hortons or shoppers drug mart e-gift card today, regardless if you choose to stop or withdraw from the study.
- If there is a question that you would not like to answer, please indicate by saying “pass”. I am not looking for specific responses; there is no such thing as a right or wrong answer. I am very interested in learning about your experiences.
- A reminder, that all interview data (audio and video) will be recorded using the McMaster Zoom account. While the Hamilton integrated research ethics board has approved using Zoom to collect data for this study, there is a small risk of a privacy breach for data collected on external servers. Therefore, we cannot guarantee the privacy of data collected using Zoom. However, the McMaster zoom is an institutional account, with enhanced security. Video recordings will be immediately deleted following the interview, and audio will be saved. You may have your video camera off during the interview. With this in mind, are you ok to continue with this interview?
- To reiterate, all identifying data will be removed from this interview to keep our discussion confidential.

Technological Issues

- In the case that our interview is cut-off due to technological reasons, what would be the best way to resume our discussion?
    - I can first try to resume our [virtual platform] call.
    - Then, if that does not work, I can call you at a number that best suits you. What number can I use to contact you?

To reiterate, the purpose of this study is to understand your responses to morally distressing situations experienced in your professional practice. My goal is also to understand what resources or tools you use in your practice to manage/reduce moral distress, and your suggestions for potential interventions.

1. **Moral distress**: I am interested in better understanding how nurses working in the ICU experience a concept known as moral distress. First, I would like to know how you would describe and define the term moral distress

A formal definition of moral distress will be provided if unknown:

- Moral distress: a response to an ethical conflict in which an individual feels they are restrained by internal or external barriers, from taking a course of action that aligns with their values.
- For example. Picture a new nurse working in the ICU. This nurse has been assigned one of the most complex patients on the unit, and she/he does not feel supported or have the knowledge, skill or ability to care for this patient. The duty to care conflicts with the nurse’s personal beliefs and professional responsibilities.

- Does this definition provide you with enough information to help you understand the concept of moral distress?

2. **Average day:** to help me understand your current role as a registered nurse working in the ICU, can you describe what a typical shift on your unit has looked like since the start of the covid-19 pandemic.
    a. "Tell me about your workplace"
    b. "Tell me about what your day looks like"
    c. Prompt for: caseload, length of shift, primary responsibilities, staff structure of the unit, number of beds, what type of hospital etc.

3. **COVID changes:** since the start of the COVID-19 pandemic, what have been the most significant changes that you have experienced or observed on your unit?
    a. Prompt for: changes to nursing workforce, changes in patient acuity; changes to environment/layout of ICU; changes to protocols/treatments/standards of care; changes to patient visitation/family etc.

4. **Example:** can you describe an example of moral distress experienced in your professional practice, that occurred at some point since March 2020?
    a. Who was involved?
    b. How did you manage this conflict? What actions did you take?
    c. Can you describe to me any organizational or unit factors that impacted your decisions/actions?
    d. Prompt for: external and internal barriers
    e. How did this make you feel?
        i. Prompt for: physical or emotional outcomes, changes to practice, positive outcomes
    f. **What actions did you take to address these feelings?** Did you seek any resources to help you manage with those feelings or outcomes? If yes, what were those resources and were they useful? If no, what impacted your decision to access resources?
    g. When you had that experience – what happened next?
    h. Did anyone follow-up to you following this experience?
    i. What are the next steps that are expected and what did happen?
    j. How do you feel about this event now?

5. **Moral distress in everyday practice**: Would you say that an event like this is a typical part of your everyday practice? Can you give some examples or briefly describe other incidents that left you feeling similar?
    a. Do you feel that these examples of moral distress experienced during the COVID-19 pandemic are new, or are there examples where previous causes of moral distress have been exacerbated? If so, can you describe?

6. **Recommendations**: Can you tell me about any of the resources in your workplace that are aimed to reduce, prevent, or manage moral distress? These can be formal or informal.
    a. Have you utilized them? Do you have any feedback?
    b. I would like leadership, management, and other researchers to hear your ideas, so that interventions can be developed to help prevent or reduce moral distressed experienced by nurses working in the ICU. **If you could implement any sort of action/activity/intervention to reduce/prevent/mitigate moral distress in your workplace, what would your suggestions be?** There are no expectations or correct answers. I want to understand what supports are desired from those who are experiencing moral distress in their professional practice.
    c. Prompt: build off their examples or provide case example (imagine an ICU nurse that…if you were their manager, how would you want them to be supported?)

7. Is there anything we did not touch on that you would like to discuss?

- Thank you for taking time out of your schedule to talk with me today.
- **Snowball:** if you know any individuals that are eligible and you believe would be interested in partaking in this study, please pass my information along to them.
- **Honorarium:** i will be sending your honorarium immediately following the closing of this interview

Field Notes:

Appendix G

Rapid Qualitative Analysis Template

Header:
ICU Nurse Responses to Moral Distress
ID RN_
Rapid Review
Date

Participant:

Research Question: How do RNs providing direct patient care in Canadian ICUs during the
COVID-19 pandemic, describe their responses to moral distress experienced in their professional practice?

Domain	Answer
What were the primary changes due to COVID?	
What were the causes of moral distress?	
What were the nurse outcomes?	
What were the patient outcomes?	
What were the organizational outcomes?	
What were the participant's action to manage moral distress?	
What were the organizational action to help with nurse moral distress?	
What are the participant's recommendations?	

Quotes:

Appendix H

Participant Information Sheet and Consent Form

Title of Study: Ethics of the ordinary, amplified – ICU nurses' responses to moral distress experienced in their professional practice during the COVID-19 pandemic

Local Principal Investigator:
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This research study is a student project conducted under the supervision of Dr. Susan Jack, in partial fulfillment of Paige Gehrke's Masters degree. In order to decide if you would like to participate in this study, you should first understand what is involved and the potential risks and benefits. This form gives detailed information about the research study, to inform your decision. Once you understand the study, you will be asked to sign a consent form at the end of this document. This form will be signed by the student investigator and then returned to you.

Sponsors:
None

Study Purpose:
Intensive care unit (ICU) nurses may experience moral distress in their professional practice, in response to various causes.
Moral distress occurs when you know the ethically correct action to take but you are prevented from taking it. Moral distress may result in the following health effects:

- Psychological (i.e., anxiety, nightmares, burnout)
- Physical (i.e., fatigue)
- Social (i.e., avoidance, withdrawal)

To-date, research has focused on understanding the causes and outcomes of moral distress. However, little is known about effective interventions to prevent or mitigate moral distress, especially in the context of a pandemic. We are interested in interviewing ICU nurses about their responses to moral distress during the COVID-19 pandemic, with the goal of understanding nurses' desired organizational interventions to mitigate moral distress. The insight from your experience will provide valuable

information that may help health professionals, researchers and organizations develop such interventions.

Steps of the Study:
If you agree to participate in this study, you will be asked to do the following things:

- Sign the electronic consent form.
- Complete an electronic demographic questionnaire and moral distress measurement tool. This will include a few questions about yourself, such your age, gender, years of practice and educational background. The Measure of Moral Distress for Health Care Providers is a tool that measures the frequency and level of moral distress as experienced by health professionals.
- Participate in a single 60-minute interview (at a time suitable for you) over the phone or by video conference (e.g., Zoom). In this interview, we will discuss:
    - Examples of moral distress you have experienced in your nursing practice since March 2020.
    - Your recommendations for strategies to address nurses' experiences of moral distress.
    - Resources that you have used to help prevent, manage, or mitigate the moral distress you have experienced. You will be invited to share examples of these resources before, during, or after the interview.
    - If required, for the purpose of clarifying information you have shared, agree to schedule a short second follow-up interview.
- With your consent, all interviews will be audio-recorded. If completing the interview on a video conference platform, you can choose to turn off the video. It is important for us to audio-record the interview so that we have an accurate and complete record of our discussion to review at a later date. Without the audio-recording, we will not be able to use information from the interview in our study. Therefore, if you do not want to be audio-recorded, you will not be able to participate in this study.

Study Risks:
The risks involved in participating in this study are minimal. Talking to a stranger about the sensitive topic of moral distress and reflecting on past experiences that may have been difficult for you, could cause you to experience an emotional response (e.g., anxiety, anger, or sadness).

You do not need to answer questions that you do not want to answer or that make you feel uncomfortable. You can stop to take break, or permanently end the interview at any time. If at any time during the interview, you feel severely distressed, we will stop the interview and discuss appropriate resources help you manage the distress. If you express an immediate risk of harming yourself or others, I will offer to call 911 to help you get emergency mental health services. If you are distressed but are not in immediate danger, I will recommend that you call your family doctor, an individual you identify as a safe, social support, telehealth (1-866-797-0000), your local EAP hotline, or

a mental health telephone service (e.g., Crisis Service Canada: 1-833-456-4566) for support.

Even though your identity will remain confidential, it is possible that you may be recognized by the stories you share or references you make in future publications of these research findings. You should take this into consideration when participating in this study.

Study Benefits and Compensation:
The research will not benefit you directly. It is our hope that what is learned from this study will help inform the development of interventions to mitigate moral distress experienced by ICU nurses in their professional practice. Developing such interventions could improve nurses' quality of life, and in turn, the patient care experience. If you are interested in being notified about any publications using these data, the research team can arrange for the reports from the study to be sent to you.

If you choose to participate in this study, you will receive a 25.00$ Tim Hortons or Shoppers Drug Mart electronic gift card when you attend the interview. The gift card will be sent electronically using an email address you provide.

Study Cost:
There are no direct costs to participate in this study. You may incur charges from your phone company if you choose to participate by phone. These will be incoming calls, which most phone companies do not charge for, but please check with your phone company. There are no other anticipated costs to you in this study.

Privacy of Personal Information:
Every effort will be made to protect your confidentiality and privacy. Personal information will be kept confidential, except as required by law. We will not use your name or any information that would allow you to be identified. However, we are often identifiable through the stories we tell. Please keep this in mind in deciding what to tell us.

The following steps will be taken to protect your confidentiality and privacy:
- All personal information (e.g., name, contact information, demographic information) will be stored as an encrypted file on a secure server.
- Your personal information will not be linked to your interview or questionnaire data. Rather, a study ID will allow the research team to link your interview data with your questionnaire, while keeping all of this information de-identified.
- Information provided will only be shared with the study team. This information will not be shared with any other person or organization except by law.
- After the interviews are transcribed, all identifying information (e.g., names, employer information, dates) will be removed from the transcript and replaced with a placeholder.
- Original interview audio and video recordings will be destroyed.

- All digital files will be encrypted and password protected, on a password protected computer.
- Once the study is complete, an archive of the data, without identifying information, will be kept and destroyed after 10 years.
- If the results of this study are published, direct quotes may be used, but your name will not be used, and no identifying information will be used.
- Information from your interview or questionnaire may be published as grouped data, and your individual information will be not identifiable.

Video-Conference Privacy Information
This study will use both phone and Zoom video-conferencing software to collect data. The Zoom platform is an externally hosted cloud-based service. A link to their privacy policy is available here (https://zoom.us/privacy). While the Hamilton Integrated Research Ethics Board has approved using Zoom to collect data for this study, there is a small risk of a privacy breach for data collected on external servers. Therefore, we cannot guarantee the privacy of data collected using Zoom. A McMaster Zoom will be used, which is an institutional account with enhanced security. If you are concerned about this, please let us know and we can arrange alternate ways for you to participate, such as by phone.

If you agree to participate in this study using the Zoom platform, you will have the option to participate with both video and audio, or audio-only. Zoom automatically records both audio and video to the cloud server. Only the audio portion of the session will be saved. Video will be deleted immediately following the interview. Audio recordings will be saved to a local computer instead of a cloud-based service to further protect your privacy.

Stopping Study Participation (Withdrawal)
Your participation in this study is voluntary. There will be no consequences to you if you choose not to participate. If you decide to be a part of the study, you can choose to stop (withdrawal), even after signing the consent form, up until two weeks after the interview has been conducted. If you decide to withdraw, there will be no consequences to you. If you decide to withdraw, the information you have provided up to that point will be kept unless you request that it be removed. Please contact the lead student researcher if you would like to withdraw.

If I Have Questions About This Study, Whom Should I Call?
If you have questions or need more information about the study, please contact the lead student researcher or local principal investigator using the information provided.

CONSENT

Participant:

I have read the preceding information thoroughly. I have had an opportunity to ask questions and all of my questions have been answered to my satisfaction. I agree to participate in this study based on the information provided to me in this form. I understand that I will receive a signed copy of this form.

I consent to participate in this research study: Yes ☐ No ☐

Please provide the date: _____

Please provide your name: _____

I would like research study reports sent to me: Yes ☐ No ☐

Please provide your email address (e.g., for communication, to send the honorarium and/or study results to): _____

Person Obtaining Consent:

I have discussed this study in detail with the participant. I believe the participant understands what is involved in this study.

_____

Name, Role in Study Signature Date

This study has been reviewed by the Hamilton Integrated Research Ethics Board (HIREB). The HIREB is responsible for ensuring that participants are informed of the risks associated with the research, and that participants are free to decide if participation is right for them. If you have any questions about your rights as a research participant, please call the Office of the REB Chair, HIREB at 905.521.2100 x 42013.

Appendix I

Distress Protocols

PARTICIPANT DISTRESS PROTOCOL

If the participant becomes emotionally distressed (e.g., starts to cry, becomes angry)

1. Pause the interview and recording
2. Check in with participant to explore if they need to:
    a. Stop the interview
    b. Take a short pause and regroup
    c. Continue
3. When interview over, acknowledge and validate the participant's emotional response. Inquire if they have supports or resources, that have been helpful in the past to help them address these feelings/distress.
4. Have a list of resources available (with phone/numbers):
    a. Local Employee Assistance Program (EAP)
    b. CAMH: https://www.camh.ca/en/health-info/crisis-resources
    c. Crisis Service Canada: https://www.crisisservicescanada.ca/en/looking-for-local-resources-support/(1-833-456-4566)
    d. Local emergency room if severe distress occurs

RESEARCH TEAM DISTRESS PROTOCOL

1. Ensure breaks are taken between interviews (i.e., one interview a day)
2. Establish routine following interviews
3. Determine regular check-ins with supervisor to review how interview went
4. If the interview/transcript/or other research activity causes distress, contact one of the other research members to debrief

Note. Adapted from "Developing distress protocols for research on sensitive topics", by Draucker, C. B., Martsolf, D. S., & Poole, C. (2009), *Archives of Psychiatric Nursing*, *23*(5), 343–350. https://doi.org/10.1016/j.apnu.2008.10.008