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Hospital Nurses' Moral Distress and Coping during COVID-19: A Pilot Study

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HOSPITAL NURSES' MORAL DISTRESS AND COPING DURING COVID-19: A PILOT STUDY

DISSERTATION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Social Work at the University of Kentucky

By

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ABSTRACT OF DISSERTATION

HOSPITAL NURSES' MORAL DISTRESS AND COPING DURING COVID-19: A PILOT STUDY

The COVID-19 pandemic caused a wave of critically ill patients, overwhelming hospitals, and creating unprecedented conditions for hospital employees, particularly bedside nurses. Concerns about the emotional and mental well-being of nurses have already been raised prior to the pandemic and depression, anxiety, and PTSD symptoms among nurses during the pandemic have been observed. Given the increased infection and safety risks, staffing shortages, inadequate personal protective equipment and resources, and hospital restrictions causing many nurses to be patients' only support, there is also a growing concern about how these institutional and personal restrictions to providing best care and practicing ethically have impacted nurses.

Moral distress is the psychological disequilibrium that occurs when a professional knows what they need to do but is/feels unable to take that action due to perceived or actual internal and/or external constraints. Much has been researched about causes of moral distress in the last 20 years, but to date, there is limited evidence around the impact of organizational support, emotional intelligence (EI), and coping strategies.

This pilot study aimed to describe and explore the relationships among EI, coping, organizational support, and moral distress, and to provide pilot data and methodological information to inform a national study. Participants were Kentucky registered nurses currently working or who have worked at an inpatient hospital facility within the last six months. Participants were recruited using non-randomized purposive and snowball sampling techniques to complete an anonymous online survey using Qualtrics. Using SPSS, descriptive statistics and regression analyses examined the relationships between the independent study variables, using the Wong and Law Emotional Intelligence Scale, COVID-19 Organizational Support, Survey of Perceived Organizational Support, and the Ways of Coping Checklist Revised, and the dependent variable, moral distress, as measured by the Measurement of Moral Distress for Healthcare Professionals. Regression analysis adjusted for hospital ethical climate, intensive care setting, and age.

After data cleaning and screening, there were 544 nurse participants who completed most of the demographic questionnaire items with 271 participants completing all instruments included in the regression analysis. The sample included mostly white females with Bachelor of Science in nursing working with adult populations in non-ICU settings in central Kentucky. In support of predicted relationships, organizational support was associated with a reduction in moral distress and emotion-focused coping was positively related. However, in contrast of predicted relationships, problem-focused

coping was also positively related to moral distress; and while EI had a negative relationship in correlational testing, EI resulted in a non-significant positive relationship in regression analysis. Additional regression analysis showed EI maintained a negative relationship only when entered with problem-focused coping adjusted for control variables.

Future research should strive for larger, more diverse samples that would allow for mediation testing to further explore the relationship between EI, coping, and moral distress. Metadata from Qualtrics will be used to inform potential changes in the structure, length and presentation of the survey for a national study.

KEYWORDS: Moral Distress, Nursing, Organizational Support, Coping, Emotional Intelligence, COVID-19

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HOSPITAL NURSES' MORAL DISTRESS AND COPING DURING COVID-19: A PILOT STUDY

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DEDICATION

This is dedicated to my Mom and Dad, whose unconditional love, support, and encouragement have made me who I am today. To my boyfriend Bill, who has motivated me when I felt discouraged, listened when I cried, and made me laugh on the hardest days. To my best friend Holly, who helped me through some of the best and worst moments and patiently listened to all my thoughts and ideas. To all my other friends, family, and colleagues who have inspired and helped me in countless ways throughout the program. And lastly, I dedicate this work in memory of Mimi and Papa, and Grandma and Grandpa Latimer.

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CH 1 INTRODUCTION

The COVID-19 pandemic has caused waves of admissions of critically ill patients which have overwhelmed many hospitals, and for bedside nurses, created scenarios described as war- like (Lee, 2020). Over the last year, hospital nurses have faced tremendous stress with increased risk of infection exposure and contraction and increased workload (National Nurses United, 2020). As a result of these added risks and stressors, the COVID-19 pandemic further perpetuated concerns about the shortage of nurses (McLernon, 2020). Furthermore, emerging research demonstrates contact with patients with COVID-19 and lack of healthcare resources such as personal protective equipment (PPE) has been associated with nurses reporting depression, anxiety, and PTSD symptoms (Arnetz et al., 2020). Due to the highly contagious nature of the COVID-19 virus and the need for more stringent hospital visitor restrictions, in addition to providing nursing care, nurses have often become their patients' only support during their critical illness (Leshner, 2020). With high rates of psychological stress and burnout (PRC, 2019) documented before the pandemic, there are increasing concerns about nurses' mental health and well-being now (Arnetz et al., 2020).

One issue negatively affecting nurses' mental health that has been potentially increased during the pandemic is moral distress (Cacchione, 2020). Moral distress is the psychological disequilibrium that occurs when a professional knows what they need to do but is/feels unable to take that action due to perceived and/or actual internal and/or external constraints (Jameton, 1984; Wilkinson, 1989). Beyond the initial distress, lasting impacts from the experience can persist, contributing to worse mental health

outcomes (Huffman & Rittenmyer, 2012). As the pandemic has caused unparalleled ethical challenges and overwhelming situations such as the need to make decisions about resource allocation for patients with a greater recovery chances, prolonged working hours, inadequate personal protection, and nurses feeling they are unable to provide optimal care, moral distress has become an increasingly concerning issue (Morley et al., 2020; Prestia, 2020). Moral distress has been extensively studied in nurses throughout the last 20 years and our understanding of sources of moral distress has advanced (Lamiani et al., 2017). However, as we continue to explore how moral distress is experienced, a clearer understanding is needed as to how nurses cope with moral distress and whether factors such as psychological characteristics and organizational supports impact the experience (Lamiani et al., 2017; Zvotsky, 2015).

Moral Distress

Moral distress is a process whereby the initial distress is followed by reactive moral distress- the lingering feelings once the initial morally distressing event has passed (Jameton, 1993). Moral distress is accompanied with intense emotional reactions (Huffman & Rittenmyer, 2012) that can accumulate over time (Epstein & Hamric, 2009; Jameton, 1984). Epstein and Hamric (2009) later named reactive moral distress as moral residue and theorized that the initial moral distress and moral residue are a part of a Crescendo Effect. The Crescendo Effect is a theoretical model that suggests that as unaddressed moral residue builds, responses to situations feel familiar and repetitive, intensifying responses to future morally distressing events (Epstein & Hamric, 2009).

Similar to burnout, moral distress can negatively impact nurses' physical and emotional well-being (Huffman & Rittenmyer, 2012). Left unaddressed, nurses can experience reduced quality of life and there may be ramifications for patient care (Gutierrez, 2005; Huffman & Rittenmyer, 2012). Generalizations based on past research on the consequences of moral distress have been limited by small sample sizes and absence of analytical and methodological rigor (Johnstone & Hutchinson, 2015; Lamiani et al., 2017); however, studies with larger samples have found moral distress is associated with work disengagement (Lawrence 2011), leaving the profession (Epstein et al., 2019), and burnout (Rushton et al., 2015). Less is known about relationships between moral distress and mental health disorders, but there is emerging evidence that moral distress predicts depressive symptomology (Lamiani et al., 2017). While the research on the consequences of moral distress is ongoing, much of existing moral distress literature has focused on the sources of moral distress (e.g., unethical workplaces, providing end-of-life care, lack of administrative support) (Lamiani et al., 2017).

To facilitate a clearer understanding of what moral distress might look like in a practice setting, the following case narrative is provided. In this fictional example, Renee's story portrays how moral distress may occur, ways nurses may respond, and how moral distress may affect the nurse and patient care.

Case Narrative

Renee is a 38- year- old nurse working on the acute care floor in a large academic hospital. She is responsible for four patients and one of them is an 85- year- old man who has tested positive for COVID-19. He has experienced shortness of breath

throughout his two- day admission, but over the last 3 hours, his condition worsened, and his oxygen saturation has dropped to a dangerous level. Renee calls the physician, respiratory therapist, and the man's family to let them know about his status. The primary team recommends intubation, and the family agrees, but Renee thinks the patient is suffering and needs to have a "do not resuscitate and intubate" order and be allowed to die peacefully. Renee expresses her concerns, and the physician agrees, but the family wants him to go to the intensive care unit. Renee expressed feeling frustrated and angry with the family at their insistence of aggressive care and for letting him suffer by himself. If there were not visitor restrictions and the family was able to be there, Renee thinks they would see his suffering and decline the transfer to the intensive care unit.

The patient is intubated on the floor and transferred to intensive care unit (ICU). While Renee is waiting on the next patient to be transferred from the ED, she vents to her co-worker about the situation and family's response. The next patient is also COVID-19 positive, and Renee begins to dread the patient's arrival, anticipating the same situation will happen again. Renee still has seven hours left for her shift and is scheduled to work again tomorrow. She meets with her charge nurse and asks for a change in assignment which she is given.

Renee returns the next day for her shift and inherits two additional patients who are COVID-19 positive. She asks again for an assignment change, however, due to short staff that day, the charge nurse cannot grant her request. Renee expresses her fear and worry about these patients to her co-workers and seeks their advice on how to emotionally handle the situation.

Sources of Moral Distress

Moral distress is a multidimensional construct and most of what we know about moral distress focuses on the circumstances and issues that are referred to as "root causes" (e.g., perceived powerlessness, lack of administrative support, unnecessary or futile treatment) (Hamric, 2012, p. 41). As seen in the case narrative, Renee experienced a few sources of moral distress as described by Hamric (2012) (e.g., patient suffering, disagreement with family, and staff shortage) and the addition of a new patient admission intensified her fear and worry due to the familiar aspects of the previous situation- an example of the Crescendo Effect.

Moral distress can be impacted by factors from various levels in the healthcare system. Viewing healthcare as an open system with elements that flow among the macro, mezzo, and micro levels can provide a framework for understanding what contributes to moral distress and how factors can be interconnected. Burston and Tuckett (2012) implicitly discuss this framework when they describe the broader organizational factors, site-specific characteristics, and individual aspects that influence the source and experience of moral distress. The macro, mezzo, and micro framework is one approach to organizing these factors in a way that emphasizes the person and role of the system and environment. For example, organizational policies and procedures can result in a lack of administrative support (macro) which has been identified as a source of moral distress (Epstein et al., 2019). Moral distress has also been identified as a result of poor quality of service care delivery and communication among teams (mezzo) which can trickle down to poor and inconsistent communication with patients and families (micro) (Epstein et al., 2019).

Moreover, as a national factor affecting all levels within the healthcare system, the COVID-19 pandemic may create additional sources of moral distress and amplify existing sources. Examining potential sources of moral distress from the macro, mezzo, and micro levels reveals a few areas warranting further exploration.

Macro

Some sources of moral distress are from the broader organizational and socio-cultural structure in which hospitals are embedded (Dzeng & Curtis, 2018; Lamiani et al., 2017). For example, hospitals' ability to "meet the requirements of standards, the law and third-party expectations" can influence the working experience of nurses and result in moral distress (Burston & Tuckett, 2012, p. 318). Hospital policies, procedures, and regulations can also contribute to the overall cooperative and ethical or moral environment of the facility which have been predictive of moral distress (Corley, 2005; McAndrew et al., 2016). Lack of administrative action to aid or protect nurses can place additional demands on nurses with excessive documentation or the sense of providing inadequate quality care- which have also been identified as contributory factors to moral distress and exemplify the relationship between macro and micro levels (Epstein et al., 2019).

Mezzo

Mezzo sources of moral distress can be "site-specific characteristics…a lack of resources; staffing numbers, mix and training…the composition of work teams; the nature of care and the absence of caring" (Burston & Tuckett, 2012, p. 318). Inadequate resources and staffing can result in psychological stress too but may contribute to moral distress when

the lack of these resources prevents the nurse from being able to do what they need to do (Epstein & Hamric, 2009). In addition to resources, team dynamics and conflict have also been a contributing source of moral distress (Bruce et al., 2015). For example, the ICU is a collaboration of multiple disciplines with differing, and at times competing, values and priorities for patient care. In a non-probability study of 168 nurses, nurses with higher moral distress were more likely to consider their working environments less collaborative than nurses with lower distress (Hamric & Blackhall, 2007). Tension among disciplines within a team can contribute to nurses' moral distress as nurses lack the hierarchical status necessary to act in accordance with their ethical beliefs (Jameton, 1984).

Nurses may experience a heightened risk of infection, conflict with patients and families about false or incorrect ideas about necessary safety precautions, and the absence and/or limited supply of personal protective equipment, all potentially hindering quality of patient care (Tolomiczenko et al, 2005). Drawing on findings from research related to Severe Acute Respiratory Syndrome (SARS) and Ebola epidemics, there are implications for moral distress as concern for the care and safety of oneself, family, and community became ethical tasks (Reid, 2005; Ulrich, 2014).

Hospital Support and Communication during COVID. Research and experience with previous epidemics, like SARS, has demonstrated that nurses' stress can be influenced by macro factors such as the quality of hospital communication during rapidly changing conditions (Marjanovic et al., 2007; Tolomiczenko, 2005). The relationship between macro and mezzo factors is evidenced again as inadequate administrative communication and support (e.g., administrative help with decision-making, assigned and available

staffing) can contribute to moral distress (Lamiani et al., 2017; McAndrew et al., 2016); further, the additional restrictions during COVID-19 may have exacerbated these affects. During the SARS epidemic, macro and mezzo factors such as hospital visitor restrictions, poor communication about SARS, and inadequate information necessary for decision-making and role assignment were shown to increase nurses' stress and negatively impact patient care (Tolomiczenko et al., 2005). Micro factors directly related to patient care where nurses who had direct contact with patients with SARS and spent longer periods of time in quarantine also related to more emotional exhaustion, anger, and avoidance behavior (Marjanovic et al, 2007); however, the more supportive a healthcare facility was, the less avoidant nurses were and the less stress they experienced (Marjanovic et al., 2007). Although the relationship between poorer ethical climate and moral distress has been established (Corely et al., 2005; Hamric & Blackhall, 2007; Sauerland et al., 2015), to date only one study has explored the relationship between perceived support from an organization and moral distress (Robaee et al., 2018). Exploring how hospital support and communication during COVID affected moral distress has implications for administrative and organizational improvement to reduce the intensity of moral distress experiences.

Micro

In addition to the larger context, micro level sources have also been explored in relation to moral distress. Micro sources can be individually based factors such as person's age, years of nursing experience, "personal beliefs, coping strategies, and personality traits" as well as direct patient care and interactions with colleagues (Lamiani et al., 2017, p. 63).

Feeling unsafe or bullied from colleagues or family members, colleague incompetence, and witnessing unethical behavior by others have also been cited as examples of micro sources of moral distress (Epstein et al., 2019). However, thus far, evidence is inconclusive as to whether age or experience increase, decrease, or have any effect on moral distress (Lamiani et al, 2017a). Some of the inconsistent findings may be explained by the varying sample sizes of the population and limited methodological rigor (Musto et al., 2014). Larger samples, multi-site studies, and the use of longitudinal research designs to study moral distress have been encouraged (Hamric, 2012).

As emotion is such a dominant component of moral distress, exploring the effects of certain psychological traits may contribute to our understanding of moral distress. Moral distress is so powerful because of the "intense psychological disequilibrium" and the violation of core beliefs that occurs with it (Wilkinson, 1988). As previously stated, many sources that contribute to perceived stress also contribute to moral distress, but the experience is different due to the nurse being unable to ethically act as they feel they must (Epstein & Hamric, 2009; Jameton, 1984). Emotions are intrinsic to moral distress and qualitative studies have described feelings of sadness, anxiety, anger, frustration, fear, disgust, guilt, and discouragement (Elpern et al., 2005; Gutierrez, 2005; Hamric, 2012; Rathert et al., 2016). Huffman and Rittenmyer's (2012) systematic review of qualitative studies further described "biopsychosocial responses" to moral distress "such as anger, depression, and stress reactions" as well as emotional withdrawal (Huffman & Rittenmyer, 2012, p. 95). As each individual nurse will approach a morally distressing situation differently based on their own beliefs and value system as well as emotional reactions (Epstein & Delgado (2010), the entwinement of emotions within the experience

of moral distress signals a need to better understand whether the ability to identify and regulate these emotions would impact the experience. One micro factor, emotional intelligence (EI), may be a useful psychological ability to explore further.

Emotional Intelligence. EI is defined as a "subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (Salovey & Mayer, 1990, p. 189). EI has shown to be essential in nursing work (Codier et al., 2011; Kooker et al., 2007; McQueen, 2004) and can improve the working quality of life for the nurse, nursing care, and teamwork (Codier et al., 2011). In fact, in a non-probability sample of 448 Malaysian nurses, nurses with higher levels of EI had lower levels of burnout (Kaur et al., 2013). However, EI has only been theorized as a meaningful factor in understanding moral distress, it has not been directly measured (Lewis, 2009). Lewis (2009) postulated that because EI is a learned ability (Mayer & Salovey, 1997) that has been associated with increased self-awareness, self-regulation, and self-confidence, this relationship could improve the quality of care, improve decision-making, and decrease burnout by regulating adverse effects associated with moral distress (Kaur et al., 2013). Having higher EI may not prevent a nurse from experiencing moral distress, but it could help lower the intensity of distress and possibly change the experience to something more positive. In fact, Rushton (2016) asserts moral distress can be a catalyst for moral resilience or the ability to "sustain or restore their integrity in response to moral complexity, confusion, distress, or setbacks" (p. 112). Having the ability to utilize emotional reasoning may be associated with constructive coping strategies and therefore contribute to a more positive experience despite distressing circumstances. Continued

research with larger samples and advanced analytic techniques has been encouraged to better examine the relationship between EI and nurses' individual wellbeing and care quality (Lewis, 2009; Smith et al., 2009). Preliminary findings are promising of EI's utility in promoting nurses' mental and emotional health and indicative of its potential impact on moral distress.

Coping. Reflecting back on the case narrative depicting Renee's moral distress over the patients with COVID-19, Renee sought to remove herself from the next patient due to her increasing distress. Insufficient staffing prevented her from avoiding the situation which left her to figure out how to cope. Ultimately, she decided to seek support with her colleagues. As moral distress is a process that may be influenced by psychological abilities, exploring more about how nurses cope with moral distress is needed (Zvotsky, 2015).

The Transactional Theory of Stress and Coping (TTSC) provides a heuristic framework for understanding the relationship between stress and coping responses. The TTSC suggests that an individual engages in coping behaviors through appraisals and reappraisals and gauging whether they have any control over and/or stake in the stress-inducing situation (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) postulated that coping is a process and is affected by personal and environmental characteristics. Within the coping process, coping strategies are defined as "cognitive and behavioral efforts to manage specific external and internal demands appraised as taxing or exceeding the resources of the person" (Folkman & Lazarus, 1988, p. 310). Coping strategies are not inherently good or bad and are just one component of the coping process that is

dynamic, reciprocal, and contextually based (Lazarus & Folkman, 1984). This process will be explained in more detail in the theoretical framework section.

Early moral distress research pointed to the important role of adaptive coping needed to restore psychological equilibrium and wholeness (Wilkinson, 1988), but which coping strategies have the most impact on moral distress has been limitedly studied (Zvotsky, 2015). To date, there are several published qualitative studies (Bruce et al., 2015; Deady & McCarthy, 2010; De Villers and DeVon, 2012; Wilkinson, 1988), and one identified quantitative study (Zvotsky, 2015) that have explored the topic of coping and moral distress.

In Wilkinson's (1988) qualitative study using a systematic random sampling strategy, 24 nurses were interviewed about their experiences of moral distress. Coping behaviors were a considerable part of how nurses responded to morally distressing situations. Wilkinson (1988) did not elaborate on specific behaviors utilized but noted that the most common and also unsuccessful coping strategy was avoidance. Given that moral distress involves a perceived lack of control over the situation, it would make sense to employ an emotion-focused strategy like avoidance (Folkman & Lazarus, 1990). However, findings continue to confirm that although avoidance is commonly used, it is not necessarily associated with lessening the burden of moral distress (Bruce et al., 2015; De Villers & DeVon, 2012; Deady & McCarthy, 2010). Talking to supports such as co-workers, friends, and family has also been identified as a coping strategy, but was not determined helpful and in fact, was discouraged due to potentially problematic or conflictual colleague and team relationships (Deady & McCarthy, 2010). In the only identified published quantitative study on coping and moral distress, social supports, positive reframing and growth, and

planning were the top three most frequently utilized coping strategies (Zvotsky, 2015). Like with the qualitative studies, maladaptive strategies such as disengagement, avoidance, and substance abuse were positively associated with moral distress (Zvotsky, 2015).

Transactional Theory of Stress and Coping

The Transactional Theory of Stress and Coping (TTSC) supports the inclusion of macro (organizational support) and micro (EI and coping) factors in studying moral distress (Lazarus & Folkman, 1984). The TTSC framework explains how an individual makes the effort to deal with a given stressor based on their available resources (Lazarus & Folkman, 1984). Briefly, TTSC suggests that personal and environmental factors inform an individual's appraisal of the stressor which has short- and long- term outcomes related to the individual's well-being (Lazarus & Folkman, 1984, 1987). Largely, existing moral distress research focuses on macro sources of moral distress that emanate from organizational structure and hierarchy. While addressing system factors is necessary, mitigating adverse outcomes also requires attention to one's psychosocial health and coping skills while systemic changes are being made (Dzeng & Curtis, 2018).

The Study

Existing moral distress research has provided insight into the macro, mezzo, and micro sources of distress such as hospital ethical climate, insufficient resources, and inadequate communication regarding patient care (Epstein et al., 2019; Lamiani et al., 2017). How nurses cope with moral distress, as well as how psychological factors and additional

organizational factors impact the moral distress experience, have been less researched, however. Furthermore, past research has suggested that how an organization responds to an epidemic has implications for nurses' mental health and well-being, as seen during the SARS epidemic (Tolomiczenko et al., 2005). Therefore, this study specifically examined how organizations responded to the COVID-19 pandemic as a component of the relationship between organizational support and moral distress. This pilot study utilizes instruments newer to moral distress to explore the relationships between coping strategies, EI, and organizational support with moral distress.

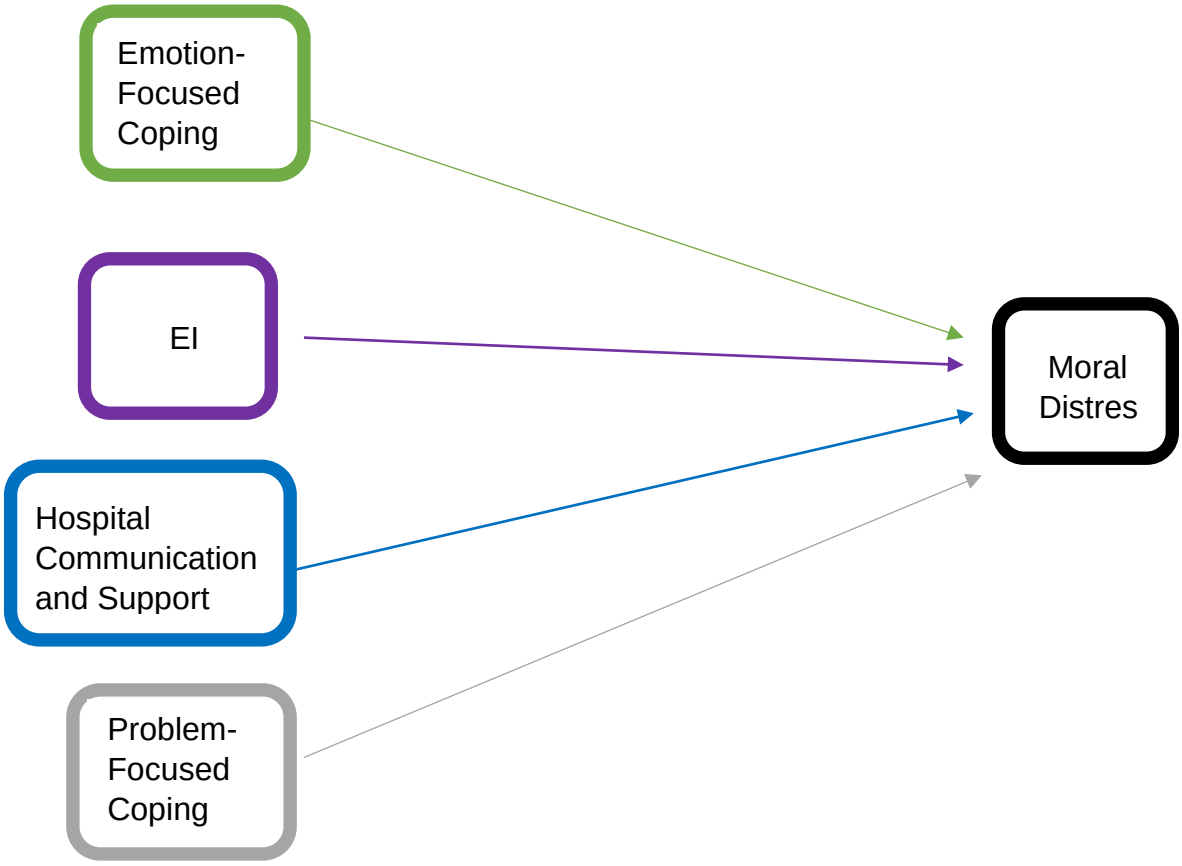
This pilot study investigated these relationships with moral distress in a sample of hospital nurses in Kentucky to 1) describe and explore the relationships among EI, coping, organizational support, and moral distress, and 2) to provide pilot data and methodological information to inform a national study. The conceptual model in Figure 1 depicts the anticipated direct relationships of EI, coping, and organizational support with moral distress explored in this study. Findings from this study have implications for larger scaled studies and continued research on factors that may promote nurses' well-being after experiencing moral distress. The following research questions are addressed:

1. What is the relationship between EI and moral distress?
2. What is the relationship between emotion-focused coping behaviors and moral distress?
3. What is the relationship between problem-focused coping behaviors and moral distress?

4. What is the relationship between perceived quality of hospital communication and support and moral distress?

Figure 1

Conceptual Model of Relationships Among EI, Organizational Support, and Coping with Moral Distress



CH 2 LITERATURE REVIEW

This literature review begins by describing our current understanding of what moral distress is, how it occurs, the relevance of studying individual and organizational factors that impact moral distress. Next, the Transactional Theory of Stress and Coping provides a framework for conceptualizing the process by which environmental and individual factors may collectively influence moral distress. This is followed by a discussion of extant research on the relationship between moral distress and each of the three independent study variables – coping, emotional intelligence (EI), and perceived support and communication by hospital organizations.

What is Moral Distress?

Moral distress is conceptualized as the negative psychological impact that occurs in a situation where the nurse knows the course of action, they feel ought to be taken but are unable to take that action due to perceived or actual internal or external constraints (Jameton, 1984). Moral distress involves both a *violation* of one's core ethical and moral standards as well as an intense psychological and emotional response (Jameton, 1984; Mareš, 2016; Wilkinson, 1989). Although some have argued that there is a need to broaden Jameton's (1984) definition of moral distress (Campbell et al., 2016; Morley et al., 2017), McCarthy and Monteverde (2018) suggest this may "collapse the very important distinction, between situations involving ethical dilemmas where healthcare professionals must choose between established but conflicting ethical principles…and those involving ethical constraints" (p. 7). For this reason, the current study adopts the

narrower definition by Jameton (1984). Jameton's (1984) definition and other recent conceptualizations are summarized in Table 1.

Moral Distress as a Process

Moral distress is a psychological and emotional process consisting of two parts: initial distress and reactive distress (Jameton, 1984). The initial distress encompasses the "feelings of frustration, anger, and anxiety people experience when faced with institutional obstacles and conflict with others about values" (Jameton, 1984, p. 544). Reactive distress or the "distress that people feel when they do not act upon their initial distress" can last for days, weeks, and months after the initial distress (Jameton, 1984, p. 544). For example, if a nurse witnesses a patient in pain and asks to order pain medication, but the physician or family refuses, the nurse may experience immediate anger or frustration. The nurse may then have guilty or anxious feelings over the thought of having contributed to patient suffering or questioning care practices by not doing what the nurse felt was ethically right.

Reactive distress has been referred to as moral residue and postulated that if moral distress is left unaddressed, moral residue builds over time and contributes to future situations feeling familiar and experienced more intensely (Epstein & Hamric, 2009). This phenomenon is considered the Crescendo Effect (Epstein & Hamric, 2009). There is limited evidence for the Crescendo Effect due to a lack of longitudinal data and sufficiently large sample sizes; however, qualitative studies and case reports support the phenomenon (Epstein & Hamric, 2009; Hamric, 2012). The positive correlation between age and experience also supports the Crescendo Effect (Epstein & Hamric, 2009), but

evidence of this relationship is inconsistent across studies (Lamiani et al., 2017). Discrepancies in findings examining whether age increases, decreases, or has any effect on moral distress may be attributed to non-representative small sample studies from single institutions and/or methodologies that cannot convey causal or explanatory details (Hamric, 2012; Johnstone & Hutchinson, 2015; Musto et al., 2014).

Moral Distress Outcomes

Moral distress research continues to develop and contribute to our understanding of how moral distress affects nurses (Hamric, 2012; Lamiani et al., 2017). Qualitative studies have demonstrated that moral distress can result in nurses' poorer quality of life, including intense emotional reactions about the distressing event, sleep disturbances, somatization, and withdrawing from patient care, all of which could negatively impact the quality of patient care provided (Gutierrez, 2005; Huffman & Rittenmyer, 2012). Moral distress was significantly predictive of symptoms of depression in a sample of 181 healthcare clinicians in Italy (Lamiani et al., 2018). As clinicians' moral distress increased, so did their depressive symptomology- even when controlling for perceived emotional difficulties (Lamiani et al., 2018). Despite the limitations of the study's cross-sectional design and non-probability sample, it is the first to use validated measures to provide empirical evidence of the relationship between moral distress and depression (Lamiani et al., 2018).

Moral distress is also associated with professional stress issues such as work disengagement, compassion fatigue, secondary traumatic stress, and burnout (Christodoulou-Fella et al., 2017; Lawrence, 2011; Maiden, 2011; Mason et al., 2014;

Rushton et al., 2015). Moreover, in multiple studies nurses have left their positions due to moral distress (Lamiani et al., 2017). In a large sample of 653 healthcare clinicians, including 440 nurses, moral distress was significantly higher for those considering leaving their position due to moral distress than those who were not (Epstein et al., 2019). This finding also emerged in another study involving 754 healthcare professionals, including 489 nurses (Whitehead et al., 2015). Nurses leaving the profession has been a concern contributing to the nursing shortage and may have worsened during the COVID-19 pandemic (McLernon, 2020). Furthermore, Whitehead and colleagues (2015) expressed concern that desensitization and withdrawing from patient care due to moral distress may worsen for those who remain in a position enduring ongoing accumulation of distress.

Beyond just the negative impacts, qualitative and theoretical evidence has linked moral distress with adaptive responses and moral resilience (Rushton, 2016). After experiencing morally distressing events, nurses have described stronger religious faith and deeper bonds with teammates, as well as a desire to complete advanced directives (Elpern et al., 2005; Gutierrez, 2005). These findings offer hope that despite the turmoil experienced through morally distressing situations, there is an opportunity for personal and professional growth. Continued research is needed, and the current study's focus on coping behaviors will provide insight regarding learned skills and behaviors that promote constructive responses to moral distress.

Transactional Theory of Stress and Coping

The TTSC was developed from Lazarus's (1966) conceptualization of stress and the relationship between coping, the individual, and their environment (Lazarus & Folkman, 1984; Walinga, 2014). Lazarus and Folkman (1984) posit that psychological stress is "a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 21). The appraisal process incorporates an individual's cognitive and emotional states and other factors such as self-efficacy and hardiness (Lazarus & Folkman, 1987; Walinga, 2014). The stressor, appraisal, and coping response make up the coping process at the center of TTSC.

The coping process is context-specific and reflects the individual's attempt to manage stressful events and his or her resultant emotions (Lazarus & Folkman, 1984, 1988). This means that coping looks different across settings depending on the situation, the stressor, and at which point the coping process is examined. For example, students will emotionally and cognitively respond differently before an exam versus while they wait on the results (Lazarus & Folkman, 1984). Stressor appraisals help determine the stressor's importance and controllability. Primary appraisals (evaluation of what is at stake) and secondary appraisals (what can be done about it) inform coping strategies within the coping process (Folkman et al., 1986; Folkman & Lazarus, 1988). The TTSC model depicts coping as a process that begins with antecedents (e.g., personal and environmental factors), which are followed by mediating processes (e.g., appraisals and coping strategies), then affects and short-term outcomes (e.g., anger and distress), and, lastly, long-term effects (e.g. psychological and physical well-being (Lazarus &

Folkman, 1984, 1987). Collectively, the coping process is made up of these reciprocally interacting components (Lazarus & Folkman, 1984).

Transactional Theory of Stress and Coping and Moral Distress

TTSC provides an advantage to the study of moral distress in that it acknowledges the complex nature of the relationship between human behavior and the environment. An early and prominent theory of moral distress suggested that when a nurse experiences an ethical violation, they either have the moral courage to act and experience moral comfort or remain silent and experience moral distress, suffering, and moral residue (Corley, 2002). Choosing whether to speak out or remain silent in the face of a morally distressing event may be an oversimplification of a more complex process, wherein a multitude of factors and responses influence the moral distress experience (Wilson, 2018).

The use of TTSC is not new to the study of moral distress. Hiler and colleagues (2018) used the model as a framework for their study on the perceived practice environment as an antecedent predicting moral distress; however, they did not directly measure stress and coping. Instead, they suggested that "the antecedent phenomena, a nurse's perception of medical futility (psychological stressor) and the subsequent enactment of primary and secondary appraisal processes (coping), can result in moral distress" (Hiler et al., 2018, p. 60). Hiler and colleagues' (2018) use of TTSC enabled them to generalize about the experience of moral distress. The current study extends their work by utilizing TTSC as a heuristic framework for the exploration of coping behaviors, EI, and hospital communication and support, as predictors of moral distress.

Coping

Lazarus and Folkman (1988) identified eight groups of coping strategies, seen in Table 2, that are commonly grouped into either emotion-focused or problem-focused strategies (Folkman et al., 1986). Emotion-focused coping strategies (e.g., distancing, self-control, accepting responsibility, and positive reappraisal) are employed to change the stressor's relational meaning (Folkman & Lazarus, 1988; Lazarus & Folkman, 1984; Lazarus, 1993). In contrast, problem-focused coping strategies (e.g., confrontative coping and planful problem-solving) are used to act on or change the stressor (Folkman & Lazarus, 1988, 1990; Lazarus, 1993). Problem-focused strategies also serve to define the problem, generate alternative solutions, and weigh the pros and cons of potential solutions (Lazarus & Folkman, 1984). Thus, problem- focused strategies have been associated with less depression and emotion-focused strategies (e.g., wishful thinking) have been associated with more depression (Vitaliano et al., 1985). Social support can be used as both a problem-focused and emotion-focused strategy, depending on the intention and goal of the support seeker (Folkman & Lazarus, 1984). Seeking support from others can look like advice seeking and problem-solving but may also turn into venting and blaming (emotion-focused). Whether emotion- or problem-focused strategies are useful depends on the stressor and desired outcome (Lazarus & Folkman, 1984; Vitaliano et al., 1985). Therefore, there is no universally preferred way to cope with stress and comparing coping effectiveness across studies can be challenging. Notably, the classification of strategies into emotion- or problem-focused will depend on the measurement tool and relevant coping strategies (MacCann et al., 2011), however, distinctions can be made according to Lazarus and Folkman's (1984) conceptualizations.

Coping and Moral Distress

There have been limited investigations into which coping behaviors impact moral distress or mitigate consequences (Lamiani et al., 2017; Zvotsky, 2015). Interviews with 24 hospital nurses selected by systematic sampling from the State Board of Nursing[1] revealed certain coping behaviors can reduce negative feelings associated with morally distressing events and lessen nurses' intentions to leave the job or profession (Wilkinson, 1988). Within the sample, the most successful strategy noted by Wilkinson (1988) was the nurse's ability to "deny responsibility for the situation or for their own immoral actions, and/or believe they were able to have some control over and effect on patient-care situations" (p. 23). From the interviews, nurses recalled that they tried many strategies to cope with a situation and that the least effective strategy was to avoid the patient or leave the job assignment. Webster and Baylis (2000) have, too, argued that avoidant behaviors trivialize morally distressing situations and create problematic distance between the self and the event. They encourage nurses to engage in critical self-evaluation and confront moral injustices.

However, confronting moral injustices or ethical violations is not always possible (Deady & McCarthy, 2010). In a small qualitative study involving nine Irish psychiatric nurses who experienced moral distress, participants reported feeling common emotions that hospital nurses experience, such as self-doubt, guilt, uneasiness, and anger, that lasted years (Deady & McCarthy, 2010). Some nurses considered morally distressing events impossible to address, as they feared speaking up would worsen professional

[1] The State Board of Nursing included 3,790 registered nurses that worked in hospitals with direct patient-care roles. Which state was utilized was undisclosed (Wilkinson, 1988).

relationships (Deady & McCarthy, 2010). Instead, nurses sought to compartmentalize, intellectualize, or distance themselves from the conflict (Deady & McCarthy, 2010). Nurses would engage in "adapting/ acquiescing to the cultural pressure (going along), denying or trivializing the problem (turning a blind eye, rationalize), refusing to participate or work with a particular colleague, or move job or adopt a dual moral code of behavior: one for home and one for work" (Deady & McCarthy, 2010, p. 216). Some nurses in the study would rely on social support (work colleagues, family, and/or friends), seek out education or training opportunities, or refocus their energy on patients (Deady & McCarthy, 2010).

Deady and McCarthy also identified nurses who would speak up about their concerns (Deady & McCarthy, 2010). This act of speaking out against a requirement based on conscience is called conscientious objection (Lamb et al., 2017), which has been suggested as a coping response to accumulating moral distress (Epstein & Hamric, 2009). However, conscientious objection is ambiguously understood in clinical practice, can lack administrative support, and its use in practical settings has been minimally reported (Lamb et al., 2017). Furthermore, whether clinicians would identify conscientious objection in clinical practice as a strategy for coping with moral distress is unknown.

A comprehensive qualitative investigation on how clinicians cope with moral distress was conducted in a study of 29 healthcare clinicians in multidisciplinary ICU teams (Bruce et al., 2015). A little over half of the clinicians in the study were nurses (n=16) and the other participants were physicians and ancillary staff (chaplains, social workers, and case managers) (Bruce et al., 2015). The morally distressing cases analyzed in the

study were provided by five healthcare clinicians who were involved in the case but did not participate in the subsequent interviews. The cases were chosen based on moral distress indicators (the clinician thought about the situation after it had resolved, the clinician experienced behavioral disruptions, or it prompted a formal debriefing). From those cases identified, a separate set of investigators not involved in the units of care selected three cases that offered ethical issues, patient demographics, and type of discordance. Then, clinicians with extensive involvement in the case were interviewed and asked to recall the source and impact of moral distress on themselves and patient care, what strategies were used to cope and whether it was helpful, describe the relationships with colleagues involved, and whether they believed the situation could have been handled differently. Coping strategies were later named as adaptive or maladaptive based on thematic coding by the research team (Bruce et al., 2015). Maladaptive behaviors were identified as communication strategies that respected team, family, and patient disagreements, but avoided direct conversation about the issues, fighting and combative language, or withdrawing and detaching from the situation (Bruce et al., 2015). Adaptive behaviors were considered venting and use of humor, seeking mentoring, and building team cohesion (Bruce et al., 2015). Team members engaged in a variety of these strategies throughout the experiences, but nurses most commonly either disengaged or vented about their distress (Bruce et al., 2015). Findings did not indicate the degree to which these efforts mitigated moral distress, only that they were considered helpful in the moment.

A similar approach to identifying coping strategies was conducted in a small qualitative study in the United Kingdom (UK; Lievrouw et al., 2016). Through semi-structured

interviews using the Critical Incident Technique, Lievrouw and colleagues (2016) aimed to explore meaning-making strategies around moral distress with 17 physicians and 18 nurses in non-critical oncology settings. Participants disclosed emotional distress in every moral distress encounter and researchers characterized clinicians' coping with moral distress as either internalized or externalized behaviors (Lievrouw et al., 2016). Four coping patterns emerged from the interviews: thoroughness, compromise, autonomy, and intuition (Lievrouw et al., 2016). The coping patterns reflect the problem- and emotion-focused coping strategies detailed by Folkman and Lazarus (1984, 1988). The coping pattern, thoroughness, included those participants who focused on the rationale, process, and structure of the experience through debate, deliberation, support, and education (Lievrouw et al., 2016). Those strategies could be considered emotion-focused as they do not change the morally distressing situation, but rather the relational meaning the event has for the individual. The coping pattern, autonomy, was problem-focused, identified by physicians in their efforts to use their hierarchical status to change hospital policies related to the morally distressing event. In this case, the source of the moral distress is being altered. Participants who practiced compromise would either avoid conflict (emotion- focused) or attempt problem-solving strategies (problem-focused). Those participants who used strategies labeled as intuition would blame, vent, or focus on their feelings (emotion-focused) (Lievrouw et al., 2016). Of note, the study revealed nurses more often used emotion-focused strategies and focused on their feelings and the experience of the event (Lievrouw et al., 2016).

In addition to qualitative studies, Zvotsky (2015) explored coping and moral distress in a non-random, non-representative sample of 198 emergency department nurses. Using the

COPE Inventory, participants were asked how they typically cope with stressors while at work. The most frequently reported coping mechanisms were positive reframing and growth, social support, and planning behaviors (Zvotsky, 2015). Significant positive associations were found between moral distress and avoidant behaviors such as: mental and behavioral disengagement, emotion ventilation, denial, substance abuse, suppression of competing activity, and humor. Acceptance was also positively correlated with moral distress. However, there was no statistically significant relationship found between moral distress, social support, and positive reinterpretation and growth. Four of these behaviors, mental and behavioral disengagement, emotion ventilation, and substance abuse, explained 21% of variance in moral distress.

Zvotsky's (2015) findings reflect the frequency of behaviors used to cope at work and the relationship with the frequency and intensity of experienced moral distress. Participants were not asked to respond how they coped *with* moral distress. Furthermore, Zvotsky (2015) explains the sample was very experienced, with participants having an average of 17 years nursing experience and 14 years of emergency department experience. As ICU setting has been associated with moral distress (Epstein et al., 2019), work setting may have an influence on the relationships between moral distress and coping. For example, the nature of the environment in the emergency department may influence what strategies are available for nurses to use. Nevertheless, this preliminary study offers insight into how one group of nurses prior to the COVID-19 pandemic coped at work and the relationship these behaviors had with moral distress.

These studies have provided a foundation upon which to build our understanding of how nurses cope with morally distressing situations (Bruce et al., 2015; Deady & McCarthy,

2010; Lievrouw et al., 2016; Wilkinson, 1988; Zvotsky, 2015). Preferred and frequent ways of coping have been identified (Deady & McCarthy, 2010; Lievrouw et al., 2016; Zvotsky, 2015) and more research on how these strategies impact overall moral distress is needed (Lamiani et al., 2017; Wilkinson, 1988; Zvotsky, 2015). Lamiani and colleagues (2017) have encouraged the exploration of how individual aspects such as coping behaviors influence moral distress.

Emotional Intelligence

In addition to understanding how an individual copes, learning what psychological factors impact moral distress is of value. One psychological ability, EI, has been proposed broadly in nursing literature as a meaningful factor for quality performance, but EI's relationship with moral distress has yet to be empirically demonstrated (Lewis, 2009). EI is the "ability to perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer & Salovey, 1997, p. 5). EI can explain to what degree an individual is able to identify, process, and use emotion to guide thinking and behavior. EI emerged from the study of social intelligence and at the time presented a novel approach to understanding the role of emotions in cognition and affect (Salovey & Mayer, 1990). Instead of categorizing emotions as a nuisance needing to be restrained, emotions are considered a source of affective information that individuals can use to "solve problems and regulate behavior" (Salovey & Mayer, 1990, p. 189). Although some argue EI is a fixed personality trait, EI

is accepted to be a cultivated ability developed through the acquisition of education and skills training (Mayer & Salovey, 1997).

An update by Mayer and colleagues (2016) reinforced emotional intelligence as a mental ability that involves the capacity to perceive, use, understand, and manage emotions. EI reflects the capacity for emotional reasoning with four branches of abilities to 1) perceive emotion, 2) use emotion to facilitate thought, 3) understand emotion and meaning, and 4) manage emotion in self and others (Mayer & Salovey, 1997; Mayer et al., 2004; Mayer et al., 2016). These branches of EI can be referred to as self-emotions appraisal (SEA), others-emotions appraisal (OEA), use of emotion (UOE), and regulation of emotion (ROE) (Law et al., 2004; Wong & Law, 2002). The ability to perceive emotion (OEA) involves the recognition of facial expressions and nonverbal communication and is considered the lowest branch as it develops early in infancy (Mayer & Salovey, 1997; Mayer et al., 2004). Whereas regulating emotion (ROE), the highest branch, requires an individual to be open, receptive, and mindful of their emotions so as to separate emotions from behaviors and to be able to do so at appropriate times (Mayer & Salovey, 1997). The four branches begin with basic identification established in infancy and childhood and develop through the life course, ideally advancing in skill and multifariousness (Mayer & Salovey, 1997; Mayer et al., 2004). Additional abilities have been added to or divided within branches over the years (Mayer et al., 2016). For example, the ability to recognize cultural differences informing emotions was added to OEA, and the ability to perceive emotions has been divided among environmental (e.g., music and art), facial (e.g., expressions and tone), and physical states (e.g., thoughts and feelings) (Mayer et al., 2016).

The ability to understand emotion necessitates an ability to analyze, appreciate, and anticipate emotions and trends (Mayer et al., 2004). Of course, these abilities are influenced by culture, family history, and child development (Mayer & Salovey, 1997; Salovey & Mayer, 1990), but EI is distinct from personality variables such as motivation, self-control, need for achievement, and social effectiveness (Mayer et al., 2008). Instead, EI is considered to enhance these aspects of individual and social wellbeing as higher EI is associated with less somatic and psychiatric symptoms and more social competence, quality friendships, and interpersonal sensitivity (Mayer et al., 2008). Emotional analytical reflection informs individual appraisals and behaviors, therefore generating more emotion and subsequent reaction (Mayer et al., 2004).

Emotional Intelligence and Nursing Work

Globally, EI has been examined as a necessary component for nursing and the emotional work needed for compassionate care requires EI skills (McQueen, 2004). EI has been theorized as integral to building compassionate patient relationships, engaging in critical decision-making, and facilitating quality of work (Smith et al., 2009). Undoubtedly managing close intimate relationships with patients, other nurses, and members of the interprofessional team could be stressful and emotionally taxing. Within the nurse-patient relationship, nurses have to engage and disengage in response to their own emotions as well as their patient's emotions (McQueen, 2004). The ability to engage and disengage is a part of the highest branch of emotion regulation within the four branches of EI (Mayer & Salovey, 1997; Mayer et al., 2004). Possessing higher EI promotes healthy emotional processing.

EI research in nursing was considered in its incipience in early 2000 (Codier et al., 2011), and studies have since demonstrated EIs relationship with other meaningful factors in nursing work that can impact the quality of patient care and nurses' wellbeing. For example, in a large study of 448 nurses randomly selected from seven public hospitals in Malaysia, a self-perceived higher level of EI was associated with an increased sense of psychological ownership and responsibility towards patients and the job, engagement in respectful and emotionally supportive caring behaviors, and a decreased level of burnout (Kaur et al., 2013). Kaur and colleagues (2013) interpreted this finding by suggesting EI and a sense of ownership decreased burnout by also decreasing feelings of depersonalization. EI can improve caring behavior which improves quality of care patients receive and helps reduce burnout and increase favorable attitudes towards their job (Kaur et al., 2013).

EI has also been studied within nursing leadership styles, job satisfaction, and turnover intention (Spano-Szekely et al., 2016; Trivellas et al., 2013). Nursing leaders who have high EI can manage conflict and chaos and can improve the work environment for patients and nurses (Smith et al., 2009). This is not to say that leaders do not experience moral distress, but the qualities they possess may reflect an ability to effectively manage moral distress in order to cultivate teamwork, communication, and empowerment among their subordinates. In the first study to examine EI and nursing leadership styles (transformational, transactional, and passive/ avoidant "laissez-faire"), a convenience sample of 148 acute care hospital nurse managers showed higher levels of EI were positively correlated with transformational leadership, whereas EI was negatively correlated with laissez-faire leadership (Spano-Szekely, et al., 2016). Transformational

leadership has been regarded as a favorable style to promote positive culture, satisfaction, nurse wellbeing and decreased stress and burnout (Spano-Szekely et al., 2016). Higher EI also had a significant impact on job satisfaction and turnover intentions in a sample of 145 nurses in Greece (Trivellas et al., 2013). Specifically, through path analysis, SEA and UOE directly impacted job satisfaction and intention to leave (Trivellas et al., 2013). If a nurse feels capable of appraising and managing his or her emotions, it makes sense this would in turn lead to lowered distress and overall better stress management. Although both studies were non-representative, they contribute towards our understanding of EI in nursing work and prompt continued discussion of the benefits of cultivating EI in practice settings.

Emotional Intelligence and Moral Distress

Emotional intelligence has been proposed as a psychological ability that can impact moral distress but has not yet been directly measured in moral distress research (Lewis, 2009). Lewis (2009) postulated that because EI is a learned ability (Mayer & Salovey, 1997; Salovey & Mayer, 1990) that is associated with improved quality of care, better decision-making, and less burnout (Kaur et al., 2013), EI may also mitigate the emotional distress associated with moral distress. EI has been encouraged to be utilized and further studied in education programs (Smith et al., 2009), leadership (Spano- Szekely et al., 2016), and practice settings (Codier et al., 2011; McQueen, 2004; Smith et al., 2009). The emotion work involved in moral distress and that is required by nurses to maintain close, effective, and quality relationships with their patients also necessitates the skills and abilities (e.g., identifying and responding to emotion in self and others) instrumental

in EI and are potentially helpful in dealing with emotions occurring with moral distress (Codier et al., 2011). Additionally, nurses with higher EI may have improved critical thinking and ethical decision-making skills (Smith et al., 2009) which may have implications for how nurses respond to and cope with morally distressing situations.

Organizational Support

Since its conceptualization, moral distress has been said to be impacted by institutional barriers (macro and mezzo factors) such as inadequate staffing, poor leadership and team communication, excessive work demands and limited resources (Corley, 2002; Jameton, 1984). Hospital issues such as hierarchical relationships and inadequate communication and support by peers and leadership have been predictive of moral distress in previous studies (McAndrew et al., 2016). Hospital ethical climate was also early identified as a predictor of moral distress (Corley, 2002). Ethical climate is considered a hospital's practices and policies around ethical decision-making and the degree to which employees are a part of the process or are engaged in ethical reflection (Brown, 1990). The hospital's ethical climate has been identified as a particularly influential contributor to moral distress for nurses, with multiple studies showing nurses perceived their organizations as having poorer ethical climates compared to their physician counterparts (Atabay et al., 2014; Blackhall & Hamric, 2007; Sauerland et al., 2014). However, excessive work demands, lack of support and communication, and the ethical climate of an organization are only a fraction of the overall organizational climate (Brown, 1990). The extent to which an employee feels tethered to an organization and how supported,

connected, and valued they are also reflects organizational support (Eisenberger et al., 1986).

As the US experiences the devastating impact of the COVID-19 pandemic, organizational support is an especially important consideration (National Nurses United, 2020). National Nurses United (2020) has reinforced the need for hospitals and administrations to cultivate employee safety and be transparent about decision-making and communication around COVID-19 policies and procedures. Furthermore, organizational actions, policies, and conditions strongly impact perceived support which can affect performance and job satisfaction (Eisenberger, 1997; Lynch et al., 1999). Information has changed quickly during the pandemic and there has been a need for timely and consistent guidance for frontline nursing.

Organizational Support during COVID-19

Although the world has not experienced a pandemic since 1918 with the Spanish Flu, more recent epidemics have guided recent research and responses (Fernandez et al., 2020). Research on epidemics like the severe acute respiratory syndrome (SARS) and Ebola suggest that how well a hospital is able to communicate and implement changes to employees can have an impact on their stress and coping (Marjanovic et al., 2007; Tolomiczenko et al., 2005). There may also be implications for additional or exacerbated factors contributing to moral distress (Ulrich, 2014).

During the SARS epidemic, researchers sought to identify what organizational impacts would be important for hospitals to consider if similar circumstances happened in the

future (Tolomiczenko et al., 2005). To assess this, 300 community hospital healthcare professionals, 25% being nurses, participated in a non-probability cross-sectional survey (Tolomiczenko et al., 2005). Researchers compared nurses to other healthcare professionals and doctor participants based on their perceptions of organizational response and SARS impact on patient care, communication of information, working conditions, and decision-making (Tolomiczenko et al., 2005). Nurses more than any other group "enjoyed work less, felt more of a negative impact on morale, relied more on peer support and depended less on supervisory guidance" (Tolomiczenko et al., 2005, p.107). Nurses also felt they lacked input into decision-making or adjusting roles and information about policies and procedures (Tolomiczenko et al., 2005). Additionally, nurses identified lack of visitors and poor communication about SARS as negatively impacting patient care significantly more so than other healthcare professionals (Tolomiczenko et al., 2005).

In a timely response to the COVID-19 pandemic, studies focused on supporting nurses' psychological and emotional wellbeing have emerged. For example, a systematic review examining qualitative studies explored nurses' experiences working during a pandemic or epidemic (Fernandez et al., 2020). The review included studies that described nurses who had to weigh professional obligation with risk to self, team members, and their own family (Fernandez et al., 2020). Sources of moral distress were identified such as fear of future litigation, uncertainty of effectiveness or insufficient PPE, inadequate training, staffing shortages, and organizational preparedness (Fernandez et al., 2020). Echoing findings from Tolomiczenko and colleagues (2005), nurses relied heavily on support from colleagues and nursing teams (Fernandez et al., 2020). Across included studies,

organizational response was found to be a key factor in nurses' physical and emotional well-being (Fernandez et al., 2020).

In another study, Zhang and colleagues (2020) developed an instrument and explored its ability to predict anxiety and life satisfaction in a sample of 712 healthcare workers (25% nurses) in Bolivia, Ecuador, and Peru. Based on a region-stratified, two-stage cluster sample, results showed that work, personal, and risk support were all associated with less anxiety (Zhang et al., 2020). Work and personal support were positively associated with life satisfaction and older-aged staff were less likely to experience mild and severe anxiety.

Perceived Organizational Support and Moral Distress

Perceived organizational support is informed by social exchange theory and suggests that employees will develop beliefs about an organization's commitment to them based on the extent to which they feel an "organization values their contributions and cares about their well-being" (Eisenberger et al., 1986, p.501). An employee assesses the level of commitment by an organization not just through rewards such as pay or praise, but rather the motives behind those rewards (Eisenberger et al., 1986). In other words, the employee is evaluating whether the organization *cares* about them.

The perception that an organization values and cares about an employee can create an affective attachment to the organization so that the employee is more likely to help the organization meet their organizational goals (Eisenberger et al., 1986). Affective commitment is one of three proposed branches to the more complex concept of

organizational commitment as a whole (Meyer & Allen, 1991). The other two branches included normative commitment (obligation) and continuance commitment (too costly to leave). Organizational support has been identified as an important component of job satisfaction, absenteeism, and job performance (Eisenberger et al. 1986; Lynch et al., 1999; Kurtessis et al., 2015) and has demonstrated direct effects on normative commitment, person-organization fit, and developmental experiences (Gutierrez et al., 2012). A meta-analysis of 558 studies shows the positive relationship of perceived organizational support with antecedents such as: supervisor support, shared values, and procedural justice (fairness in organizational policies and practices) (Kurtessis et al., 2015). Perceived organizational support also had a positive relationship with outcomes such as obligation and normative commitment, willingness to remain with the organization (affective commitment), and job satisfaction, and was negatively related to burnout, emotional exhaustion, stress, turnover intentions, turnover, and work-family conflict (Kurtessis et al., 2015).

Organizational support has been described in qualitative research (McAndrew et al., 2016) and has been demonstrated to have associations with antecedents (e.g., lack of communication, lack of peer/ leadership support) and consequences (e.g., intent to leave, turnover) of moral distress; yet, quantitatively, has been limitedly explored (Maningo-Salinas, 2010; Robaee et al., 2018). Robaee and colleagues (2018) used random quota sampling to select nurses affiliated with a large hospital network across regions of Tehran, Iran. There was no significant relationship between moral distress and perceived organizational support. These findings were limited by the moral distress instrument not

translating consistently to an Iranian context as well as the small sample size included in the study (Robaee et al., 2018).

Perceived organizational support was also tested as a moderator on the relationship between moral distress and anticipated turnover in a study of 180 inpatient (42.8%) and outpatient oncology nurses (Maningo-Salinas, 2010). While perceived organizational support was associated with less likelihood for nurses to leave, it did not moderate the relationship between moral distress and anticipated turnover. In contrast to existing literature, in Maningo-Salinas's (2010) dissertation study, moral distress was not associated with turnover. There were also concerns with sample size, the organizational support instrument being inappropriate for a nursing context, and unaccounted for confounding variables such as empowerment. Despite these non-significant findings, there is theoretical support and emerging research supporting the need to consider organizational response in future inquiry. Further exploration of the relationship between moral distress and organizational support has been encouraged using larger sample sizes of nurses to determine whether the Perceived Organizational Support instrument is appropriate and whether a relationship with moral distress exists (Robaee et al., 2018, Maningo-Salinas, 2010). Aspects of hospital organizations (e.g., ethical climate, administrative support, staffing) have impacted moral distress (Epstein et al., 2019), thus further exploration into the perceive support of hospitals is needed, especially since the onset of the COVID-19 pandemic.

Summary

Our conceptualization and understanding of moral distress have evolved over the last 20 years and ongoing research continues to advance this knowledge and support the need to recognize moral distress complexity (Jameton, 1984; Morley et al., 2020). TTSC provides a supportive framework to guide the exploration of moral distress as one part of a larger process that is informed by individual and environmental factors (Folkman & Lazarus, 1984; Huffman & Rittenmyer, 2012; Lamiani et al., 2018). TTSC goes beyond previously discussed theories of moral distress that may oversimplify the process and limit our understanding of its antecedents (Wilson, 2018). An antecedent such as EI has been theorized as a useful ability to navigate moral distress and one that could mitigate adverse outcomes, but its relationship with moral distress has yet to be empirically investigated (Lewis, 2009; Smith et al., 2009). Similarly, experiences from previous epidemics suggest that organizational support may play a crucial role in the mitigation of adverse consequences associated with the COVID-19 pandemic (Tolomiczenko et al., 2005; Marjanovic et al., 2007). Lastly, research in coping and moral distress has been encouraged (Wilkinson, 1989) and expanding Zyotsky's (2015) dissertation work using additional factors pertinent to coping and moral distress is needed to continue to develop our understanding of these relationships.

Guided by TTSC, and using psychometrically sound instruments, the primary aim of this study is to examine the relationships among EI, coping, and organizational support and communication with moral distress. As small sample sizes have limited past research,

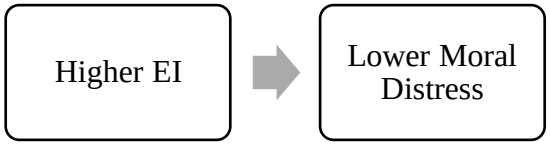
this pilot study also aims to determine the feasibility of launching these instruments to a larger and more diverse sample of nurses.

Hypotheses

To address the first study aim, this study explores the following research questions (RQ) and related hypotheses (H). A model depicting these relationships with hypotheses can be seen in Figure 2.

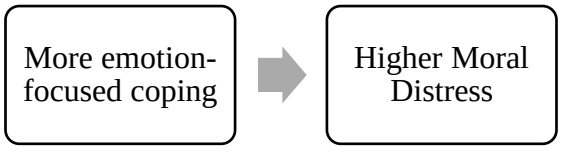
RQ1: What is the relationship between EI and moral distress?

H_1: EI will be negatively associated with moral distress.



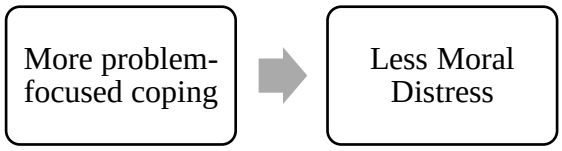
RQ2: What is the relationship between emotion-focused coping and moral distress?

H_2: Emotion-focused coping strategies will be positively associated with moral distress



RQ3: What is the relationship between problem- focused coping and moral distress?

H_3: Problem-focused coping will be negatively associated with moral distress.



RQ4: What is the relationship between perceived quality of hospital communication and support and moral distress?

H_4: Higher quality of hospital communication and support will be negatively associated with moral distress.

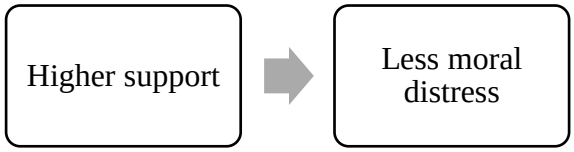


Table 1

Definitions of Moral Distress

Author (Year)	Definition
Jameton (1984)	distress arises when one knows the right thing to do, but tional constraints make it nearly impossible to pursue the right of action'.
Wilkinson (1988)	distress is defined by the author as the psychological ilibrium & negative feeling state experienced when a person a moral decision but does not follow through by performing the behavior indicated by that decision'
Jameton (1993)	nurse experiences moral distress when the nurse makes a moral ent about a case in which he or she is involved and the tion or coworkers make it difficult or impossible for the nurse to that judgment'
Corley (1995)	n defined moral distress as painful feelings and/ or logical disequilibrium caused by a situation in which (1) one es one knows the ethically ideal action to take and (2) that one carry out that action because of (3) institutionalized obstacles s lack of time, lack of supervisory support, medical power, tional policy, or legal limits'.

Table 1 (continued)

Definitions of Moral Distress

Author (Year)	Definition
Corley, Elswick, Gorman, & Clor (2001, p. 250)	'Jameton1 defines as moral distress: the painful psychological disequilibrium that results from recognizing the ethically appropriate action, yet not taking it, because of such obstacles as lack of time, supervisory reluctance, an inhibiting medical power structure, institution policy, or legal considerations'.
Corley (2002, p. 643)	'Moral distress is the psychological disequilibrium, negative feeling state, and suffering experienced when nurses make a moral decision and then either do not or feel that they cannot follow through with the chosen action
Hanna (2004)	'An 'umbrella category' that could include the experience of anguish or suffering associated with facing a moral dilemma, moral uncertainty as well as certainty accompanied by constraint'.
Kälvemark, Höglund, Hansson, Westerholm, & Arnetz (2004)	'Traditional negative stress symptoms that occur due to situations that involve ethical dimensions and where the health care provider feels she/he is not able to preserve all interests and values at stake'.

Table 1 (continued)

Definitions of Moral Distress

Author (Year)	Definition
Peter & Liaschenko (2004)	'if moral agency is defined as the capacity to recognize, deliberate/reflect on, and act on moral responsibilities, in order to experience moral distress, an agent is required to possess at least some autonomy in recognizing and reflecting upon moral concerns. Yet on the other hand, an agent's autonomy must be at least somewhat constrained in acting upon the very moral responsibilities he/she understands him/herself to have. This apparently irresolvable contradiction is moral distress'.
Corley et al. (2005)	'Jameton,1 who defined it as painful feelings and/or the psychological disequilibrium that occurs when nurses are conscious of the morally appropriate action a situation requires but cannot carry out that action because of institutionalized obstacles'.
American Association of Critical Care Nurses (2006, p. 1)	'Moral distress occurs when: You know the ethically appropriate action to take, but are unable to act upon it. You act in a manner contrary to your personal and professional values, which undermines your integrity and authenticity'.

Note. The table includes definitions provided in the moral distress literature. Adapted from "What is 'Moral Distress': A Narrative Synthesis of the Literature," by G. Morley et al., Second Initial. 2017, *Nursing Ethics,* 7. Copyright 2017 by The Authors. Adapted with permission.

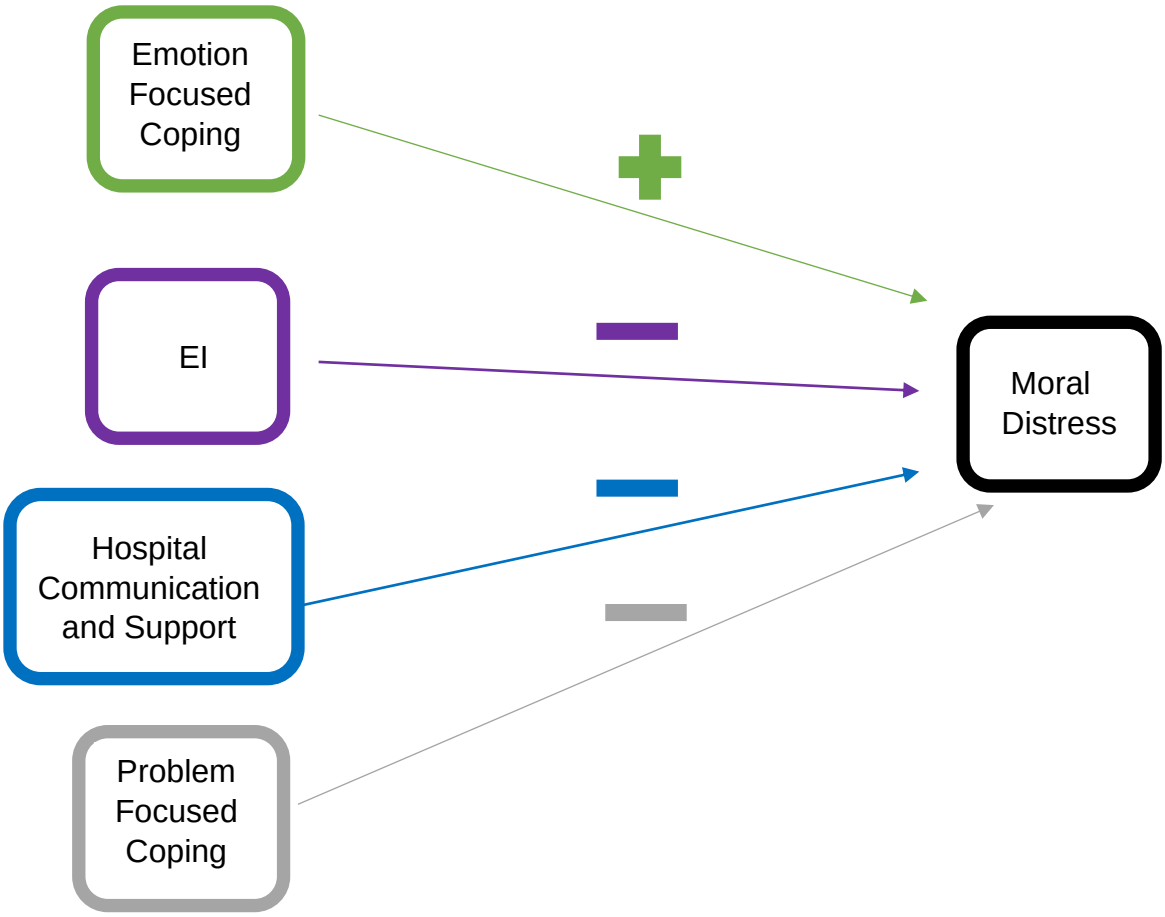
Table 2

Coping Strategies Described by Folkman and colleagues' (1986) and Folkman and Lazarus (1988)

Strategy	Example
Confrontative Coping	Stood my ground and fought for what I wanted
Distancing	Went on as if nothing had happened
Self- Control	Kept others from knowing how bad things were
Seeking Social Support	Accepted sympathy and understanding from someone
Accepting Responsibility	Criticized or lectured myself
Escape- Avoidance	Wished the situation would go away
Planful problem-solving	I made a plan of action and followed it
Positive Reappraisal	Changed or grew as a person in a good way

Figure 2

Model Prediction of Relationships Among EI, Organizational Support, and Coping with Moral Distress



CH 3 METHODS

The purpose of this chapter is to introduce the research methodology for this pilot study. The methodological approach allowed for the empirical testing of the relationships between emotional intelligence, coping behaviors, and perceived organizational support and the dependent variable, moral distress. Details regarding study participants, sampling procedures, data collection, measurements, and analytic plan are addressed in this chapter.

Participants

This cross-sectional exploratory pilot study utilized data from a non-random sample of registered nurses (RN) with an active license located in Kentucky who have worked in an inpatient hospital setting within the previous six months. Six hundred and thirty-six nurses initially consented to participate, with 80 cases being removed due to not meeting study criteria. These removed cases included 18 nurse practitioners, seven licensed practical nurses, licensed vocational nurses and certified nursing assistants, 25 who had not worked in an in inpatient setting, and 30 who did not answer any questions beyond the consent. After data cleaning, screening and the outlier removal (n=12), the final sample included 544 participants.

Sample Size, Power, and Precision

Sample size and power were estimated a priori using power analysis software, G*Power (Faul et al., 2007) with typical benchmarks for multiple regression f^2 values at .02, .15, and .35 (Cohen, 1988). While there are no existing studies that incorporate the variables

used in this study, medium effect sizes have been found in moral distress studies with sample sizes ranging 100-300 using correlational and regression analysis (Christodoulou-Fella et al., 2017; Hiler et al., 2018; Oh, & Gastmans, 2013). Using G*Power, F test linear multiple regression analysis with a total of 13 predictors, power was set at .95 and alpha at .05 was used to compute sample size (Faul et al., 2007). Calculated results indicated at least 189 participants are needed to detect a medium effect size (f^2=.15). An additional 25% was calculated for missing data and to buffer for skewed data distributions, making the total sample needed 236. If power was lowered to .80, 131 participants would be needed (163 accounting for the 25%). Given these results, the sample is sufficiently large to address the aims of the study.

Sampling Procedures

A non-randomized purposive sampling technique using hospital networks and social media to reach participants, along with snowball sampling techniques, were used to recruit participants to complete the online survey. The online survey was accessible on a computer, smart phone, or tablet by selecting an anonymous web link or using a QR code. Participants were recruited from a large[2] academic hospital (569 beds) and an affiliated (189 beds) and unaffiliated (75 beds) community hospital in the Commonwealth of Kentucky. Participants were also recruited using social media platforms: Facebook and Twitter. The survey links and QR codes were advertised by paper advertisements placed near hospital timeclocks, e-mail communication with hospital nurse care unit managers, a Facebook page with posts on social media, as well as

[2] In the southern region of the US, rural hospitals 75+, urban non-teaching hospitals 200+, and urban teaching hospitals 450+ are considered large (Tian, W., 2016).

by word of mouth. These strategies followed the Tailored Design Method (TDM) which provides strategies to encourage participation by survey creation based on the specific topic, population, and available resources (e.g., time and money) (Dillman et al., 2014). By using Social Exchange Theory and extant survey research, TDM emphasizes tailoring the method of recruitment, survey wording, and communication to the specific population targeted (Dillman et al., 2014). TDM also addresses common errors, such as nonresponse and measurement, that can result in lower response rate and overall quality of the survey. TDM emphasizes that participants are more likely to engage with the survey if they can understand the benefits of participating and be reached in multiple ways as they function in their everyday lives (Dillman et al., 2014). Also consistent with recommendations made by Munn and Jones (2020), efforts were made to achieve buy-in and engagement from key stakeholders such as nurse managers on care units, hospital administrators and communication managers. Nurse care unit managers and administrators were contacted by e-mail and phone to discuss being a participating site. The template for telephone and e-mail correspondence can be viewed in Appendix A1. Nurse care unit managers and administrators were asked to disseminate the anonymous survey link to nurse peers and nurse employees using the template seen in Appendix A2.

Social multimedia platforms served as the second approach to recruitment with study advertisements and short message announcements on Facebook and Twitter. On Facebook, a unique page was created dedicated to the study, with the advertisement, messages, and an anonymous survey link along with QR code that participants could use and share (example of a study advertisement and brief messages seen in Appendix A3). Additionally, the researcher used her personal account to share the page and posts in

order to access personal social and healthcare professional network. The page was promoted using the researcher's personal Facebook and Twitter account to access established personal and professional medical and nursing networks. Twitter used the same messaging seen in Appendix A3; however, this mechanism was used less due to its national reach versus a more localized state reach intended for this pilot study.

Initial Survey Launch. The survey was launched on February 17th, 2021 to social media platforms and nurse care unit managers. On February 22nd and 25th the survey was launched on an employee-dedicate online communication platform, a list-serve associated with highlighted news delivered from that platform, as well as a COVID-dedicated website within the large academic hospital. The participants reached via these methods overlapped. Concurrently, paper advertisements of the survey with a QR code were posted near employee time clocks. On March 10th, the survey was distributed using a third e-mail list-serve which included all inpatient nurse employees within the large academic hospital. The same day, a Facebook advertisement promoting the study's dedicated page was purchased to run for five days.

Follow Up Communication. Three days after the initial launch on February 17th, follow-up contact was made with nurse managers, communication platform and list-serve owners, as well as social media posts reminding participants to complete unfinished surveys. After one week, a reminder-to-participate in the survey post was shared on the Facebook page. On March 4th, two weeks after the initial launch, a reminder to participate was e-mailed to the nurse managers of all participating hospitals. A final reminder and thank you was sent to all participating nurse managers, all communication

platform and list-serve owners, as well as social media outlets on March 17th. The survey closed on March 24th, having been open for a total time of 5 weeks.

Due to the sampling methods, a response rate is unavailable, however, response trends were monitored and recorded based on the outreach method. Figure 3 shows recruitment announcements and efforts with subsequent response rate trends. According to Facebook page analytics, the total number of page likes were 74 and an estimated 2,412 people were reached (the number of people who saw any posts at least once).

The end of the survey included a separate link for an opportunity to enter in a drawing to win one of ten $20 Amazon gift cards. The possibility of a gift card was one method used to motivate participants to complete the survey. A total of 178 participants provided their e-mail to be considered for the drawing. A number was assigned to each entry and using a random number generator, winners were selected the day after the survey closed. Gift cards were electronically delivered with a thank you and congratulations message from the researcher. The timeliness and relevance of a focus on moral distress, cathartic benefits, and feeling like this study could help others were considered as motivations to participate. Addressing motivations such as meaningfulness, relevance, and benefits to participants have been encouraged in hospital survey research and is also consistent with the TDM (Dillman et al., 2014; Munn & Jones, 2020).

Reasons for selecting Kentucky nurses for the pilot survey were two-fold. One, as the primary site for this study, efforts to expand knowledge about practitioners in the Commonwealth of Kentucky is of interest. And two, Kentucky is considered the sixth

least- healthiest state and ranked last in preventable hospitalizations (America's Health Rankings with the United Health Foundation, 2018). Patients who have multiple comorbidities may need more intensive care, especially if they have contracted COVID-19. As moral distress is often associated with intensive medical care, including in ICU settings and end-of-life care (Epstein et al., 2019), there may be a high number of nurses working in Kentucky hospitals who are experiencing moral distress.

Data Collection

The anonymous internet-based survey, comprised of psychometrically sound instruments and demographic questions, was sent using Qualtrics (see Appendix A5 for questionnaire). Qualtrics offers a number of survey protections to prevent search engines from indexing the survey and to prevent ballot box stuffing by placing a cookie on their browser once the survey is submitted, as well as a secured link so that only the owner of the survey can view responses. Privacy and confidentiality were of upmost concern given the sensitive nature of the questionnaire items. Informed consent was provided by a cover letter with no signature required to ensure anonymity. See Appendix A4 for participant cover letter. Participants had the option of ending the survey at any point prior to submission. Participants who chose to be considered for the award incentive were redirected to a separate link where they recorded their e-mail contact information separately from their responses. Full survey can be found in Appendix A5.

Ethical Considerations

All efforts to preserve anonymity and reinforce confidentiality were taken. The Qualtrics anonymous feature was used so no IP addresses were collected which ensured this anonymity. Qualtrics also provided participants' file protection in that only the survey owner may view responses. Participant name and contact information was saved separately from their submission within Qualtrics so their e-mail address could not be connected to their responses. The e-mail forwarded from nurse unit care managers to nurse employee participants included language that emphasized responses would be private and anonymous from management and organizational leadership. For the Facebook page, privacy settings restricted visitors from publishing to the page, posting photos or videos. Sharing options for the Facebook page and Facebook posts were turned on, however, comments were turned off to preserve any possible participant identification.

Variables and Measures

Measures and Covariates

Primary variables used in this study utilized psychometrically sound instruments measuring EI, coping strategies, perceived hospital support, and moral distress. Control variables included measures of hospital ethical climate and psychological empowerment, as well as several personal and professional demographic measures.

Dependent Variable

Moral Distress. The dependent variable, moral distress, was measured by the Measure of Moral Distress for Healthcare Professionals (MMD-HP) (Epstein et al., 2019). The MMD-HP was developed from a collection of moral distress measurements which have evolved over time (Epstein et al., 2019). The current MMD-HP measures the frequency and intensity of the root causes of moral distress (patient, unit, and system levels) and focuses on professional value violations based on existing literature (Epstein et al., 2019). By measuring how often and to what degree a professional experiences commonly-identified sources of distress, the goal is to provide a cumulative indicator of moral distress level.

The MMD-HP was initially tested by a sample of 653 healthcare professionals (440 nurses, 84% female) and determined to have construct validity and good reliability (Cronbach's α=.93) (Epstein et al., 2019). After an exploratory factor analysis, a four-factor structure was identified which mirrored the causes of moral distress reflected in the literature. Two factors included causes that occur at the system (e.g., "Be required to care for more patients than I can safely care for") and clinical or patient level (e.g. "Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient") (Epstein et al., 2019). The remaining two factors occurred at the team-level but differed in that one factor included issues that compromised the team's integrity (e.g., "Fear retribution if I speak up"), whereas the other factor included communication breakdowns and barriers (e.g. "Fear pressured to ignore situations in which patients have not been given adequate information to ensure informed consent") (Epstein et al., 2019). In the most recent

study using the MMD-HP in a sample of mechanical circulatory support nurses, a four-factor structure was confirmed with Cronbach's alphas ranging from .80-.89 (Latimer et al., 2020).

The MMD-HP gauges the frequency and intensity of 27 morally distressing scenarios ranked using a five-point Likert-type scale. For how often a scenario is experienced, the scale ranges from zero to four (0= never, 1= very rarely, 2= occasionally, 3= frequently, and 4= very frequently). For how distressing the scenario was or *would* be, the scale also ranges zero to four (0= none, 1= slightly, 2= somewhat, 3= moderately, 4= very distressing). Example items are "Be required to care for more patients than I can safely care for" and "Witness health care providers giving 'false hope' to a patient and family". The MMD-HP composite score is computed by multiplying each frequency score (0-4) by the intensity score (0-4) then summing each of those scores (frequency x intensity, 0-16) to result in a total moral distress score (0-432). Items that have never been experienced or are not seen as distressing do not contribute to the total moral distress score. There is no established metric associated with cut off scores for moral distress, thus, high and low scores are determined based on percentiles within the sample response. Cronbach's alpha was measured at .96 for this study.

Independent Variables

Emotional intelligence (EI). Emotional intelligence was measured using Wong and Law's (2002) Wong and Law Emotional Intelligences Scale (WLEIS). It was developed to provide a concise instrument which measures EI as an ability versus a fixed personality trait.

Discriminant, convergent, and predictive validity has been demonstrated for the WLEIS through a series of confirmatory factor analyses, cross-validation studies, and hierarchical regression (Beath, Jones, & Fitness, 2015; Law et al., 2004). Initial reliabilities were shown across the four dimensions of EI with reliabilities ranging from .82 (OEA) to .86 (SEA) (Wong & Law, 2002). The total WLEIS score has also shown good reliability in a convenience sample of 150 participants (α= .91) (Sulaiman & Noor, 2015). The validity and reliability of the WLEIS was also supported in a large study in China (N= 889) (Law et al., 2004). The measurement was administered in English in both samples and demonstrated good reliability in both young adult and adult samples, α= .78 and .81, respectively (Law et al., 2004).

The WLEIS measures four dimensions of EI: 1) self-emotions appraisal (SEA; items 1-4; e.g. "I have a good sense of why I feel certain feelings most of the time",), 2) regulation of emotion (OEA; items 5-8 e.g. "I always know my friends' emotions from their behavior"), 3) use of emotion (UOE; items 9-12; e.g. "I always set goals for myself and then try my best to achieve them"), and 4) others-emotions appraisal (ROE; items 13-16; e.g. "I am able to control my temper so that I can handle difficulties rationally"). The original instrument comprises 16 items using a 7-point Likert scale ranging from 1) strongly disagree to 7) strongly agree. For this study, a 5-point Likert scale was used ranging from 1) strongly agree to 5) strongly disagree and responses were transformed and coded to reflect the original 7-point Likert structure following recommendations by Dawes (2007) and IBM SPSS (2020) algorithm. The total EI score and subscale scores are averaged which results in a final score ranging from one to seven. Higher scores indicate higher levels of EI. Cronbach's alpha for this study was .86.

Organizational Support. Two measures were used to assess perceived organizational support, the COVID-19 Organizational Support (COVID-OS) and the Survey of Perceived Organizational Support (SPOS).

COVID-19 Organizational Support (COVID-OS). The first measure, COVID-OS, was used to assess healthcare professionals' perceptions of how well they were supported and communicated with by hospital administration during the COVID-19 pandemic (Zhang et al., 2020). Zhang and colleagues (2020) developed the instrument from interviews conducted by Shanafelt and colleagues (2020) which explored healthcare clinicians' and professionals' concerns during the first week of the pandemic. Hospitals administrations' ability to hear, protect, prepare, support, and care for staff were identified across eight areas of support.

Factor structure and validity of COVID-OS was assessed based on data from 712 healthcare workers (170 nurses) from Bolivia, Ecuador, and Peru using an online survey with region-stratified, two -stage cluster sampling technique (Zhang et al., 2020). Demographics reflecting the total nursing population in these countries are not available. Zhang and colleagues (2020) identified a three-factor model: 1) work support [items 1, 3, and 7], 2) personal support [items 5 and 6], and 3) risk support [items 2, 4, and 8]. Convergent and discriminant validity was established in that all factors were negatively associated with anxiety, and work support and personal support were positively related to life satisfaction. Zhang and colleagues (2020) encouraged the use of the COVID-OS to "assess, monitor, compare and improve COVID-19 specific support" for the healthcare workforce during the pandemic and encouraged identification of additional items (p.4).

The COVID-OS is a new measurement with limited available information on its psychometric properties.

The eight questions in the COVID-OS are rated based on the extent of agreeableness on a 7-point Likert scale ranging from 1) strongly disagree to 7) strongly agree with items 2, 4, and 8 reverse coded (Zhang et al., 2020). For this study, a 5-point Likert scale was used ranging from 1) strongly agree to 5) strongly disagree then transformed and coded to reflect the original 7-point Likert structure following recommendations by Dawes (2007) and IBM SPSS (2020) algorithm. Example items are "I have access to appropriate personal protective equipment (PPE)" and "I feel I lack access to up-to -date information and communication from healthcare system". The COVID-OS was used as a continuous variable with its total score calculated by finding the average of all items with a final score of 1-7. Higher scores reflect better quality of perceived support. The sources used to inform COVID-OS also reflect some of the needs expressed by nurses and other healthcare clinicians from previous epidemics (Marjanovic et al., 2006; Tolomiczenko et al., 2005). There is an absence of reliability testing provided in the literature on this instrument, however, the current study demonstrated a Cronbach's alpha at .67, which is considered minimally acceptable for exploratory research (Ursachi et al., 2015).

Survey of Perceived Organizational Support (SPOS). Constraints stemming from the macro or system-level have been identified as a source of moral distress (Jameton, 1984) and while hospital ethical climate has been explored (Lamiani et al., 2017), the role of organizational support and moral distress continues to be limitedly understood. The second measure of organizational support, SPOS, is an instrument developed to assess employees' perception of their organization's support and commitment to them

(Eisenberger et al., 1986). The SPOS (36-items) and its shorter versions (16-item and 8-item) have been used to study perceived organizational support and have demonstrated validity and reliability (Worley et al., 2009). In a meta-analysis of the SPOS, consistent and strong relationships were found with antecedents and consequences related to moral distress such as: burnout, emotional exhaustion, stress, absenteeism, turnover intentions, and turnover (Kurtessis et al., 2015).

Originally developed as a 36- item instrument (Eisenberger et al., 1986), shorter versions including an 8-item version have been commonly used and encouraged (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002; Worley et al., 2009). The 8-item SPOS was tested in a sample of 295 employees across organizations and was determined to be unidimensional with convergent and discriminant validity as well as good reliability (α= .90) (Eisenberger et al., 1997). Factor analysis in samples of 300 and 221 employees in varying sizes of organizations also confirmed a unidimensional scale with good reliability, α= .90 and α= .89, respectively (Lynch et al., 1999). In a random sample of 450 community college employees, convergent validity with organizational communication, participation, and emotional connection (affective commitment) was established (Worley et al., 2009). Internal reliability was also established where Cronbach's alpha was .93 and item-total correlations ranged from .70 to .84. The 8 item-SPOS was also used with a sample of 110 nurses in Iran with a lower but still acceptable reliability (α= .74) (Robaee et al., 2018).

The 8-item SPOS is originally based on a 7-point Likert scale with response options ranging from 0) strongly disagree to 6) strongly agree, with a total possible score 0 to 6

computed by finding the total average. Items 2, 3, 5, and 7 are reverse coded. Higher scores indicate more perceived organizational support. For this study, a 5-point Likert scale 0) strongly agree to 4) strongly disagree was used with a total possible score of 0 to 4. Scores were recoded to ensure higher scores were consistent with higher perceived support. Item examples are "My organization really cares about my well-being" and "My organization cares about my opinions". Total score of the SPOS as a continuous variable was used for analysis. Cronbach's alpha for the current study is .93

Coping. Lazarus and Folkman's (1980, 1985) conceptualization of the coping process informed the development of the Ways of Coping Checklist (WCCL) (1980) and the Ways of Coping Questionnaire (1985). To reduce the length of the WCCL and assess coping more specifically, the WCCL-R was developed (Vitaliano et al., 1985). The first validation study of the WCCL-R demonstrated generalizability, predictive validity, and explanation of variance in psychological distress with varying populations of age/ gender make ups: psychiatric outpatients (N=83), spouses of persons with dementia (N=62), and medical school students (N=425) (Vitaliano et al., 1985). The revised scale had a "mean alpha (across the four common scales)" of .82 and higher alphas on all subscales (PF, WT, AV, SS, BS) ranging .72-.89 for medical students, .73-.90 for spouses, and .76-.88 for psychiatric outpatients (Vitaliano et al., 1985, p.13). Less than ideal reliabilities were from subscales with less items. The additional strategies, CYB and BO, were examined in a sample of 79 caregiver and recipient dyads in a longitudinal study assessing distress and expressed emotion (Vitaliano et al., 1989; Vitaliano et al., 1991). CYB and BO had Cronbach's alpha values of .80 and .88, respectively (Vitaliano et al., 1989). The 42-item WCCL-R was recently used in a sample of 450 Italian nurses to assess for a

multidimensional model of work and individual characteristics predicting psychophysical health (Vallone et al., 2020). Reliabilities were provided on five of the subscales: Problem-focused (α = .88), Seek Advice (α = .75), Self-blame (α = .78), Wishful Thinking (α = .85) and Escape/Avoidance (α = .74), however, CYB and REL were not used in the study (Vallone et al., 2020). There is an absence of studies focusing on the structure and validity of the WCCL-R within the last 20 years. However, the 42-item WCCL-R was examined in a large sample of 1,314 Asian employees from Indonesia, Singapore, Sri Lanka, and Taiwan which confirmed the same five-factor structure obtained by Vitaliano and colleagues (1985) (Sawang et al., 2010). To date, there are no known psychometric properties published for the added REL subscale.

The WCCL-R includes 57-items assessed on a 4- point Likert-type scale ranging from 0) never used to 3) regularly used, and the measure focuses on a single stressor rather than a lifetime pattern of coping. Total score, calculated by summing all items, ranges from 0-171. The WCCL-R has eight subscales to reflect types of coping strategies. *Problem-focused* (PF); range of scores 0-45; e.g. "Bargained or compromised to get something positive from the situation"). *Seeks Social Support* (SS; range of scores 0-18; e.g. "Asked someone I respected for advice and followed it"). *Blamed- self* (BS; range of scores 0-9; e.g. "Criticized or lectured yourself"). *Wishful Thinking* (WT; range of scores 0-24; e.g. "Hoped a miracle would happen"). *Avoidance* (AV; range of scores 0-30; e.g. "Went on as if nothing had happened"). *Blamed- others* (BO; range of scores 0-18; e.g. "Got mad at people or things that caused the problem"). C*ount Your Blessings* (CYB; range of scores 0-18; .e.g. "Focused on the good things in my life"), and *Religiosity* (REL; range of scores 0-9; e.g. "Relied on my faith to get me through").

Two scores, raw and relative scores can be calculated using WCCL-R guidelines (Vitaliano et al., 1987). Raw scores refer to the frequency of a strategy used, whereas relative scores indicate the "proportion of total coping efforts" (Vitaliano et al., 1987, p. 2). Raw scores are determined by summing the integer value of each subscale for a total score. To calculate a relative score, first the mean item score (ME) for each scale is obtained. To obtain ME, raw scores are divided by the number of items on that scale (PF= 15, SS= 6, BS= 3, WT= 8, AV= 10, BO= 6, CYB= 6, and REL= 3) resulting in a total range of score values of 0-3. Once ME scores are computed, the ME score per scale is divided by the sum of ME scores for each of the scales. The relative scores are expressed as a percentage adding up to 100. For example,

$$SS\ \%100 = \frac{SS}{ME\ PF+ME\ WT+ME\ SS+ME\ BS+ME\ AV+ME\ BO+ME\ CYB+ME\ REL}$$

This study collapsed the summed raw scores of coping subscales into problem-focused (PF, SS) and emotion-focused (WT, AV, BS, BO, CYB, REL) subscales. The purpose of creating distinct coping strategies was to reduce the number of variables and maintain language consistency in how coping strategies are discussed in relation to moral distress. This has been done in previous studies using two different approaches. Jorgensen and colleagues (2009) used the original factor structure of the WCCL-R and summed the coping subscales into problem-focused (PF) or emotion-focused (WT, AV, SS, BS) in their study of undergraduate women's consistency of coping with stressful events. However, Vitaliano and colleagues (1991) used principal- component analysis to reduce the number of variables used in their study of caregiver burden and distress. Their component structures included more than the coping variables included in the WWCL-R,

but emotion-focused items (BO), count your blessings (CYB), and problem-focused strategies (PF and SS) were identified as distinct constructs (Vitaliano et al., 1991). Both methods led to a similar reclassification of structures.

The current study performed a principal component analysis and results reflected the structure found by Vitaliano and colleagues (1991). Religion (REL) and CYB did not load well on either the problem-focused coping or emotion-focused coping factor, however. As the nature of the items included on both strategies are consistent with the goal of emotion-focused strategies, they were considered emotion- focused strategies. Given the study's small sample size and high residuals on model fit, there was caution in interpreting these loadings. Ultimately the subscales were summed into problem focused coping (PF, SS) and emotion-focused (WT, AV, BS, BO, CYB, REL). Cronbach's alpha was measured at .90 for the overall scale, .84 for PFC subscale, and .89 for EFC subscale.

Control Variables

Demographic Characteristics. The study includes several measures for personal and professional characteristics. These characteristics are age (in years), nursing experience (in years), and whether one works in the intensive care unit (ICU) (ICU/ non-ICU). Additional demographic factors are ethnicity (African- American/Black, Hispanic Non-white, Asian, Caucasian/White, Hispanic/White, Native American or Alaskan Native, Native Hawaiian or other Pacific Islander, Other) and gender (female, male). Due to a lack of diversity in the sample, ethnicity (white/ non-white) nor gender (female/ male) were included as controls.

Organizational controls. Additional control variables included measures of ethical climate and empowerment.

Ethical climate. Hospital ethical climate is the hospital's practices and policies around ethical decision-making and the degree to which employees are a part of that process and/or are engaged in ethical reflection (Brown, 1990). One way to measure a hospital's ethical climate is through the nurse's perspective (Olson, 1998). Perceived ethical climate has been associated with moral distress (Lamiani et al., 2017), and thus controlling for the potential explanatory value of perceived ethical climate with respect to perceived organizational support during the pandemic is needed.

The Hospital Ethical Climate Survey (HECS) was originally developed by Olson (1998) to "measure ethical climate in hospitals as perceived by RNs" (p. 348). Research has shown ethical climates have been significantly and negatively associated with moral distress (Atabay et al., 2014; Blackhall & Hamric, 2007; Pauly et al., 2009; Sauerland et al., 2014). The HECS was validated with a sample of 360 registered nurses at two acute care hospitals in the Midwest (Olson, 1998). Construct, convergent, and discriminant validity was found with an internal consistency reliability of $\alpha = .91$ (Olson, 1998). While five factors emerged from a confirmatory factor analysis using the HECS (relationships with peers, patients, managers, the hospital, and physicians) the factors are highly correlated and can be used to organize the items but should not be interpreted as distinct constructs (Olson, 1998). Therefore, the scale should be interpreted as unidimensional. The high reliability of the HECS was also found in Sauerland and colleagues' (2015)

moral distress study of 225 nurses in an academic medical center in the southwest (α= .95).

The 26-item HECS uses a 5- point Likert-type scale, 1= almost never true and 5= almost always true, where higher scores indicate a more positive perception of ethical climate. HECS was used as a continuous variable for the total score, computed by finding an average of items with a possible range from 1- 5. Item examples are "Hospital policies help me" and "Conflict dealt with openly". Cronbach's alpha for the current study is .95.

Empowerment. Drawing from conceptualizations of empowerment by Conger and Kanungo (1988) and Thomas and Velthouse (1990), Spretizer (1995) defined psychological empowerment as a "motivational construct manifested in four cognitions: meaning, competence, self-determination, and impact…that combine additively to create an overall construct" (p.1444). Recent studies have identified empowerment as a predictor of moral distress using Spreitzer's (1995) conceptualization and instrument, the Psychological Empowerment Instrument (PEI) (Browning, 2013; Wolcott Altaker et al., 2018). The PEI was originally developed by Spreitzer (1995) with one sample of 393 managers randomly selected from an industrial organization (mostly male) and a second stratified random sample of 128 non-manager employees (mostly female). Initial evidence of convergent and discriminant validity of the measurement using a four-dimensional measure was established with a Cronbach's alpha .72 and .62 of the two samples, respectively. Adequate test-retest reliability of the dimensions also supports internal consistency (Spreitzer, 1995).

The PEI includes four subscales of psychological empowerment: 1) meaning, 2) competence, 3) self-determination, and 4) impact, measured on a 7-point Likert-type scale from 1= very strongly disagree and 7= very strongly agree. For this study, a 5-point Likert scale was used ranging from 1) strongly disagree to 5) strongly agree and values were transformed and coded to reflect the original 7-point Likert structure following recommendations by Dawes (2007) and IBM SPSS (2020) algorithm. Item examples are "I am self-assured about my capabilities to perform my work activities" and "I have significant autonomy in determining how I do my job". The measurement was used as a continuous variable for its total score. Total and subscale PEI scores can be averaged for scores ranging from one to seven, where higher scores are indicative of higher psychological empowerment. Cronbach's alpha was measured at .87.

Analytic Plan

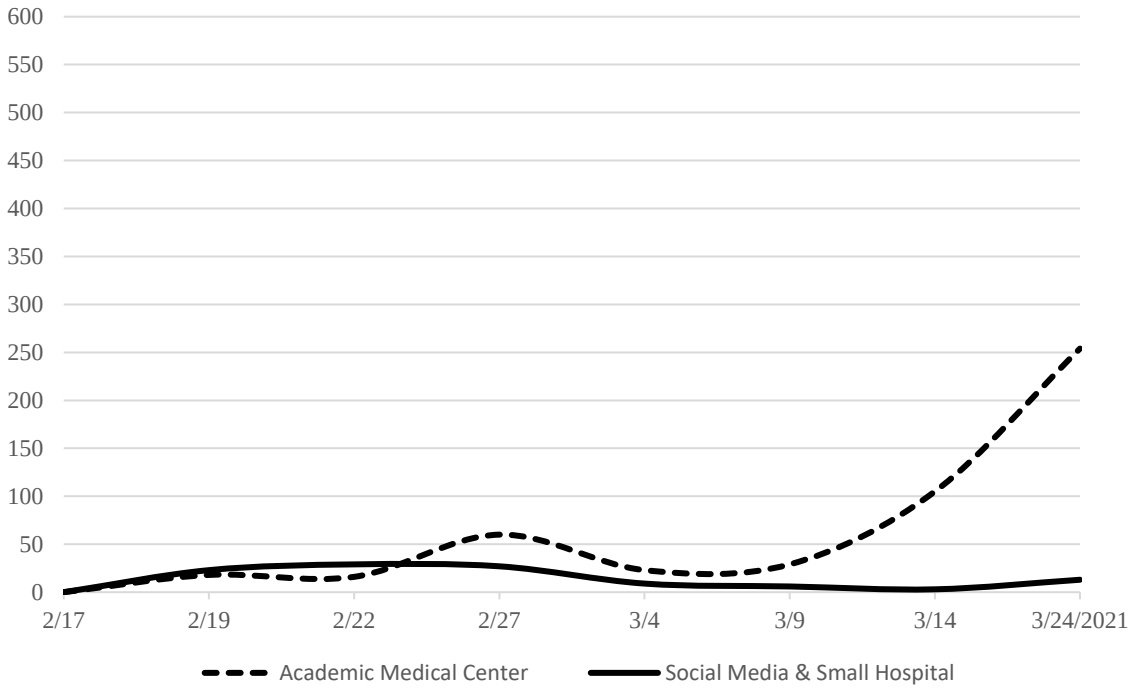
Missingness analysis was conducted and determined data to be missing at random (Garson, 2015; Mertler & Vannatta Reinhart, 2017). Data screening led to the elimination of 12 outlier cases. No substantial violations of other assumptions including homoscedasticity, collinearity, and residuals were observed.

All statistical analyses were conducted using the computer statistics package SPSS (IBM, 2021). Descriptive statistics was used to analyze scores for main variables providing means and standard deviations. Independent *t* tests looked at differences in groups with respect to moral distress. To address the primary aim of this study and test hypotheses, bivariate correlations and hierarchical regression analysis was conducted. Regression analyses adjusted for covariates (age in years, ICU/ non-ICU work setting, HECS). A

final trimmed model was determined by removing non-significant covariates (years of experience and PEI) one at a time resulting in a final parsimonious model.

Figure 3

Cumulative Responses by Day and Mode of Recruitment



Adapted from: Dillman DA, Smyth JD, Christian LM. Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method. 3rd ed. Hoboken, NJ: JohnWiley & Sons; 2009.

Originally from *Determining whether research is interdisciplinary: An analysis of new indicators* (Technical Report 13-049), by M.M. Millar, 2013, Pullman: Washington State University, Social and Economic Sciences Research Center.

CH 4 RESULTS

This chapter provides a description of the study's analysis results. Descriptive results for all variables are presented first followed by the results of the regression analysis.

Descriptive Statistics

Sociodemographic Characteristics

The sociodemographic characteristics of participants can be seen in Table 3 with descriptive statistics of all scales and subscales summarized in Table 4.[3] The sample was mostly White (95.4%), female (92.2%) with a baccalaureate degree (72.8%). Most participants were between 25 and 34 years old (33.2%) with two to five years of nursing experience (30.4%). Participants mostly worked full time (91.9%) in Central Kentucky (94.6%) with adult populations (83.3%) in non-ICU settings (67.5%). The top three work settings were 1) other non-intensive care unit settings (e.g., psychiatry, procedural, OB) (21.7%), 2) pulmonary intensive care units (19.5%), and 3) medical surgical (14.7%). Frequencies for all work settings can be seen in Table 5. A list of non- ICU setting types can be found in Appendix B1. The sample reflects the population of

[3] Descriptive statistics will vary depending on the analysis. The regression analysis had an overall smaller sample size. The regression sample had comparable numbers with the general sample demographics except for population, education, residency status, orientee or preceptee status, and setting. Those demographic characteristics had fewer frequencies, but valid percentages were similar.

nurses in the Commonwealth of Kentucky who are also predominately female (90.9%), White (92.6%), with a baccalaureate (37.9%) or associate degree (38%) in nursing (Kentucky Board of nursing, 2021b-d). Notably, the sample included twice as many nurses with a Bachelor of Science in Nursing (n= 396), possibly attributed to Kentucky's nursing distribution. Over half of Kentucky RNs hold primary positions as a staff nurse (54.8%) and the top three practice settings are 1) medical surgical (13.2%), 2) operating room or post-anesthesia care unit (7.7%), and 3) emergency room or urgent care (6.1%) (Kentucky Board of Nursing, 2021e, f).

Moral Distress

Total moral distress scores ranged from 0 to 389 (M = 138.07, SD = 77.45, n= 271). The top five most frequently occurring and distressing sources of moral distress were found for the following situations: 1) "follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient" (M = 8.48, SD = 5.72), 2) "experience compromised patient care due to lack of resources/ equipment/ bed capacity" (M = 8.27, SD = 5.88), 3) "experience lack of administrative action or support for a problem that is compromising patient care" (M = 7.98, SD = 6.12), 4) "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" (M = 7.83, SD = 6.04), and 5) "be required to care for more patients than I can safely care for" (M = 7.77, SD = 6.05) (n= 395). All sources of distress and their frequencies can be seen in Appendix B2.

Coping

Examining coping by its raw score (the average of frequency of use), the raw sum averaged 94.42 (*SD* = 19.75) and ranged from 22 to 142. Using the relative score (proportion of use), PF (*M* = .19, *SD* = .06), CYB (*M* = .19, *SD* = .06), and SS (*M* = .18, *SD* = .07) were the three most frequently used coping strategies. Table 6 includes all strategies with means and standard deviations of raw and relative scores.

Organizational Support

Two instruments were used to measure organizational support: SPOS (*M* = 1.60, *SD* = 1.01) ranged 0 to 4 and COVID-OS (*M* = 4.13, *SD* = 1.00) ranged 2 to 7. Means and standard deviations for the three categories of COVID-OS are: work support (*M* = 5.32, *SD* = 1.24), risk support (*M* = 3.12, *SD* = 1.30), and personal support (*M* = 3.88, *SD* = 1.58). Nurse participants reported the highest support with "receiving up-to-date information and communication from the healthcare system" (*M* = 10.30, *SD* = 1.27). Table 7 summarizes all COVID-OS items.

EI

Total EI scores averaged 5.44 (*SD* = .93) and ranged from 1-7. Means and standard deviations for the four subscales of EI were as follows: SEA (*M* = 5.55, *SD* = 1.20), OEA (*M* = 5.64, *SD* = 1.13), UOE (*M* = 5.42, *SD* = 1.28), and ROE (*M* = 5.14, *SD* = 1.42).

Bivariate Correlations

Independent samples *t*-tests showed statistically significant differences in moral distress scores for some nurse groups, see Table 8. Nurses with a BSN ($t(393)= 3.35$), those working in ICU settings ($t(393)= -3.83$), and those who are currently working with COVID patients ($t(281)= 3.22$) or had worked with COVID patients ($t(281)= 2.55$) had significantly higher moral distress scores than their counterparts who did not hold the degree. When examining the most frequently and intensely experienced source of distress by setting (ICU vs non-ICU), for non-ICU nurses the source was "experience compromised patient care due to lack of resources/ equipment/ bed capacity" ($M = 8.07$, $SD = 5.92$), and for ICU nurses it was "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" ($M = 12.25$, $SD = 4.53$). See Appendix B3 for sources of distress by setting.

Coping

The strongest bivariate correlation with the dependent variable was with AV (r (277) = .43, $p \leq .001$), where higher frequency of use of avoidant strategies was significantly associated with higher moral distress scores. Subscales CYB (r (277) = .11, $p = .080$), REL (r (277) = -.01, $p = .853$), and SS were non- significant (r (277) = .09, $p = .127$). There were slight differences in the total sample compared with the regression sample. The bivariate relationships between coping subscales and moral distress for the total sample (vs the regression sample with a smaller sample size) can be seen in Table 9. In the larger sample, social support was also significantly and positively related with moral distress (r (353) = .12, $p \leq .05$).

Both the emotion-focused subscale [BS, WT, AV, BO, CYB, and REL; $r(269) = .37$, $p \leq .001$] and the problem-focused subscale [PF and SS; $r(269) = .19$, $p \leq .001$] were positively correlated with moral distress.[4]

Organizational Support

Higher organizational support during COVID had a moderate negative association with moral distress scores ($r(269) = -.51$, $p \leq .001$).[5] SPOS also had a moderate negative correlation with moral distress ($r(269) = -.58$, $p \leq .001$).[6] In each case, as perception of organizational support increased, moral distress decreased.

EI

EI had a small significant negative relationship with moral distress ($r(269) = -.15$, $p \leq .01$); as EI scores increased, moral distress decreased.[7]

Hypotheses Testing

Hierarchical linear multiple regression was used to examine the individual (WCCL-R and WLEIS) and environmental measures (COVID-OS and POS) as predictors of moral distress (MMDHP) (see Figure 2 conceptual model), after controlling for the influence of age, ICU setting, and hospital ethical climate (HECS). Due to missing data on some study variables and removal of outliers, the regression sample consisted of 271 cases. Table 10 provides the descriptive statistics and bivariate correlations for the regression

[4] No meaningful differences between the total sample and regression sample.

[5] No meaningful differences between the total sample and regression sample.

[6] No meaningful differences between the total sample and regression sample.

[7] No meaningful differences between samples.

analysis. Control variables age, ICU setting, and HECS, were entered at Step 1, explaining 22%, F (3, 267) = 24.96, $p \leq .001$) of the variance in moral distress. After entry of EFC, PFC, WLEIS, COVID-OS, and POS scales at Step 2, the total variance explained by the model was 44%, F (5, 262) = 26.19, $p \leq .001$. Controlling for age, ICU setting, and HECS the inclusion of the coping, EI, and organizational support measures explained an additional 23% of the variance in moral distress R squared change = .23, F change (5, 262) = 21.25, $p \leq .001$. See Table 11 for regression analysis coefficients and model summary statistics.

In the second step, all predictor variables were statistically significant except for EI (b*= .03, p = .60), with SPOS being the strongest predictor in the model (b*= -.35, $p \leq .001$). Moral distress decreased 26.78 points for every 1- point increase in SPOS. EFC (b* = .16, $p \leq .01$), PFC (b*= .16, $p \leq .01$), and COVID-OS (b* = -.16, $p \leq .05$) all had similar independent effects. For every 1- point increase in COVID-OS, moral distress decreased by 12.28 points. In the full model, the control variables were no longer significant: ICU setting (b* = .08, p = .12), Age (b* = -.08, p = .11), and HECS (b* = -.12, p = .06).

Summary of Hypothesis Testing

The study examined four hypotheses related to variance in moral distress. The outcome of this analysis is as follows:

H_1: EI will be negatively associated with moral distress. This hypothesis was not supported as EI was not a significant predictor of moral distress in the regression model (b*= .03, p = .60).

H_2: Emotion-focused coping strategies will be positively associated with moral distress. This hypothesis was supported; EFC independently predicted moral distress relationship ($b^* = .16$, $p \leq .01$).

H_3: Problem-focused coping will be negatively associated with moral distress. This hypothesis was not supported as PFC had a positive relationship with moral distress ($b^* = .16$, $p \leq .01$).

H_4: Higher quality of hospital communication and support will be negatively associated with moral distress. This hypothesis was supported where both SPOS ($b^* = -.35$, $p \leq .001$) and COVID-OS ($b^* = -.16$, $p \leq .05$) had significant negative effects on moral distress.

Summary of Results

In line with the hypothesized relationships shown in Figure 2, organizational support was negatively related to moral distress and emotion-focused coping was positively related. However, in contrast with the hypotheses, problem-focused coping was also positively related to moral distress, and EI was not a significant predictor. Figure 4 provides aAn updated model reflecting these findings. Notably, bivariate relationships resulted in EI having a negative relationship with moral distress, however, when EI was entered in the regression analysis with other predictors, EI was not a significant contributor to the model.

Table 3

Sociodemographic Characteristics of Participants

Characteristic	n	%
Gender (n= 282)		
Female	260	92.2
Male	19	6.7
Other	3	1.1
Ethnicity (n= 218)		
White	208	95.4
Asian	4	1.8
Black	3	1.4
American Indian/ Alaskan	2	.9
Native Hawaiian/ Pacific Islander	1	.5
Age (n= 280)		
18- 24	17	6.1
25- 34	93	33.2
35- 44	80	28.6
45- 54	58	20.7
55- 64	31	11.1
65+	1	.4

Table 3 (continued)

Sociodemographic Characteristics of Participants

Characteristic	n	%
Education (n=544)		
Diploma	3	.6
AD	80	14.7
BSN	396	72.8
MSN	48	8.8
PHD	1	.2
DNP	7	1.3
Other	9	1.7
Years of nursing experience (n= 283)		
0-1	24	8.5
2- 5	86	30.4
6- 9	57	20.1
10- 14	35	12.4
15- 19	24	8.5
20+	57	20.1

Table 3 (continued)

Sociodemographic Characteristics of Participants

Characteristic	n	%
Time employed at hospital inpatient facility (n= 283)		
Under 1 year	7	2.5
1- 2 years	5	1.8
3- 5 years	13	4.6
6- 8 years	6	2.1
9- 11 years	27	9.5
12- 14 years	140	49.5
15- 17 years	47	16.6
18- 20 years	36	12.7
21+ years	2	.7
Primary population (n= 544)		
Adults	453	83.3
Pediatrics	46	8.5
Neonatal	30	5.5
Combination of adults, pediatrics, & neonatal	15	2.8
Kentucky region (n= 279)		
Central	264	94.6
Eastern	8	2.9
Northern	4	1.4

Table 3 (continued)

Sociodemographic Characteristics of Participants

Characteristic	n	%
Western	2	.7
Southern	1	.4
Currently in residency program (n= 544)		
Yes	41	7.5
No	503	92.5
Currently an orientee or preceptee (n= 544)		
Yes	45	8.3
No	499	91.7
Currently work with patients with COVID-19 (n= 283)		
Yes	154	54.4
No	129	45.6
Have worked in the past with patients with COVID-19 (n= 283)		
Yes	215	76.0
No	68	24.0

Table 4

Means and Standard Deviations of Scores on All Scales

Scales	*M*	*SD*
MMDHP Total Score (n= 389)	137.65	79.06
Frequency	43.21	21.02
Intensity	67.91	27.01
WLEIS Total Score (n= 330)	5.47	.84
SEA	5.59	1.13
OEA	5.67	1.06
UOE	5.46	1.23
ROE	5.17	1.38
COVID-OS Total Score (n= 321)	4.13	1.00
Work support (n= 322)	5.32	1.22
Risk support (n= 323)	3.11	1.30
Personal support (n= 324)	3.88	1.57
SPOS Total Score (n= 316)	1.61	1.01
PFC Total Score (n= 355)	39.82	8.11
EFC Total Score (n= 355)	54.57	15.34
HECS Total Score (n=294)	3.33	.78
PEI Total Score (n= 279)	5.28	.95

Note. MMDHP= measurement of moral distress for healthcare professionals; WLEIS= Wong and Law emotional intelligence scale; SEA= self-emotions appraisal; ROE= regulation of emotion; UOE= use of emotion; OEA= others-emotions appraisal; COVID-OS= COVID organizational support; SPOS= perceived organizational support; PFC= problem-focused coping; PF= problem-focused; SS= seeks social support; EFC=

emotion-focused coping; BS= blamed self; WT= wishful thinking; AV= avoidance; BO= blamed others; CYB= count your blessings; REL= religiosity

Table 5

Frequencies for Hospital Setting Type (N=544)

Setting	n	%
Other Non-ICU	118	21.7
Pulmonary ICU	106	19.5
Medical Surgical	80	14.7
Pediatrics	46	8.5
Oncology	40	7.4
Perioperative	38	7.0
Emergency Department	30	5.5
Cardiac ICU	29	5.3
Other ICU	23	4.2
Trauma ICU	13	2.4
Labor & Delivery	10	1.8
Trauma	5	.9
Neonatal ICU	6	1.1

Table 6

Means and Standard Deviations of All Coping (WCCL-R) Subscale Raw and Relative Scores (n= 355)

Subscale	Raw		Relative	
	M	*SD*	*M*	*SD*
PF	28.69	6.07	.19	.06
SS	11.12	3.00	.18	.07
BS	4.41	2.14	.13	.06
WT	13.10	5.00	.15	.05
AV	14.48	5.70	.13	.05
BO	6.74	3.47	.10	.05
CYB	11.98	3.26	.19	.06
REL	3.86	2.67	.12	.09

Note. PF= problem-focused; SS= seeks social support; BS= blamed self; WT= wishful thinking; AV= avoidance; BO= blamed others; CYB= count your blessings; REL= religiosity

Table 7

Summary Statistics for All Items from COVID-OS

Items	*M*	*SD*
I have access to appropriate personal protective equipment (PPE) (e.g., hand gloves or face masks) (n=323)	5.90	1.52
I am exposed to the risk of getting COVID-19 at work and taking the virus home to my family (n= 324)	2.14	1.56
I can get tested for COVID-19 rapidly if I need to (n= 324)	5.86	1.66
I am uncertain my organization would take care of my own needs (e.g. personal and family) if I get COVID-19 (n= 324)	2.75	2.15
People in my organization have access to childcare during increased work hours and school closures (n= 324)	3.90	1.82
As work demands increase, I can get support for other personal and family needs (e.g. food, lodging, transportation) (n=324)	3.85	1.96
My organization can provide me competent medical care if I am deployed to a new area (e.g. from a non-ICU to ICU) (n=323)	4.21	1.81
I feel I lack access to up-to-date information and communication from the healthcare system (n= 323)	4.45	1.91

Table 8

Results of Independent t Tests Examining Moral Distress (MMDHP) Differences in Nurse Groups

Group	n	*M*	*SD*	T	*p*	Cohen's *d*
ICU	128	159.55	75.09	-3.83	.000	-.41
Non-ICU	267	127.44	79.27			
In residency	29	131.48	65.05	-.45	.654	-.09
Not in residency	366	138.35	80.36			
Currently work with patients with COVID-19	154	150.42	76.38	3.22	.001	.38
Not currently working with patients with COVID-19	129	120.99	76.98			
Worked with patients with COVID-19 in past	215	143.59	78.65	2.55	.011	.36
Did not work with patients with COVID-19 in past	68	116.19	72.22			
BSN	283	146.16	76.09	3.35	.001	.37
Other education	112	116.85	83.56			
White	208	142.62	81.04	-1.46	.145	-.47
Non-White	10	180.80	70.71			
Female	260	137.50	77.31	-.48	.630	-.11
Other	22	129.14	87.37			
Central Kentucky	264	135.71	77.61	-.43	.665	-.12
Outside central Kentucky	15	144.67	80.63			

Table 9

Correlations Among Coping (WCCL-R) Subscales and Moral Distress (MMDHP) (n= 355)

Variable	1	2	3	4	5	6	7	8	9
1. PF									
2. SS	.55***								
3. BS	.30***	.15**							
4. WT	.23***	.09	.54***						
5. AV	.27***	.03	.54***	.67***					
6. BO	.25***	.25***	.47***	.49***	.50***				
7. CYB	.49***	.20***	.14**	.30***	.18**	.18**			
8. REL	.16**	.12*	.15**	.18***	.05	.05	.34***		
9. MMDHP	.23***	.12*	.31***	.38***	.45***	.34***	.05	-.01	

Note. MMDHP= measurement of moral distress for healthcare professionals; PF= problem-focused; SS= seeks social support; BS= blamed self; WT= wishful thinking; AV= avoidance; BO= blamed others; CYB= count your blessings; REL= religiosity

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$

Table 10

Descriptive Statistics and Correlations for Regression Variables (n= 271)

Variable	1	2	3	4	5	6	7	8	*M*	*SD*
1. MD									138.07	77.45
2. ICU[a]	.21***								.30	.46
3. HECS	-.39***	.00							3.35	.77
4. Age	-.21***	-.30***	.04						2.96	1.12
5. EI	-.15**	-.09	.28***	.14*					5.47	.83
6. COS	-.51***	-.20***	.51***	.23***	.21***				4.15	1.00
7. SPOS	-.58***	-.26***	.55***	.21***	.21***	.60***			1.59	1.01
8. PFC	.19***	-.06	.12*	.02	.11*	-.03	.03		40.06	7.61
9. EFC	.37***	-.04	-.20***	-.01	-.25***	-.31***	-.28***	.35***	54.53	15.61

Note. MD= measurement of moral distress for healthcare professionals; PEI= psychological empowerment instrument; HECS= hospital ethical climate survey; EI= Wong and Law emotional intelligence scale; COS= COVID organizational support; SPOS= perceived organizational support; PFC= problem-focused coping; EFC= emotion focused coping.

[a] Non-ICU Reference Group

*p <.05. **p< .01. ***p< .001

Table 11

Hierarchical Regression Results for Moral Distress (n= 271)

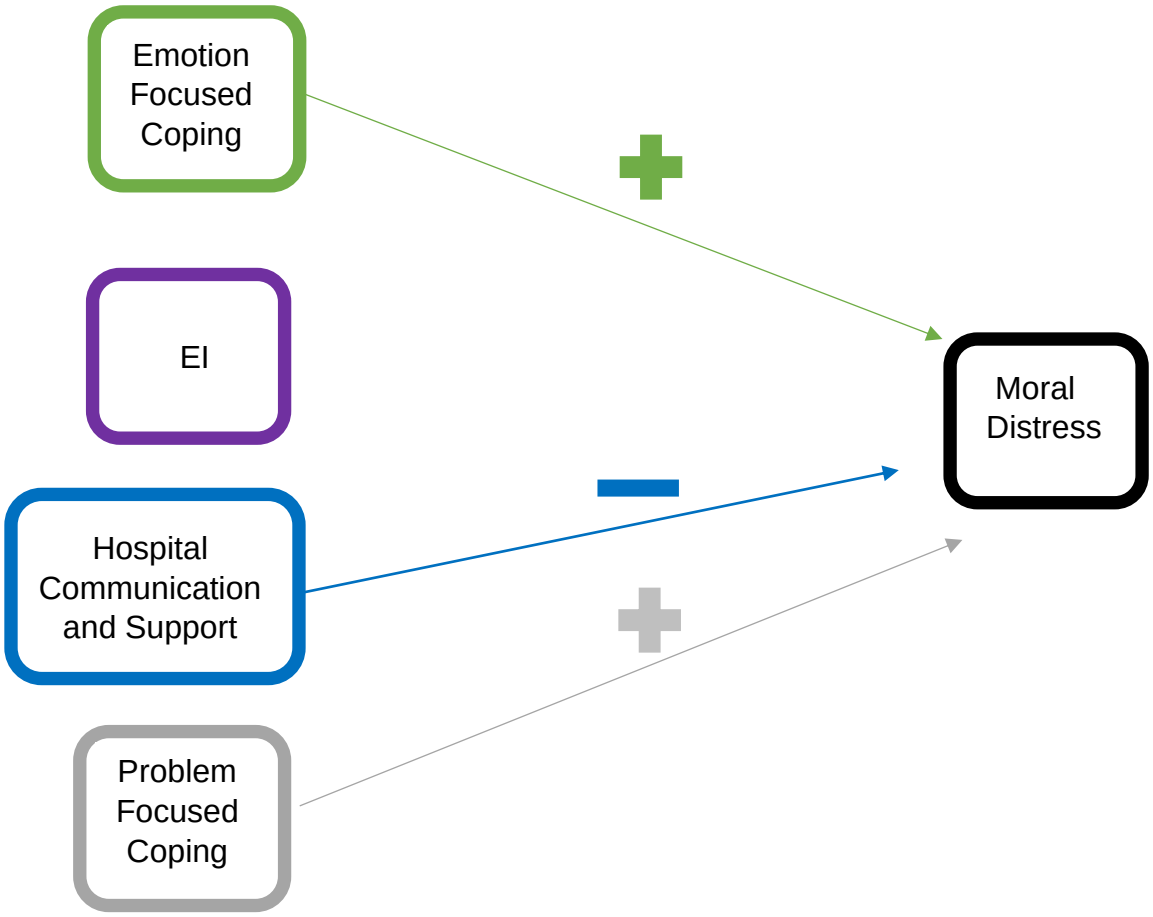
Variable	*B*	*SE B*	β	*t*	*p*	95% Cl
Step 1						
Constant	291.20	22.20		13.15	.000	[247.48, 334.91]
ICU[a]	27.55	9.55	.16	2.89	.004	[8.76, 46.35]
HECS	-39.06	5.44	-.39	-7.18	.000	[-49.77, -28.35]
Age	-10.28	3.92	-.15	-2.62	.009	[-18.00, -2.56]
R^2	.22				.000	
Step 2						
Constant	162.73	37.41		4.35	.000	[89.06, 236.40]
ICU[a]	13.51	8.54	.08	1.58	.115	[-3.30, 30.31]
HECS	-11.56	6.06	-.12	-1.91	.06	[-23.49, .38]
Age	-5.56	3.43	-.08	-1.62	.107	[-12.32, 1.20]
WLEIS	2.47	4.67	.03	.53	.598	[-6.74, 11.67]
COVIDOS	-12.28	4.83	-.16	-2.55	.011	[-21.79, -2.78]
SPOS	-26.78	4.96	-.35	-5.40	.000	[-36.54, -17.02]
PFC	1.61	.52	.16	3.09	.002	[.59, 2.64]
EFC	.77	.27	.16	2.83	.005	[.24, 1.31]
R^2	.44				.000	
ΔR^2	.23					

Note. CI= confidence interval; *LL*= lower limit; *UL*= upper limit; ICU= intensive care unit; HECS= hospital ethical climate survey; WLEIS= Wong and Law emotional intelligence scale; COVID-OS= COVID organizational support; SPOS= perceived organizational support; PFC= problem focused coping; EFC= emotion focused coping

[a] Non-ICU Reference Group

Figure 4

Updated Model Reflecting the Results of Regression Analysis of the Relationships Among EI, Organizational Support, and Coping with Moral Distress



CH 5 DISCUSSION

The Study

The COVID-19 pandemic created seismic changes in everyday lives and contributed to over 30 million positive COVID-19 cases and to-date has caused the deaths of more than 500,000 individuals in the US.[8] In Kentucky, by April 2021, over 400,000 individuals had tested positive and there were over 6,000 deaths attributed to the disease (Cabinet for Health and Family Services, 2021). The staggering numbers of patients needing medical care overwhelmed hospitals, exhausting resources and staff (McLernon, 2020). Kentucky news featured nurses sharing their fear, exhaustion, and frustration at the lack of reliable testing, PPE, restrictions, and their struggles to balance risk to self and family for the sake of providing patient care (Kenning, 2020). These hospital nurses' feelings and experiences were not unique to Kentucky, nursing shortages, hospital visitor restrictions, and lack of hospital equipment and PPE affected many nurses throughout the United States and the world (Arnetz, 2020; Leshner, 2020; McLernon, 2020; Zhang et al., 2020). The work stress, insufficient resources, and risks associated with caring for patients with an unknown airborne illness presents ethical challenges (Ulrich, 2014) and contributes to worse mental health for hospital nurses, as seen in the current pandemic as well as previous epidemics (Arnetz, 2020; Marjanovic et al. 2007; Tolomiczenko et al., 2005). The constrictions nurses faced to providing quality care due to this difficult environment also raised concerns about moral distress (Cacchione, 2020), a consequence

[8] According to the Centers for Disease Control and Prevention (2020, April 8) *Covid Data Tracker* https://covid.cdc.gov/covid-data-tracker/#datatracker-home

of the inability to provide adequate or best patient care due to internal and/or external constraints (Jameton, 1984).

While much is known about what contributes to moral distress, including factors at the macro (staff shortage, lack of administrative action, insufficient resources), mezzo (excessive documentation, nature of care, and power hierarchies), and micro levels (feelings of powerlessness, nonbeneficial care, inadequate informed consent) (Epstein et al., 2019; Hamric, 2012), our understanding of moral distress as a process and an experience continues to evolve. It has been argued that early moral distress theories present the experience of moral distress too simplistically and approaching the study of moral distress through a framework that allows for more complexity is needed and beneficial (Wilson, 2018).

The TTSC offers advantages to the study of moral distress as it centers on the individual, environmental, and coping processes that occur when demands of an individual overwhelm their resources (Lazarus & Folkman, 1984). Furthermore, coping behaviors were the central component to Wilkinson's (1988) study and several studies have utilized a coping lens to qualitatively described nurses' response to moral distress (Bruce et al., 2015; Deady & McCarthy, 2010; Lievrouw et al., 2016; Wilson et al., 2013) with one quantitative dissertation (Zvotsky, 2015) also examining the relationship. There is also a need to further explore what individual characteristics may affect the experience of moral distress (Lamiani et al., 2017), such as with EI (Lewis, 2009). Furthermore, while many environmental factors have been considered as contributing factors to moral distress (e.g., hospital ethical climate, work setting, insufficient resources), measuring the impact of

organizational support as understood from organizational commitment theories (Mayer & Allen, 1991) has been limited (Robaee et al., 2018; Maningo-Salinas, 2010).

Findings

This pilot study explored the direct relationships among EI, organizational support, and coping behaviors as predictors of moral distress in a non-probability sample of Kentucky hospital nurses using the TTSC as the guiding theoretical framework. As this study took place during the COVID-19 pandemic, results are interpreted within the context of the pandemic, and how organizations communicated with and supported nurses during the COVID-19 pandemic was also assessed. Overall, moral distress scores tended to be higher with similar variation compared to previous studies using the MMDHP (Epstein et al., 2019; Latimer et al., 2020). The current study's average score was 137.65 compared to 126 (Latimer et al., 2020) and 112.3 in previous years (Epstein et al., 2019). Preliminary analysis showed significant differences in moral distress in certain nurse groups. Importantly, nurses who worked with patients with COVID-19 and in ICU settings had higher moral distress than those nurses who did not.

In addition to reporting higher levels of moral distress, ICU nurses also reported differences in the type of moral distress experienced. These differences may be due to "the nature of care" (Burston & Tuckett, 2012, p. 318) or patient-level causes (Epstein et al., 2019) that occur in the ICU. For ICU nurses in this study, the most frequently experienced and distressing situations were around providing intensive care interventions to patients who are not benefiting from treatment and having no one available to decide when to withdraw these interventions. In contrast, non-ICU nurses more frequently and intensely experienced a lack of administrative action to resolve problems (e.g., support in

dealing with difficult care scenarios and decision-making) and insufficient resources and staffing. These top sources of distress for both groups also ranked highly for all nurses in Epstein and colleagues' (2019) study. The ICU setting has often been associated with higher moral distress scores and is controlled for in predictive analysis (Epstein et al., 2019). Like in Epstein and colleagues' (2019) study, in the current study setting was no longer a significant predictor after incorporating other factors like hospital ethical climate.

Perceived organizational support had a strong negative association with moral distress, supporting the study's hypothesis. Both measurements of perceived organizational support, the SPOS and COVID-OS, were responsible for greater reductions in moral distress scores compared to other variables in the regression analysis. Overall, the current sample demonstrated nurses were receiving organizational support during COVID-19. While this may have been the case since the onset of the pandemic, it is possible this may be due to the fact that the present study surveyed the sample a year into the pandemic, thus giving organizations time to adjust and respond to conditions.

Nurse participants who felt and experienced the organization cared about, supported, and provided them with consistent resources and communication had lower overall moral distress. These findings provide new quantitative insight into the role of perceived organizational support as Robaee and colleagues (2018) found no association with moral distress and organizational support. Maningo- Salinas (2010) also examined perceived organizational support with moral distress and questioned the utility of the SPOS in nursing practice research. However, the current study’s findings reflect qualitative

research where nurses described less distress when organizations demonstrated caring and inclusive behaviors (McAndrew et al., 2016). The divergent findings from Robaee and colleagues (2018) may have simply been due to differences in non-probability samples, or there may have been cultural differences as Robaee and colleagues' (2018) conducted their study in Tehran, Iran. Further, differences may be reflective of data collection as nurse participants completed paper surveys during work shifts, which may have compromised feelings of confidentiality and honest responses. Differences may have also been an artifact of the COVID-19 pandemic when data collection for the present study occurred. The need to evaluate the quality of organizational support during the COVID-19 pandemic was the impetus for developing the COVID- OS (Zhang et al., 2020). Organizational support may have served more of an influential role during the COVID-19 pandemic (Marjanovic et al., 2007; Tolomiczenko, 2005).

The macro or system-level impact on moral distress is not surprising based on the conceptualization of moral distress and extant literature demonstrating how sources of distress may stem from institutional barriers (Epstein et al., 2019; Jameton, 1984; McAndrew et al., 2016). The TTSC offers an opportunity for the inclusion of not only the environmental factors, but personal characteristics involved when an individual copes with a stressor as well (Folkman & Lazarus, 1984). While we continue to expand our understanding of what system-level factors contribute to moral distress, exploring how personal characteristics influence this process is needed (Laimiani et al., 2017). EI has been theorized as a contributing factor to help nurses navigate morally distressing situations (Lewis, 2009), yet findings from the current study did not support the role of EI as a predictor of moral distress. While EI was not a significant predictor in the model, it

did have a significant negative bivariate relationships with moral distress – as emotional intelligence increased, moral distress decreased. Despite the absence of its significance in the regression model, further investigation is needed to better understand what role, if any, emotional intelligence might play in the process of coping with moral distress.

Limitations

This pilot study has several limitations worth mentioning. Measurement errors due to social desirability, recall bias, selection bias, and instrumentation all have the potential to affect the findings' reliability. Nurse participants' responses may have also been influenced by the Hawthorne effect. Nurses with higher moral distress and those nurses who strongly feel one way or another about their organization's ability to support them may have been more motivated to participate in the study to share their experiences. To date, the WCCL-R has not been examined with a social desirability construct like the HECS (Olson, 1998) and could benefit from further validity testing. Additionally, the COVID-OS is a new instrument with limited evidence concerning psychometric properties and although the reliability of the instrument was acceptable, it was lower than the other measurements used. It was not reported whether the original instrument was in English or another language as the primary study was conducted in Ecuador, Bolivia, and Peru. This could have had affected the instrument's reliability in this study (Zhang et al., 2020). Notably, as might be expected, the COVID-OS was highly correlated with the SPOS and HECS.

The generalizability of these findings is narrowed in population and situation. Compared to other degrees, there were almost twice as many nurses with BSN degrees, so the smaller number of observations in other education groups may also affect reliability of

the findings. Varying levels of education may also prompt different coping strategies (Sawang, 2010). As the current study mostly included nurses with bachelor's level degrees, other studies involving participants with more diverse education backgrounds may produce different findings. The participants in this study were also mostly white females, and the data was collected during the COVID-19 pandemic. While there can be implications for future directions, caution should be used when considering these findings in relation to different nurse populations across time.

While the nursing profession's national demographic is primarily White females (Smiley et al., 2018), there is a need to involve more representation from nurses of color in moral distress research. As the U.S. experienced the crisis of the COVID-19 pandemic, racial tensions and disparities also reached a critical point resulting in mass protests and igniting a nation-wide conversation calling for racial justice. Demands for racial justice within the nursing profession and healthcare system as a whole have also been made, where only a small percentage of nurses are African American (California Nurses Association/ National Nurses Organizing Committee, 2020; Smiley et al., 2018). Feelings of isolation and disempowerment are a part and a consequence of moral distress (Epistein & Delgado, 2010), and nurses of color may already feel an existing amount of disenfranchisement (California Nurses Association/ National Nurses Organizing Committee, 2020), thus exacerbating the impact of moral distress.

Studies examining ethnicity's influence on moral distress are limited, but one study found ethnicity significantly predicted moral distress in a sample of 238 nurses (82% White, 18% other) (Wolcott Altaker et al., 2018). A preliminary examination of data in the current study showed moral distress was higher for nurses of color, but the findings were

non-significant. Notably, in addition to the non-probability sample, this finding may be attributed to the fact that only ten nurses identified with an ethnicity other than White.

This pilot study also lacked representation from nurses outside Central Kentucky and nurses identifying as male or non-binary. Initially, hospital identification was determined based on large bed sizes to gain representation from varying regions of Kentucky. However, due to the ongoing COVID-19 pandemic and demands on nursing administrators, there was limited engagement from additional hospitals throughout the Commonwealth. The initial engagement period with stakeholders was made at one of the peak moments of the pandemic, which may have impacted the ability to generate a diverse sample from the Commonwealth.[9] Other hospitals were contacted as the cases trended downward in March 2021[10] but without success. Notably, a couple of the administrators initially contacted in November had left their agencies by March, which may be reflective of turnover concerns (McLernon, 2020). Similar to ethnicity, moral distress was higher for nurses outside Central Kentucky, but the difference was not significant.

There were only 23 nurses in the sample who identified as male or non-binary, and while moral distress was higher for females, this finding was non-significant. There are documented gender disparities, male primacy, and favorable opinions of male nurses in

[9] White House Coronavirus Task Force. (2020, Nov 01). *Kentucky State Report*. (Issue 20). https://dnks20yxl1c2u.cloudfront.net/381d0fbb43b611527a8f1c329301ef51fd555fcf/Kentucky-Nov-1-2020.pdf

[10] White House Coronavirus Task Force. (2021, Mar 05). *Kentucky State Report*. https://gscdn.govshare.site/381d0fbb43b611527a8f1c329301ef51fd555fcf/Kentucky-March-5-2021.pdf

nursing and nursing leadership (Newman et al., 2019). Gender differences in practice may have implications for future moral distress research. Persons in positions of power and leadership, like with physicians, have reported less moral distress compared to their RN counterparts (Epstein et al., 2019). These differences may be explained by having decision-making abilities and influence to change or remove barriers (Lievrouw et al., 2016). If male nurses hold more leadership positions or are perceived as dominant, this may influence how the moral distress event is addressed. Gender differences in moral distress was the focus of a small study of 31 nurse participants (24 females, 7 males) and no significant differences were found (O'Connell, 2015). The small sample size and analysis greatly limited the generalizability and reliability of those findings, and there is a need to explore potential gender differences in a larger representative sample.

Implications for Future Research

This study's results and the framework used to explore included variables offers some direction for future moral distress studies. While the current study focused on direct relationships, more complex analyses that support mediation and moderation testing would build upon these findings and further explicate the nature of EI relationships, organizational support, and coping with moral distress.

Despite the aforementioned limitations, this pilot study offers many strengths and potential contributions to next steps in moral distress research. Findings build upon existing evidence towards the impact of system-level factors, especially perceived organizational support, and provides new insight into personal characteristics involved in experiencing moral distress. This pilot study also emphasizes the importance of assessing and addressing moral distress during a national health crisis.

Emotional Intelligence

Moral distress and Emotional Intelligence

The absence of EIs ability to predict moral distress in the multivariate analysis may have been due to limitations of the analysis or the instrument used to assess EI. While there may be a relationship between EI and moral distress, mediation analysis may help to determine this relationship's exact nature. For instance, it is possible EI may influence the selection of coping strategies (Kim & Han, 2015) more so than with moral distress. Results support a medium correlation between EI and emotion-focused coping and a small correlation between EI and problem-focused, where higher EI is associated with less frequent use of coping strategies. Further, EI functioned differently in regression analysis where EI maintained a negative relationship with moral distress when entered with problem-focused, but not emotion-focused coping. Nurses may be able to utilize problem-focused coping strategies that allow them to distance themselves (vs engaging in avoidance) from the act while still preserving their ethical values, as suggested by Wilkinson (1988) and Rushton (2013). A larger sample and analysis designed to test whether coping functions as a mediator between EI and moral distress is needed.

There is existing debate about whether EI can be adequately assessed using self-report measures (Mayer et al., 2016; Law et al., 2004). Mayer and colleagues (2016) stated that the main principles of EI need to be assessed through ability testing (e.g., problem-solving questions oriented around EI skills) as people might be poor reporters of their own EI (over or under gauging their abilities). One type of EI ability test is The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) (Mayer et al., 2016). The MSCEIT is a valid and reliable test, however, it includes 141 items and takes 30-45

minutes to complete (Consortium for Research on Emotional Intelligence in Organizations, n.d.), which can be less than ideal for organizational survey research (Wong & Law, 2002). Wong and Law's (2002) WLEIS was developed out of the need to have a shorter, valid, and reliable way to measure EI in leadership. While some may argue whether self-reporters are accurately assessing their EI ability (Mayer et al., 2016), the WLEIS has demonstrated good convergent and divergent validity and reliability (Wong & Law, 2002). Further, O'Connor and colleagues (2019) clarify,

> "Participants can easily come across as high in EI by answering questions in a strategic, socially desirable way. However, this is usually only an issue when test-takers believe that someone of importance (e.g., a supervisor or potential employer) will have access to their results. When it is for self-development or research, individuals are less likely to fake their answers" (p. 4).

Future studies may want to consider a way to measure moral distress and EI using different types of EI measures (problem-solving based questions vs self-report behavior-based questions).

Moral Distress and Coping

This study also contributed to existing evidence and warrants continued research into the relationship between coping and moral distress. In the current study, problem-focused coping, social support, and counting blessings were the strategies used the most relative to other strategies. This finding contradicts qualitative literature that indicated emotion-focused coping strategies, like blaming, venting, and avoidance, are preferred and most frequently used (Bruce et al., 2015; Lievrouw et al., 2016). The current study had similar findings of that of Zotsky's (2015) quantitative study measuring coping in emergency

department nurses using a different coping instrument. While in Zvotsky's (2015) study, only emotion-focused strategies were positively associated with and predictive of moral distress, results from this pilot study revealed all coping strategies were positively related and predictive of moral distress. However, the current study's results were similar with Zvotsky (2015) where avoidance, wishful thinking, blaming self and blaming others had larger positive relationships with moral distress compared to other strategies. Although Zvotsky (2015) focused her study on emergency department nurses, Epstein and colleagues (2019) found no difference in moral distress scores between emergency department nurses and nurses in acute and critical care settings. While the current study found significant differences between ICU and non- ICU nurses, there were only 30 nurses who reported working in the emergency department. Independent *t*-tests reported no significant differences between emergency department nurses and ICU/ non-ICU combined group, but the limited non-probability sample size may impact reliability of that finding.

The difference between qualitative and quantitative findings may reflect the nature of how the data is collected and analyzed. Social desirability may explain why nurses responded more frequently to problem-focused strategies while the strength of association between moral distress and emotion-focused strategies was stronger. Interestingly, in the current study, religiosity was the only strategy to have a negative relationship with moral distress, however, it was not significant. Religiosity is also the most recent coping strategy added to the WCCL-R, and further development of the items in this subscale is needed.

The diverging findings regarding coping strategies used with moral distress will need further investigation. Future studies may benefit from a mixed-methods approach to understanding preferred and effective coping across the continuum of moral distress process (coping with initial distress vs. reactive distress). This may be comparable to the differences in coping strategies for students preparing for a test compared to while they are waiting for results (Lazarus & Folkman, 1984). Across time, moral distress may prompt different coping strategies. Coping with moral distress over time has not yet been researched and there is a need for longitudinal studies.

To date, this is the first known application of the WCCL-R instrument to a nursing sample in the context of moral distress. The factor structure of the WCCL-R may need re-examining, which may result in a more dimensional view of coping strategies. For example, Falkum and colleagues (1997) examined the structure of the WCCL in their sample of over 1,000 Norwegian physicians. They found a three-factor structure of the problem-focused coping scale: action-oriented, accommodation, and positive thinking. Narrowing and specifying problem-focused coping strategies with moral distress would further our understanding and have implications for moral distress interventions. As seen in this study, count your blessings was used as frequently as the other problem-focused strategies. This may reflect desirability error or as an artifact of a sample from a highly religious state[11], or an improved factor analysis may result in it loading onto a different subscale.

[11] According to Pew Research Center's (2014) Religious Landscape Study, 86% of adults rate religion as somewhat or very important.

Crescendo Effect

Lastly, the need for interventions has been encouraged to prevent the accumulation of moral distress over time, a process called the Crescendo Effect (Epstein & Hamric, 2009); yet there continues to be a gap in quantitative evidence supporting this phenomenon. Primarily the Crescendo Effect has been substantiated in qualitative studies and case reports (Epstein & Hamric, 2009). Epstein and Hamric (2009) also suggest the positive correlation between age and years of experience also supports the concept. However, this evidence is inconsistent across studies (Lamiani et al., 2017) and the present study does not support this theory. In this study, age and years of experience negatively correlated with moral distress. Longitudinal studies would also contribute to our understanding of the Crescendo Effect.

Engagement, Recruitment, and Survey Implementation: Lessons for Future Inquiry

In addition to exploring the relationships of EI, organizational support, coping, and moral distress, this study also provides strategies for engaging healthcare professionals in survey research and the feasibility of conducting this study for a national sample. Recruitment strategies utilized in this pilot study can provide information on how to increase sample sizes for future research. Consistent with Thompson and Jones's (2020) study, institutional support and stakeholder engagement, and buy-in were crucial for recruitment from the academic medical center. This researcher leveraged professional networks established at the academic medical center as well as through social media. Contacting nurse managers on various care units provided a direct connection to potential nurse participants (Thompson Munn & Jones, 2020). Not knowing the total number of nurses reached compared to those who participated is a limitation in discussing

recruitment success; however, recruiting the number of nurses who did participate may reflect the importance, relevance, and timing of the study (Corner & Lemonde, 2019). Corner and Lemonde (2019) suggest that being selective in nursing populations for recruitment promotes the applicability of the survey in their lives and increases likelihood of participation.

As mentioned, the survey launched during a decline in COVID-19 positive cases in the area, preceded by one of the largest surges. This reality may or may not have encouraged participation. While potential nurse participants may have been too tired or overwhelmed to participate in the survey, alternatively, nurses may have felt motivated to participate to benefit from the catharsis of sharing their experience and desire to feel heard. Several other hospitals throughout Kentucky were approached to be participating sites to disseminate the survey, but there was limited engagement and follow up from those nurse administrators. Lack of follow up may be indicative of hospital administrators' working conditions during the COVID-19 pandemic. Efforts to engage with hospital administrators once the COVID-19 pandemic is more controlled may increase likelihood of participation. Furthermore, following recommendations by Thompson, Munn, and Jones (2020), making connections with other staff to identify appropriate stakeholders and possibly a study site coordinator could also promote participation.

Metadata from Qualtrics will be used to inform potential changes in the structure, length and presentation of the survey. Consistent with Dillman and colleagues' (2014) TDM approach, social media is an extension of how many people spend their everyday life. The multi-media access through QR codes and survey links via either a personal computer, smartphone, or tablet offered participants many different ways to take the

survey, which was a strength of this study (Dillman et al., 2014). Determining the influence of survey modality was the focus of a randomized two-wave cross- over experimental study of 3,408 respondents[12] where there were significant differences in completion time with smartphone users possessing longer median completion times (Revilla et al., 2016). However, there were no differences found in perceived privacy or willingness to answer sensitive questions between computer users and smartphone users, possibly because respondents mostly completed the survey at home regardless of device use (Revilla et al., 2016). Recording the method in which participants take the survey (computer vs tablet or smartphone) will be an essential consideration for future research to determine any potential differences in response and completion rates (Revilla et al., 2016).

Implications for Practice

Despite the importance of studying moral distress among other professionals, there remains a strong case for building on knowledge gained within nursing research. Not only has the pandemic heightened risk for frontline nurses, as explained, but the relationship between nurses and patients is unique compared to other healthcare providers. Without "helping nurses deal with death, suffering, physical exhaustion, burnout, and emotional distress," nurses' physical and emotional health could suffer and there may be an inability to retain and recruit at the rate necessary to address the growing need for nurses in the future (Mason et al., 2014, p.223). Understanding issues pertinent to the nursing profession is beneficial for clinical social workers in mental health practice

[12] There was a total of nine groups, three control groups and six treatment groups. There were 1,800 respondents in the first wave with 200 respondents per group, and 1608 in the second wave between 165 and 188 respondents per group (Rivella et al., 2016).

settings who are counseling nurses as clients. These findings can also inform interprofessional practices as clinical social workers are addressing moral distress in hospital and team settings (Browning & Cruz, 2018; Leff et al., 2017). Interprofessional collaboration is vital within research and healthcare delivery and can generate new knowledge, stimulate solutions, and break down siloes to resources and information (Green & Johnson, 2015). Social workers have distinctive skill sets to address the complexity and uniqueness of moral distress. For instance, Wampole (2018) focused her Doctor of Social Work dissertation study on inpatient psychiatric nurses' experience of burnout to promote patient safety and nurse wellbeing. Using mindfulness therapy techniques, Wampole (2018) found depersonalization scores decreased while total emotional exhaustion and personal accomplishment scores increased. Beyond the focus on nurses, research on understanding moral distress in social workers has begun with studies involving hospital and nursing home social workers (Fantus et al., 2017; Lev & Ayalon, 2018). However, social worker's moral distress may look very different than nurses based on the social worker's setting, role, and licensure. If there are differences in how moral distress is experienced within the same profession, other professions, such as social workers, may need different instruments to adequately assess the types of moral distress experienced (Fantus et al., 2017).

Conclusion

This pilot study presents novel and meaningful findings to advance our understanding of how a sample of nurses coped with moral distress during the COVID-19 pandemic. Both emotion and problem-focused coping independently predicted moral distress, but only emotion-focused coping was associated with a reduction in moral distress scores.

However, correlational analyses supported a positive relationship with both coping types. Consistent with existing literature, avoidance was associated with the strongest relationship with moral distress, but inconsistent with literature, nurses coped with problem-focused, social support, and counting blessings most frequently. Findings also challenged existing theories concerning EI as a predictor of moral distress. Greater clarity of these findings may be revealed by exploring these relationships in larger, more diverse samples, with complex analyses. This pilot study also provided insight into the role of organizational support, especially during the COVID-19 pandemic. Whether organizational support will continue to be a meaningful and significant predictor of moral distress in future studies once the pandemic is under control, is unknown. The process of recruiting and the large sample size that was obtained during a global pandemic also provides insight into future efforts to obtain a national sample. The nature of the study, timing, and meaning may have been motivating for participants to take the survey, and modifications to the length of the survey and data collection and management processes will be beneficial.

Appendices

Appendix A1

Initial E-mail/ Telephone Correspondence Template

My name is Abigail Latimer, and I am a doctoral candidate with the University of Kentucky College of Social Work in Lexington, KY. I am contacting you regarding possible participation for my doctoral thesis which involves moral distress and how hospital nurses are coping given the COVID-19 pandemic. This project will be conducted under the supervision of Dr. Melanie Otis also with the University of Kentucky College of Social Work. I am seeking your willingness to disseminate an anonymous survey link on your page.

I can attach a copy of the questionnaire that would be included in the survey, the consent form which all nursing respondents would be given, as well as a copy of the approval letter which I received from the Institutional Review Board at the University of Kentucky. The survey should not take more than 20 minutes to complete, will be completely anonymous, and respondents can provide their contact information in a separate link to be entered in a drawing of one of 20 $10 gift cards.

If you choose to be a participating site, you would be instrumental in disseminating the survey link to your nursing staff. You will be one of several other participating Facebook pages in addition to several national organizations throughout the US.

Abigail Latimer, LCSW, PHSW-C
Doctoral Candidate, College of Social Work
University of Kentucky
phone: 937.726.4532
abbie.latimer@uky.edu

Appendix A2

Email to be sent by Nursing Administrator to Site to Nurse Participants

Subject Line: Hospital Nurses' Moral Distress and Coping

For all Registered Nurses, Licensed Practical or Vocational Nurses, and Nurse Practitioners

Hello,

Thank you for participating to send this important study link to the nurses you work with!

Moral distress is a serious issue affecting nurses around the country and with the ongoing COVID-19 pandemic, this issue may be at a heightened concern. This study seeks to understand how hospital nurses have been coping with moral distress and the role emotional intelligence and organizational support may play in these efforts.

The survey is totally anonymous and confidential, only the researcher will be able to see your answers. Your supervisor was contacted to send out the survey on my behalf and it will not affect your employment or used as evaluative purposes for your supervisor or hospital.

If you choose to participate, you have the option of entering in a drawing for 1 of 20 $10 Amazon Gift Cards. More details about participation and incentive are provided within the consent form within the survey link.

Link here

This project is being conducted by doctoral candidate Abigail Latimer, LCSW with the University of Kentucky College of Social Work. For questions please email, abbie.latimer@uky.edu

*Ethics Approval Number

Appendix A3

Study Advertisement and Message for Social Media

Message Post 1: Hospital RNs, how are you experiencing and coping with moral distress? Please complete this survey. *Link Here*

Appendix A4

Consent to Participate in a Research Study

Hospital Nurses' Moral Distress during COVID-19: The Role of Coping, Emotional Intelligence and Organizational Support

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS SURVEY?

As a nurse, you are being invited to take part in a survey examining your experiences of moral distress. If you volunteer to take part in this study, you will be one of up to 500 people to do so.

WHO IS DOING THE STUDY?

The study's research coordinator is Abigail Latimer, LCSW with the University of Kentucky College of Social Work as a part of her dissertation research. She is under the supervision of Dr. Melanie Otis. Your supervisor was not involved in the creation of this survey.

WHAT IS THE PURPOSE, PROCEDURES, AND DURATION OF THIS STUDY?

Moral distress occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of constraints or barriers. There are concerns moral distress has increased for hospital nurses since the onset of the pandemic. The results will expand the research of moral distress and how to help nurses cope with it, therefore, reducing turnover, improving professional quality of life, and reducing compassion fatigue. Results will influence the development of targeted interventions at the unit/ team and organizational level. It should take less than 20 minutes to complete and you many skip any question you wish to.

ARE THERE REASONS WHY YOU WOULD NOT QUALIFY FOR THIS STUDY?

You may not qualify if you do not currently hold a registered nursing license, are not or have not worked in an inpatient hospital setting within the last 6 months, or are currently in orientation or training within your hospital employment.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in this study.

WHAT ARE THE RISKS AND BENEFITS?

To the best of our knowledge, there are no serious risks associated with answering these questions. However, some questions may be considered sensitive. This study may be a good experience for you as it elicits your expression of thoughts, feelings, and experiences you have related to nursing, especially during the pandemic. Some volunteers experience satisfaction from knowing they have contributed to research that may possibly benefit others in the future.

DO YOU HAVE TO TAKE THE SURVEY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer. *Your employment will not be affected by choosing to or not to participate.*

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS? The person in charge of this study is Abigail Latimer of the University of Kentucky, Department of Social Work. If you have questions, suggestions, or concerns regarding this study: (502) 465-3631 or abbie.latimer@uky.edu. If you have any questions, suggestions or concerns about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

WHAT WILL YOU BE ASKED TO DO? If you agree to be in this study, you will complete the proceeding online survey with questions about emotional intelligence, organizational support, coping, and moral distress. Specifically, we will ask about

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

Neither your immediate supervisor nor your organization will have any access to your responses to the survey. Your immediate supervisor nor your organization are involved in the study in any way. If you choose to enter your name in the drawing to win a reward, your contact information will be recorded separately from your responses so there will be no way to link your responses with your name or institution. Your response to the survey is anonymous which means no names, IP addresses, email addresses, or any other identifiable information will be collected with the survey responses. We will not know which responses are yours if you choose to participate, any identifying information disclosed in response to open-ended questions will be removed.

We will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained via the Internet. However, third-party applications used in this study may have Terms of Service and Privacy policies outside the control of the University of Kentucky. When we write about or share the results from the study, we may include quotes from provided responses but no identifying information will be included. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

If you would like to be included in the drawing for one of 20 $10 gift card you will have the option to provide your contact information at the end of the survey in a separate link. The winners will be randomly selected after the close of the survey and will be contacted using the information provided. This contact information will be kept separate from the survey responses. Your chances of winning are approximately 4%.

CAN YOUR TAKING PART IN THE STUDY END EARLY?

If you decide to take the survey you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decided to end the study early.

FUTURE USE OF YOUR INFORMATION: Your information collected for this study will not be used or shared for future research studies.

Appendix A5

Survey Contents of Demographic Questions and Instruments

1. Are you an employee or have you been an employee with a hospital facility within the last 6 months?
    a. Yes
    b. No [end of survey]
2. Currently in a residency program?
    a. Yes
    b. No
3. Currently in orientation?
    a. Yes
    b. No
4. Licensure
    a. LPN/ LVN
    b. RN
    c. NP
    d. Other
5. Education
    a. LPN
    b. Diploma
    c. AD
    d. BSN
    e. MSN
    f. PhD
    g. DNP
    h. other
6. Population you work with
    a. Adult
    b. Children
    c. Neonatal
    d. other
7. Setting
    a. Pulmonary intensive care unit
    b. Cardiac intensive care unit
    c. Labor and delivery
    d. Emergency department
    e. Med surg
    f. Pediatrics
    g. Perioperative
    h. Oncology
    i. Other

Directions for Completing the MMDHP

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:

- 0 never
- 1 very rarely
- 2 occasionally
- 3 frequently
- 4 very frequently

Distress

- 0 none
- 1 slightly
- 2 somewhat
- 3 moderately
- 4 very distressing

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.
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. Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.
23. Be required to work with abusive patients/ family members who are compromising quality of 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.

Directions for Completing the RWCCL

The items below represent ways that you may have dealt with morally distressing events you identified. We are interested in the degree to which you have used each of the following thoughts/behaviors in order to deal with the morally distressing situation. Please check the appropriate column if the thought/behavior was: never used, rarely used, sometimes used, or regularly used (at least 4 to 5 times per week).

Frequency used:
- 0 never used
- 1 rarely used
- 2 sometimes used
- 3 regularly used

1. Bargained or compromised to get something positive from the situation.
2. Counted my blessings.
3. Blamed yourself.
4. Concentrated on something good that could come out of the whole thing.
5. Kept my feelings to myself.
6. Figured out who to blame.
7. Hoped a miracle would happen.
8. Asked someone I respected for advice and followed it.
9. Prayed about it.

10. Talked to someone about how I was feeling.
11. Stood my ground and fought for what I wanted.
12. Refused to believe it had happened.
13. Criticized or lectured yourself.
14. Took it out on others.
15. Came up with a couple of different solutions to
the problem.
16. Wished I were a stronger person -- more optimistic and forceful.
17. Accepted my strong feelings but didn't let them interfere with other things too much.
18. Focused on the good things in my life.
19. Wished that I could change the way that I felt.
20. Changed something about myself so I could deal with the situation better.
21. Accepted sympathy and understanding from someone.
22. Got mad at people or things that caused the problem.
23. Slept more than usual.
24. Spoke to my clergyman about it.
25. Realized you brought the problem on yourself.
26. Felt bad that I couldn't avoid the problem.
27. I knew what had to be done, so I doubled my efforts and tried harder to make things work.
28. Thought that others were unfair to me.
29. Daydreamed or imagined a better time or place than the one I was in.
30. Tried to forget the whole thing.
31. Got professional help and did what they recommended.
32. Changed or grew as a person in a good way.
33. Blamed others.
34. Went on as if nothing had happened.
35. Accepted the next best thing to what I wanted.
36. Told myself things could be worse.
37. Talked to someone who could do something concrete about the problem.
38. Tried to make myself feel better by eating, drinking, smoking, taking medications.
39. Tried not to act too hastily or follow my own hunch.
40. Changed something so things would turn out right.
41. Avoided being with people in general.
42. Thought how much better off I am than others.
43. Had fantasies or wishes about how things might turn out.
44. Just took things one step at a time.

45. Wished the situation would go away or somehow be finished.
46. Kept others from knowing how bad things were.
47. Found out what other person was responsible.
48. Thought about fantastic or unreal things like perfect revenge or finding a million dollars) that made
me feel better.

49. Came out of the experience better than when I went in.
51. Wished that I could change what had happened.
52. Made a plan of action and followed it.
53. Talked to someone to find out about the situation.
50. Told myself how much I have already accomplished.
54. Avoided my problem
55. Relied on my faith to get me through.
56. Compared myself to others who are less fortunate.
57. Tried not to burn my bridges behind me, but left things open somewhat

OTHER:

Directions for Completing the WLEIS

Here is a short 16-item measure of emotional intelligence, developed for use in management research and studies. The items on the Wong and Law Emotional Intelligence Scale (WLEIS) is based on the ability model of emotional intelligence. A list of statements are provided below, and to complete this questionnaire, mark the extent to which you agree or disagree to each of the statements.

- 1 strongly agree
- 2 somewhat agree
- 3 neither disagree or agree
- 4 somewhat disagree
- 5 strongly disagree

1. I have a good sense of why I feel certain feelings most of the time.
2. I have a good understanding of my own emotions.
3. I really understand what I feel.
4. I always know whether I am happy or not.
5. I always know my friends' emotions from their behavior.
6. I am a good observer of others' emotions.
7. I am sensitive to the feelings and emotions of others.
8. I have a good understanding of the emotions of people around me.
9. I always set goals for myself and then try my best to achieve them.
10. I always tell myself I am a competent person.
11. I am a self-motivating person.
12. I would always encourage myself to try my best.
13. I am able to control my temper so that I can handle difficulties rationally.
14. I am quite capable of controlling my own emotions.
15. I can always calm down quickly when I am very angry.
16. I have good control of my emotions.

Directions for Completing the COVID-OS

Below are statements about your opinions. Please rate (1 to 7) your agreement or disagreement with each statement. There are no right or wrong answers. Please be open and truthful.

Agreement

- 1 strongly agree
- 2 somewhat agree
- 3 neither agree nor disagree
- 4 somewhat disagree
- 5 strongly disagree

1. I have access to appropriate personal protective equipment (PPE) (e.g., hand gloves or face masks)
2. I am exposed to the risk of getting COVID-19 at work and taking the virus home to my family
3. I can get tested for COVID-19 rapidly if I need to
4. I am uncertain my organization would take care of my own needs (e.g. personal and family) if I get COVID-19
5. People in my organization have access to childcare during increased work hours and school closures
6. As work demands increase, I can get support for other personal and family needs (e.g. food, lodging, transportation)
7. My organization can provide me competent medical care if I am deployed to a new area (e.g. from a non-ICU to ICU)
8. I feel I lack access to up-to-date information and communication from the healthcare system

Directions for Completing the POS

Listed below and on the next several pages are statements that represent possible opinions that
YOU may have about working at your institution. Please indicate the degree of your agreement or
disagreement with each statement by filling in the circle on your answer sheet that best represents your point of view about your institution. Please choose from the following answers:

- 0 strongly agree
- 1 somewhat agree
- 2 neither agree nor disagree
- 3 Somewhat disagree
- 4 Strongly disagree

1. The organization values my contribution to its well-being.
2. The organization fails to appreciate any extra effort from me. (R)
3. The organization would ignore any complaint from me. (R)
4. The organization really cares about my well-being.
5. Even if I did the best job possible, the organization would fail to notice. (R)
6. The organization cares about my general satisfaction at work.
7. The organization shows very little concern for me. (R)
8. The organization takes pride in my accomplishments at work.

Directions for Completing the HECS

How true are the following statements:

- 0 almost never true
- 1 sometimes true
- 2 often true
- 3 usually true
- 4 almost always true

1. My peers listen to my concerns about patient care.
2. Patients know what to expect from their care.
3. When I'm unable to decide what's right or wrong in a patient care situation, my manager helps me.
4. Hospital policies help me with difficult patient care issues/problems.
5. Nurses and physicians trust one another.
6. Nurses have access to the information necessary to solve a patient care issue/problem.
7. My manager supports me in my decisions about patient care.
8. A clear sense of the hospital's mission is shared with nurses.
9. Physicians ask nurses for their opinions about treatment decisions.
10. My peers help me with difficult patient care issues/problems.
11. Nurses use the information necessary to solve a patient care issue/problem.
12. My manager listens to me talk about patient care issues/problems.
13. The feelings and values of all parties involved in a patient care issue/problem are taken into account when choosing a course of action.
14. I participate in treatment decisions for my patients.
15. My manager is someone I can trust.
16. Conflict is openly dealt with, not avoided.
17. Nurses and physicians here respect each other's opinions even when they disagree about what is best for the patient.
18. I work with competent colleagues.
19. Patients' wishes are respected.
20. When my peers are unable to decide what's right or wrong in a particular patient care situation, I have observed that my manager helps them.
21. There is a sense of questioning, learning, and seeking creative responses to patient care problems.
22. Nurses and physicians respect each other.
23. Safe patient care is given on my unit.
24. My manager is someone I respect.
25. I am able to practice nursing on my unit as I believe it should be practiced.
26. Nurses are supported and respected in this hospital.

Directions for Completing the GSE

- 1 not at all true
- 2 slightly true
- 3 mostly true
- 4 exactly true

1. If someone opposes me, I can find means and ways to get what I want.
2. It is easy for me to stick to my aims and accomplish my goals.

3. I am confident that I could deal efficiently with unexpected events.
4. Thanks to my resourcefulness, I know how to handle unforeseen situations.
5. I can remain calm when facing difficulties because I can rely on my coping abilities.
6. No matter what comes my way, I'm usually able to handle it.

Directions for Completing the PEI

Listed below are a number of self-orientations that people may have with regard to their work role. Using the following scale, please indicate the extent to which you agree or disagree that each one describes your self-orientation

- 1 Very strongly disagree
- 2 Strongly disagree
- 3 Disagree
- 4 Neutral
- 5 Agree
- 6 Strongly agree
- 7 Very strongly agree

1. I am confident about my ability to do my job.
2. The work that I do is important to me.
3. I have significant autonomy in determining how I do my job.
4. My impact on what happens in my department is large.
5. My job activities are personally meaningful to me.
6. I have a great deal of control over what happens in my department.
7. I can decide on my own how to go about doing my own work.
8. I have considerable opportunity for independence and freedom in how I do my job.
9. I have mastered the skills necessary for my job.
10. The work I do is meaningful to me.
11. I have significant influence over what happens in my department.
12. I am self-assured about my capabilities to perform my work activities

Demographics

1) Do you currently work directly with patients with COVID?
2) [if no] Have you in the past worked with patients with COVID?
3) What part of Kentucky do you work in?
    a. Northern
    b. Central
    c. South
    d. East
    e. West
4) Years of experience
    a. 0-1
    b. 2-5

    c. 6-9
    d. 10-14
    e. 15-19
    f. 20+
5) What is your employment Status
    a. Full time
    b. Part time
    c. PRN
    d. Unemployed
6) [if PRN] How many hours per week?
7) How long have you been employed at your current hospital?
8) Do you provide on call hours?
    a. Yes
    b. No
9) [if yes] how many hours on call per week?
10) How old are you?
    a. 18-24
    b. 25-34
    c. 35-44
    d. 45-54
    e. 55-64
    f. 65- 74
    g. 75+
11) What would best describe you?
    a. American Indian or Alaskan Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or Pacific Islander
    e. White
12) What gender do you identify with?
    a. Female
    b. Male
    c. Non-Binary

The next two questions are open-ended, as a reminder, please do not include any names of patient or family members of patients, other nurses, or any other information that could potentially identify yourself or your institution.

13) Have you experienced other morally distressing events not already described that you would like to share with us?
14) Is there anything else you would like the researchers to know about your experience in coping with moral distress?

[end of survey] https://emotionalppe.org/ The *Emotional PPE Project* connects healthcare workers in need with licensed mental health professionals who can help. No cost. No insurance.

Thank you for participating! Click Here to be redirected to a separate survey in which you'll enter your email for a chance to win a $20 Amazon gift card. As a reminder, we will not be able to connect your survey responses to your email address.

Appendix B1

List of specific settings not included in Table 5 of setting frequencies.

- Addiction
- Administration
- All Areas
- Capacity Management
- Cardiac Progressive
- Case Management
- Diagnostic Radiology
- Dialysis
- Employee Health
- EMU
- Endoscopy/ Outpatient Procedures
- Family Medicine
- Hepatology
- Medicine Intensive Care Unit
- Medicine Intensive Care Unit
- Medicine Progressive
- Mother and Baby
- Neurology
- Neonatal
- Neurosciences
- Neurosurgery
- OB/ GYN
- Pediatric Oncology
- Progressive Care
- Psychiatry/ Behavioral Health
- Pulmonary Rehabilitation
- Rapid Response
- Research
- Surgical Oncology
- Telemetry
- Transitional Care
- Wound Care/ Ostomy

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
Witness healthcare providers giving "false hope" to a patient or family.	5.25	4.85
Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	8.48	5.72
Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	5.54	5.03
Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.	6.23	6.12

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
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.	7.83	6.04
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.	1.65	3.20
Be required to care for patients whom I do not feel qualified to care for.	3.60	4.49
Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.	5.62	5.31

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
Watch patient care suffer because of a lack of provider continuity.	6.33	5.22
Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/ fam	2.90	3.99
Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	2.16	3.56
Participate in care that I do not agree with, but do so because of fears of litigation.	2.47	3.86
Be required to work with other healthcare team members who are not as competent as patient care requires.	5.03	4.99

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
Witness low quality of patient care due to poor team communication.	6.27	4.98
Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	2.97	4.39
Be required to care for more patients than I can safely care for.	7.77	6.05
Experience compromised patient care due to lack of resources/ equipment/ bed capacity.	8.27	5.88
Experience lack of administrative action or support for a problem that is compromising patient care.	7.98	6.12

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
Have excessive documentation requirements that compromise patient care.	7.40	5.81
Fear retribution if I speak up.	4.94	5.45
Feel unsafe/ bullied amongst my own colleagues.	2.54	4.20
Be required to work with abusive patients/ family members who are compromising quality of care.	5.92	5.52
Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.	5.10	5.49
Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.	5.02	5.03

Appendix B2

Summary Statistics for Sources of Moral Distress (MMDHP Items' Frequency x Intensity) (n=395)

Items	*M*	*SD*
Work within power hierarchies in teams, units, and my institution that compromise patient care.	3.38	4.63
Participate on a team that gives inconsistent messages to a patient/ family.	4.49	4.95
Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.	2.71	3.91

Appendix B3

Sources of Moral Distress by Hospital Setting Type (MMDHP Items' Frequency x Intensity)

Type	ICU (n= 128)		Non-ICU (n= 267)	
	M	*SD*	*M*	*SD*
Witness healthcare providers giving "false hope" to a patient or family.	7.52	4.97	4.16	4.40
Follow the family's insistence to continue aggressive treatment even though I believe it is not	11.82	4.45	6.88	5.57

in the best interest of the patient.				
Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	7.07	5.43	4.81	4.67
Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.	6.13	5.92	6.27	6.23
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.	12.25	4.53	5.72	5.50

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.	1.60	2.92	1.67	3.33
Be required to care for patients whom I do not feel qualified to care for.	3.27	4.18	3.76	4.64
Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.	8.53	5.12	4.22	4.83
Watch patient care suffer because of a lack of provider continuity.	7.27	5.35	5.88	5.12
Follow a physician's or	3.72	4.34	2.51	3.76

family member's request not to discuss the patient's prognosis with the patient/ fam				
Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	2.27	3.50	2.11	3.60
Participate in care that I do not agree with, but do so because of fears of litigation.	3.16	4.21	2.13	3.64
Be required to work with other healthcare team members who are not as competent as patient care requires.	5.28	5.15	4.91	4.93

Witness low quality of patient care due to poor team communication.	6.36	5.02	6.23	4.97
Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	3.01	4.05	2.96	4.56
Be required to care for more patients than I can safely care for.	7.55	5.84	7.88	6.15
Experience compromised patient care due to lack of resources/ equipment/ bed capacity.	8.69	5.79	8.07	5.92
Experience lack of administrative action or	8.88	6.01	7.55	6.13

support for a problem that is compromising patient care.				
Have excessive documentation requirements that compromise patient care.	8.70	5.48	6.78	5.87
Fear retribution if I speak up.	5.23	5.69	4.80	5.33
Feel unsafe/ bullied amongst my own colleagues.	2.03	3.68	2.78	4.42
Be required to work with abusive patients/ family members who are compromising quality of care.	5.80	5.23	5.98	5.67
Feel required to overemphasize tasks and productivity or quality measures at the	5.31	5.09	5.00	5.68

expense of patient care.				
Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.	6.83	4.95	4.15	4.85
Work within power hierarchies in teams, units, and my institution that compromise patient care.	3.15	4.33	3.49	4.77
Participate on a team that gives inconsistent messages to a patient/ family.	5.89	5.30	3.82	4.63
Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.	2.26	3.37	2.91	4.14

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Vita

ABIGAIL LATIMER

EDUCATION

University of Kentucky, Lexington, KY
Master of Social Work 2009 – 2011

University of Kentucky, Lexington, KY
Bachelor of Arts in Psychology (Magna Cum Laude) 2005 – 2009

SCHOLASTIC AND PROFESSIONAL HONORS

Advanced Palliative Hospice Social Worker Certified (APHSW-C) 2019
Advanced Certified Hospice and Palliative Social Worker (ACHP) 2017
Licensed Clinical Social Work (LCSW) 2015
Certified Social Work License (CSW) 2011
Social Work Hospice Palliative Network Award for Clinical Excellence 2019
Social Work Hospice Palliative Network Conference Scholarship 2017

PROFESSIONAL POSITIONS: RESEARCH

Research Assistant Fall 2020
Research Assistant Spring, Summer, Fall 2020
2019- present, Principal Investigator

PROFESSIONAL POSITIONS: CLINICAL

TeamHealth Behavioral Health
Knoxville, TN 37919

Post- Acute Care Behavioral Health/LCSW	10/2020- present
University of Kentucky Hospital	
Lexington, KY 40536	
Palliative Care Clinical Social Worker	10/ 2016- 01/2020
Bluegrass.org	
Mental Health Specialist	
Lexington, KY 40507	08/2015-10/2016
Winchester, KY 40391	08/2014- 08/2015
Paris, KY 40361	03/2014- 08/2014
Eastern State Hospital, Bluegrass Emergency Services Team	
Assessment Clinician PRN	08/2015- 01/2016

Lexington, KY 40511

Hospice of the Bluegrass
Inpatient, Home Care Social Worker and Bereavement Counselor 05/2011- 01/2014
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PROFESSIONAL POSITIONS: TEACHING

Primary Instructor University of Kentucky College of Social Work
Lexington, KY 2016-2020

Co- Instructor University of Maryland, School of Pharmacy,
Baltimore, MD 2019-2021

Guest Lecture New York University, College of Social
Work, New York, NY 2020

Guest Lecture University of Kentucky, College of Social Work,
Lexington, KY 2019

Guest Lecture University of Kentucky, College of Nursing,
Lexington, KY 2018

Guest Lecture University of Kentucky, College of Arts & Sciences
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PUBLICATIONS

Fields, N., Gibson, A., Wladkowski, S., Wallace, C., & Latimer, A. (2020). The AGESW Pre-Dissertation Fellows Program: Participants' Perceptions of Mentorship and Training for Academia. Innovation in Aging, 4(Suppl 1), 549.

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