Intervening on Moral Distress:

Intensive Care Unit Nurses and the Moral Distress Map

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A Project Presented to the Graduate Faculty of the University of Virginia in Candidacy for the Degree of Doctor of Nursing Practice

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Acknowledgements

This project had three prerequisites: Support from my loved ones, support from my professors, and support from the unit where the project took place. Without any of those, this would not have been possible. I am so grateful.

Abstract

Background: Moral distress is an event that occurs when a health care worker feels as though they cannot do the right thing for a patient due to situational constraints. Moral distress is correlated with burnout, compassion fatigue, intent to leave, and perceived worse quality of care.

Purpose: The primary aim of this project was to evaluate use of the moral distress map (MDM) among ICU nurses, with the secondary aim of discerning any change in moral distress resultant from the MDM's use.

Design: Pre/post intervention project.

Methods: ICU nurses were introduced to the moral distress thermometer (Wocial & Weaver, 2013) as an instrument to measure current moral distress. They subsequently completed the MDM with colleagues, and repeated the moral distress thermometer. They were asked to complete a PI-designed questionnaire to evaluate how they used the map.

Results: Findings reveal that when ICU nurses (N = 47) use Dudzinski's moral distress map with nurse colleagues at the point of care, their moral distress increases as measured by the moral distress thermometer ($p < 0.001$). There was no statistically significant evidence that the mean pre-post change in moral distress scores could be explained by whether the case(s) selected for discussion with the MDM was presently occurring, or had occurred in the past ($p = 0.097$), ($p = 0.058$), however, trends in the data were found to be clinically meaningful in that they supported theory about moral residue.

Discussion: This project is novel for three reasons. First, the results demonstrated that mean MD in ICU nurses (N = 47) increased significantly as measured by the MDT when nurses use the moral distress map to debrief one another about MD cases at the point of care ($p < 0.001$). Second, the project's findings provided clinical evidence about the intensity of MD over time,

substantiating theory about moral residue. Finally, the participant responses to the questionnaire provided general feedback about how to optimize the use of the MDM in this setting.

Conclusions: Among ICU nurses there is statistically significant evidence that when nurses use Dudzinski's (2016) moral distress map to debrief one another at the bedside, they experience a statistically significant increase in moral distress. There is also clinical evidence affirming moral residue among these nurses.

Keywords: moral distress, moral distress map, surgical intensive care unit nursing

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Introduction

Moral distress (MD) is an event that occurs in healthcare when an individual feels as though the right thing for a patient cannot be done due to situational constraints (Hamric & Blackhall, 2007; Jameton, 1984). Clinicians who experience MD often feel as though they have had to compromise their own deeply held professional and personal values (Varcoe, et al, 2011). Moral distress can be experienced emotionally, psychologically, or physically, and is often a direct threat to a clinician's identity and integrity (Varcoe, et al, 2011).

MD is a pernicious problem in the healthcare setting. Speaking of individual healthcare professionals, the literature demonstrates correlates between MD and perceived lower quality of care, burnout, compassion fatigue, and staff intent to leave (Dalmolin, et al, 2014; Fumis, et al, 2017; Larson, et al, 2017; Maiden, 2011; Rushton, et al, 2015; Whitehead, et al, 2015). On a systems level, MD may be existentially denied, or politically prohibited from being studied (Pauly, et al, 2012).

While individuals experience MD, it is not a problem with an individual; rather, it is a problem within a system (Epstein & Hurst, 2017). MD is difficult to conceptualize and combat, and as such, has often been ignored, dismissed, or overlooked (Allen, 2016). Yet MD research holds promise—it stands to reason that by reducing or preventing MD, the aforementioned list of negative correlates may also be reduced.

Background

Moral distress is a phenomenon that was first identified in 1984 by nurse philosopher Andrew Jameton. He wrote of MD occurring when, while providing healthcare, one experiences "psychological distress from being in a situation in which one is constrained from acting on what

one knows to be right" (Jameton, 1984, p. 6). Since that time, research in MD broadened and refined, resulting in definitions that, while normative, are distinct (Dudzinski, 2016).

MD tends to arise during clinical situations as an individual or group becomes constrained against acting in the patient's best interest (Hamric, Borchers, & Epstein, 2012). As clinical situations evolve, clinicians may depart from doing what is right for a patient, such as not performing informed consent, providing false hope about prognosis, or disregarding a patient's wishes (Hamric, Borchers, & Epstein, 2012). Constraints against taking the right action can be categorized into internal and external constraints. An internal constraint is reflective of an individual's interpretation of a clinical situation, such as feeling powerless or lacking authority. An external constraint is a characteristic of a system that is tolerated but not beneficial, such as tolerance of abuse, poor communication, compromised care due to insurance or litigation, etc. (Hamric, Borchers, & Epstein, 2012). While the clinician may identify (s)he is experiencing MD, the root of what factors causally contribute to MD rests in how a system performs health care (Epstein & Hurst, 2017).

The incidence of MD is difficult to calculate. Among nurses, MD is most often identified in ICU, procedural, and peri-operative nursing staff (Sirilla, et al, 2017). A survey of 760 critical care nurses revealed that 50% affirmed having acted against their conscience while providing patient care. (AACN, 2008). Acting against one's conscience is distinct from MD, but it has been mentioned to contextualize the reader's understanding that nurses may struggle to do what they believe is right. Specific to MD, a survey of European intensive care unit staff (n = 1,218 nurses, n = 227 physicians) found that marked distress due to inappropriate disproportionate care was reported by 33% of nurses and 25% of senior physicians, and that "Teaching ICU physicians to deal with prognostic uncertainty in more adequate ways and to promote ethical discussions in

their teams may be pivotal to improving moral distress and the quality of patient care." (Piers, et al, 2014, p. 267). Such research provides some insight about the incidence and prevalence of difficult moral decision-making in health care environments.

A recent systemic review of 13 prominent articles on MD found that the priority in MD research at this time must shift towards advocating for interventions that prevent and reduce MD (Prentice, et al, 2016). There have been a number of research articles positing solutions to MD (Hamric & Epstein, 2017). However, there is a prominent gap in the literature about interventions that have been trialed and proven to directly reduce MD (Musto, et al, 2015). An analysis of MD interventions by Hamric and Epstein (2017) revealed that there are three categories of MD intervention research: direct interventions, indirect interventions, and general interventions. Direct interventions are ones which aim to impact MD specifically. Indirect interventions are those which are aimed at a related area, and while not directly targeting MD, may impact MD. General interventions are those which affect systems, such as institutional changes in the work environment (Hamric & Epstein, 2017).

An example of a direct intervention on MD cited by Hamric and Epstein (2017) is the moral distress map (MDM). The MDM is a tool designed to be used during case debriefings by nurses who seek to clarify and articulate their MD (Dudzinski, 2016). However, the demands of working in an intensive care unit (ICU) environment may often preclude a nurse having protected time to debrief. Debriefing may be especially difficult to do during times when MD is accruing, since patient care in ICUs is often of such high acuity that nurses may feel uncomfortable leaving the bedside for spans of time that may be required for a formalized debriefing process. In spite of these barriers to formalized debriefing, there is nevertheless a need for more to be known about direct interventions. As such, the possibility arose of investigating

whether MDM may prove helpful for nurses if they are able to use it at the point of care and debrief one another.

PICO Question

What are the negative correlates of MD and what interventions are available to institutional leaders to reduce MD in the healthcare environment?

Review of the Literature

A literature review was performed on PubMed, Ovid/Medline, CINAHL, EMBASE/Elsevier, EBSCOhost, psychINFO, Cochrane, Essential Evidence Plus, and Google Scholar using the terms 'moral distress' and 'moral distress in nursing' in a key word search. Articles of any age were initially included, as were articles with content that discussed MD incidence, prevalence, barriers to reducing MD, interventions to reduce MD, and common critiques of MD. Articles that addressed MD in nursing exclusively, or in an interdisciplinary context were included. Articles that did not discuss MD in nurses were excluded, as were articles that used the term 'moral distress' but were not relevant to the health care field. All levels of evidence were included. Articles were limited to the English language.

Selection of Articles

Following completion of the search, all returned results were examined. The search resulted in 618 English, non-duplicate articles, for which title review yielded 200 excluded and 418 relevant publications. Of the remaining 418 articles, every abstract was examined for inclusion and exclusion criteria. Each of the 418 articles underwent abstract review, regardless of whether they had MD in the title. Articles kept included any article that involved nursing and other disciplines, any article that used analysis (either quantitative or qualitative) to produce results, any article that discussed how MD may be associated with an outcome in patients and/or

staff, and any article that took a position on MD's relevancy in healthcare. Reference lists of selected articles were also searched for other relevant articles. Articles that did not contain reference to MD in the abstract were ultimately excluded.

Sixty-six articles remained after articles that did not meet these criteria had been excluded. Of these articles, all were read in full for determining relevance to the aims of this literature review. Reflective of the literature review aims, the final group of 46 articles included studies on MD in nurses in the ICU, and interventions trialed for reducing MD. Other relevant articles included were perspectives from national organizations on MD and theoretical aspects of MD. All levels of evidence were included, from systematic reviews to expert opinion, in order to avoid overlooking relevant information from the limited number of studies in MD. A PRISMA diagram illustrates the inclusion and exclusion process (Appendix A). Appendices B and C provide additional information regarding the prevalence of MD research and the abundance of the nomenclature associated with MD.

Evolution of MD Research

MD has been studied most often in settings of hospitals and most commonly in ICU and acute care units (Pauly, et al, 2012). Initial research publications consisted mostly of small, descriptive, qualitative studies (Gutierrez, 2005; Hamric, 2012; Henrich, 2017). These studies supported the development of a validated MD quantitative tool in the 2000s, which then compounded the number of studies undertaken (Hamric, 2012). Since that time, there has been an expansive increase in the volume of research on MD in nurses both in and outside of hospital settings (Hamric, 2012). However, most studies remain limited in scope. There were no identifiable randomly controlled trials for MD prevention or treatment in ICU nurses. The call

for more research is echoed in nearly every article that discusses MD, and often specifically includes a call for interventions for MD reduction or prevention.

Moral Distress: What is it?

Since its inception in the 1980s, debate about how to exactly define MD has obscured a common understanding of MD (Hamric, 2012) (For discussion of definitions, see Appendix D). As debate has evolved, a common concept has emerged: MD occurs when a clinician identifies that they are being constrained from doing the right thing for a patient (AMA, 2017; Dodek, et al, 2016; Jameton, 1984; Kalvemark, et al, 2003). The constraints exist because of complex situational barriers that those who experience MD can neither control nor resolve at the point of care (Epstein & Hurst, 2017).

What is the Scope of the MD Problem?

The incidence of MD appears to be increasing (Ulrich, et al, 2014). Ulrich, et al (2014) performed a nation-wide sample of 5,875 critical care nurses surveyed between 2006 and 2013. The nurses surveyed reported worse marks for relevant Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, increased frequency of MD, and less empowerment during shared decision-making. Between 2006 and 2013, the percentage of critical care nurses who reported feeling MD 'very frequently' increased from 6.8% to 9.4%, 'frequently' increased from 19.4% to 23.3%, 'occasionally' decreased 45.6% to 42.8%, and 'very rarely' decreased from 28.2% to 24.5% (Ulrich, et al, 2014).

Research also demonstrates that when MD occurs, it is intense. A 2013 cross sectional descriptive study of ICU nurses (n = 277), Browning, et al (2013) found that MD in ICU nurses, while low in frequency, is high in intensity.

Predictors for MD can be difficult to identify. Hiler, et al (2018) conducted a cross sectional descriptive cohort study of 328 ICU nurses. Factors that proved significantly predictive of MD included perceptions of job satisfaction, practice environment, and age of nurse ($p < .001$). They concluded from their research that as clinical practice environment deteriorated, MD increased (Hiler, et al, 2018). Sirilla, et al (2017) conducted a cross sectional survey of 338 nurses of any kind across a single academic health system spanning six types of hospitals. They noted that critical care / ICU care, procedural care, and perioperative care nurses scored the highest in areas of MD (Sirilla, et al, 2017).

While moral distress in health care was first known to nurses, it has since been identified by pharmacists, physicians, medical students, psychologists, and employees of hospitals (Lamiani, Borghi, & Argentero, 2017).

There is evidence that proximity to the patient is a significant factor in MD development. Whitehead, et al (2015) conducted a descriptive comparative study at a single academic health center involving 592 clinicians. The researchers noted that nurses had greater average MD scores than any other profession (Whitehead, et al, 2015).

Clinical Correlations

As MD research builds, correlates to other phenomena are increasingly identified. As Hamric, & Epstein (2017) described, important discoveries about MD reduction can result from research in topics indirectly related to MD. Below, four such correlates to MD will be discussed: burnout, intent to leave, compassion fatigue, and quality of care.

Burnout

A number of studies demonstrate a relationship between MD and burnout. Rice, et al (2008) performed a cohort study among 260 acute care nurses at a hospital in the southeastern

US. Findings demonstrate that poor collaboration and poor communication contribute to MD in nurses. Findings were particularly stark in cases where patients were at the end of life and/or were suffering, in cases when the physician advises aggressive care that the nurse believes to be futile, and where that disagreement is not discussed and resolved collaboratively. The researchers found that these types of scenarios lead to nurse burnout and withdrawal (Rice, et al, 2008).

In a 2016 paper by the National Academy of Medicine (NAM), researchers from the Critical Societies Care Collaborative (CSCC) explain that Burnout Syndrome is "A syndrome characterized by a high degree of emotional exhaustion and depersonalization, and a low sense of personal accomplishment at work" (Dyrbye, et al, 2017 p. 1). MD is centrally featured within the framework for Burnout Syndrome (See Appendix E). The authors of that featured framework, Moss, et al (2016) cited Hamric & Blackhall (2007) when discussing moral distress. Hamric & Blackhall (2007) identify that MD stems from "factors such as perceived powerlessness, unnecessary/futile care, inadequate informed consent, and false hope" (Hamric, et al, 2007, p. 423). Many other studies that underscore that MD is independently associated with burnout (Dalmolin, et al, 2014; Larson, et al, 2017; Fumis, et al, 2017; Rushton, et al, 2015).

Intent to Leave

Multiple studies have found that MD was predictive for nurses who voiced intent to leave their job (Hiler, et al, 2018; Whitehead, et al, 2015; Allen, et al, 2016). Dodek, et al (2016) surveyed 669 personnel in 13 ICUs in Canada to discover that ICU nurses have higher MD scores than ICU physicians. They also found that where increased MD scores were present, there was an associated increase in job attrition, burnout, and poor physician collaboration (Dodek, et al, 2016).

Wilson, et al (2013) surveyed 61 transitional care unit and medical surgical ICU (MSICU) nurses, and found low amounts of MD, but affirmed that 18% of the MSICU nurses and 6% of the transitional care unit nurses had left a job in the past due to a distressing situation (Wilson, et al, 2013). Pendry, et al (2007) theorize that nurse retention and patient safety would likely improve if MD were reduced (Pendry, et al, 2007).

Compassion Fatigue

Allen, et al (2016) performed a cross sectional, descriptive, comparison study of 323 professionals, including physicians and nurses in both adult and pediatric settings, respiratory therapists, case managers, and social workers, across 6 hospitals in the southeast US. Findings included that "nurses who experience MD lose their capacity for caring, avoid patient contact, and fail to give good physical care as a result of moral distress. Nurses also physically withdraw from the bedside, barely meeting the patient's physical needs, or they leave the profession altogether." (Allen, et al, 2016. p. 15). Maiden, Georges, & Connelly, (2011) used mixed methods via survey of 205 AACN nurses across the nation, and found that the more MD an ICU nurse had, the more they perceived their compassion fatigue, and that compassion fatigue was correlated to intent to leave ($r = 0.21$, $p = < 0.001$) (Maiden, Georges, & Connelly, 2011).

Perceived Quality of Care

Healthcare clinicians believe that the quality of care that they give to patients is lower when moral distress is present. Browning, et al (2013) completed a cross sectional descriptive survey of 277 critical care nurses who were on a national member list of AACN and who had cared for a dying patient in the past year. Results revealed that MD frequency is lower in nurses who score highly in psychological empowerment ($r = -0.213$, $P = < 0.004$) (Browning, et al,

2013). Maiden, Georges, & Connelly, (2011) also found that nurses who scored high in MD noted that medication errors occurred due to poor communication with physicians.

Interventional Studies on MD

A study by Epstein, et al, (2009) and Hamric & Epstein (2017) involved formation of a consult service to respond to staff-initiated pages when MD occurs. Staff who realize that they are within a morally distressing situation can page the moral distress consult service (MDCS). The MDCS staff then respond and schedule a time to have a structured conversation about MD attended by any interested staff from the area where the morally distressing situation occurred. The studies found that the MDCS identified root causes of moral distress, barriers to doing the "right thing" and identified strategies to address the morally distressing situation (Epstein, et al, 2009; Hamric & Epstein, 2017).

Interprofessional conversations may provide a method to reduce MD. Wocial, et al (2016) studied pre/post MD scores of nurses working on a pediatric intensive care unit (PICU). The study intervention was hosting collaborative, interprofessional weekly goals of care conversations for patients with a length of stay (LOS) of ten or more days. Results included a significantly improved pediatric risk of mortality (PRISM) and indexed LOS (control = 4.94, intervention = 3.37, $p = 0.015$) indicating that upon entry to the PICU, the predicted LOS of a patient was lower if the weekly conversations occurred. Results also demonstrated no change in 30 or 365-day mortality, while there was an increase in DNR orders (11% control, 28% intervention, $p = 0.013$) and in-hospital deaths (9% control, 25% intervention, $p = 0.015$) compared to control group over 12 months. MD scores of nurses were assessed during this intervention via two measures: the moral distress thermometer (MDT), and the revised moral distress scale (MDS-R). MD scores were found to be lower in all categories in the post-

intervention period. Three categories demonstrated significantly lower MD scores on the MDS-R in the post-intervention period. However, the researchers were unable to identify which individual nurses had participated in the weekly conversations, and thus could not conclude that the conversations were the item that reduced MD scores (Wocial, et al, 2016).

National organizations that represent nurses have also proposed interventions for MD. The American Association of Critical-Care Nurses (AACN) posed a tool aimed at reducing MD; titled '*4 A's to Rise Above Moral Distress'*, the AACN framework for the *4 A's* is depicted in Appendix F (AACN, 2004). The AACN's tool has been used as a resource while working with nursing executives to assist them towards conclusions (McCue, 2010).

Organizational Headwaters

The Institute for Healthcare Improvement's (IHI) Triple Aim position is that reducing cost may limit quality (Berwick, et al, 2008). Meanwhile, health care organizations generally want to provide the highest quality care at the least expensive cost. It is plausible that an organization interested in keeping costs contained would also be interested in reducing MD, given costs of the aforementioned correlates of MD. However, thus far no organization has accomplished and publicized MD reduction or prevention methodology, and there is abundant literature that demonstrates how MD can occur and accrue, provided the organization does not intervene.

MD is known to be a problem with a system, rather than an individual (Epstein & Hurst, 2017) Epstein & Hurst (2017) argue that MD is an indicator of systemic problems in a care setting. While experienced by clinicians, MD does not occur because of clinicians who experience it. Experiencing MD is not a weakness, or a lack of stalwart grit among medical professionals. Rather, it is evidence that the clinician is able to identify when the system is

unnecessarily failing their patient (Epstein & Hurst, 2017). During such conflicts, individual clinicians' attempts for advocacy often go unheard (Epstein & Hurst, 2017).

Individuals are often the first to realize that an ethical problem is occurring, though that does not make the individual the problem. Rather, evidence mounts that individuals who encounter an ethical problem are more likely to incur MD. Rathert, May, & Chung, (2015) performed a cross sectional study that surveyed 290 nursing staff at a Trauma Level 1 acute care hospital. Findings included that the frequency of ethical problems in a workplace directly leads to an increase in MD (Rathert, May, & Chung, 2015). Gaudine, et al (2012) performed a qualitative descriptive interdisciplinary study about ethical conflicts confronted during care. These ethical conflicts were recognized by 75 physicians, nurses, and nurse managers, in four hospitals in eastern and central Canada. Participants were interviewed, and those interview responses underwent content analysis. They found that nurses and doctors felt that there was a lack of respect for them and patients from the organizations that they worked for, that administration 'turns a blind eye', and lacks transparency (Gaudine, et al, 2012).

Professional roles and settings can also impact MD prevalence. Bruce, et al (2015) performed a qualitative case study of role of teamwork in MD incidence in adult ICUs of 900 bed tertiary hospital among 29 nurses, physicians, and ancillary staff members. They found that surgical ICU nurses had more MD related to lack of full disclosure to patients, more fighting amongst themselves, less team building, and less mentoring when compared to medical ICU nurses (Bruce, et al, 2015). Clinicians were found to lead conversations with patients where content was altered in a way that compromised patient decision making. This was done by clinicians in order to accommodate other clinicians' opinions, usually surgeons (Bruce, et al, 2015).

There are also studies that examine how physicians may be influencing medical decision-making around the end of life of their patients. Maxwell, et al. (2014) observed nearly 20,000 cardiac surgery patients from Medicare data in 2008-2012. They noticed that cardiac surgery patients had a significant increase in mortality on post-operative day 30 that they could find no medical explanation for (Maxwell, et al., 2014). They concluded that:

> "Physician decisions about the use of aggressive interventions for critically ill patients, the timing of family meetings and shifts in treatment priorities, and hospital decisions about the design and coordination of systems for caring for these patients (e.g., inpatient and outpatient rehabilitation, hospice, and palliative care services) may interact with the implicit incentives created by the use of a short-term survival outcome as a quality metric." (Maxwell, et al., 2014, p. 1660).

Rather than place blame on one particular individual, profession, or setting, it seems that organizations have ultimate accountability when it comes to quality. Maiden, Georges, & Connelly, (2011) found that when examining medical errors and MD, institutional factors, rather than individual factors, promote or prevent errors. It was argued that organizations must take accountability for their own work environments in order to effect change, and that ICU nurses often lacked a voice to advocate for themselves and/or their patients (Maiden, Georges, & Connelly, 2011).

Further literature supports the argument that engagement with MD on an organizational level is critical for MD reduction. Varcoe, et al (2011) studied acute care setting RNs working in British Columbia, Canada (n = 374). They were surveyed using qualitative analysis of open-ended questions. It was found that among hospital nurses that experience MD, acute care nurses

seek local solutions to organizational problems, and that health care organizations need to be directly, actively involved in MD reduction (Varcoe, et al 2011).

Finally, the literature supports that MD is not a matter of an individual's sensitivity, but rather reflective of problems within the broader organization. De Veer, et al (2012) performed a cross sectional correlational questionnaire survey of 365 nurses working at settings ranging from a nursing home to acute care hospitals. They noted that rather than MD being related to an individual's personal sensitivities, MD was correlated to more organizational generalities such as time pressures, communication with colleagues, and leadership styles (de Veer, et al, 2012).

All of the aforementioned studies help to explain how MD, while experienced by an individual, has headwaters in organizational infrastructure. See Appendices G & H for a full table of all literature reviewed in this project.

Project Aim

The primary aim of this project was to evaluate use of the moral distress map (MDM) among ICU nurses, with the secondary aim of discerning any change in moral distress resultant from the MDM's use.

Theoretical Framework of Moral Reckoning

Incidence of MD via the Theory of Moral Reckoning

Alvita Nathaniel's Theory of Moral Reckoning in Nursing was developed to clearly articulate the logical process that nurses undergo as they navigate the workplace, and at times, become morally distressed (Nathaniel, 2006). The theory discusses how nurses progress through the work environment in relation to the accrual of MD. Nathaniel (2006) asserts that nurses pass through three stages while assuming the role of nurse—the first being termed the stage of ease, the second called the stage of resolution, and the final called the stage of reflection. The theory

emphasizes that MD occurs after the first stage, and before the second stage, at an event termed a 'situational bind'. Nathaniel's framework demonstrates how situational binds are eventful, conflict-filled junctures where MD occurs in the course of providing routine nursing care to a patient. (See Appendix I, Appendix J) (Nathaniel, 2006).

Nathaniel's Stages of Nursing

While first entering into the workplace in the first stage, the stage of ease, Nathaniel (2006) states that the nurse is going through four smaller intervals—becoming, professionalizing, institutionalizing, and working. The nurse becomes progressively familiar with the work environment as time passes. During this time, the nurse will at some point encounter what Nathaniel (2006) terms a 'situational bind'. Such binds occur when the nurse encounters a situation where he/she cannot extricate him/herself from some moral rift while giving patient care. The nurse recognizes that he/she is being asked to act in one way, but also recognizes that doing so would be incongruent with the patient's stated desires or best interest. This stage is when the moral distress accumulates.

The second stage, the stage of resolution, evolves as the nurse decides to "either make a stand or give up" (Nathaniel, 2006, p. 430). The nurse realizes that he is in a situational bind and is accruing MD. He understands that some sort of resolution needs to occur, but may or may not act, depending on complexities that comprise each particular situation.

The final stage is reflection, where the nurse thinks about the situational bind, discusses it, and examines the conflicts within the situational bind. Thereafter, the nurse lives with the consequences of the situational bind and their own reactions to that bind (Nathaniel, 2006).

Nathaniel's (2006) framework is arranged along a linear timeline, supporting the idea that moral distress intensity may peak during a situational bind and trough on either side. This

project collected data from nurses regardless which of Nathaniel's three stages of nursing the nurse was experiencing at the time of implementation.

Methods

Project Design, Inclusion and Exclusion Criteria

The project was initiated following IRB approval. Staff were informed about the project via email and in monthly unit meetings prior to project implementation.

The project was a pre/post design in which ICU nurses were asked to rate their MD via the moral distress thermometer (MDT), a valid measurement of an individual's self-reported level of MD experienced over the past week (Wocial & Weaver, 2013). Nurses were asked to rate their level of MD before and after use of the MDM, and were asked to complete a PI-designed questionnaire. Participation was voluntary. Please see Appendix K for definitions of terms in this project and a copy of IRB approval, and Appendix L for permissions to use the intervention and measurement instrument used in this project.

Staff included were ICU nurses, all of whom hold valid licenses as registered nurses, and approximately ten of whom hold specialty certifications relevant to that unit. Staff who were traveling nurses or float nurses were also included. Nursing support staff, such as techs, managers, and unit administrative assistants were excluded.

Project Setting

The setting for this project was a 24 bed thoracic cardiovascular post-operative ICU that regularly receives patients of high acuity, including but not limited to: extra corporeal membranous oxygenation devices, open chests, ventricular assistive devices, vascular patients, continuous renal replacement therapies, and miscellaneous high acuity patients who often endure

long admissions. This ICU employs approximately 80 nurses, and is in rural southeastern United States, at a level one trauma center, tertiary care academic medical center.

This project was implemented on weekends for three reasons. First, patient census in this unit is lowest during weekends. During weekdays, surgical cases are performed and patients arrive directly from the OR, requiring critical management. Such workload may have jeopardized nurse participation, and thus was avoided. Second, nurses who work full time only work six days a week over a two-week period of time. Thus, if data collection had been performed every day for a week, some staff may have not been able to participate, simply by chance of staffing, whereas other nurses would have been invited to participate multiple times. Third, there was no consistent grouping of staff except on the weekends so as to ensure that all dayshift and nightshift staff are afforded the chance to participate in data collection. ICU conditions are the most consistent on weekends, and acuity and census is lowest on weekends. The study design attempted to optimize conditions for staff participation by prioritizing the consistency of sampling conditions.

Project Sample

In this ICU, all staff are required to work at least every third weekend. The staff is divided on a rolling basis into groups named ‘A Weekend’ ‘B Weekend’ and ‘C Weekend’. On any given weekend day, there is a range of nine to fourteen nurses providing care, depending on unit patient census. Generally, the same nine to fourteen individuals who work on ‘A Weekend’ will work together on every ‘A Weekend’, meaning every third weekend— and the same is true of the staff who work ‘B Weekend’ and ‘C Weekend’. Thus, the staffing of weekends spans a three-week repeating cycle wherein the same nurses are assigned to work every weekend with one another.

There are a few exceptions to these finite cohorts being composed of the same nurses. According to demands of staffing, there are, from time to time, staff members who agree to work a weekend which is not their assigned weekend, but those individuals will then later also work on their own assigned weekend. Some staff members are assigned to work a weekend, but then call out from work, and thus are not present for their weekend assignment, or leave their weekends entirely via a departure from the job. In such cases, those staff may be required to work the following weekend. Staff that work every weekend were included. Given the chance that performing the MDM more than once would augment data, a question was included so as to identify nurses who may have previously completed the MDM.

The Project Instrument

This project featured three measurement instruments that were used to evaluate use of the moral distress map and discern any change in MD resultant from the MDM's use. It was anticipated that the nurses required no longer than ten to twenty minutes of total time to participate in the project. Sixty total respondents were anticipated.

Demographic Questions, the MDT, and the PI-Designed Questionnaire

The first measurement instrument used was a set of demographic questions. These questions were designed to gather descriptive information about the sample while avoiding identifying any individual nurse. Information was sought regarding the respondent's age, sex/gender, whether they were a staff or float nurse, how long they had been a nurse for, how long they had been hired to work on this unit for, what weekend they were assigned to work, what weekend it was at the time of data collection, and whether they were dayshift or nightshift staff. Specific instructions were included that directed respondents to avoid providing

information that could identify them individually, and the categorical answers offered to demographic questions were deliberately broad.

The second measurement instrument used in this project was the Moral Distress Thermometer (Wocial & Weaver, 2013). This instrument was used in order to discern any change in MD resultant from the MDM's use. The MDT is a valid measurement of an individual's self-reported level of MD experienced over the past week (Wocial & Weaver, 2013) (See Appendix M). The MDT first poses a definition of MD to the reader, stating that MD "Occurs when you believe you know the ethically correct thing to do, but something or someone restricts your ability to pursue the right course of action" (Wocial & Weaver, 2013). The MDT then instructs the reader to reflect about the MD encountered over the prior week, and circle a number, zero through ten, that indicates how much MD they have experienced. Zero would indicate no MD, while ten would indicate severe MD (Wocial & Weaver, 2013). The psychometric testing performed on the MDT demonstrated convergent validity when compared with a more extensive quantitative assessment of MD, the moral distress scale (Pearson's = 0.404, $p = < .001$). The author recommended the MDT for use among nurses in hospital settings. The author also approved the use of the MDT for this project, including the use of the MDT to measure how much MD an individual was experiencing in the present moment (rather than the past week), and again immediately after completion of the moral distress map.

The third measurement instrument used was a PI-designed questionnaire. The purpose of the PI-designed questionnaire was to evaluate use of the moral distress map (MDM) among ICU nurses. The PI-designed questionnaire was posed to nurses following the MDM and second MDT. Questions included whether the nurse completed the MDM, whether the nurse had used

the MDM in the past, and whether the nurse completed the MDM independently or with a partner.

Following those questions was a question about whether the nurse had chosen a case from the past, present, or a combination of cases from both the past and the present. Written instructions about choosing a case had been provided to nurses as follows: "If you have moral distress right now, please complete the map with a case in mind that you believe relates to the moral distress you may be presently experiencing. If you are not experiencing any MD presently, please complete the map with a prior case in mind."

The next two questions in the questionnaire asked whether the nurse thought that the MDM was helpful for reducing MD, and whether the nurse thought that MDM may be helpful if used in another way, and both provided spaces for comment. The final questions were about timing of the cases that nurses selected while using the MDM, and a final question about sources of MD.

The final question in the PI-designed questionnaire was designed to evaluate the status of known sources of MD in this particular setting that were previously identified in a separate study by Wolf (2016). In Wolf (2016), a total of 25 nurses from this ICU completed the Moral Distress Scale- Revised (MDS-R) a valid tool used to assess MD. The MDS-R features 25 total items, of which there were six that greater than 50% of the staff in this unit identified as sources of their MD. These included: 'lack of consensus regarding treatment plan' (80.8%), 'inadequate staffing, inadequate experience' (80.8%), 'Unclear goals of care' (76.9%), 'providing false hope' (69.2%), 'prolonging dying' (65.4%), 'Inadequate communication among team members' (65.4%) (Wolf, 2016). These six sources of MD were featured in the PI-Designed questionnaire due to the expectation that they may be experienced by most nurses who experience MD in that unit, and to

inquire whether the MDM helped the nurses identify these particular sources of their MD. Please see Appendix O for the questionnaire given to nurses.

Intervention

The moral distress map (MDM) has been proposed as an intervention that may reduce MD. The MDM "was designed to be used along with active listening and empathy in moral distress trainings and case debriefings." (Dudzinski, 2016, p. 323) (See Appendix N). The MDM is a template containing six successive questions posed in relation to a morally distressing case. The six questions relate to the following: Emotions, Sources, Constraints, Conflicting Responsibilities, Possible Actions, Final Action. Dudzinski (2016) theorized that once morally distressing problems have been articulated via discussion of each of the six questions, the nurse may then identify actions to take, and resolve to take one of the identified actions. If the nurse, after selecting one action to take, follows through and carries out that action, Dudzinski (2016) theorizes that the nurse may then ultimately have a reduction in MD. As of Spring, 2019, there are no metrics or analyses that have evaluated the psychometric properties of the MDM.

The MDT was presented to individuals before and after the MDM in order to capture any change in their MD at the time of having completed the MDM. Following the post-MDM MDT, the PI-designed questionnaire was presented to nurses in order to gather feedback about the use of the MDM.

In this practice setting, removing nurses from the patient care area to have a formal debriefing conversation presented a barrier to participation. Nurses in this setting are often occupied providing care to critically ill patients, and thus are likely most comfortable when proximate to their charges. Concern about barriers to participation grounded the decision to prioritize participation at the incurred cost of forgoing a formalized debriefing session led by an

authority. For these reasons, it was decided to deploy the intervention among pairs or groups of available colleagues at the nurses' stations.

Procedures

IRB approval was obtained prior to implementation of this project. Prior to implementation, unit nurses were informed about MD via email and brief (ten minutes or less) discussions during staff meetings. Information specific to the project measurement instruments and intervention was not included.

The project was then implemented during three successive weekends on Saturdays. All available nurses from dayshift and nightshift were offered participation in the project during the course of their Saturday shift. Nursing staff were recruited by the PI. Participation was voluntary.

Nurses were approached and asked whether they would be interested in participating in a project about moral distress. If they declined, they were thanked and were not pursued further. Staff who expressed interest then received instruction via a script. The script was read by the participant or to the participant by the PI prior to completing the first instrument (demographic sheet). While reading the script, the PI allowed for the staff nurse to look at the MDM and the MDT and answered any questions the nurse had. The script contained explicit information that participation was voluntary and prior to beginning, each participant was asked whether or not they would like to continue and begin. Those who expressed that they wanted to proceed began to fill out the instrument, those who refused were thanked and not pursued further.

Nurses began to complete the instrument by responding to the first measurement instrument, which featured questions about demographics. Then they proceeded to the second instrument as they recorded an initial amount of their own MD via the MDT. Following the pre-

MDM MDT but prior to completing the MDM, nurses were instructed to complete the MDM with a partner. Further instructions included that if they were presently experiencing MD, then they were to complete the MDM with a case in mind that related to their present MD, and if they did not presently have MD, to complete the MDM using a case from the past.

Having read these instructions, nurses then completed the intervention, the MDM. After completion of the MDM, the nurses were asked to complete a second measurement of MDT, and respond to the final instrument of the PI-designed questionnaire. If staff expressed questions related to the mechanics of completing the instruments and intervention, then the PI answered them, otherwise, the PI did not intervene. Following the completion of the instruments and intervention, prior to instrument collection, participants were reminded to include no personally identifying information such as names or initials, and no information that could be used to identify any patient. Additionally, they were asked to securely dispose of the MDM on which they had written information about a morally distressing case.

Once data were collected and analysis was initiated, data were reviewed for any information that identified a particular staff member. No data contained this type of information. If instruments were left partially completed, data from the partially completed sections were included. Instruments were reviewed for any HIPAA sensitive information. There were no instruments containing HIPAA-sensitive information.

Completed instruments were collected and secured with the PI. When not being used for analysis, instruments were stored securely within a locked cabinet at the School of Nursing. Upon conclusion of analysis, instruments were destroyed; data will be kept on a secured SON server.

Data Analysis

Results from the completed instruments were analyzed using IBM SPSS Statistics® version 25. Descriptive statistics were used to describe the demographic characteristics of the sample. Data from the MDT and the PI-designed questionnaire were analyzed in a number of ways. A paired samples t-test was used to compare the mean change in MDT scores. Independent samples t-tests and the Kruskal-Wallis test were used to compare pre-MDM MD scores, post-MDM MD scores, and change from pre to post MDM scores, in order to assess the use of the MDM.

Results

Participant Characteristics

A total of 47 nurses participated. Of those 47 nurses, 40 were hired to work on the floor where the project occurred, including traveling nurses hired as temporary staff, accounting for 85.1% of respondents. Of the seven respondents who did not work exclusively in the project setting, six nurses (12.8%) indicated that they were hired float nurses in the hospital system, but routinely staffed the setting and were present in the setting during the time of the project. One respondent did not answer the question about where they typically worked, but answered other questions, accounting for 2.1% of demographic responses.

Measurement Instrument One: Demographics (See Table 1)

The majority of participants (55.3%) indicated that they were greater than or equal to 20 years old but less than or equal to 30 years old had been nurses for five or fewer years (55.3%), and were female (83%). Twenty-three nurses (48.9%) indicated that they had been staff in the project setting for fewer than 2 years. Thirty-nine nurses (83.0%) reported that they worked full time. Twenty-five nurses (53.2%) indicated that they were participating while working on the

unit during dayshift, 07:00 – 19:00, and 22 nurses (46.8%) were participating during nightshift, 19:00—07:00.

Mean MDT Scores of Dayshift vs Nightshift.

Dayshift and nightshift MDT pre/post scores were very similar. The mean pre-MDM MDT score for dayshift (n=25) was 2.6 (*SD 2.5*), and the mean post-MDM MDT score was 4.0 (*SD 3.0*). The mean pre/post change in MDT scores for dayshift nurses was an increase of 1.4. The mean pre-MDM MDT score for nightshift (n=22) was 2.5 (*SD 2.6*), and the mean post-MDM MDT score was 3.9 (*SD 2.7*). The mean pre/post change in MDT scores for nightshift nurses was an increase of 1.4. An independent-samples t-test comparing the pre-post change in mean MDT scores found no evidence of a difference between these two groups ($t(45) = - 0.015$, $p = 0.988$).

Weekends 'A', 'B', and 'C'.

Of the 47 participants, nurses who indicated that they were working during the first weekend of implementation were working on 'A Weekend' (n = 22) and indicated a mean pre-MDM MDT score of 2.6 (*SD 2.5*), and mean post-MDM MDT score of 3.7 (*SD 2.9*), an increase of 1.1 (*SD 2.1*). Nurses who worked the next weekend, which was 'B Weekend' (n = 11) indicated mean pre-MDM MDT score of 3.6 (*SD 2.3*), and mean post-MDM MDT scores of 5.0 (*SD 2.7*), an increase of 1.4 (*SD 1.9*). Nurses who worked on the final weekend of implementation, 'C Weekend' (n = 11) indicated mean pre-MDM MDT scores of 1.2 (*SD 1.8*), mean post-MDM MDT scores of 3.4 (*SD 2.6*), an increase of 2.2 (*SD 2.2*). Those who did not indicate what weekend they worked (n = 3) had a mean pre-MDM MDT score of 3.0 (*SD 4.4*), and a mean post-MDM MDT score of 4.3 (*SD 4.0*), an increase of 1.3 (*SD 0.6*). Tests for

differences in MDT scores among the weekends were not performed because the distributions did not satisfy the assumptions for a 1-way ANOVA, likely due to cohort sizes being small.

Evaluation of Use of MDM

Overall MDT scores

The overall mean pre-MDM MDT score was 2.6 (*SD 2.5*), and the mean post-MDM MDT score was 4.0 (*SD 2.8*), n = 47. Mean MD in ICU nurses increased significantly when nurses used the MDM as measured by the MDT ($t(46) = -4.8$, $p < 0.001$). Of the 47 nurses who completed the measurements and intervention, six nurses had reduced MDT scores following the MDM. Twelve nurses had no change in their MDT scores following the MDM. The remaining 29 nurses had increased MDT scores following the MDM.

Overall MDT scores tended to be in the "mild" to "uncomfortable" range as indicated by the MDT. Pre-MDM MDT scores greater than zero were reported by 32 nurses. Sixteen of those nurses (50%) indicated that they had selected cases from the past while completing the MDM. There were 15 nurses who reported pre-MDM MDT scores of zero. Of those 15 nurses, two nurses indicated that they had selected a present case or a combination of present and past cases, while 12 used a past case, and one respondent that did not indicate whether their selected case occurred in the present or past. Of the 15 nurses who had recorded a pre-MDM MDT score of zero, six nurses recorded a post-MDM MDT score of zero. The other nine nurses had a mean increase in their post-MDM MDT scores of 3.9 (*SD 1.8*). Of the 12 nurses who reported pre-MDM MDT scores of zero and later selected a past case to use for the MDM, eight of the 12 recorded post-MDM MDT scores higher than zero with a mean increase of 3.6 *(SD 1.7)*.

Of the five nurses who indicated that they used cases from the present, their mean pre-MDM MDT score was 3.8 (*SD 2.4*). For nurses who used cases from a combination of the present and past (n=13), the pre-MDM MDT mean score was 4 (*SD 2.6*). Of the 28 participants who used cases from the past exclusively, the mean pre-MDM MDT score was 1.8 (*SD 2.1*).

Nurses who selected cases from the present (n = 5) experienced a mean increase in their MDT scores of 0.2 (*SD 1.3*). The 13 nurses who used cases from both the past and the present experienced a mean increase in their MDT scores of 0.9 (*SD 2.2*). The 28 nurses who used cases from the past experienced a mean increase in their MDT scores of 1.9 (*SD 2.0).* Nurses who used cases from the present, either alone or in combination with past cases, had significantly higher pre-MDM MDT scores (n = 18, $M = 3.9$, $SD = 2.5$) than those who used a case exclusively from the past (n = 28, $M = 1.2$, $SD = 2.2$) ($t(44) = -3.190$, $p = 0.003$).

There was no statistically significant evidence that the mean increase in post-MDM MDT scores was attributable to whether nurses selected cases from the present, past or a combination of past and present cases (Exact Kruskal-Wallis H = 4.1, $p = 0.097$). Given the clinical trends, however, further evaluation was pursued. This was done by grouping the mean change in MDM MDT scores of nurses who used cases from the present, with scores of nurses who used a combination of past and present cases, (n = 18, $M = 0.7$, $SD = 2.0$) and comparing that group with the mean change in post-MDM MDT scores of nurses who exclusively used cases from the past (n = 28, $M = 1.9$, $SD = 2.0$). There was no statistically significant finding when comparing these groups, ($t(44) = 1.970$, $p = 0.058$). While not statistically significant, trends in the data suggest the possibility that statistical significance may develop given increased sample size.

Evaluation of MDM for MD

When asked, "Did you find the Map to be helpful for reducing any moral distress you had?" 18 nurses (38.8%) indicated that the MDM was helpful for reducing respondents' MD, 24 nurses, (51.1%) indicated that they did not find the MDM helpful for reducing MD, and 5 nurses (10.6%) did not answer.

When asked, "Would you think that the map may be more helpful if used in a different way?" 19 nurses (40.4 %) indicated that the MDM may be more helpful if used in a different way, 24 nurses, (51.1%) indicated that they did not think that the MDM may be more helpful if used in a different way, and 4 nurses did not answer (8.5%).

Most respondents, 80.9% (n=38) said that the MDM was helpful for identifying the origins of their MD while 10.6% (n=5) indicated that the MDM was not helpful for identifying origins of MD, and 4 nurses indicated that they had no MD (8.5%). Twenty-eight nurses (59.6%) indicated that the MDM helped them identify that an origin of their MD was providing false hope. Twenty-seven nurses (57.4%) indicated that the origin of their MD was prolonging dying. Twenty-six nurses (55.3%) indicated that the origin of their MD was inadequate communication among team members. Twenty-six nurses (55.3%) indicated that the origin of their MD was lack of consensus regarding treatment plan. Twenty-five nurses (53.2%) indicated that the origin of their MD was unclear goals of care. Nineteen nurses (40.4%) indicated that the origin of their MD was 'inadequate staffing, inadequate experience.' Four nurses (8.5%) indicated that the MD they experience was from other sources that were not listed.

General Feedback

Two questions were included that allowed space for free text response. The first question that provided space for comment was "Did you find the Map to be helpful for reducing any

moral distress you had?" The second question that provided space for comment was, "Would you think that the map may be more helpful if used in a different way?" Comments left under these two questions were reviewed by the author and two faculty members. Each individual read all comments independently and then met to discuss prominent themes and subsequent categorization of each comment. One comment from each category was selected based on consensus that it was the most representative comment of each category.

The 'Helpful for Reducing MD' Responses.

Twenty-nine of 47 returned measurement instruments contained a written response for the question "Did you find the Map to be helpful for reducing any moral distress you had?" These responses were reviewed by the author and an independent reader. Four common categorical response types were identified: 'yes', 'yes but with qualifications', 'no', or 'no with qualifications.'

Yes, the MDM was helpful for reducing MD (6 responses). "It was a good way to get to the root of my moral distress and process it. It helps to make an action plan and to know that I am not the only one feeling this way."

Yes, with qualifications (6 responses). "The map brought up situations that made me feel angry. It was nice to verbalize & debrief with a colleague and I feel heard & like we are on the same page but doing so brought all those emotions to the forefront."

No, the MDM was not helpful for reducing my MD (9 responses). "The map made me feel more stressful because I started thinking about how frustrating / distressing I find certain patient situations. Especially considering the constraints."

No, with qualifications (8 Responses). "We talk about moral distress but it's really hard to do anything about it within the current medical model. I'm well aware of my current moral distress."

The 'Helpful If Used In A Different Way?' Responses

Twenty-five of 47 nurses returned measurement instruments contained a written response for the question "Would you think that the map may be more helpful if used in a different way?". These comments were reviewed in an identical manner to the 'Helpful for Reducing MD' comments. Four categories of response types were jointly identified: 'Comments about debriefing', 'resolution/solution comments', 'comments recommending procedural changes, or 'comments recommending structural changes to the MDM itself.' One comment from each category was selected and displayed below based on consensus that it was the most representative comment of each category. One comment contained crucial elements of both procedural and structural changes to the MDM, thus was counted in both of those categories.

Comments about debriefing (7 Responses). "Would be good for teams to fill out during distressing situations—could help debrief."

Comments about resolutions / solutions (4 responses). "I found it helpful for articulating how I feel with a particularly distressing situation."

Procedural change recommendations (11 responses). "Probably in many other ways – I can see the value of using this if the audience is other people involved in the case, or at the time of the case, or both."

Structural change recommendations (4 responses). "I would like to see more suggestions / examples about the map's headers—it provokes talking points."

Emotional Responses from Both Questions.

Many of the comments about the MDM referenced feelings of validation and/or uncomfortable emotions, regardless of the question posed to the responder.

Validation response (7 responses). "We should all complete the maps and post them in the hallways of the unit."

Uncomfortable emotional response (9 Responses). "The story / case while distant still hurts. It's an important lesson to tell but increases my distress telling it."

The seven validation responses spoke of how sharing about personal MD experiences and listening to another nurse do the same let respondents feel a sense of 'connection' with their colleagues. Some spoke of how the process supported them in finding words to describe how they felt. Others mentioned realizing that they were not alone in feeling MD. The importance of listening to such respondents is that their feedback illuminates a pathway for potential use of the MDM.

There were nine respondents who left comments voicing discomfort. They used phrases like 'brings up old scars', 'distressing', and 'frustrating'. A number of nurses made comments about how they had not been considering MD cases prior to using the MDM, and that the MDM instigated their recollections of previous tribulations. A number of comments about procedural improvements spoke of when the MDM ought to be used. Some, but not all, stated a preference for using the MDM in a present case, or just after. Such use may help to avoid the feelings of 'dredging up old memories' that were voiced. It may be that the MDM would be optimally used at the nurses' discretion, and at a time of an individual nurses' choosing.

Discussion

This project is novel for three reasons. First, the results demonstrated that mean MD in ICU nurses (N = 47) increased significantly as measured by the MDT when nurses use the moral distress map to debrief one another about MD cases at the point of care ($p < 0.001$). Second, the project's findings provided clinical evidence about the intensity of MD over time, substantiating theory about moral residue. Finally, the participant responses to the questionnaire provided general feedback about how to optimize the use of the MDM in this setting.

Increase in Mean MDT Scores with MDM Use Among Nurses.

This project provided evidence that when nurses debrief one another about MD using the MDM, their mean MDT scores significantly increases ($p < 0.001$). This is novel because data using the MDM as an intervention have not yet been published.

Nurses in this project were encouraged to select a staff member of their choice to help them complete the MDM, and many of them completed the MDM with their peer nurses. Some possible explanations for increases in MDT scores include validation of one's own MD, or empathizing with peers, or that nurses may experience increased MD when they discuss MD. Alternatively, a short post-intervention data collection period could have explained the increase in MD, in that MD may have increased immediately following the MDM due to emotional engagement, and may have later subsided concurrent with emotions. This study did not collect MDT scores from nurses beyond the single post-MDM MDT measurement, although such scores could reveal a more nuanced or entirely different trend of MDT scores over a longer period of time. Of note, a number of comments voiced that use of the MDM occur during or immediately following a morally distressing case, suggesting that the MDM may be better used at a particular time related to unfolding MD events, rather than how it was used for this project.

Of the 47 nurses who completed the measurements, six (12.8%) of nurses had reduced MDT scores following the MDM, while 18 (38.8%) participants responded "Yes" to the question, "Did you find the Map to be helpful for reducing any moral distress you had?" The fact that some participants said in the questionnaire that the MDM helped reduce their MD while the MDT data showed otherwise is an interesting finding. The disparity could be explained by a few of the comments that nurses left about feeling validated upon completion of the MDM. Alternatively, nurses may have felt morally distressed but may not have been familiar with the term itself, finding solace in having a term matching how they felt, albeit still indicating feeling more morally distressed. It could be that working on the MDM with a partner may increase the intensity of MD while also allowing for some resolution to occur via support and insight gained. There is no way to know whether any of these explanations apply, given the limitations of the study, but comments from the nurses do suggest plausibility.

Another explanation for the statistically significant increase in MD is that ICU nurses may feel unable to resolve the organizational-level problems that precipitate into nurse MD on this unit. Literature indicates that acute care nurses seek local solutions to organizational problems, and that health care organizations need to be directly, actively involved in MD reduction (Varcoe, et al 2011). Moreover, nurses and physicians both want to be better supported through ethical conflicts by the health care organization that they work within (Gaudine, et al, 2012; Huffman & Rittenmeyer 2012). MD, while experienced by an individual, results from traits and characteristics of the larger organization and its leadership (de Veer, et al, 2012).

Given that there were a few individual reductions in MD, one consideration based on the findings of this project could be that the MDM be made accessible for nurses in this setting, and that they be educated about its use and be able to complete it at their own choosing. One caveat

to that suggestion is that individuals may have a more difficult time resolving their own MD compared to groups led by MD experts. When organizational leadership endeavors to engage with MD by taking systems level interventions, such as forming a consult service, MD can be directly targeted and affected (Rathert, et al, 2015). Rather than shuffling the mantle of resolving MD in to rest exclusively on individuals, organizational leadership interested in reducing and preventing MD must take part and engage MD directly via actions such as education, improving the ICU environment, and helping staff cope (Mealer & Moss, 2016) The call to stop ignoring and begin direct engagement with MD has been echoed in nursing journals, with recommended interventions of improving nurse-physician collaboration, nurse-physician communication, resilience, and compassionate rounding as methods for reducing MD (Wallis, 2015).

Research may be at the cusp of affirming that nurses may have less of an increase in MD, or even a reduction in MD, when they have conversations organized by an expert. To that end, Dr. Elizabeth Epstein, a leading scholar on moral distress, has affirmed to this author that "We now have some unpublished evidence of this reduction and it's somewhat evident in the 2017 Hamric & Epstein study." (personal communication, June 4th, 2019). The study by Wocial, L., et al (2016) may also support the strategy of having nurses discuss MD with interdisciplinary healthcare team members as a part of weekly rounds on patients with long lengths of stay.

While MD seems to be most preventable and reducible given direct engagement by organizational leadership, there are risks associated with organizational involvement. For example, if leadership were to identify the MDM as a potential tool for MD reduction and encourage individuals to complete it in a fashion analogous to this project's methods, it would be expected that MD would significantly increase among the staff, rather than decrease. Such an

arrangement could delay necessary broader systemic changes while saddling individuals with recurrent unpreventable, irreconcilable problems.

Perhaps for concerns like these, or perhaps all together other reasons, the author of the MDM recommends its use among groups participating in a formalized debriefing, and utilizing the MDM in those circumstances may yield different results than those of this project (Dudzinski, 2016). Further research is necessary.

Intensity of MD: Selection of Past or Present Cases & Concepts of Crescendo and Residue

Past and Present Cases and the MDM

There was no statistically significant evidence that the pre-post change in mean MDT scores varied according to when the case was chosen—present, past or a combination thereof. However, clinical trends indicated that nurses who completed the MDM having selected cases from the present experienced a lesser mean increase in MD as compared to nurses who selected cases exclusively from the past. This finding is not surprising—one would expect that nurses who have a present MD case indicate higher pre-MDM MDT scores compared to nurses who have no present MD case. One explanation as to why on average nurses experienced less of an increase in MD when using present cases could be because the MDM poses a final question that asks for the user to identify a final action using the prompt, “What action should you take?”. Nurses who complete the MDM while a current MD situation is occurring might encounter this question and perceive themselves as being able to take immediate action that could resolve the MD situation, compared to those nurses who encountered that question while considering events from the past.

While nurses who used cases from the present experienced *less* of a mean increase in their MD compared to nurses who used cases from the past exclusively, they nevertheless

experienced an *increase* in their MD. One explanation could be a different reaction to the aforementioned final MDM question that asks nurses what action they will undertake. Such a question presupposes that nurses have the ability to take an action that could resolve their MD, in spite of the fact that the MDM's earlier sections acknowledge barriers that preclude nurses from acting. As such, nurses who used cases from the present may have felt as though due to the constraints and conflicting responsibilities of MD, that solutions were difficult to come by. There is no way to know whether any of these possibilities might be true, given the limitations of the study. Ultimately, clinical trends suggested that the MDM may be best suited for use during a present MD case.

Moral Distress Crescendo and Residue

This project found that nurses who used cases from the present, either alone or in combination with past cases, had statistically significantly higher pre-MDM MDT scores than those who used a case exclusively from the past. There is theory of MD increasing in intensity corresponding to morally distressing events unfolding. These increases in MD are called MD crescendos in widely accepted theory by Hamric & Epstein (2009) or situational binds by Nathaniel (2006) (See Appendix Q).

While it would be expected that nurses with a present MD case have higher pre-MDM MDT scores given theory about MD crescendo, this finding does not serve as statistically significant evidence of the MD crescendo, due to a lack of controls. For example, nurses who chose MD cases from the past could have selected cases that were not particularly distressing. It may also be the case that unit or system level changes occurred over time that exposed nurses presently on the unit to comparatively increased MD presently, or likewise presently reduced

potential MD exposure compared to past MD events. Nevertheless, the clinical trend is interesting within the context of the crescendo theory.

Hamric & Epstein (2009) also identified that repeated exposure to MD can manifest in a person accumulating 'moral residue'. They theorized that moral residue can accrue over time and perpetually impact an individual, independent of any immediate morally distressing event. Of the 32 nurses who selected pre-MDM MDT scores above zero, the fact that half of those nurses then identified that they were discussing cases exclusively from the past supports the idea of moral residue. Moral residue seems to be a plausible explanation when accounting why nine of the 15 nurses who had recorded pre-MDM MDT scores of zero later recorded increased scores. Moreover, of the 12 nurses who reported pre-MDM MDT scores of zero *and* had selected a past case to use for the MDM, eight of those 12 nurses indicated increased post-MDM MDT scores, providing further clinical evidence for moral residue.

One other possibility for the increase in post-MDM MDT scores for the 15 nurses with pre-MDM MST scores of zero is that perhaps the act of completing the MDM itself could be increasing MD, rather than any underlying residual moral residue. It could be the case that these MD scores increased not out of one's own MD, but rather out of having empathy for their partner nurse while examining the MDM cases together. It could be also that nurses recognize their own MD, and when doing the MDM, worry that they will continue to have MD cases in spite of feeling as though MD ought not occur – that is, they may develop MD about anticipated future MD, and feel unable to prevent future MD. Further research is needed to gain a better understanding of the increases in mean MD seen in this project.

There was a trend in the data that nurses who selected cases from the past tended to have larger increases in MD when compared to nurses who used cases selected from the present.

There was no statistically significance to this trend, although the data was analyzed using two different approaches. First mean MDT change scores were compared across the three groups of present cases, combination present and past cases, and past cases via the Kruskal-Wallis test, the result of which was not statistically significant. Even when grouping the mean MDT change scores of both nurses who used present cases together with those who used cases from the past and present, and comparing those to the mean MDT change scores of nurses who used cases from the past exclusively via the independent samples t-test, statistical significance did not develop. While these analyses were not statistically significant, the clinically observed trend may support the prospect that, given a larger sample size, evidence for moral residue may be discovered.

MD Prevalence & General Feedback

Findings Revealing Consistent Sources of Moral Distress Known to This Unit

A survey in 2016 using the MDS-R revealed six types of situations that greater than 50% of the unit staff identified as sources for MD (Wolf, A., 2016). Five of those six were identified as sources of MD for greater than 50% nurses who completed the questionnaire in this project. This finding demonstrates consistent sources of MD for ICU nurses working in this setting. McAndrew, et al (2011) found that MD was increased in settings where staff perceived poor hospital leadership. This consistency is important in that it provides specific sources of MD that could allow for direct and targeted engagement from those in unit management or organizational leadership.

This Project, the Moral Distress Map, and Other Interventional Studies on Moral Distress

There are a few publications about how to intervene to reduce or prevent MD. Of the few interventional studies, a number focus on inviting staff to discuss their moral distress. Hamric & Epstein (2017) focused on a moral distress consultation service (MDCS). The MDCS dispatched subject matter experts to lead discussion about MD with any that staff wished to attend, often occurring away from the nurses' station. Hamric & Epstein (2017) found that the MDCS provided research that identified root causes of moral distress, barriers to doing the "right thing" and identified strategies to address the morally distressing situation.

While Hamric & Epstein (2017) were unable to demonstrate that the consult service reduced MD, they were able to contribute valuable analysis from interview and follow-up data from consultations. They identified five themes, namely, acknowledgement of staff concerns, staff empowerment, staff engagement, improved team collaboration, and unit- or organizational-level change (Hamric & Epstein, 2017). The list of root causes of MD that Hamric & Epstein (2017) provides evidence of the benefits of resolving MD (See Appendix P).

Like the MDCS study, this project invited nurses into a dialogue about MD, but unique to this MDM project was the design of allowing nurses to discuss their MD in real time at the point of care, but without a subject matter expert present. This method was proposed in order to explore opportunities for nurses to be able to resolve their own MD at the time of an acute MD situation, without having to depend upon a meeting held at a later time, or a subject matter expert. The use of the MDM in this manner demonstrated how mean MD increases when nurses discuss their MD among themselves using the MDM at the point of care.

Nurses may feel MD less often, or less intensely, when they have assurances that coincide with having a say about matters. This project's results produced comments about the desire for

interdisciplinary team members to be present for the MDM use. One explanation as to why nurses may feel more MD in this project is that it was performed without an expert present. Nurses may seek an authority, or an expert, or both—someone they view as comparably empowered to represent them beyond their own unit. Alternatively, it may be that nurses feel less morally distressed when they know that their concerns and experiences about MD are acknowledged by an authority. Finally, it may be that nurses feel emphatically validated by the experiences of their peers, and indicate increased MD scores from this validation.

It is possible that future projects could explore the use of the MDM by nurses participating in interprofessional weekly rounds, with a MD expert present. The AACN'a *4 A's* may be an alternate approach as a blueprint for an interventional MD project, and there is evidence to suggest that utilizing the *4 A's* can help to reduce MD (Molazem, Tavakol, Sharif, Keshavari, & Ghadakpour, 2013; Beumer, 2008) (see Appendix E). It has been theorized that due to the common psychological symptoms that often occur concurrent with MD, that resiliency techniques, such as mindfulness, may hold promise for mitigating MD (Rushton, & Carse, 2017). At present there are no published data to demonstrate that resiliency techniques lower or prevent MD. Further research is needed.

Strengths

Project findings reveal a number of strengths. Its sample size was large, allowing for data collection that supported significant findings. The results produced novel findings about use of the MDM by ICU nurses. Additionally, the results demonstrated that when the MDM is used by ICU nurses at the point of care, their MD increases significantly. There are few interventional studies about moral distress, and a project of this scope contributes to the MD literature.

Limitations

Findings from this project are not generalizable. Additionally, the nurses in this ICU setting are generally engaged in patient care to a degree that precludes being able to leave the bedside in order to complete the MDM in a more formalized debriefing session. This project was designed to enhance nurse participation at the bedside, hence, it may have been an application of the MDM that, while novel, may not have allowed for an optimal debriefing setting.

Another limitation is that the MDM was used only among ICU nurses in this setting. It is possible that in another population of nurses, the MDM may produce a different result if used the same way. It is also possible that if the MDT scores were repeated over a longer period of time following the use of the MDM, novel trends may have emerged. Finally, there was no question included in this project that asked for nurses to explain any change in their MD, although many took initiative to do so via comment.

This project only assessed MD via the MDT immediately following completion of the MDM, at a time where many nurses wrote comments indicating that their difficult emotions were piqued. Nurses may have conflated emotional distress for moral distress during this time. There may also have subsequently been an undetected future improvement in their MD, as their emotion ebbed. More research and future projects are necessary.

Future Projects

Further studies could include repeated MDT assessments over a longer timeframe, so as to identify the longevity of the increase in MD that these ICU experienced. A number of nurses responded that they would have preferred that the MDM was available to them during an acute episode of MD. To that end, one future possibility is to provide the MDM to nurses to use at their own initiation.

The final column of the MDM features a space for nurses to identify a 'final action' that nurses should take. This project did not collect evidence regarding whether identifying such an action or carrying out that action may impact MDT scores, though such a study would be interesting. Another project to endeavor towards is to explore the MDM may be used in order to specifically target five known areas that consistently give rise to MD in most nurses in this ICU: provision of false hope, prolonging dying, inadequate communication among team members, unclear goals of care, and lack of consensus regarding treatment plan.

It may prove fruitful for organizations to target MD. Moral distress differs importantly from correlated phenomena like compassion fatigue, burnout, and intent to leave. The findings in this project indicate that there is statistically significantly increased MD when there is a present case of MD. The presence of a morally distressing case may be a means by which to combat known chronic clinical correlates, in addition to combating MD. The MDM would benefit from further study.

Some final questions to explore theoretically include whether MD is preventable in all circumstances, and if moral distress a necessary part of a health care system. It could also be the case that the Theory of Moral Reckoning and the Crescendo Effect could be overlaid and combined so as to improve theoretical depiction of MD (see Appendix R).

Conclusion

Reviewed literature affirms that MD has correlations with burnout, intent to leave, compassion fatigue, and perceived worsening of provided care. One proposed direct intervention for MD is the moral distress map. The primary aim of this project was to evaluate use of the moral distress map among ICU nurses, with the secondary aim of discerning any change in moral distress resultant from the MDM's use. This project's findings demonstrated that when ICU

nurses used the MDM to debrief themselves and other nurses at the point of care, they experienced a statistically significant increase in their mean MD as measured by the MDT. The findings also demonstrated that the MDM may be best utilized by nurses during acutely present MD, rather than about cases of MD that occurred in the past. There is some clinically relevant, though not statistically significant, evidence for moral residue. This project's results also provided general feedback about how to improve the MDM and improve the use of the MDM, and identified persistent sources of MD specific to this setting.

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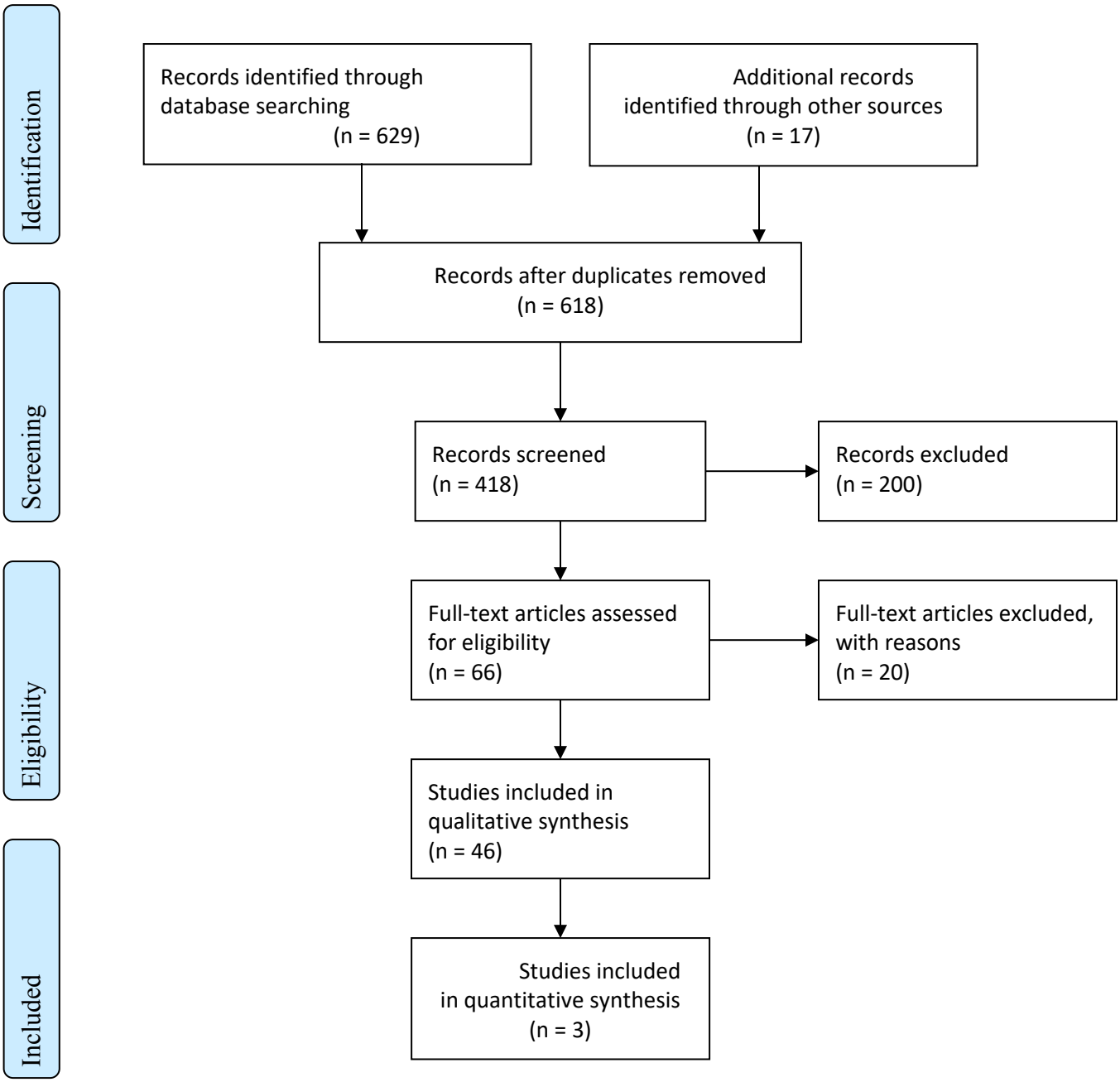
Appendices

Appendix A

PRISMA Table



Appendix B

Prevalence of the Term Moral Distress

Per a 'moral distress' keyword search in Pubmed, results include:

Locations where MD is studied include: Iran, Japan, Canada, Turkey, the United Kingdom, The Netherlands, Italy, New Zealand, Switzerland, Australia, India, Belgium, Africa (Nations that had Ebola outbreaks), Jordan, Spain, Brazil, Israel, Ireland, Malawi, Sweden, Uganda, South Korea, the United States, and Norway.

Specialties with MD studies include: ER, HIV, Humanitarian, Long Term Care Facility, Dementia, ICUs, psych, transplant, palliative, oncology, women's health services including abortion, obstetrics practices, nursing homes, wartime, burns, community pharmacies, executive suites, midwifery, peds rehab, surgical oncology, pediatrics, neonatal, palliative, heart failure, academic medicine, bioethics, hematology, perioperative, geriatrics, and hepatology.

Professions studied include: PT, OT, SW, CM, residents, nursing students, aides, nurse executives, nurse managers, nurses, CRNAs, Attendings, nurse practitioners, physician assistants, pharmacists, chaplains, psychologists, psychiatrists, RTs, med students, residents, interns, nursing students, aides, psychiatrists, and counselors.

Appendix C

Terminological Variance

Select terms seen in title review and abstract review, used while describing and theorizing about MD:

Moral resilience, ethical climate, moral outrage, moral agency, moral crescendo, moral residue, resiliency, moral ambiguity, moral community, futile care, burnout, burnout syndrome, ethical dilemma, situational bind, moral fatigue, ethics consultation, moral comfort, moral integrity, moral reasoning, moral case development, moral habitability, moral courage, painful business (busy-ness), moral immunization, moral sensitivity, moral agency, moral imagination, moral community, moral leadership, moral repugnance, moral disempowerment, moral uncertainty, moral habitability, moral experience, demoralization, remoralization, and ethical competence.

Appendix D

Definitions of Moral Distress

The table below contains a number of definitions about moral distress (Dudzinski, D. M., 2016).

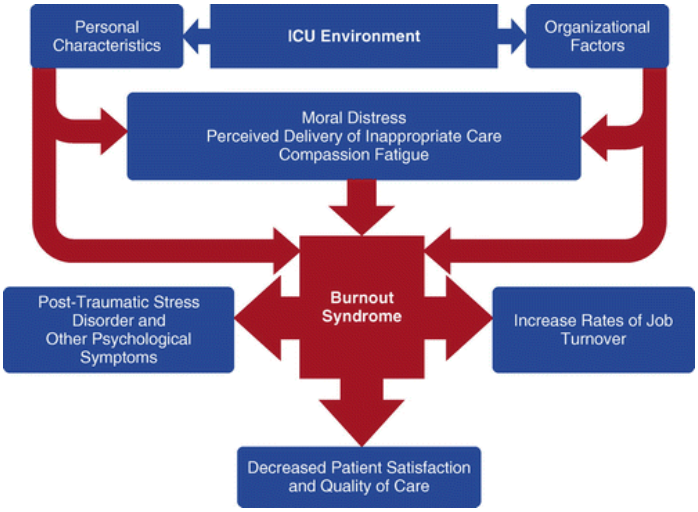
Table 1 Definitions of Moral Distress[3]

Definition	Source[3]
When one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action	Jameton[4]
When the practitioner feels certain of the ethical course of action but is constrained from taking that action	Hamric and Blackhall[5]
The painful psychological disequilibrium that results from recognising the ethically appropriate action, yet not taking it, because of obstacles such as lack of time, supervisory reluctance, an inhibiting medical power structure, institution policy or legal considerations	Corely *et al*[6]
You act in a manner contrary to your personal and professional values, which undermines your integrity and authenticity	American Association of Critical Care Nurses (AACN)[7]
The pain or anguish affecting the mind, body or relationships in response to a situation in which the person is aware of a moral problem, acknowledges moral responsibility and makes a moral judgement about the correct action; yet, as a result of real or perceived constraints, participates in a perceived moral wrongdoing	Rushton *et al*[8]
Moral distress occurs when situational constraints prevent a nurse from implementing a moral decision s/he has made. . . For moral distress to occur, a case must arise in which the nurse recognises a moral issue and believes she or he is responsible for her or his own actions in the situation	Wilkinson[2]
The suffering experienced as a result of situations in which individuals feel morally responsible and have determined the ethically right action to take, yet owing to constraints (real or perceived) cannot carry out this action, thus believing that they are committing a moral offence	Mitton *et al*[9]
Traditional negative stress symptoms that occur due to situations that involve ethical dimensions and where the healthcare provider feels she/he is not able to preserve all interests and values at stake	Kälvemark *et al*[10]
Moral stress is experienced when nurses are aware of what ethical principles are at stake in a specific situation and external factors prevent them from making a decision that would reduce the conflict between the contradicting principles	Lützén *et al*[11]

Appendix E

Figure Depicting the Role of Moral Distress in Burnout Syndrome

The figure below depicts how moral distress plays a central role in precipitating burnout among health care clinicians (Moss, M., et al, 2017).



Appendix F

The 4A's

The AACN's 4A's to rise above moral distress (AACN, 2004).

TABLE. THE 4A'S TO RISE ABOVE MORAL DISTRESS		
ASK	ASK APPROPRIATE QUESTIONS. "Am I feeling distressed" or showing signs of suffering? Is the source of my distress work related?	GOAL: YOU BECOME AWARE THAT MORAL DISTRESS IS PRESENT.
AFFIRM	AFFIRM YOUR DISTRESS AND YOUR COMMITMENT TO TAKE CARE OF YOURSELF. Validate feelings and perceptions with others. Affirm professional obligation to act.	GOAL: YOU MAKE A COMMITMENT TO ADDRESS MORAL DISTRESS
ASSESS	IDENTIFY SOURCES OF YOUR DISTRESS. Recognize there is an issue but may be ambivalent about taking action to change it. Analyze risks and benefits.	GOAL: YOU ARE READY TO MAKE AN ACTION PLAN
ACT	TAKE ACTION Implement strategies to initiate the changes you desire. MAINTAIN DESIRED CHANGE	GOAL: YOU PRESERVE YOUR INTEGRITY AND AUTHENTICITY.

Appendix G

Review of Literature: Systemic Reviews

Research Table 1

Studies that Included Systemic Reviews

Reference & Design	Subjects & Setting	Outcomes	Limitations
Huffman, D., Rittenmeyer, L. 2012 Systematic review n = 39	Nurses in hospitals, particularly ICU nurses	The researchers identified 39 articles that were reviewed and revealed MD manifestations, effects, and recommendations for reducing MD.	Compared studies of mixed methodologies. Only used studies from 1995 – 2008.
Prentice, T., et al, 2016, systemic review, n=13	PICU, NICU	The authors reviewed 13 articles pertinent to NICU / PICU MD levels, affirmed that interventions are more important than agreeing on a definition of MD, and that more evidence is needed to draw conclusions in this population.	Compared studies of mixed methodologies. Only included PICU/NICU so not very generalizable.
Lamiani, G., et al, 2017 systemic review that included 17 articles, excluded 459.	Performed a bibliographic review of MD articles in healthcare personnel from 1984 to 2014, noting MD present globally and in which areas of health care.	Stated aims were to map the spread of MD, and to see if MD related to other psychological (like professional attitude) and organizational (like organizational environment / ethical climate) constructs, and if so, how so.	Only selected for quantitative studies. Strict inclusion/exclusion criteria led to helpful mapping of MD spread, but limited insight as to close correlates like burnout, compassion fatigue, and MD's potential role in those.

Appendix H

Review of Literature: Other Relevant Studies

Research Table 2

Studies that were Included that were not Systemic Reviews

Reference & Design	Subjects & Setting	Summary of Relevant Material
Browning, A. 2013, Cross sectional descriptive survey	N = 277 critical care nurses who had cared for a dying patient in the past, sent surveys from nation-wide member list of AACN.	Moral distress in ICU nurses is high intensity, low frequency. MD frequency is lower in nurses who score highly in psychological empowerment. The intensity is the same regardless of psychological empowerment.
Bruce, C., et al, 2015 Qualitative case study	Role of teamwork in MD incidence in Adult ICUs of 900 bed tertiary hospital, n = 29 nurse, physician, and ancillary staff mixed. In-person interviews conducted based on three presented case studies, responses coded.	In ICU teams, when compared to a medical ICU team, Surgical ICU teams: Had more moral distress related to lack of full disclosure Had more moral distress related to maladaptive behaviors such as fighting Had less constructive behaviors, namely, less team building cohesions and less mentoring. "The pas-de-deux process is a particularly insightful mal- adaptive strategy. Our interviewees fully acknowledged that altering the content of conversations with patients and families compromises patient care and decision making, yet they felt it is necessary to accommodate other clinicians' opinions, usually surgeons."
Dalmolin, G., et al, 2014	N = 375 nurses across three hospitals in Brazil	Moral distress is weakly but significantly statistically correlated with burnout.

Cross sectional survey		A significant negative relationship between MD and professional fulfillment was discovered. Used the MDS and the MBI to identify the relationship.
de Veer, A. et al, 2012 Cross sectional correlational questionnaire survey	N = 365 nurses working at nursing home -- acute care hospitals.	MD is correlated to job satisfaction and not individual characteristics but rather organizational contexts such as time pressures, consultation with colleagues, and leadership style.
Kalvemark, S. et al, 2003, Interdisciplinary focus group interviews in Sweden in 3 clinics in Stockholm,	N = 15 of mixed medical professions, nurse, doctor, pharmacists, aides, medical secretaries.	The definition of MD used by Jameton could be improved to read that MD occurs when any health care worker experiences stress symptoms from having an ethical problem where the worker cannot preserve all interests and values at stake.
Dodek, P. et al, 2016 Survey	All clinical personnel in 13 ICUs in BC, n = 669	Defines MD anew, as guilt, anger, and powerlessness that practitioners feel when unable to practice to their ethical standards. Underscored ICU nurse's higher MD scores compared to docs, and also found association with MD and past and present job attrition, burnout, and poor physician collaboration.
Gaudine, A. et al, 2011 Qualitative descriptive interdisciplinary study of physicians, nurses, and nurse managers	N = 75, in four hospitals in eastern and central Canada. Interviewed for content analysis.	Uncovered that physicians and nurses often feel ethical conflicts not only amongst themselves, but felt that on a systems / organizational level, nurses and physicians feel as though there is a lack of respect for them and patients, that administration 'turns a blind eye', and that the organization lacks transparency.
(Epstein, B., Hamric, A., 2009) interviews	Parents, nurses, and physicians in the NICU, n = 21	Isolated clinical causes of MD, Internal and external constraints of MD

		Theorized about a moral crescendo / residue, Formed a Moral Distress Consult Service as a possible intervention Identified withdraw/compassion fatigue, burnout, and opposition as the three literature evidenced responses to MD accrual.
Fumis, R. 2017 Survey	ICU staff of 283 nurses, physicians, aides, RTs in two ICUs in a tertiary Hospital in Brazil	Moral distress is independently associated with burnout with moderate statistical significance.
CDC website Health People 2020 Occupational Health Objective OSH – 9	N/A	"Increase the proportion of employees who have access to workplace programs that prevent or reduce employee stress"
The Joint Commission Quality and Safety Journal 2003	N/A	Hospitals are able to and ought to create a culture of retention where a workplace is "too good to leave".
Pendry, P., 2007 No intervention, only a journal article.	N/A	Nurses, particularly ICU nurses, would benefit the support of physician colleagues and moreover the support of the administration in order to reduce MD. Nurse retention would likely improve, as would patient safety.
Hiler, C. et al, 2018 cross sectional descriptive cohort study	N = 328 ICU nurses	The severity of MD was strongly predictive about nurses who intended to leave their jobs. Units with AACN beacon designation had significantly lower MD Perceptions of job satisfaction, practice environment, and age are significantly correlated with MD as predictors of MD.
Grace, P., et al, 2014 3 year study of enrolling them in to an ethics educational program. They did not collect data on the participants, only	N = 72, 67 of those being nurses.	Designed an ethical education residency for nurses theorizing that it might reduce MD. Did not implement, only designed as an adjunct for nursing executives to consider.

suggested that the process may be of use.		
Gaudine, A., Thorne, L., 2012. Longitudinal cohort design	N = 410 nurses in hospitals in Canada.	Ethical conflict in nurses may increase absenteeism and turnover
Henrich, N., 2017 Interdisciplinary focus group interviews.	13 ICUs in BC, Canada, N = 56 mix of nurses, CNS, physicians, and other healthcare staff. Qualitative analysis.	ICU staff coping strategies for MD included changing patient assignment, leaving the ICU, and consuming alcohol after work. ICU providers perceive patient care quality to worsen if the provider has endured MD. Providers also note they feel negative emotions.
Rice, E.M. et al, 2008. Cohort study.	N = 260 acute care nurses at one hospital in the SW USA.	Futile care was the highest intensity of MD, Poor collaboration and poor communication precipitates MD, in particular around patients who are end of life and/or suffering where the physician advises aggressive care that the nurse believes to be futile and where that disagreement is not discussed and resolved collaboratively. This leads to burnout and withdraw by the nurse.
Gutierriez, K., 2005. Qualitative, descriptive method study of interviews.	12 ICU nurses at a large teaching hospital in the Midwest, USA	Identified that nurses feel MD then feel withdrawn. Nurses don't believe that nurse management is even aware of the MD and is not supportive, nurses feel powerlessness contributes and that they are not collaborated with. Nurses believe their provision of care worsens with MD Risk factors that were named as constraints to moral action included: goals of care disagreements between nurse, family, and physician; time constraints; lack of established relationship with patient and

		family; fear of professional / physician backlash; inexperienced medical staff; hierarchical power structure of healthcare, teaching institutions.
Larson, C., et al, 2017 Cross-sectional study	PICU/NICU involving n = 206 of physicians, nurses, and RTs at a 300-bed hospital in Canada.	MD in the PICU/NICU is high across all providers and is statistically correlated with burnout, uncertainty, and feeling under-supported MDS items are ranked according to how severe the scoring was!
Mealer, M., Moss, M., 2016. No study, only analysis of published articles.	N/A	There are no RCTs on MD Three interventions may help prevent and treat ICU related MD: "(1) educational interventions, (2) interventions focused on enhancing the ICU environment, and (3) interventions focused on helping individuals cope with their work environment." Organizations and HCOs need to endeavor to directly monitor MD and reduce / prevent it.
Moss, M., et al, 2017 No study, only analysis of published articles.	N/A	MD is a central feature of Burnout Syndrome per CCSC.
Pavlish, C. et al, 2016 "critical incident study" survey.	N = 100 clinical nurse leaders and CNS in California	Discusses the role that nurse leaders including nurse managers both perceive themselves as having and ought to occupy Discusses using the SUPPORT model to improve unit communication Mentions the increasing prospect of preventative ethics and how hope for preventing MD may rest in part with educating nursing leadership about how to govern and manage MD better.
Peter, E. and Liaschenko, J., 2004 No intervention performed. A paper that examined	N/A	MD is multi-dimensional and complex, and nuanced. One of the most important contributing factors is the proximity and intimacy of the nurse-patient relationship.

multiple other paper's findings to synthesize a theory about proximity.		
Ulrich, B., et al, 2014 Convenience sample	Critical care nurses who were members of the AACN across the US, n = 5,875	Most of the areas measured in this dataset about work environment, including HCHAPS, moral distress, and empowerment for shared decision making, are worse in 2013 since 2006.
Rathert, C., et al, 2015 Cross sectional study survey.	Nursing staff at one Trauma level 1 acute care hospital, n = 290	Frequency of ethical issues directly led to increase in MD. And measures of organizational support, such as through an ethics consult service, directly affects MD.
Rushton, C., et al, 2015 performed a cross-sectional survey.	Nurses from 4 hospitals in one health system in ICUs, oncology units, and peds/neo units, n = 114	"Nurses working in high-risk areas such as pediatrics, oncology, and critical care are vulnerable to burnout because of patients' intense needs, uncertain outcomes, and the highly charged context of the nurses' work, particularly the impact of ongoing witnessing of suffering and death." Burnout ought to be targeted by organizations interested in saving money via retention. Moral distress is a significant predictor of burnout.
Shoorideh, F. A., et al, 2015, performed a descriptive-correlative study surveying for MD via IMDS, burnout via CBI, and intent to leave via ATS.	N = 159 ICU nurses in 12 academic hospitals in Iran.	MD is not correlated to burnout among ICU nurses, and not related to anticipated turnover, though burnout is.
Varcoe, C., et al, 2011. Survey, qualitative analysis following open ended questions.	N = 374 of acute care setting RNs working in BC, Canada.	Among hospital nurses that experience MD, they typically seek local solutions to what are organizational problems, thus the broader organizational problems are not addressed. There ought to be

		collective action for structural organizational change to occur in health care systems in order to reduce MD.
Wocial, L. et al, 2016 Survey.	Quaternary care center PICU, n = 89 providers of any sort, also surveyed patients.	Initiated weekly conversation with ethicist present discussing goals of care in a PICU, reduced MD (though not significantly due to some patients that rated high in MD being in control group), decreased LOS, no change in 30 or 365-day mortality, increased DNR and in-hospital deaths compared to control group over 12 months.
Woods, M., et al, 2015. Survey.	N = 412 nurses, nationwide in New Zealand.	In a national study in NZ, 30 – 40% of the nurses experienced significant MD, many from working with other nurses who they deemed incompetent, and younger nurses were more apt to leave the job or profession due to MD. All of the reported major sources of MD were from external constraints. Found that younger nurses are more susceptible to MD than older nurses / new grads are more likely to leave the workplace or profession to maintain their moral integrity than more experienced staff.
(Maiden, J., et al, 2011) Mixed methods via survey.	AACN nurses nationwide (n = 205) and interviews via focus group of those nurses (n = 5).	Medical errors are a direct result of situational lapses in safety, rather than carelessness or bad judgement. This study suggests that institutional factors promote or prevent medication errors. In ICU nurses, if change is to occur, blame must end and organizations must take more accountability into reforming their work environments. Nurses that endorsed CF scored higher with intent to resign.

		The more MD a ICU nurse had, the more they perceived CF. Nurses that scored high in MD noted that med errors occurred due to poor physician communication. ICU nurses lack a voice to advocate for themselves and their patients within a health care organization.
Musto, L. et al, 2015 No intervention, just synopsis of past literature.	N/A	Interventions to reduce MD are the next step in MD research. Interventions that are most likely to work based on examining the ethical roots of MD include: Regular, pre-structured debriefing rounds, reciprocal transparent feedback between all interdisciplinary professionals including administration, ethics support, and advocacy work.
Corley, M., 2001	Sample of n = 214 nurses predominantly made of critical care nurses and occupational health nurses from a variety of sources in the US.	The MDS, moral distress scale, is a reliable, valid tool for measuring MD.
Sirilla, J. et al, 2017 Cross sectional survey.	N = 338 nurses of any kind across a single academic health system spanning six types of hospitals.	Critical care, procedural care, and perioperative care nurses scored the highest in areas of MD.
Whitehead, P., 2015 Descriptive comparative study.	At a single academic health center involving n = 592 clinicians of any type (395 nurses, 111 physicians, 86 others)	Nurses had more MD than any other profession, however, other direct care providers had similar levels of MD as nurses, suggesting the proximity of care is a major element of MD Nurses in ICUs had statistically significantly higher MD than nurses in non-ICU environments.

		MD is associated with intent to leave current position. 18% of physicians reported intent to leave position, compared to 11% in a different study in 2012 (Hamric, A., 2012) and 3% in an earlier study (Hamric and Blackhall 2007)
Hochman, K., 2017 An interesting abstract from a paper that performed interdisciplinary complex care rounds from 2008 – 2016	N/A	Complex care meetings involving interdisciplinary staff done twice a week on patients with LOS 5 days or longer significantly reduce LOS. Attempted to measure MD but results were mixed.
Hamric, A. B., & Epstein, E. G., 2017.	Analysis of n = 56 moral distress consults conducted from 2006 – 2016 at a single tertiary care center	Moral distress and ethical dilemma are often mutually exclusive, in that MD the provider knows the morally correct choice and feels constrained from doing it. A Consult Service for Moral Distress can help to quell MD in a hospital setting.
Allen R., 2016 cross sectional, descriptive, comparison study.	N = 323 total of the following: physicians, nurses, (adults and peds docs and nurses) RTs, CM, SWs, across 6 hospitals in the southeast US.	"Nurses (who experience MD) lose their capacity for caring, avoid patient contact, and fail to give good physical care as a result of moral distress. Nurses also physically withdraw from the bedside, barely meeting the patient's physical needs, or they leave the profession all together."
AACN 2008 position statement (journal article, no intervention)	N/A	MD is frequently ignored in healthcare In a survey they performed of 760 nurses, nearly 50% of nurses had given care against their conscious.
Wallis, L., 2015 Journal article, no intervention.	N/A	AJN advocating to engage rather than ignore MD. Nurse-physician collaboration, nurse-physician communication, resilience, and compassionate rounding are methods for reducing MD.

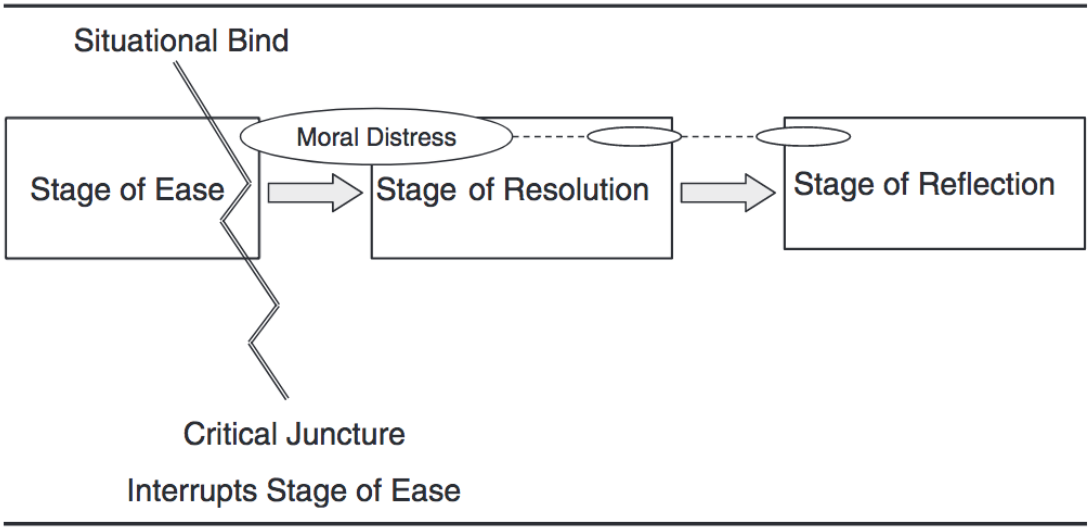
Wilson, M. A., 2013 exploratory descriptive design.	In a single acute care hospital survey sample size n = 50, all nurses.	61 Transitional care unit and Med-surgical ICU nurses surveyed reported none to low amounts of MD However, 18% of MSICU nurses and 6% of TCU nurses reported having left a job due to a distressing situation Futile care had the highest level and frequency of MD, futile meaning inability to alleviate suffering and providing extensive medical care to a patient unlikely to survive.
Pauly, B. M., et al, 2012. Article synthesizing the research, no intervention.	N/A	"Research and action on moral distress has been constrained by lack of conceptual clarity and theoretical confusion as to the meaning and underpinnings of moral distress… Moral distress is defined variously in different studies. While there are many sources of stress in health care work, moral distress is specifically associated with the ethical dimensions of practice and concerns related to difficulties navigating practice while upholding professional values, responsibilities and duties." Research has been stymied by three major hurdles: Limited engagement with policy and politics, empirical research tensions, and conceptual and theoretical tensions.
McAndrew, N., et al, 2011 Descriptive, correlational, prospective study, questionnaires distributed.	At one level 1 trauma center academic hospital, in critical care areas only, nurses only, n = 78, adult care areas only, no peds.	Frequency of moral distress affects all aspects of professional practice except foundations for quality of care There is limited data that increased frequency of MD may be related to nurses believing that leadership was poor.

Appendix I

Theoretical Framework

Alvita Nathaniel's Theoretical Framework: The Theory of Moral Reckoning (Nathaniel, A., 2006).

Figure 1
The Relationship Between Moral Distress and Moral Reckoning

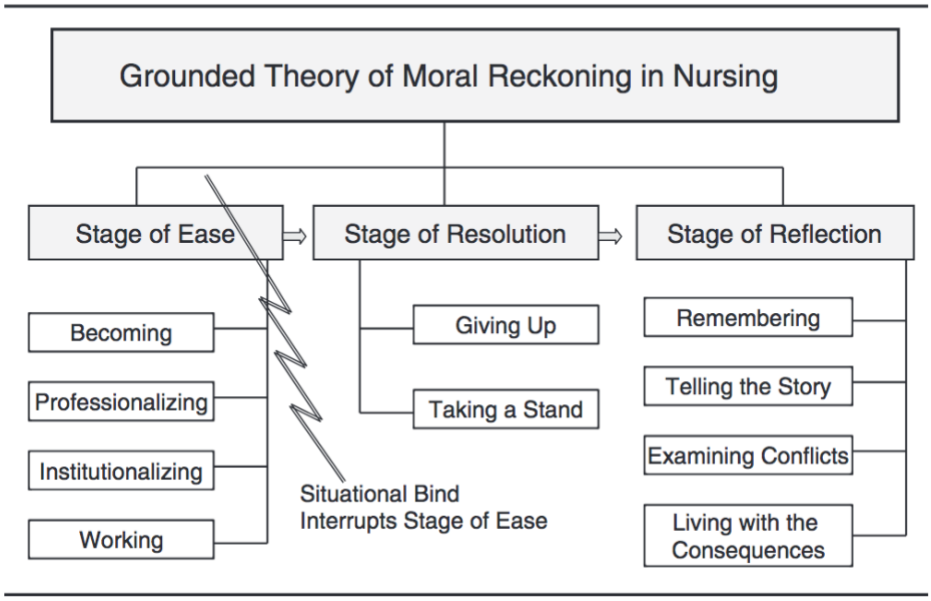


Appendix J

Theoretical Framework

Altiva Nathaniel's Theoretical Framework: The Theory of Moral Reckoning (Nathaniel, A., 2006).

Figure 2
Model of the Grounded Theory of Moral Reckoning in Nursing



Appendix K

Definitions and Permissions

The following sections include: Definition of Terms, IRB Approval, and Permissions for Use of Measurement instrument and Intervention.

Definition of Terms

Definitions of MD vary across the literature, also while sharing some common components. In 2013, researchers examined twenty prominent MD articles, with the aim of analyzing competing definitions of MD from 2013 to Jameton's 1984 original articulation of MD (McCarthy & Gastmans, 2015). McCarthy & Gastmans, (2015) excluded any MD publications that did not focus primarily on nurses. While underscoring that MD is conceptualized with 'fuzziness', they summarized: "There is a general consensus in the argument-based literature that the term 'moral distress' refers to the psychological–emotional–physiological suffering that nurses may experience when, constrained by circumstances, they participate in perceived wrongdoing by action or omission" (McCarthy & Gastmans, 2015, p. 131).

A broad definition like that of McCarthy & Gastmans (2015) allows for conceptualization of MD by the reader. One of the measurements used in this project, the moral distress thermometer (MDT) displays a definition of MD similar to that of McCarthy & Gastmans, (2015). The authors of the MDT write that moral distress is "at its core it is a form of distress that occurs when one knows the ethically correct thing to do, but is prevented from acting on that perceived obligation." (Wocial & Weaver, 2013). This project deferred to the definition of MD that is used on the MDT, since it is visible on the instrument itself, ensuring that all participating

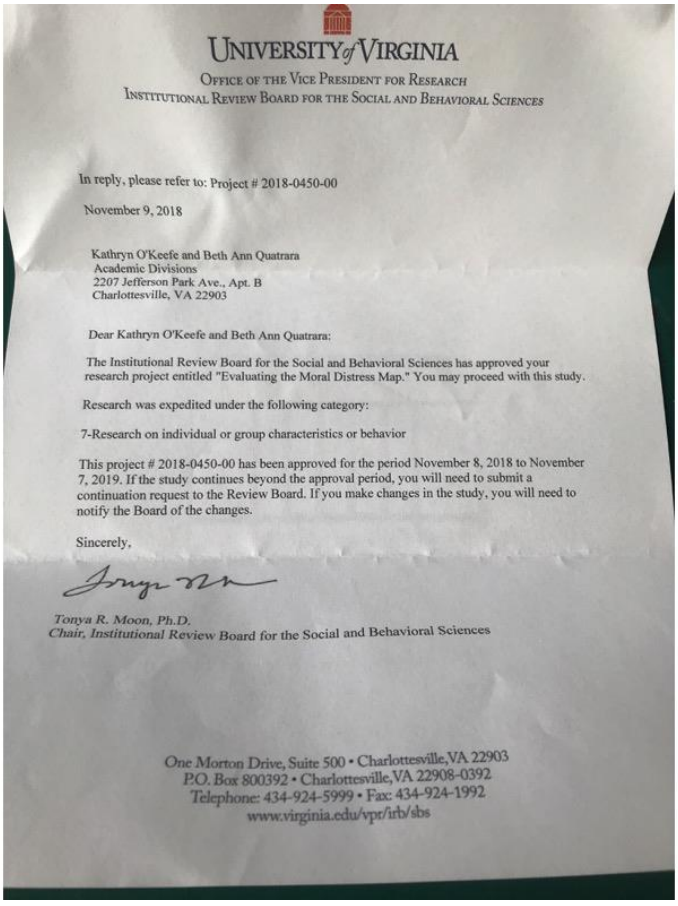
nurses considered the same definition of MD prior to indicating how much MD they were experiencing.

Moral Distress (As seen by project participants prior to their completing the Moral Distress Thermometer) – "Moral distress occurs when you believe you know the ethically correct thing to do, but something or someone restricts your ability to pursue the right course of action" (Wocial & Weaver, 2013).

Practice Setting – The unit where the project occurred is the thoracic cardiovascular surgery intensive care unit of a tertiary care center in the rural southeast of the United States.

Critical care nurse - Each of the nurses included in this project were licensed registered nurses who provided routine nursing care to patients in the ICU.

IRB Approval:



UNIVERSITY of VIRGINIA

OFFICE OF THE VICE PRESIDENT FOR RESEARCH
INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2018-0450-00

November 9, 2018

Kathryn O'Keefe and Beth Ann Quatrara
Academic Divisions
2207 Jefferson Park Ave., Apt. B
Charlottesville, VA 22903

Dear Kathryn O'Keefe and Beth Ann Quatrara:

The Institutional Review Board for the Social and Behavioral Sciences has approved your research project entitled "Evaluating the Moral Distress Map." You may proceed with this study.

Research was expedited under the following category:

7-Research on individual or group characteristics or behavior

This project # 2018-0450-00 has been approved for the period November 8, 2018 to November 7, 2019. If the study continues beyond the approval period, you will need to submit a continuation request to the Review Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,

Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences

One Morton Drive, Suite 500 • Charlottesville, VA 22903
P.O. Box 800392 • Charlottesville, VA 22908-0392
Telephone: 434-924-5999 • Fax: 434-924-1992
www.virginia.edu/vpr/irb/sbs

Appendix L

Permissions for use of the MDT and the MDM

The following is permission obtained by the relevant authors to use the respective intervention and measurement instrument.

Wocial, Lucia D March 13, 2019 at 9:39 AM

RE: MDT

To: Katie O'Keefe

Siri found new contact info in this email: Lucia D Wocial lwocial@iuhealth.org add to Contacts...

Hi Katie,

Thanks for the update. I think how you have used the instrument is fine. It is unclear how long after an intervention we might see a change in the MDT score. Think of pain medication and circling back to see if it has taken effect. Some interventions (medications) may have an immediate effect, some may take longer...

Congratulations on getting good participation for the project. I can't wait to read about your results once you publish (:))

Lucia

Lucia D. Wocial, PhD, RN, FAAN
Nurse Ethicist,

Dear Katie,

Thank you for reaching out to me. Your project sounds wonderful!!! You are more than welcome to use the MDT. You also may want to reach out to Dr. Bet Epstein who has done a great deal of work in moral distress (also at UVA).

I am attaching a version of the instrument that is a little different than the one that was published. As is true with any instrument, when you make changes you call into question the validity of the instrument so it is your choice whether or not to use the published (validated version PDF) or the one (word version) I am attaching.

Here are the differences:

- The words used have been simplified
- The words correspond with whole number ranges (0 = non, 1-3 = mild, 4-7 = moderate 8-10 = severe)
- The is a list of contributing factors that people can select to indicate what is contributing to their moral distress. The list was validated with content experts (although that was now many years ago) and I know it does not include a key stressor (electronic medical record), and there is a line for "other" which gives respondents the opportunity to identify a contributing factor not yet named.

Using Dudzinski's work is also a wonderful strategy!!!

Please let me know how your project unfolds and if there is anything I can do to help you in your efforts.

Sincerely,
Lucia

Lucia D. Wocial, PhD, RN, FAAN
Nurse Ethicist.

Denise M. Dudzinski June 27, 2018 at 7:53 PM

Re: The Moral Distress Map Details

To: Katie O'Keefe, Cc: Quatrara, Beth A. (bad3e)

I would be honored for you to use the map in your research. No special stipulations — just cite accordingly including on the map when you distribute it to nurses (if you plan to do that).

Thanks, Denise

Appendix M

The Moral Distress Thermometer (Wocial & Weaver, 2013)

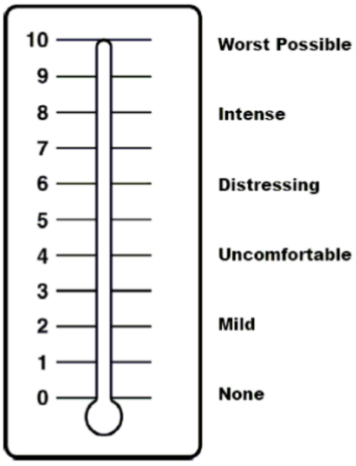
Below is the MDT, the measurement instrument that was used to measure moral distress pre/post the intervention in this project.

Date: _____

Moral distress occurs when you believe you know the ethically correct thing to do, but something or someone restricts your ability to pursue the right course of action.

Please circle the number (0-10) on the Moral Distress Thermometer that best describes how much moral distress you have been experiencing related to work in the past week including today.

Moral Distress Thermometer



Appendix N

The Moral Distress Map (Dudzinski, D., 2016).

Below is the intervention used in this project, the moral distress map (MDM).

	Emotions	***Source(s)***	***Constraints***	***Conflicting Responsibilities***	***Possible Actions***	***Final Action***
Case						

Instructions: The facilitator invites clinicians to discuss a case that caused them moral distress. Participants answer the questions below. They can answer privately and then discuss as a group or the entire process can be done together in a large group. Encourage everyone to respectfully express differences of opinions. The facilitator probes the group for more specific responses and guides the group in examining the ethical issues underlying moral distress.

Emotions: *What emotions are you experience?*
E.g. sadness, frustration, anger

Source: *What precisely is the source of the moral distress?*
E.g. inadequate staffing leading to suboptimal patient care

Constraints: *Name the internal and external constraints to taking action.*
E.g. fear my concerns will be ignored; patient does not qualify for services she needs

Conflicting Responsibilities: *Fill in X and Y*
Value/obligation/responsibility **X** conflicts with value/obligation/responsibility **Y**.

Possible Actions: *What actions could you take?*
To improve outcomes for the patient in the case
To cope with your own moral distress

Final Action: *What action should you take?*

Appendix O

Three Measurements and Intervention

The following questionnaire was given to nurses on Saturday during nightshifts and Sundays during dayshifts.

Oral Consent Text

As you know, I am a Doctorate of Nursing Practice student from the University of Virginia, in the United States. I am conducting a study on moral distress in ICU nurses, and I would like to ask you some questions about that. I will not review the content of your packet at the time that you turn it in, and all packets will be collected in a single envelope that will not leave my person while recruitment is ongoing on the unit. I ask that you exclude from your survey responses any information that would identify yourself (such as your name, employee ID, initials, DOB, etc.). I also ask that you exclude from your survey responses any information that would risk identifying any patient, (such as information protected under HIPAA). Upon the conclusion of a day of surveying, completed packets will be secured in a locked cabinet in the School of Nursing. I have people helping me whom I trust to maintain your confidentiality. I will do everything I can to protect your privacy, but there is always a slight chance that someone could find out about the contents of your survey packet. If at any time you want to withdraw from this study please tell me and I will ensure that your survey is destroyed without reviewing the contents. Now I would like to ask you if you agree to participate in this study and would like instructions about the survey packet contents. Do you agree to participate?

Thank you for choosing to voluntarily participate in this survey. Please do not write any personally identifying information on any item in this packet. This survey may take you approximately ten to twenty minutes to complete. It is understood that this survey is being provided while you are actively performing your job as a nurse. If your progress in the survey is paused due to demands, please notify the DNP candidate so she can secure your packet for you. Once you receive this survey, you will have up to an hour to complete it.

One part of the survey will require working with a partner for a period of ten or so minutes. This partner may be any UVA healthcare professional, such as SW, PT, MD, PA, NP, RN, PCT, RT, etc. If it is impossible to complete the packet with a partner, please complete the packet yourself and return it to the DNP candidate.

There are five items in this survey.

Items:

1. A Demographics sheet.
2. The Moral Distress Thermometer.
3. The Moral Distress Map
4. The Moral Distress Thermometer.
5. Follow-up questions concerning the use of the moral distress map.

Item 1, the demographics sheet, includes questions about your age, sex, and role on the unit. These questions have been designed specifically to gain descriptive information about the study participants while ensuring that no single combination of answers will identify any single nurse.

Item 2 is the Moral Distress Thermometer (Wocial & Weaver, 2013). This tool will explain what moral distress is, and then ask you to indicate the amount of moral distress that you

are presently experiencing on a scale from no moral distress (0) to severe moral distress (10). Item 4 is identical to Item 2.

Item 3 is the Moral Distress Map. For this part of the survey, you will need to find a partner with whom you may safely discuss either a case that is causing you moral distress presently, or one from the past. This map is "designed to be used along with active listening and empathy in moral distress trainings and case debriefings (Dudzinski, D. M., 2016). Please discuss each of the six areas of the Moral Distress Map with your partner (or if impossible, reflect by yourself). Please write on the map itself if you would like. Once this portion is completed, you will no longer need your partner.

Item 4 is identical to Item 2. Please complete the Moral Distress Thermometer again, indicating your level of moral distress following completion of the Moral Distress Map.

Item 5 includes follow-up questions that are designed to assess how you used the Moral Distress Map. Please avoid answering these questions with any information that could identify a patient. Once these questions are completed, you will be done with the survey. At that time, please remove and shred your Moral Distress Map prior to returning the completed survey to the doctoral student. Please do not discuss the content of this survey packet with your peers except for while completing the map. If you have any questions at this time, ask them now. Thank you!

The contents of the survey packet are below:

Item One: Demographics

1. Please indicate your age:

    A. 20 – 30 years old

    B. Greater than 30 years old

2. Please choose which statement best describes you:

A. I am a male.

B. I am a female.

3. Please indicate how long you have been a nurse:

   A. Fewer than five years

   B. Greater than five years.

4. Please indicate how long you have worked on this unit:

   A. Fewer than 2 years.

   B. Greater than 2 years but fewer than 5 years.

   C. Greater than 5 years.

5. Please indicate how many hours do you work in a typical week:

   A. Part Time or Per Diem.

   B. Full Time.

6. Please indicate which best describes your role on this unit:

   A. Staff or Travel RN hired for this unit.

   B. Float pool / Critical staffing float nurse / Other.

7. Please indicate what weekend this is:

   'A' Weekend 'B' Weekend 'C' Weekend

8. Please indicate which weekend you typically work

   'A' Weekend 'B' Weekend 'C' Weekend I work all weekends.

9. Are you working on Dayshift or Nightshift at present?

   A. Dayshift B. Nightshift.

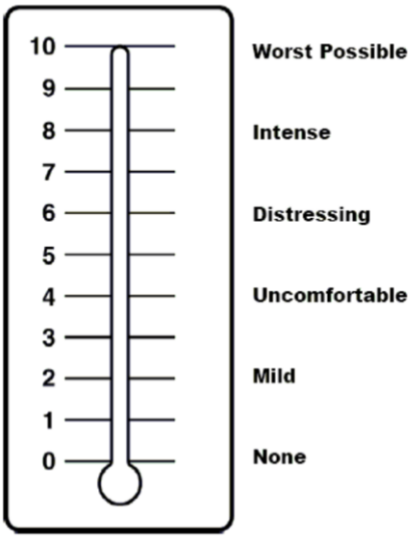
Item 2:

Moral Distress Thermometer (Wocial & Weaver, 2013)

Moral distress occurs when you believe you know the ethically correct thing to do, but something or someone restricts your ability to pursue the right course of action.

Please circle the number (0-10) on the Moral Distress Thermometer that best describes how much moral distress you are feeling right now.

Moral Distress Thermometer



Item 3: On the following page, please invite a partner to work with you to complete the Moral Distress Map (Dudzinski, D., 2016). If you have moral distress right now, please complete the map with a case in mind that you believe relates to the moral distress you may be presently experiencing. If you are not experiencing any MD presently, please complete the map with a prior case in mind.

	Emotions	***Source(s)***	***Constraints***	***Conflicting Responsibilities***	***Possible Actions***	***Final Action***
Case						

Instructions: The facilitator invites clinicians to discuss a case that caused them moral distress. Participants answer the questions below. They can answer privately and then discuss as a group or the entire process can be done together in a large group. Encourage everyone to respectfully express differences of opinions. The facilitator probes the group for more specific responses and guides the group in examining the ethical issues underlying moral distress.

Emotions: *What emotions are you experience?*

E.g. sadness, frustration, anger

Source: *What precisely is the source of the moral distress?*

E.g. inadequate staffing leading to suboptimal patient care

Constraints: *Name the internal and external constraints to taking action.*

E.g. fear my concerns will be ignored; patient does not qualify for services she needs

Conflicting Responsibilities: *Fill in X and Y*

Value/obligation/responsibility **X** conflicts with value/obligation/responsibility **Y**.

Possible Actions: *What actions <u>could</u> you take?*

To improve outcomes for the patient in the case

To cope with your own moral distress

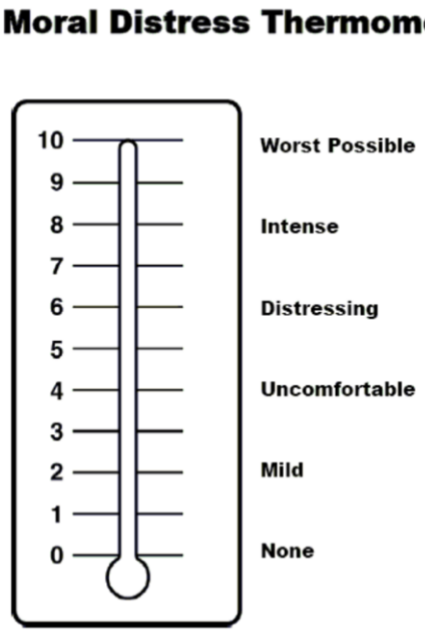
Final Action: *What action should you take?*

Item 4:

Moral Distress Thermometer

Moral distress occurs when you believe you know the ethically correct thing to do, but something or someone restricts your ability to pursue the right course of action.

Please circle the number (0-10) on the Moral Distress Thermometer that best describes how much moral distress you are feeling right now.



Item 5:

Please answer the following questions without including any information that could identify yourself or any particular patient.

1. Did you complete the Map?
    a. Yes
    b. No
2. Did you complete the Map individually, or with a partner?

   a. Individually
   b. With a partner

3. Have you ever completed the Map prior to today?
   a. Yes
   b. No
4. Did you complete the Moral Distress Map while considering a present case or a case from the past?
   a. Present case.
   b. Past case.
   c. I considered cases from both the present and the past.
5. Did you find the Map to be helpful for reducing any moral distress you had?
   a. Yes
   b. No

Space for comment:

---

6. Would you think that the Map may be more helpful if used in a different way?
   a. Yes
   b. No

Space for comment

Did the Moral Distress Map aide you in identifying the origin of any moral distress you may be feeling?

a. Yes

b. No

c. I have no moral distress.

If so, please indicate which of these common origins did your MD spring from. Mark all that apply (a—f taken from Wolf, A., 2016):

a. “Inadequate staffing, inadequate experience”

b. “Providing false hope”

c. “Inadequate communication among team members”

d. “Lack of consensus regarding treatment plan”

e. “Unclear goals of care”

f. “Prolonging dying”

g. Other.

h. None of the above.

The survey is complete. Please make sure you have not made any identifying marks on the survey. Also, remove Item 3, the Moral Distress Map, and securely dispose of it prior to handing the packet back to the surveyor. Thank you!

Appendix P

Moral Distress Consult Services Root Causes of MD (Hamric, A., Epstein, E. G., 2017).

HEC Forum

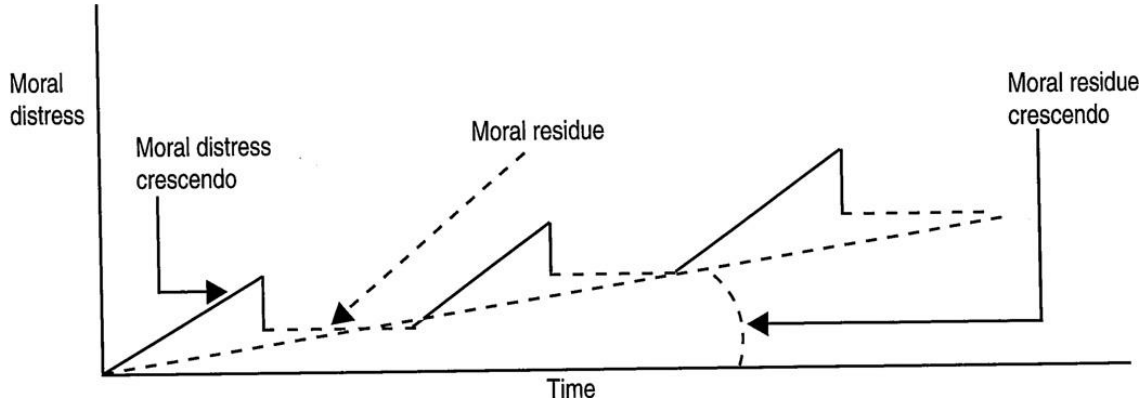
Table 1 Most common root causes (N = 56 consults)

Root cause	% (n)
Inadequate team communication	41 (23)
Unclear treatment plan/lack of goals of care	25 (14)
Inadequate pain management	21 (12)
Lack of provider continuity compromising patient care	21 (12)
Futile or aggressive treatment not in the patient's best interest	19 (11)
Abusive/inappropriate patient threatening staff	19 (11)
Family wishing aggressive treatment not in the best interest of the patient	16 (9)
Team giving inconsistent messages to patient/family	14 (8)
Abusive/difficult family compromising quality of care	13 (7)
Incompetent care providers	11 (6)
Inadequate staffing	9 (5)

Appendix Q

Moral Distress Crescendo (Hamric, A., Epstein, E. G., 2009).

Below is a graphic depiction of moral distress crescendo and residue as theorized by the cited authors.



Appendix R

Overlay of Nathaniel's Theory of Moral Reckoning and Hamric and Epstein's Theory of Moral Crescendo

Incidence and Intensity as Viewed through the Theory of Moral Reckoning and the Moral Crescendo Featuring Progressively Shorted Stages of Ease Reflecting Accrual of Known MD Correlates

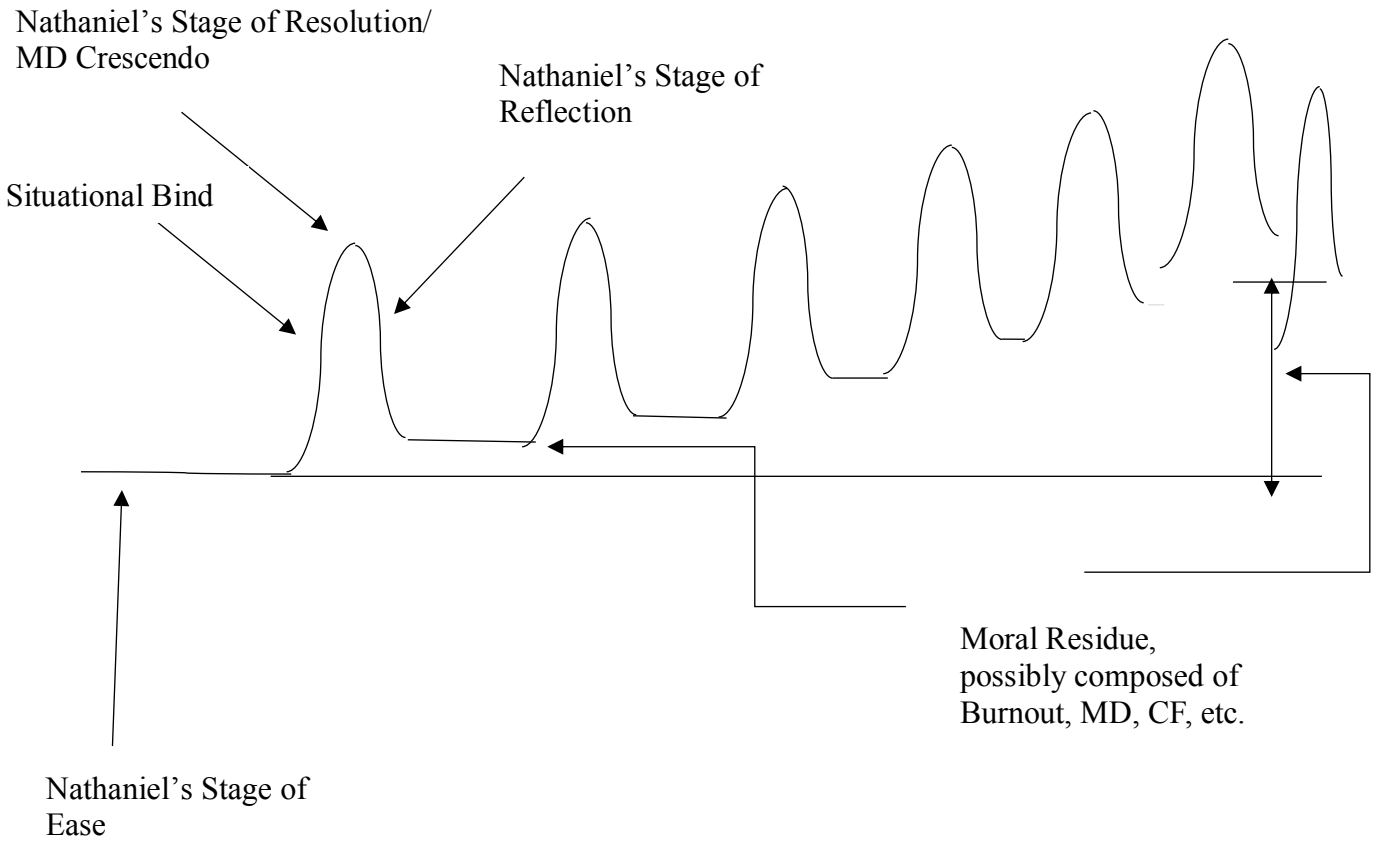


Table 1

Demographic Data of Nurses

	n	%
Age		
20 – 30 years old	26	55.3%
Greater than 30 yr	21	44.7%
Sex/Gender		
Male	8	17.0%
Female	39	83.0%
How Long RN		
5 or fewer years	26	55.3%
Greater than 5 yrs	20	42.6%
Did Not Answer	1	2.1%
Years on Unit		
Fewer than 2 yrs	23	48.9%
2 yrs – 5 yrs	15	31.9%
Greater than 5 yrs	8	17.0%
Did Not Answer	1	2.1%
Employment Status		
Part Time / PRN	7	14.9%
Full Time	39	83.0%
Did Not Answer	1	2.1%
Role on Unit		
Staff or Travel RN	40	85.1%
Float / Other	6	12.8%
Did Not Answer	1	2.1%
What Weekend is This		
A Weekend	22	46.8%
B Weekend	11	23.4%
C Weekend	11	23.4%
Did Not Answer	3	6.4%
Which Shift		

Dayshift	25	53.2%
Nightshift	22	46.8%

Table 2

Moral Distress Statistical Findings

	Mean Pre MDM	SD	Mean Post MDM	SD	Change	*p* value
Overall (n = 47)	2.6	2.5	4.0	2.8	1.4	$p < 0.001$*
Time of Case						$p = 0.003$*** $p = 0.097$** $p = 0.058$***
Present (n = 5)	3.8	2.4	4.0	1.3	0.2	
Past (n = 28)	1.8	2.1	3.7	2.0	1.9	
Combo (n = 13)	4	2.6	3.5	2.2	0.9	
Shift MD						$p = 0.988$***
Dayshift (n=25)	2.6	2.5	4.0	3.0	1.4	
Nightshift (n=22)	2.5	2.6	3.9	2.7	1.4	
Weekend						Assumptions not met
A (n = 22)	2.6	2.5	3.7	2.9	1.1	
B (n = 11)	3.6	2.3	5.0	2.7	2.2	
C (n = 11)	1.2	1.8	3.4	2.6	2.2	

* = Paired samples t-test. ** = Exact Kruskal-Wallis significance. *** = Independent samples t-test.