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Moral Distress and Ethical Climate in Pediatric Nurses in the Time of COVID

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Moral Distress and Ethical Climate in Pediatric Nurses in the Time of COVID

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ABSTRACT

Moral Distress in an increasing problem in nurses and other healthcare professionals due to the many challenges nurses face in proving care to their patients and families. These challenges can be magnified when the nurse is conflicted and unable to successfully navigate the moral and ethical responsibilities of the profession leading to moral distress. The COVID-19 pandemic has had profound and global widespread consequences including the impact on pediatric nurses. This descriptive correlational study examined the relationship between moral distress and ethical climate among pediatric nurses who cared for patients during the COVID-19 pandemic. This study used Corely's Theory of Moral Distress as the theoretical background to examine this relationship.

The sample consisted of 81 pediatric inpatient nurses from across the US that were recruited by two professional organizations. All participants completed the Measure of Moral Distress – Healthcare Professionals (MMD-HP) the Hospital Ethical Climate Survey (HECS) and a demographic data collection tool developed by this researcher.

The results of this study found a statistically significant inverse relationship between moral distress and perceived ethical climate among the study participants. Other demographic data information was analyzed and there were no significant findings for years of experience, type of education, and type of unit setting. However, there were statistically significant findings for those participants who stated they were considering leaving their position due to moral distress and those that were not, as well as those who stated they received adequate training to COVID-19 patients and those who stated they did not.

This is the first known study to investigate the relationship between moral distress and perceived ethical climate in pediatric nurses who cared for patients during the COVID-19

pandemic. Since the end of the COVID-19 pandemic is not fully in sight, findings of this study will help bring awareness to this issue and promote improving an ethical climate in order to mitigate the feelings of moral distress. This is of paramount importance to mitigate the negative consequence of moral distress among pediatric nurses.

Key words: COVID-19, pediatric nurse, ethical climate, moral distress

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CHAPTER 1

INTRODUCTION

Moral distress is an increasing problem for nurses and other healthcare professionals. While research over the last 35 years has had a greater focus on adult practitioners, moral distress has been studied in both adult and pediatric healthcare settings (Cavaliere et al., 2010; Corley, 1995; Dodek et al, 2016; Dyo et al., 2016; Elpern et al., 2005; Sirilla, 2014; Trotochaud et al., 2015). The presence of moral distress has been linked to turnover among nurses (Cavaliere et al., 2010; Dodek et al., 2016; Gutierrez, 2005; Lusignani et al., 2017; Sauerland et al., 2015; Trotochaud et al., 2015), as well as feelings of anger, frustration, guilt, and anxiety (Corley, 1995; Epstein & Hamric, 2009; Gutierrez, 2005; Wilkinson, 1988). Moral distress among healthcare providers continues to be an area of concern in this complex health care environment.

Moral distress describes the emotional experience a nurse may feel when faced with morally challenging situations. Andrew Jameton, an ethicist and philosopher, was the first to identify the concept of moral distress in 1984 defining it as the "painful state of disequilibrium when one knows the right thing to do but, institutional constraints make it nearly impossible to pursue the right course of action" (p. 6). Several other researchers have expanded upon the original definition. Wilkinson defines moral distress as the "psychological disequilibrium and negative feeling state when a person makes a moral decision but does not follow through by performing the moral behavior in that decision" (Wilkinson, 1988, p. 16). Corley, Elswick, Gorman and Clor (2001) define moral distress as "the painful psychological disequilibrium that results from recognizing the ethically appropriate action, yet not taking it, because of obstacles such as lack

of time, supervisory reluctance, an inhibiting medical power structure, institutional policy, or legal considerations" (p.250). All definitions discuss the inability of nurses to do what they think is the right course of action when faced with ethically challenging situations and the resulting negative feelings.

The American Nurses Association Code of Ethics (the Code) is one of the cornerstone documents for all professional nurses and lays the foundation to guide the practice of nursing in an ethical manner. Nurses may have moral and ethical conflicts when there is incongruence between ideal professional behavior, as outlined by the Code, and actual behavior. Provision 2 of the Code discusses the nurse's commitment to the patient that is further defined as something that "carries the greatest weight and trumps all loyalties" (American Nurses' Association Guide to the Code of Ethics for Nurses with Interpretive Statements, 2015, p.26). While this statement is broad in nature, it is simplistic in meaning. When nurses are confronted with situations where they perceive they cannot provide optimal care to the patient and fully operationalize their professional duty, this may cause strife. Provision 6 refers to the moral milieu of nursing practice. More specifically, the moral milieu describes a work environment that promotes ethical, safe and competent care. In this provision, the Code refers to the work of Jameton in discussing moral issues that confront nursing. Article 6.1 of provision 6 addresses the moral environment and two types of normative ethics: norms of obligation and norms of value. Norms of obligation direct the nurse in doing the right thing and norms of value are the tools that enable the nurse to do so. Nurses need to participate in creating an environment that promotes fostering, not impeding of the principles of the Code. Therefore, it comes as no surprise, that a nurses' predicament of knowing the right thing to do but not being able to do it may impede the nurses focused commitment to the patient. The actual practice setting, with its various challenges, may

inhibit the nurse from fulfilling his/her commitment to the patient, causing the potential for moral distress. More importantly, this contradicts one of the core principles of the Code: to protect the patient. The issues faced by nurses during the COVID-19 pandemic most likely will lead to nurses questioning their ability to adhere to the provisions of the Code in these times of uncertainty.

Studies have examined the relationship between moral distress and certain demographic variables. One study found a significant inverse relationship between years of experience and levels of moral distress (Elpern et al., 2005). Other studies found that neither age nor educational background contributed to levels of moral distress (Cavaliere et al., 2010; Elpern et al., 2005).

The phenomenon of moral distress and the factors that influence its development has been studied in several nursing disciplines (Cavaliere et al., 2010; Corley, 1995; Elpern et al., 2005; Whitehead et al., 2015). Moral distress in health care disciplines has also been studied in various practice settings such as intensive care unit (ICU) versus non-ICU settings. While all participants report some level of moral distress, variations do exist. Professionals working in the ICU setting reported greater moral distress then those working in non-ICU settings (Dyo et al., 2016; Trotochaud et al., 2015; Whitehead et al., 2015). Additionally, adult ICU practitioners experienced greater moral distress then pediatric intensive care unit (PICU) or neonatal intensive care unit (NICU) staff (Sauderland et al., 2015). Variations were also found based on different disciplines that were not consistent between studies. Trotochaud and colleagues (2015) found that physicians experienced the highest moral distress followed by nurses and "other" professionals while Whitehead and colleagues (2015) found the highest moral distress was experienced by nurses.

Several factors leading to higher levels of moral distress have been identified. Aggressive care that is not beneficial to the patient or care that is futile is a consistent contributor (Cavaliere et al., 2010; Corley, 1995; Elpern et al., 2005; Trotochaud et al., 2015). Following the wishes of the family even if they may not be in the best interest of the patient has also been identified as contributing to moral distress in nurses (Cavaliere et al., 2010; Dyo et al., 2016; Sauerland et al., 2015). These identified situations have been consistent in the literature and have the potential to negatively impact the nurse.

The importance of an ethical climate that promotes and supports professional nursing practice cannot be underestimated. The organizational climate plays an important role in mitigating the presence of moral distress. "Ethical climate provides context for ethical decision making in the clinical setting of a healthcare organization" (Olson, 2002, p. 6). The premise that moral distress is lower in an environment where the ethical climate is perceived as positive has been supported in the literature (Corley et al., 2001; Corley et al., 2005; Epstein et al., 2019; Hamric et al., 2012; Pauley et al., 2009; Sauerland et al., 2015; Whitehead et al., 2015).

Problem

There are many challenges that nurses face in providing care to patients and families. These challenges can be magnified in situations where the nurse is conflicted and unable to successfully navigate the moral and ethical responsibilities of the profession. In March 2020, the World Health Organization declared COVID-19 a pandemic. Since then, there have been profound and global widespread consequences. The ever-changing healthcare environment, combined with unique moral and ethical challenges due to the pandemic, can make it difficult for the nurse to navigate the moral and ethical responsibilities of the profession, thus potentially leading to moral distress. The nurse may be confronted with situations where there is uncertainty as to the right

course of action in caring for patients and families that may lead to discord. The short and long-term ramifications of COVID-19 to the nursing profession are outcomes that we are just beginning to learn and understand.

It has been more than two years since the start of the pandemic and while significant progress has been made in the diagnosis, treatment, and surveillance of the disease, there is still work to be done. As the pandemic situation continues to develop and evolve into the potential of becoming an endemic, the impact on health care professionals will also continue to unfold. Many challenges were faced by the pediatric healthcare team since the start of the pandemic. The initial fear and uncertainty were magnified by the constantly changing CDC guidelines and changes to the hospital's policies and procedures in the care of pediatric patients with COVID-19. The lack of personal protective equipment, pediatric nurses' deployment to adult practice settings, stretched personnel resources, changes to visitation guidelines, and shifting of priorities were just some of the challenges faced by the pediatric nursing team as they worked to maintain a culture of safety as experienced by this nurse. Even though there was a concerted effort to keep staff informed through daily verbal and written communication, the staff voiced concern for their own safety and the safety of their families as well as the pediatric patients in their care. The stressors of the pandemic posed threats to moral and ethical decision making as nurses navigated the new healthcare landscape. The physical, psychological, psychosocial, and emotional impact on the pediatric healthcare providers is an area in need of further research. This will be of significant importance as we continue to endure the current situation and look toward the future. Since the current literature evaluating moral distress and the relationship of perceived ethical climate among pediatric nurses has been conducted "pre-pandemic," further inquiry is necessary to understand the impact the COVID-19 pandemic has had on pediatric nurses. This research

will provide a springboard to better understand this relationship in the interest of mitigating the consequences to pediatric nurses. Nurse leaders are in a pivotal position to ensure the health and well-being of pediatric nurses is a priority. Utilizing the American Association of Critical Care Nurses (AACN) framework the 4 A's to Rise Above Moral Distress (Ask, Affirm, Assess, and Act) leaders can better understand moral distress and provide support and guidance to staff. As nursing practice continues to evolve to meet the constantly changing needs imposed by the pandemic, this research is especially relevant since the end of the pandemic is still not fully in sight.

Purpose of the Study

The purpose of this study is to explore the relationship between moral distress and ethical climate among pediatric nurses who cared for patients during the COVID-19 pandemic. This study has two main variables: perceived moral distress and perceived ethical climate.

Variables & Definitions

Moral distress is conceptually defined as the "painful state of disequilibrium" for the nurse when he/she knows the correct ethical course of action in the clinical situation but is unable to fulfill those obligations due to perceived constraints or obstacles (Jameton, 1984, 1993). The operational definition for moral distress will be a score on the Measure of Moral Distress for Health Care Professionals (MMD-HP) that measures the intensity and frequency of moral distress (Epstein et al., 2019).

Ethical climate is conceptually defined as "the organizational conditions and practices that influence how ethical issues are identified, discussed, and decided" (Olson, 2021). The operational definition of ethical climate will be a score on the Hospital Ethical Climate Survey (HECS) which measures how nurses perceive their ethical work environment.

Delimitations, Inclusion/Exclusion Criteria

This study will include pediatric registered nurses with at least one year of experience caring for patients from the following pediatric hospital settings: inpatient medical-surgical, intensive care (including pediatric and neonatal), peri-operative services or units, and pediatric emergency departments. In order to participate, the subject must have cared for patients during the COVID-19 pandemic in these designated settings within the past 12 months.

Theoretical Framework

Corley's Theory of Moral Distress is the theoretical framework that was used to guide this study and support the proposed relationship between the variables (See Figure 1). According to Corley, the theory "is designed to help clarify what happens when a nurse either is unable or feels unable to advocate for the patient, and thus experiences moral distress" (Corley, 2002, p. 643). There is an emphasis on two guiding principles; that nursing is an inherently moral profession, and nurses are moral agents. The interactions of eight moral concepts of commitment, sensitivity, autonomy, sense making, judgement, conflict, and competency guides the nurse in moral and ethical decision making. These concepts are explained in relation to both the individual nurses' perspective and the organizational perspective. The "internal context" is the nurses' personal psychological response to the situation, more specifically, what is the response to the situation. This individual perspective of the nurse is governed by how the eight moral concepts are operationalized. Ultimately, how the nurse utilizes the eight concepts guides the nurse in the decision-making process when a morally challenging situation is encountered. The organizational perspective encompasses the "external context" which is how the actual work environment impacts the nurses' decision making. Work environments that promote

collaboration, positive peer relationships, involvement in decision making processes, and autonomy lead to lower levels of moral distress.

The two "outcomes" for a morally distressing situation are: moral intent to act leading to moral comfort or moral distress, moral suffering or moral residue. Moral comfort is achieved when the nurse is able to act in a moral way. Conversely, moral distress, moral suffering, and moral residue are the result of the inability of the nurse to act in a moral fashion. Moral suffering occurs when the nurse cannot make a morally acceptable decision and moral residue is the lingering effects of this decision.

Corley's Theory of Moral Distress supports the linkage between moral distress and ethical climate. When faced with a challenging situation nurses utilize the eight moral concepts in the decision-making process. The workplace has an influence on moral and ethical decision making. The type of ethical climate will influence the nurses' response to morally challenging situations. The theory describes the trajectory nurses go through when encountering ethically challenging situations. More specifically, it addresses how the nurse utilizes the eight moral concepts in a dynamic fashion to ultimately decide. The theory provides a logical and thoughtful outline of how the nurse recognizes an ethically challenging situation, subsequent actions, and the ultimate resolution (Corley, 2002). This theory is well-suited for the proposed research as it describes the process the nurses experience as they encounter morally challenging situations within the context of the influences of the work environment.

Research Question

What is the relationship between moral distress and ethical climate in pediatric nurses who cared for patients during the COVID-19 pandemic?

Hypothesis

There will be an inverse relationship between perceived moral distress and perceived ethical climate among pediatric nurses who cared for patients during the COVID-19 pandemic.

Significance of the Study

Since moral distress exists among nurses to varying degrees with the effects well documented, it poses a real threat to the current workforce (Cavaliere et al., 2010, Trotochaud et al, 2015). As the COVID-19 pandemic continues to evolve, the long- term ramifications cannot fully be understood. Frontline nurses face unprecedented situations and decision making as they care for patients in this new era. Although the numbers of adult COVID-19 patients far outweighed pediatric patients, pediatric nurses were impacted as well. In some cases, pediatric staff floated to adult COVID units and assisted with patient care. In these situations, many nurses expressed feelings of fear and concern. The overall hospital climate was riddled with a sense of frenzy and fear of the unknown. Nurses follow an unwavering moral compass when providing care to ensure it is safe, of high quality, and in the best interest of the patient. Nurses are also morally and ethically bound to do what is best for the patient even in challenging situations. The COVID-19 pandemic most certainly has created challenging situations and has raised moral and ethical issues for nurses and healthcare providers globally.

The relationship between moral distress and ethical climate is extremely significant to the nursing profession. As we continue to navigate the pandemic world, this relationship is in need of inquiry. The premise that nurses prefer to work in an environment that fosters and cultivates professional relationships and collaboration in order to deliver safe quality care is well understood (Pauly et al., 2009). Such characteristics are intrinsic to a positive work environment. As the numbers of COVID-19 cases peaked to an alarming high in 2020 and now has somewhat plateaued, multiple questions arise about the impact of COVID-19 on nurses from

all disciplines. Some questions include were nurses given the necessary tools to deliver safe, quality care? It will be important to evaluate how nurses' moral distress was impacted by things such as lack of personal protective equipment, changes to nurse-to-patient ratios, differing perspectives on end-of-life care, and the fear of the unknown. From an administrative perspective, did hospital and nurse leaders promote the best ethical climates possible to enable healthcare professionals to do their job to the best of their abilities during this pandemic? Were efforts to decrease feelings of moral distress evaluated and supported?

A study to evaluate moral distress and ethical climate will help to answer some of the questions outlined above as the past year has been fraught with fear, uncertainty and hope. The impact the pandemic has on the frontline pediatric nurse needs to be more fully understood in order to establish baseline data to help mitigate the potentially lasting effects. Understanding and promoting the wellness of the workforce is of paramount importance during these challenging times. As we continue to navigate this global pandemic, such research will contribute to this much needed body of knowledge.

CHAPTER II

REVIEW OF LITERATURE

This chapter will provide an overview of the literature on the topics of moral distress and ethical climate. A description of the literature search is provided and the databases and keywords used are identified. The theoretical framework is discussed and supports the theoretical linkages between moral distress and ethical climate. A comprehensive review of the literature relevant to each variable is critiqued and synthesized; gaps in the literature are identified and support the rationale for this current study.

An extensive review of the literature was conducted using the following on-line search engines: Cumulative Index to Nursing & Allied Health Literature (CINAHL), PubMed, ProQuest, Google Scholar, and Medline accessed through the Rutgers Medical School library and the Seton Hall library site. Various key words were used including moral distress, moral concepts, ethics, ethical climate, nurses, pediatric, neonatal, intensive care, COVID-19, and hospital. These included but were not limited to the following combination of terms: moral distress and pediatric nurses, moral distress and nurses, ethical climate and pediatric nurses, moral distress and ethical climate. Research studies from 2010 to present were then analyzed more closely for relevant content to yield the articles for review. Articles published prior to 2010 were selected due to the seminal and extremely relevant nature of the findings. The total number of articles reviewed for moral distress and pediatric or neonatal nurse search terms was 80, moral distress and (NICU or PICU) was 32, moral distress and NICU was 21. Ethical climate using key words ethics, ethical climate, pediatric, NICU or PICU yielded 21 articles. Moral distress and ethical climate as search terms yielded 43 articles. When searching moral distress and COVID-19 in peer reviewed articles with full text a total of 327 articles were found.

A second search added the terms pediatric or child or infant or adolescent and yielded 124 articles. When adding pediatric, NICU or PICU nurse as search terms an additional 44 articles were found. All articles were initially reviewed by reading the abstracts and determining if the full article would be relevant for review. No quantitative or quantitative articles were found evaluating moral distress among pediatric nurses during the pandemic. The final articles that were selected were from peer reviewed journals and provide a comprehensive review of the concepts of moral distress and ethical climate.

Theoretical Framework

Historical Background

Andrew Jameton, an ethicist and philosopher, was the first to identify the concept of moral distress in 1984. The book *Nursing Practice the Ethical Issues* expands on the study of ethics as it relates to nursing as a distinct and unique discipline. Building upon the concepts of bioethics Jameton distinguishes between ethics and morals. Ethics "refers to publicly stated and formal sets of rules or values such as a professional code of ethics" (Jameton, 1984, p.4) whereas morals "refers to a set of values or principles to which one is personally committed" (Jameton, 1984, p.5). The significant difference is that morals encompass a greater personal connotation. Jameton (1984) defines moral distress as the "painful state of disequilibrium" for the nurse who knows the correct course of action in a clinical situation but is unable to fulfil that obligation due to perceived constraint or obstacles.

Wilkinson (1988), a nurse researcher and ethicist building upon the original work by Jameton, further explored and defined moral distress using a phenomenological approach. The qualitative research conducted by Wilkinson emphasized the moral and ethical issues that nurses face and "the relationship between moral aspect of nursing practice and quality of patient care

(Wilkinson, 1988, p. 17). Wilkinson defines moral distress as the "psychological disequilibrium and negative feeling state when a person makes a moral decision but does not follow through by performing the moral behavior indicated in that decision" (Wilkinson, 1988, p. 16). This study identified seven conceptual categories that impact moral distress and provides support to the definition as well as implications for further identified research topics.

Jameton (1993) continued his work on defining moral distress and further identified two distinct types of moral distress: initial distress and reactive distress. Both come from a moral dilemma that the nurse is facing in practice. Initial distress "involves feelings of frustration, anger, and anxiety" felt immediately and reactive distress results "when people do not act upon their initial distress" (Jameton, 1993, p. 544). Jameton identifies the role of moral responsibility for the nurse and how the contributing factors of healthcare reform, hospital bureaucratic hierarchies and physician power impact the moral decision making of nurses.

Early work on moral distress by Mary Corley laid the foundation and provided the impetus for development of the Moral Distress Theory. Corley (1995) was the first researcher to conduct a quantitative study on moral distress. The purpose of her study was to evaluate an author-designed instrument to measure moral distress among critical care nurses. Using previous work from Jameton (1985) and Wilkinson (1988), Corley developed a 32-item Likert scale instrument to measure moral distress among 111 critical care nurses. Three main factors emerged from the data: honesty regarding end of life care, aggressive care that is futile, and action or inaction in situations the nurse did not agree with. Although findings revealed overall low levels of moral distress, the author identified that 12% of the participating nurses left the profession due to moral distress. The author reported the need for further investigation into this phenomenon including institutional barriers and opportunities to mitigate the effects of moral distress.

Corley and colleagues (2001) continued work on moral distress in developing a new instrument to measure moral distress; the Moral Distress Scale (MDS). Using previous work by Jameton (1984, 1993) and a theoretical framework that incorporated two additional theories, role conflict theory by House and Rizzo (1972) and values theory by Rokeach (1973), the authors developed the MDS. Role conflict theory "is a type of stress that results when the managers of an organization hold competing or conflicting sets of expectations for one's position in the organization" (Corley et al., 2001, p. 252). Values Theory explains "how a person's values and value system motivate behavior" (Corley et al., 2001, p. 252). The authors identified situations that may be morally distressing and to what extent the nurse felt moral distress. The research is based on three assumptions: that "nurses bring values to their work, that they can identify ethical problems in their work environment, and that they can evaluate the extent to which these problems cause moral distress" (Corley et al., 2001, p. 252). The resulting 32 item MDS was administered to a convenience sample of 214 nurses, and it showed moderate levels of moral distress with acceptable validity and reliability. Factor analysis identified three factors; individual responsibility (Cronbach's alpha =0.97), deception (Cronbach's alpha = 0.82), and not in the patient's best interest (Cronbach's alpha =0.84). Consistent with Corley's study in 1995, fifteen percent (15%) of participants had left a position due to moral distress. These prior works laid the groundwork for theory development.

Corley's Theory of Moral Distress

In 2002, Corley identified moral distress as a significant problem within nursing and became the first to develop a theory to clarify the phenomenon. Prior to her work, there had been limited research on moral distress to aid in theory development and ways to measure the phenomenon. Limited research included the causes of moral distress, measurement tools, links to job

satisfaction, and the decision to leave the profession. Corley outlined challenges to the nursing profession which precluded the development of the theory including staffing shortages and lack of necessary education to better equip nurses to recognize moral distress and its potential negative consequences.

In Corley's theory, nursing is described as a moral endeavor with many competing priorities that may interfere with ethical and moral decision-making. "When a nurse learns what is best for the patient, yet cannot provide it, the nurse suffers moral distress" (Corley, 2002, p. 637). Corley describes how the nurse operationalizes key moral concepts and how the institutional environment impacts moral decision making. A key component of the theory is the manner in which the organizational culture impacts the presence of moral distress. The organizational ethical culture is intrinsically linked to moral distress as it helps direct how the nurse will react to morally distressing situations. If the nurse perceives the institutional climate as supportive, collaborative and one that promotes autonomy this has a positive impact on her decision-making abilities when faced with morally distressing situations.

According to Corley, the theory "is designed to help clarify what happens when a nurse either is unable or feels unable to advocate for the patient, and thus experiences moral distress" (Corley, 2002, p. 643). Ethical principles are inherent to the profession of nursing as nursing is seen as a moral endeavor with overarching goals of both protecting and doing what is best for the patient. The presence of moral distress depends on the "internal context" that is the individual characteristics of the nurse as well as the "external context" which is the organizational work environment. The theory has two overarching principles: nursing as a moral profession and nurses as moral agents (Corley, 2002). These principles serve as a basis in guiding the theory development. (See Figure 1).

Corley uses eight distinct and relevant core concepts and illustrates the linkages between the concepts. How the nurse operationalizes these core concepts when faced with a moral conflict determines if the outcome will result in moral intent to act resulting in moral comfort or moral distress, moral suffering, or moral residue for the nurse. Moral comfort is achieved when the nurse is able to act in a moral way. Conversely moral distress, moral suffering and moral residue can occur when the nurse is unable utilize the eight moral concepts in a way that achieves moral comfort.

The eight moral concepts are commitment, sensitivity, autonomy, sense making, judgement, conflict, competency, and certainty. Corley (2002) outlines each moral concept separately then illustrates the interconnectedness of the concepts. A nurse may be able to successfully utilize some of the moral concepts, but it is important to note how the concepts work together to achieve moral decision making. Moral commitment refers to the nurse being fully invested in acting on moral issues affecting the patient and is committed to work toward a resolution on behalf of the patient. According to the theory "nurses who have a high level of moral commitment to patients are more likely to develop moral competence; to demonstrate moral behavior and to have low levels of moral distress" (Corley, 2002, p. 645). The nurse values and understands how his/her commitment to the patient can result in either positive or negative outcomes. Sensitivity as a moral concept implies that the nurse is able to identify and understand the moral conflict, the impact on the patient and the patient outcomes related to his/her actions. "Nurses with moral sensitivity but who lack moral competency are more likely to experience moral distress" (Corley, 2020, p. 645).

Autonomy refers to the nurse having an obligation to the patient and independence to make choices regarding ethical issues affecting the patient. According to the theory, "nurses who have

moral autonomy are more likely to experience moral distress unless they also have moral commitment and moral competence" (Corley, 2002, p.646). Sense making is the ability of the nurse to fully understand morally challenging situations and to find meaning in the situation. According to the theory "nurses who have a high level of moral commitment and moral competence have greater ability to make moral sense of a situation and experience less moral distress" (Corley, 2002, p. 646).

Judgement as a core moral concept describes the nurse's ability to evaluate what course of action is most appropriate relying on ethical considerations in the decision-making process. "Nurses who possess a high level of moral commitment and moral sense making are more likely to exercise appropriate moral judgement and experience less moral distress" (Corley, 2002, p. 646). Conflict is the negative consequence when there is disparity in what the nurse feels able to do in certain situations. The central component for this moral concept is the nurse making a specific choice on the course of action. Moral competency describes the nurse having the tools and ability to make the best moral decisions. "Nurses who have moral commitment but lack moral competency are more likely to experience moral distress" (Corley, 2002, p. 646). The final concept is moral certainty and this is when the nurse feels without any doubt that the best decision has been made on behalf of the patient. "Nurses who have high level of moral commitment, moral competence, and moral autonomy are more likely to feel moral certainty and experience less moral distress" (Corley, 2002, p. 646).

According the theory, if the nurse is able to act in a moral fashion using the moral concepts outlined, the process will ultimately lead to moral comfort which is the goal for moral decision making. Conversely, if the nurse is unable to act in a morally appropriate manner, this leads to moral distress, moral suffering, and moral residue with negative impact on the nurse, the patient,

and the organization. Negative outcomes to the patient in the form of patient suffering are identified when the nurse is unable to advocate successfully. The impact on the nurse can lead to nurse burn-out and turnover. The external context of the theory addresses the impact to the organization as a whole. In this analysis, three negative outcomes are identified: increase nurse turnover, poor quality of care, and a decrease in patient satisfaction (Corley, 2002).

Corley's Theory of Moral Distress supports the unique linkage of moral distress to ethical climate. Moral distress is exhibited when the nurse knows the right thing to do; however, he/she cannot follow though due to real or perceived constraints. Each core concept is influenced by the characteristics of the nurse as well as the organizational structure and environment. Moral decision making is influenced by both the individual characteristics of the nurse as well as the impact of the organizational work environment. Corley's Theory of Moral Distress suggests the overall work environment has a direct link to how the nurse manages morally distressing situations. The perceived ethical climate of the organization will have a direct impact on the overall work environment that in turn influences how the nurse manages morally distressing situations. The nurse's management of the morally distressing situation will ultimately contribute to the preferred "outcome" of the theory which is moral comfort or the negative outcome of moral distress and the impact on the patient, the nurse and the organization as whole.

Moral Distress

Moral Distress Quantitative Studies

Prior to 2010, studies on moral distress have primarily focused on adult nurses working in a variety of settings including ICU and end of life care (Corley, 1995, Elpern et al., 2005, Gutierrez, 2005, Hamric & Blackhall, 2007). The results from these early studies were consistent in identifying that moral distress exists among healthcare professionals to varying

degrees. Although moral distress is an identified problem among pediatric providers, the studies are relatively small in number compared to research on adult practitioners.

Cavaliere, Daly, Downing and Montgomery (2010), conducted a descriptive correlational study to measure moral distress of NICU nurses and situational causes of moral distress. A convenience sample of 196 eligible RNs resulted in a sample of 94 (48% response rate). Participants completed a demographic data sheet that included questions about leaving a position and the Moral Distress Scale Neonatal-Pediatric Version (MDSNPV) developed by Corley. The instrument uses a five-point Likert scale to measure frequency and intensity of 20 clinical situations. Participants rate the frequency of the event from 0 (none) to 4 (very frequent) and the intensity of from 0 (none) to 4 (great extent). The total score per situation is calculated by multiplying the frequency by the intensity to yield a range from 0 (low) to 16 (high). Overall, low levels of moral distress were found in this group. The mean frequency score was 1.35 ranging from 0.4 to 2.88 the mean intensity score was 1.73 ranging from 0.66 to 3.18 and the overall level of moral distress (frequency x intensity) was 3.96 ranging from 0.35 to 9.16. The scenarios that had the highest scores were following families' wishes even though not in best interest of the child, futile care, aggressive care that is not beneficial to the child, and working with incompetent colleagues. Significantly higher levels of moral distress were noted for nurses who considered leaving their position due to moral distress ($p = 0.048$) modified their approach to care ($p = 0.17$) and those that stated they were not spiritual ($p = 0.025$). There was no significant correlation for overall level of moral distress for age, education level, years in NICU, years in nursing, or religion. However, a modest correlation was found between years in nursing and intensity of the specific situation to carry out physician orders for unnecessary tests ($r = 0.214$, $p = 0.044$), as well as years working in the NICU and frequency of the specific situation to

carry out physicians' orders for unnecessary tests ($r = 0.211$, $p = 0.044$). Strengths of the study include the use of the MDSNPV to establish additional support for the psychometric properties of the instrument. The use of the MDSPNV is also a limitation as this was a new instrument so the authors were unable to compare current results. Reliability data was not reported. Other limitations include a homogeneous participant group and a small sample size.

A cross-sectional, descriptive, comparative study was conducted by Allen and colleagues (2013) to evaluate moral distress among five healthcare disciplines from a healthcare system located in the southeast. A 12% response rate resulted in the study sample of 323; 207 nurses (194 adult and 13 pediatric), 62 physicians (51 adult and 11 pediatric), 27 social work/case manager (all adult), 4 APNs (all adult) and 20 respiratory therapists (15 adult and 5 pediatric) participated. Subjects completed a demographic data collection sheet and the MDS-R. Overall composite scores for all disciplines ranged from 0 to 214. Mean scores varied according to the discipline with the following mean scores reported (APNs 68, RNs 51, MDs 48, respiratory therapists 47 and social workers 32). More years of experience were not associated with higher moral distress for nurses ($r = -0.190$, p = .010) or physicians ($r = -0.415$, $p = 0.004$). No differences were found for levels of moral distress and community versus rural hospital setting ($t_{296} = 1.86$, $p = 0.66$) ethnicity ($t_{287} = 0.302$, $p = 0.763$) or race ($F_{3, 280} = 1.065$, $p = 0.364$). Moral distress was higher for those professionals working in adult settings versus pediatric settings ($t_{306} = 2.86$, $p = .007$). Statistically significant results were reported for staff that had considered leaving a previous job or actually left versus those that had not ($F_{2, 303} = 24.326$, $p < .001$) meaning moral distress was greater among those that considered leaving or actually left a job. The most common situations of moral distress were identified and ranked from low to high according to the mean scores reported. Nurses and respiratory therapists ranked "carry out

physician's orders for what I consider unnecessary tests and treatments" as number one, and nurses, physicians, advanced practice nurses (APNs), and respiratory therapists all ranked "follow the family's wishes to continue life support even thought I believe it is not in the patient's best interest" as number two. "Watch the patient suffer because of lack of provider continuity" was ranked number 1 by physicians, number 3 by nurses and number 2 by social work/case managers. (Allen et al., 2013). This study was limited due to the small number of pediatric providers that participated and subjects coming from one healthcare system.

Trotochaud, Coleman, Krawiecki and McCracken (2015) studied moral distress experienced by pediatric providers including nurses, physicians, and "other" health professionals. They examined the relationship between moral distress and staff turnover and situational predictors of moral distress. A large pediatric healthcare system was the setting for this descriptive correlational study using a convenience sample of 3041 which resulted in 869 participants. Response rates were highest for nurses (577), followed by "other" professionals (159) and physicians (133). The MDS-R and a demographic data collection tool were distributed via an on-line survey. All professions reported levels of overall moral distress with a mean score of 50.2 (47.4 - 53.2) with an overall possible range of composite score was 0-336. The overall possible range for frequency and intensity was 0-16, higher mean scores for intensity of the situation (2.11) compared to frequency (0.94) were reported. The physician group overall mean score was significantly greater than the nurses (62.88 vs. 47.3; $t_{(866)} = 3.55$ $p = 0.001$). In analyzing the frequency of morally distressing situations, the physician group reported significantly higher scores compared to nurses (1.09 ± 0.48 vs. 0.90 ± 0.57; $t_{(866)} = 3.36$; $p = 0.002$) and compared to other providers (1.09 ± 0.48 vs. 0.93 ± 0.65; $t_{(866)} = 2.39$; $p = 0.002$). All subjects working in an ICU setting also had greater moral distress than those in other settings (mean score 74.3).

Statistical significance was found between levels of moral distress and staff thinking about leaving a position but who did not leave (mean 80.6) versus those that left (mean 60.4) when compared to staff that never considered leaving a position (39.0, $F_{(2,859)} = 72.99$; $p < 0.001$), meaning subjects that actually left a position or considered leaving reported greater moral distress. The situations causing the highest levels of moral distress were following family's wishes even though not in best interest of the child, performing life-saving interventions that prolonged death, and poor patient care due to communication lapses. Limitations of the study include subjects from one healthcare system, and, although there were 869 participants, the response rate was <35%. Strengths of the study include the use of the MDS-R that has good psychometric properties and surveying various disciplines that care for children.

Dyo, Kalowes and Devries (2016) studied adult and pediatric nurses in ICU and non-ICU settings to determine levels of moral distress, the relationship between demographic characteristics, and the intent to leave a position. A descriptive correlational study design using a demographic data collection tool and the MDS was conducted. The sample size yielded 426 respondents from a pool of 1000 eligible nurses from adult and pediatric units from a five-hospital health system in California. The final number of subjects was 279 due to incompleteness of survey data. Findings showed adult ICU nurses reported higher levels of moral distress frequency and intensity than nurses in non-ICU settings ($M = 2.5 \pm 0.19$ p=0.005 for intensity and M=1.6 ± 0.11 $p < 0.001$ for frequency). Conversely, PICU nurses reported lower levels of intensity ($M = 1.6 \pm 0.41$, $p = 0.159$) compared to non-ICU pediatric nurses ($M = 2.2 \pm 0.34$) and lower levels of frequency ($M = 0.9 \pm 0.25$, $p = 0.058$) compared to non-ICU pediatric nurses ($M = 1.3 \pm 0.30$). In comparing ICU nurses from adult and pediatric/neonatal settings, adult nurses reported having statistically higher moral distress intensity and frequency.

Those working in adult settings reported higher levels of moral distress intensity ($M = 2.5 \pm 0.19$, $p = 0.002$.) compared to those working in pediatric and neonatal settings ($M = 1.6 \pm 0.19$). Additionally, those working in adult settings reported higher levels of moral distress frequency ($M = 1.6 \pm 0.11$, $p < 0.001$) compared to those working in pediatric and neonatal settings ($M = 0.7 \pm 0.46$). In comparing demographic variables, there were no significant differences in moral distress frequency and intensity for age, years of experience or education. Situations causing great moral distress for all nurses include: following families' wishes in end-of-life care and administering treatments that prolong death. Decision to leave a position was positively correlated with higher moral distress frequency for all participants. "Each unit increase in moral distress doubled the odds of intention to leave when adjusted for age, gender, ethnicity and specialty area ($p = 0.003$)" (Dyo et al., 2016, p. 45). A study limitation was the number of unusable surveys due to incompleteness of the data returned and a 43% response rate. A strength of the study is the use of multiple sites and the varied demographic composition of the participants including race, level of education, and type of practice unit.

Moral Distress Quantitative Studies Outside of the USA

Since there are limited studies on moral distress conducted on pediatric healthcare providers in the United States relevant studies from other countries were analyzed. A study by Dryden-Palmer, Moore, McNeil, Larson, Tomlinson, Roumeliotis, Janvier, and Parshuram (2020) was conducted in Canada, and its primary objective was to quantify levels of moral distress among pediatric providers. The secondary objective was to evaluate the relationship between moral distress, uncertainty, and depersonalization. A national cross-sectional survey from 31 hospitals identified 54 ICUs for participation. Surveys were sent electronically to 6,702 PICU and NICU potential subjects yielding a sample of 2,852 (1,844 nurses, 306 physicians, 459

respiratory therapists and 211 "other disciplines"). Moral distress was measured by using the MDS-R. Depersonalization was measured by using a subscale from Maslach's Burnout Inventory, and uncertainty was measured by five items from Mishel's Parent Perception of Uncertainty Scale. An eight item demographic data sheet was administered. Significant findings were noted for professional discipline, sex, and years of experience working in the ICU. Nurses' median (interquartile range) on the MDS-R was 85 (57-112) which was eight points greater than respiratory therapists and 19 points greater than physicians ($p < 0.0001$). Female respondents reported a mean interquartile score of 81 which was 17 points greater than male subjects ($p < 0.0001$). Moral distress scores varied for years of working in the ICU setting. For subjects working in the ICU less than one year, the mean score was 53 and rose to 83 for nurses working in the ICU for > 30 years ($p < 0.0001$). The median interquartile score for depersonalization was 6 with 22% of respondents scoring greater than 12 indicating high levels. Moral distress was associated with higher depersonalization ($p < 0.0001$). "Respondents reporting greater uncertainty were younger, had less ICU experience, and were more likely to have high degrees of depersonalization ($p<0.0001$) (Dryden-Palmer et al., 2020, p. 319). The situations causing the greatest moral distress were following the family's wishes when not in best interest of the child, working with levels of staffing perceived to be unsafe, initiating life-saving interventions when just prolonging death, patient suffering due to lack of provider continuity, and giving false hope. Strengths of this study include using a valid and reliable tool to measure moral distress, a cross-sectional sampling, and, even though the response rate was low, the number of subjects that participated was high.

Using a cross-sectional design Sannino, Gianni, Re and Lusignani (2015) studied moral distress intensity and frequency among NICU nurses in Italy. A convenience sample of 472

eligible nurses from 15 NICUs yielded a sample size of 406. With permission from Drs. Corley and Hamric participants completed an author modified 20 item modified version of the Moral Distress Scale Neonatal-Pediatric Version (MDSPNV) and a demographic collection tool. Low to moderate levels of moral distress were reported by the subjects. The top five highest mean scores for frequency, intensity and overall moral distress were calculated. Mean scores for frequency ranged from 1.66 to 1.88, intensity 2.37 to 2.76, and overall score (frequency x intensity) ranged from 4.49 to 5.73. "The clinical situation initiate life-saving actions when I think it only prolongs dying" resulted to be the one leading to the highest score for all dimensions (frequency =1.88, intensity =2.76, frequency x intensity =5.73) (Sannino et al., 2015, p. 215). Overall scores (frequency x intensity) were categorized as high (>64) and low (<64). The authors found no significant differences in the mean scores for the demographic data collected with the exception of gender; males reported higher levels or moral distress than females (77.8 vs 49.1, $p < 0.0001$). In addition, 27% of respondents reported they had considered leaving their position due to moral distress; however, they did not do so and 20% reported that they currently were considering leaving their position.

A study by ffrench-O'Carroll and colleagues (2020) of 408 health care providers (including 17.4% doctors 66.9% nurses and 15.7% "other" professionals) was conducted to evaluate the psychological impact of COVID-19 on practitioners working in adult and pediatric ICUs. Findings showed moral distress using selected questions of the MMD-HP was greater for those working in the adult ICU vs the pediatric ICU (p=0.0001) (ffrench-O'Carroll et al., 2020). This is one of the first studies using the MMD-HP to evaluate health care providers during the COVID-19 pandemic.

Moral Distress Qualitative Studies

Davies, Cook, O'Loane, Clarke, MacKenzie and Stutzer (1996) were the first researchers to study pediatric nurses who worked with dying children and they used qualitative methods. Since there were no theoretical concepts identified in the literature thus far, a qualitative research study using grounded theory was designed. Using a semi-structured interview format, the researchers interviewed 25 nurses who had cared for at least one child with a chronic illness who subsequently died. The interviews were recorded and transcribed word-for-word and then coded by 3 trained researchers to identify themes. The final analysis identified the core concept of "struggling" in terms of the nurses' relationship with the child once the nurse realized the child was going to die. The experiences of the nurses reported were indicative of the concept termed "struggling" including both grief distress and moral distress. Grief distress described the nurse's struggle between expressing his/her emotions regarding the child's death and the need to maintain workplace professional environment to support the patient and family. The difference between grief distress and moral distress is highlighted below by Davies et al. (1996)

> Moral distress. When nurses were the first members of the professional team to accept the inevitability of a child's death, they struggled with the dilemma between their obligation to follow physicians' orders and their duty to provide a comfortable death. Nurses' distress was compounded by following orders that were in conflict with their belief that children should be allowed to die peacefully without unnecessary pain. Because nurses had developed close relationships with the children and/or families, they were profoundly aware of patient's and family's preferences for care. Nurses felt that they had violated this relationship when they were forced to continue to inflict suffering beyond the point of a possible cure. When nurses perceived that doctors did not consider

> their input into decision-making, they suffered profoundly and felt powerless. In such situations, nurses felt helpless and resented being forced to do things that they perceived were not in the child's best interest (p. 502).

Conversely, when nurses felt they were active participants in the care of the patient and family, they were more equipped to manage the moral distress they were experiencing. Not all nurses interviewed expressed feelings of moral distress, but those that did "spoke eloquently about their feelings of anger, frustration, sadness, and powerlessness when they found themselves carrying out active treatment regimens which involved pain and suffering for children who they knew were going to die" (Davis et al., 1996, p. 504). The research highlighted how the nurse manages the "struggle' as well as professional and personal consequences of moral distress. Since this was the first qualitative study to evaluate moral distress, this research provided a springboard for future research.

Epstein (2008) evaluated the lived experiences of nurses and physicians in her qualitative research on end-of-life (EOL) care experiences in the NICU setting. A hermeneutic phenomenology study design was used to conduct semi-structured interviews with 21 nurses, and 11 physicians approximately one week after an infant's death. The main identified theme expressed by the nurses and physicians was "creating the best possible experience for the parents" (Epstein, 2008, p. 771). Three sub-themes that support the main theme emerged including: building relationships with the parents, preparing the parents for end-of-life and creating memories for the parents and family. Based on the caregiver's experiences, three further sub-themes emerged; moral distress, parental readiness and consent for autopsy. Nurses and physicians described their relationship with the parents as either good (42% nurses and 43% of physicians), poor (11% of nurses and 28% of physicians), or non-existent (47% of nurses and

28% of physicians). "Good" relationships were found to support feelings of positive continuity of care and providers expressed the importance of developing relationships especially during EOL care. Preparing for EOL was described by nurses as facilitating discussion between the physicians and parents, discussion of treatment options, and the preparation of the parents for the physical changes when dying was imminent. Creating memories was described by nurses and physicians as the desire to create "memorable moments." The researchers stated "all instances of moral distress arose as a result of prolonged, aggressive treatment that was perceived to be futile" (Epstein, 2008, p. 775). Other factors contributing to moral distress were situations with the perceived provision of false hope and poor continuity of care. Nurses and physicians acknowledged the different perspectives in these situations; physicians involved in the decision-making process and nurses involved in the actual care provided to the patient and parents. Strengths include the richness of the narratives described by the subjects and the identification of the overarching theme of providing the best possible experience for the parents.

A qualitative study by Molloy, Evans and Coughlin (2015) used secondary analysis to evaluate moral distress among NICU nurses regarding resuscitation of extremely premature infants. The research team purposefully selected the transcripts from the original study (Weir et al., 2009) resulting in a total of 15 nurses (all female with a mean of 24.8 years neonatal experience) from a tertiary academic medical setting in Canada. The data obtained was from a previous study evaluating ethical decision making. Original transcripts were evaluated and coded with five emerging themes noted: "uncertainty, questioning of informed consent, differing perspectives, perceptions of harm and suffering, and being with the family" (Malloy et al., 2015, p. 54). Each of the themes was further discussed in terms of what experience the nurse shared and how that fit into each of the five domains. Uncertainty regarding lack of standardization of

guidelines regarding resuscitation of extremely premature infants was a consistent theme and a key driver of moral distress. The theme of informed consent encompassed nurses questioning the ability of the family to fully comprehend the clinical situation in relation to resuscitation and the urgency to make a decision due to their emotional state. Differing perspectives highlighted the nurse's concern for providing care at the parents request even though it may not be in the best interest of the child. "The nurses' sense of helplessness and their perceived lack of power in the resuscitation decision-making process of extremely premature infants was a significant finding" (Molloy et al., 2015, p. 58). Nursing is seen as a helping profession, and the concept of inflicting more harm than good is in direct conflict of this premise. The concept of being with the family illustrated the emotional stress and difficulties felt by the nurse as he/she provides continual support and care to families during difficult times. All of these themes represent situations that cause moral distress for the nurse.

Thomas, Thammasitboon, Balmer, Roy, and McCullough (2016) conducted a descriptive exploratory qualitative study to explore moral distress and the impact clinical situations had on professional integrity among pediatric resuscitation team members at a large academic pediatric medical center. Using semi-structured interviews, twenty-five PICU clinicians (including attending physicians, fellows, nurses, physician assistants and respiratory therapists) from a tertiary pediatric center in Texas were interviewed. Moral distress was reported when participants shared a memorable resuscitation event. "When specifically probed, 21 out of 25 clinicians acknowledged that their sense of professional integrity was challenged during their memorable resuscitation experience (Thomas et al., 2016, p. 304). Through analysis, four themes emerged as threats to integrity triggering moral distress in these situations. Lack of understanding the "big picture" occurs when there is not consistency on the interventions and

prognosis of the child among the healthcare providers and family. Clinical situations where the term "resuscitation" was not clearly defined and understood among the healthcare team as well as an obligation to follow the wishes of the family even when not in child's best interest was another identified theme. "Variations in the definitions of "resuscitation," its indications, process, and resulting variable bedside practices contributed to moral distress" (Thomas et al., 2016, p. 305). Ineffective team leadership during resuscitation elicited feelings of moral distress. "Uncertainty of role responsibilities negatively impacted performance and contributed to morally distressing situations for clinicians (Thomas et al., 2016, p. 306). The researchers conclude the importance of the role of team leader to help mitigate threats to professional integrity cannot be underestimated. Identified strengths include studying a very specific population that had not be studied previously and interviewing various members of the pediatric healthcare team.

Lewis (2017) explored responses to end-of-life-care (EOLC) including affective, interactional, and meaning-related responses among 25 NICU nurses. Three prevailing themes emerged from the affective responses: responsibility, moral distress, and identification. Responsibility outlines the nurses' commitment and desire to provide quality, ability to advocate for her patient, feelings of inadequacy and disbelief when the clinical situation did not progress as anticipated. Moral distress was described in terms of the nurse's feelings of anger, guilt, helplessness and hopelessness. "When moral distress was described, it was the predominant, pervasive feeling in the story." (Lewis, 2017, p. 99). Moral distress was identified in situations where the nurse felt the care provided was futile or he/she was not in agreement with the wishes of the family. Identification was described in terms of the nurse personally identifying with the clinical situation expressing feelings of loss, guilt, grief, and maternal-like feelings. Four less common affective themes were also identified; spirituality, aloneness, pride, and relief. Coping

strategies were also explored with identified positive interventions (collegial support, debriefing), and less positive interventions (avoidance and compartmentalization). "Feelings of moral distress were present in half of the narratives that mentioned avoidance as coping method." (Lewis, 2017, p. 101).

Measures of Moral Distress

The Moral Distress Scale-Revised (MDS-R) is a 21 item five-point Likert scale ranging from 0-4 that measures the intensity (the degree of disturbance) and frequency (how often the situation occurs) of various clinical situations. Participants rate the frequency of the situation using a five-point Likert scale (0 = never to 4 = very frequent) and the intensity of the situation using a five-point Likert scale (0 = none to 4 = great extent). Scoring of the instrument is done in two parts. For each of the 21 items, the frequency score (0-4) is multiplied by the intensity score (0-4) to calculate a per item score ranging from 0-16. The overall score (frequency x intensity) for each item is then multiplied by 21 to get the overall composite score ranging from 0-336. "Using this scoring scheme allows all items marked as never experienced or not distressing to be eliminated from the composite score, giving a more accurate reflection of moral distress" (Hamric et al., 2012, p. 4). The overall scores for frequency x intensity range from 0-336 however, with higher scores indicating greater levels of moral distress. The frequency and intensity of each of the 21 items can also be summed separately to determine a score per individual item. Two open-ended questions were added to identify the subject's intent to leave a current position or his/her decision to have actually left a position. "To increase the applicability of the MDS-R to populations beyond nursing, six parallel versions of the scale were developed" (Hamric et al., 2012, p, 3). Overall reliability of the instrument was calculated with a Cronbach's alpha of 0.88. Construct validity was demonstrated by the successful testing of four

hypotheses. The hypothesis included: providers with greater years of experience would report higher moral distress, nurses would report higher moral distress then physicians, moral distress would be inversely correlated with ethical climate, and moral distress would be higher for those who considered leaving a position. The use of the MSD-R has been well documented in the empirical literature reviewed.

The Measure of Moral Distress for Healthcare Professional (MMD-HP) was developed in 2019 as a revision to the MDS-R. This instrument was revised to better understand the root causes of moral distress and for use with a variety of practitioners. "While the MDS-R has performed well, a significant revision was necessary in order to more fully capture team and system-level sources of moral distress, minimize repetition of similar root causes, and simply use" (Epstein et al., 2019, p.115). The revised tool measures the frequency and intensity of the items to generate a composite score. Participants rated the frequency of the situation using a five-point Likert scale (0 = never to 4 = very frequent) and the intensity of the situation using a five-point Likert scale (0 = none to 4 = very distressing). The authors recommend calculating a composite score (frequency x intensity), scores per item range from 0-16 noting the two dimensions should be evaluated together since both contribute to overall moral distress. The overall composite score will range from 0 – 432 for all 27 items. A higher composite score indicates greater moral distress. Reliability of the MMD-HP was demonstrated by a Cronbach's alpha of 0.93. Construct validity was achieved by support of four hypothesis. "Because the instrument behaves as would be predicted, we recommend that the MMD-HP replace the MDS-R for hospital-based studies" (Epstein et al., 2019, p. 121).

The Moral Distress Thermometer (MDT) developed by Wocial and Weaver (2013) is a single item 11point scale ranging from 0-11. The instrument is shown as a "thermometer" where

the respondents rate their levels of moral distress (10 = worst possible to 0 = none) within the past two weeks including the day they complete the instrument. The MDT uses "verbal descriptors to help anchor the degree of distress in a meaningful way" (Wocial & Weaver, 2013, p. 169). The MDT demonstrated convergent and concurrent validity when compared to the MDS. "The MDT may be useful for rapid measurement of moral distress and tracking changes in moral distress over time" (Wocial & Weaver, 2013, p. 172). The use of the MDT has not been well-documented in the empirical literature.

Synthesis of the Moral Distress Literature

In summary, the presence of moral distress among pediatric and adult practitioners has been well established. Studies report varying degrees of moral distress for subjects ranging from low (Cavaliere et al., 2010) to moderate-high (Allen et al., 2013) with identified differences noted among disciplines and practice settings. In comparing health care providers, findings varied. Higher levels of moral distress were reported by physicians compared to nurses (Trotochaud et al., 2015) while nurses reported the highest levels compared to other pediatric providers (Dryden-Palmer et al., 2020). Adult health practitioners from various disciplines had higher levels of moral distress than those working in pediatric settings (Allen et al., 2013). Dyo and colleagues (2016) and ffrench-O'Carroll and colleagues (2020) found practitioners caring for patients in the ICU experienced greater moral distress then those in non-ICU settings; however, practitioners working in the PICU reported less moral distress then those in non-ICU settings. Results comparing adult versus pediatric ICU revealed lower levels of moral distress reported by pediatric providers versus adult providers. This is in contrast to Trotochaud and colleagues' (2015) findings that pediatric practitioners working in the ICU reported greater levels of moral distress then those in a non-ICU setting. Intent to leave a position was associated with higher

levels of moral distress in multiple studies (Allen et al., 2013; Cavaliere et al., 2010; Dyo et al., 2016; Sannino et al., 2015; Trotochaud et al., 2015).

Specific scenarios that caused the greatest moral distress levels were consistent in the literature. Following the family's wishes even when not in the best interest of the child was consistently reported in multiple studies (Allen et al., 2013; Cavaliere et al., 2010; Dryden-Palmer et al., 2020; Dyo et al., 2016; Malloy et al., 2015; Thomas et al, 2016; Trotochaud et al., 2015). Care that was perceived as futile or aggressive in nature contributed to an increase in moral distress (Cavaliere, et al., 2010; Epstein, 2008; Lewis et al., 2017) as well as care perceived as causing pain and suffering versus providing for a comfortable death for the patient (Davies et al., 1996). Performing life-saving interventions that prolonged death was reported to increase levels of moral distress (Dyo et al., 2016; Dryden-Palmer et al., 2020; Sannino et al., 2015; Trotochaud et al., 2015). Multiple scenarios involving caregiver resources, interactions, communication and collaboration were identified as well. These included working with incompetent coworkers (Cavaliere et al., 2010), provider staffing considered unsafe (Dryden-Palmer et al., 2020), perceived poor provider continuity (Allen et al., 2013; Dryden-Palmer et al., 2020), poor communication among the providers (Trotochaud et al., 2015), and ineffective leadership and lack of clear delineation of roles and responsibilities (Thomas et al., 2016).

The review of the literature has identified gaps in the research in need of further inquiry. To date, there has been no empirical research on the concept of moral distress among pediatric nurses who have cared for patients during the COVID-19 pandemic. In addition, research that evaluates specific demographic criteria (age, gender, years of experience, work setting, hospital type, employment status, educational level and certification status) had not been conducted providing an opportunity for further inquiry.

Ethical Climate

Ethical Climate Studies

Although an important concept in healthcare, there is extremely limited research in the United States on the study of ethical climate among pediatric nurses or pediatric nurses and other pediatric healthcare providers as a stand-alone variable. Ethical climate is "the organizational conditions and practices that influence how ethical issues are identified, discussed, and decided" (Olson, 2021). An important consideration is the role ethical climate plays in how ethical decisions are made by healthcare practitioners in various settings. An institutions ethical climate has the ability to be modified to promote a more positive environment. This is a key point in understanding the value of evaluating ways to improve the workplace environment. All of the studies reviewed used the HECS by Olson that measures the perceived ethical climate in terms of the subject's relationships with peers, patients, managers, the hospital, and physicians.

Lemmenes,Valentine, Gwizdalski, Vincent and Liao (2018) conducted a study to evaluate nurses' perceptions of ethical climate within a large academic medical center. More specifically, the study focused upon the relationship between ethical climate and certain nurse characteristics including age, gender, race, length of employment, and specialty area. A sample of 475 adult and pediatric nurses from a large academic medical center in the Midwest completed Olson's Hospital Ethical Climate Survey (HECS) and a demographic survey. Approximately one third of the subjects worked in pediatric, pediatric critical care or NICU settings. The following three research questions were evaluated: (a) what is the nurses' overall perception of the ethical climate, (b) what is the perception of ethical climate of the nurse among the five factors of the nurses' relationships with peers, patients, manager, hospital and physicians and (c) are there differences in ethical climate perception by nurse characteristics of age, gender,

race, level of nursing education, specialty area and number of years employed. The nurses' HECS total mean scores were 3.22 ± 0.65 with a tool range of 1-5. The highest mean sub-scale score was 3.94 for peers followed by 3.60 for patients, 3.04 for manager, 2.97 for hospital and 2.93 for physicians. Significant findings were found for HECS total mean score and age. Nurses under 30 years of age had a total mean scores of 3.55 ± 0.52 compared to nurses in other age categories that reported total mean score of 3.08 to 3.24, $p < 0.0001$ by Dunn's pairwise comparison. Differences in total mean scores were also noted according to specialty area worked. Adult critical care nurses had the highest total mean scores ($M = 3.39 \pm 0.69$) next were pediatric and pediatric intensive care nurses ($M = 3.37 \pm 0.45$) followed by neonatal ($M = 3.19 \pm 0.64$), medical surgical ($M = 3.09 \pm 0.66$) and women's care ($M = 3.04 \pm 0.56$) nurses. Findings for total mean scores of adult critical care nurses showed significantly higher scores than neonatal and medical/surgical nurses ($p \leq 0.0001$ by Dunn's pairwise comparison). The nurses in this study "reported somewhat higher than neutral perceptions of ethical climate" (Lemmenes, Valentine, Gwizdalski, Vincent, & Liao, 2018, p. 729). In analyzing the five sub-scales, it was found that nurses reported their relationships with peers and patients as higher than those with managers, physicians and the hospital overall. The authors suggest further research is needed to nurture a positive ethical climate.

Bartholdson, Sandeberg, Lutzen, Blomgren and Pergert (2015) studied ethical climate among physicians, nurses and nurse-aides caring for children in Sweden. The goal of the study was to compare perceived ethical climate among healthcare workers caring for children in three units: hematology/oncology, chronic disease, and neurology. A total of 89 participants (15 physicians, 36 nurses and 38 nurse-aides) completed a Swedish version of the HECS and a demographic data collection tool. Overall nurses' perceptions of ethical climate were lower than

physicians' perceptions on all items and no differences were found based on type of unit. The lowest ranking items were related to inter-professional interactions. Perception of ethical climate was not affected by years of experience except for the item "nurses and physicians at my unit trust one another" with less experienced nurses answering in the positive to this statement. The HECS is comprised of various statements regarding practice settings. In this study, highest ranking statements for all disciplines were 'I work with competent co-workers" (95.5% of respondents), followed by "nurses and nurse-aides at my unit trust one another" (84.3%), "at my unit the guardian's wishes are respected" (83.1%), and "at my unit the patient's wishes are respected" (80.9%) (Bartholdson et al., 2015, p.6). Physicians ranked the following three statements as highest: my co-workers listen to concerns about patient care, at my unit the guardian's wishes are respected and at my unit the patient's wishes are respected. Nurses ranked the following two statements highest; nurses and nurse-aides trust one another and my co-workers listen to concerns about patient care. Nurse-aides ranked the following two statements as highest: nurse and nurse-aides trust one another and on my unit the patient's wishes are respected. While the authors concluded moderate levels of a perceived ethical climate among the respondents, they suggest further research in necessary to explore ethical climate as it relates to professionals caring for children with cancer.

Pergert, Bartholdson, and Sandeberg (2019) conducted a study to evaluate health care professionals (physician, nurse and nurse-aide) perceptions of ethical climate among 6 pediatric oncology centers in Sweden. A total of 309 participants (167 nurses, 70 physicians, and 72 nurse-aides) completed a shortened Swedish version of the HECS and a demographic data collection tool. Data analysis identified that physicians scored higher than nurses and nurse-aides on 10 items in the tool. Three of the items involved relationship with manager: "manager

helps" ($p < 0.001$), "manager I trust" ($p < 0.001$) and "manager helps coworkers" ($p < 0.001$) two of the items pertaining to ethical decision; "ethical issues identified" ($p < 0.001$), and "dealing ethical issues" ($p < 0.001$) and two items relating to relationships: "MDs and RNs respect opinions" ($p < 0.001$) and "competent coworkers" ($p < 0.001$). Gender differences were found on two items; "physicians asking nurse for their opinions" where male mean score of 3.63 compared to female mean score 3.30 ($p = 0.041$) and "hospital guidelines help" where a female mean score of 3.03 compared to male mean score of 2.67 ($p = 0.034$). Years of clinical experience showed some significant differences among certain aspects of the survey. Participants working less than 5 years had a mean score of 3.21 compared to a mean score of 2.86 for those working greater than 5 years which was significant ($p = 0.10$) for items regarding being assisted by hospital guidelines. Differences were also noted for survey elements pertaining to attention to ethical problems for those working greater than 5 years who had greater mean scores of 3.97 compared to those working less than 5 years with a mean score of 3.73 ($p = 0.049$). In addition, subjects with greater than 5 years of experience had higher mean scores on elements regarding strategies and ways to deal with ethical concerns than those working less than 5 years ($p = 0.017$). The study concluded that physicians perceived the ethical climate as greater than the nurses and nurse-aides. Additionally, differences were noted among the disciplines and in relation to years of experience and gender. The authors suggested further inquiry into the role of the manager in supporting an ethical climate.

Measures of Ethical Climate

The Hospital Ethical Climate Survey (HECS) developed by Olson (1998) measures how hospital nurses perceive the ethical climate of their work setting. The HECS is a 26-item instrument using a five- point Likert scale ranging from 1 to 5. Subjects are asked to rate each

item from 1 = almost never true to 5 = almost always true. The instrument evaluates the nurses' perceptions of organizational practices and their relationship with peers, patients, managers, physicians and the hospital. Overall scores range from 26 to 130 with higher scores indicating a more positive perceived ethical climate. Reliability of the entire instrument was demonstrated by a Cronbach's alpha of 0.91 with sub-scale alphas as follows; 0.73 (peers), 0.68 (patients), 0.92 (managers), 0.81 (physicians) and 0.77 (hospital). Construct validity was established using confirmatory factor analysis. The use of the HECS has been well-documented in empirical research.

The Ethical Environment Questionnaire (EEQ) by McDaniel (1987) was developed to assess the degree to which a healthcare practice setting is perceived as an ethical environment. The EEQ is a 20-item instrument with a five-point Likert scale ranging from 1 = strongly agree to 5 = strongly disagree. A score of 3.5 or greater indicates a positive ethical work environment. Reliability was demonstrated with a reported Cronbach's alpha of 0.93.

Synthesis of the Ethical Climate Literature

Due to the small amount of research conducted with pediatric practitioners, it is difficult to summarize studies on ethical climate. Perceptions of ethical climate vary according to various disciplines, work settings, age, and gender. Lemmenes and colleagues (2018) found nurses under 30 years of age and practicing in the adult ICU setting perceived a more positive ethical climate. Analysis of the data from the five sub-scales revealed nurses' relationships with peers and families resulted in positive perceived ethical climate compared to managers, physicians and the hospital. Bartholdson and colleagues (2016) evaluated ethical climate in terms of specific items on the revised HECS noting the lowest ranking items were inter-professional relationships and the highest-ranking item was working with competent coworkers. Pergert and colleagues

(2019) reported the highest-ranking items from the survey be separated into 3 categories: managers, ethical decisions and relationship with others. Physicians perceived the ethical climate as more positive than nurses and nurse-aides (Bartoldson et al., 2016; Pergert et al., 2019).

Moral Distress and Ethical Climate

Moral Distress and Ethical Climate Quantitative Studies

Sauerland, Marotta, Peinemann, Berndt, and Robichaux (2015) studied moral distress in 53 NICU and PICU nurses in an academic medical center to explore possible links between moral distress, ethical work climate and moral residue. Participants completed the Moral Distress Scale Pediatric/Neonatal version, the Hospital Ethical Climate Scale (HECS) and a demographic data collection tool. A weak to moderate degree of moral distress intensity was reported with mean scores ranging from 0.11 (SD = 0.38) to 2.09 (SD = 1.68). Low levels of moral distress frequency were reported with mean scores ranging from .21 (SD = 0.69) to 1.45 (SD = 1.34). Overall, scenarios causing the greatest moral distress intensity and frequency were perceived unsafe staffing, working with incompetent colleagues, performing unnecessary tests and treatments, and continuing life support when it was not in the best interest of the child. The total mean scores for all 26 items on the HECS were 96.60 (SD = 17.77), indicating nurses' perception of a moderately ethical work climate. "My peers listen to my concerns about patient care" had the highest mean score of 4.47 (SD = 0.61). An inverse correlation was found between nurses' moral distress and hospital ethical climate scores ($r(53) = -0.39$, $p < .05$) meaning subjects that perceived the ethical climate as more positive experienced lower moral distress. No other significant correlations with demographic data were identified. Compared to the author's

previous work with adult ICU nurses, PICU, and NICU nurses experienced less moral distress then their adult counterparts. (Sauerland et al., 2015).

Whitehead, Herbertson, Hamric, Epstein and Fisher (2015) studied adult and pediatric health care professionals from a tertiary level I trauma facility to assess levels and causes of moral distress, as well as moral distress in relation to an ethical work setting, intention to leave profession and end-of-life care. The descriptive comparative study used the MDS-R, a demographic collection tool, and a shortened version of Olson's Hospital Ethical Climate Scale to collect data. The survey was distributed to 2,697 eligible healthcare participants (nurses, physicians and "other") with 592 participants, predominately nurses, fully completing the data collection. Nurses and "other" direct care professionals had significantly higher levels of moral distress than physicians ($p = .001$), as well as "other" professionals providing indirect care ($p < .001$ with nurses mean score reported as 82.9, physicians mean score reported as 65.8 and other professional mean score reported as 66.4. Caregivers in adult settings had significantly higher levels of moral distress than those working in pediatric settings ($p < .001$). Practitioners in intensive care settings versus non-ICU settings had significantly higher levels of moral distress ($p < .001$). The following mean scores were reported by professional groups working in the following settings: ICU setting 89.0, non-ICU setting 70.5, adult settings 81.1 and pediatric settings 57.9. Lack of continuity of care resulting in patient suffering, care that is not in best interest of the patient, and poor communication among providers were ranked the highest root causes of moral distress. The overall mean for HECS was 58.2 ($SD = 11.1$) with physicians scoring higher than nurses and other professionals. An inverse relationship was noted between levels of moral distress and perceptions of an ethical work climate ($r = -0.516$; $p < .001$) concluding subjects that perceived the ethical climate as more positive experienced lower moral

distress. Participants who left a position or contemplated leaving a position had greater levels of moral distress ($p < .001$) than those who did not. Whitehead and colleagues (2015) discuss the need for further inquiry into the root causes of moral distress with the overarching goal to improve care to patients and satisfaction of healthcare professionals.

Donkers and colleagues (2021) studied the relationship between ethical climate and moral distress among 345 nurses, 40 intensivists, and 103 support staff working in adult ICUs. Findings reveal an inverse relationship between moral distress and ethical climate scores in ICU nurses ($r = -0.55$, $p<0.001$) and supporting staff ($r= -0.47$, $p < 0.001$) only Donkers et al., 2021). The author concluded the effects of moral distress during crisis situations could be alleviated with specific interventions to address moral distress among practitioners. This is the most current study evaluating these concepts during the pandemic.

Synthesis of the Moral Distress and Ethical Climate Literature

There are limited studies evaluating moral distress and ethical climate among pediatric nurses and pediatric healthcare providers. In all studies reviewed (NICU and PICU nurses as well as adult and pediatric nurses, physicians and other professionals) an inverse correlation was found between moral distress and perceived ethical climate implying a more positive ethical climate is associated with lower levels of moral distress (Donkers, et al., 2021; Sauerland et al., 2015; Whitehead et al., 2015). Low to moderate levels of moral distress and a work climate perceived as moderately ethical was identified by Sauderland and colleagues. Findings varied regarding practice setting; PICU and NICU nurses experienced lower levels of moral distress than adult ICU nurses (Sauerland et al., 2015; Whitehead et al., 2015). The most distressing items were unsafe staffing, working with incompetent nurses, doing unnecessary treatments

(Sauerland et al., 2015), witnessing patient suffering due to lack of continuity of care, and poor communication (Whitehead et al., 2015).

Conclusion

In summary, the current review of the literature has identified the presence of moral distress among pediatric nurses and healthcare providers and the perceptions of ethical climate in the work setting. The relationship between moral distress and perceived ethical climate has been identified in healthcare providers however, gaps in the literature exist. The use of the MMD-HP to assess moral distress among pediatric nurses is also lacking in the literature due in part to the "newness" of the revised instrument. After an in-depth analysis, the instrument was revised in 2019 reflecting more relevant clinical situations and thus, will be used in this research study. Research is lacking on the relationship between moral distress and ethical climate among pediatric nurses who cared for pediatric patients during the COVID-19 pandemic. As we approach two years since the start of the COVID-19 pandemic, it is necessary to evaluate this relationship to obtain current findings and compare results to previous studies. These results would contribute to current nursing practice in several ways. Specifically, findings may contribute to our understanding of how an ethical climate contributes to moral distress in a time of overarching local and global implications from the pandemic. Targeted interventions could be employed to help mitigate morally distressing situations and, if indicated, promote an ethical work climate. Education to practitioners on moral distress may assist them in their practice in terms of the ability to recognize moral distress may exist and provide strategies to manage morally distressing clinical situations.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to investigate the relationship between moral distress and hospital ethical climate in pediatric nurses working during the COVID-19 pandemic. This chapter will provide an overview of the selected population for study, sampling methods including power analysis and required sample size, data collection procedures, the proposed research instruments including the validity and reliability, data analysis and ethical considerations related to the subject participation.

Study Design

A descriptive correlational study design was used to investigate the relationship between moral distress and hospital ethical climate. This type of study design was selected after taking into consideration the research questions and the study variables. A descriptive correlational study describes relationships among the variables and is the most appropriate design to investigate the proposed research questions (Polit & Beck, 2017).

Description of Population and Sample

The sample population for this study included pediatric registered nurses with at least one year of experience caring for children from birth to 21 years of age who worked during the COVID-19 pandemic in the following pediatric hospital settings: inpatient medical-surgical, intensive care (including pediatric and neonatal), peri-operative services or units, and pediatric emergency departments. In order to participate, the subject must have cared for patients during the COVID-19 pandemic in these designated settings. RN licensure, associate degree, baccalaureate degree, diploma degree, master's degree, and doctoral degree are all inclusion

criteria. Pediatric nurses with less than one year of experience were excluded from participation. This decision is based on Benner's theory from novice to expert outlying five levels of skill acquisition and the manner in which the nurse progresses to each stage. The newly graduated nurse or "novice" has no experience except what learned in the nursing program. She/he is reliant on the textbook equivalent of practice since she/he does not yet have the depth and breadth of any experience. In the next stage, advanced beginner, the nurse shows "marginally acceptable performance" (Benner, 1984, p. 22). At this stage, the focus is on completing tasks, but the nurse does not fully understand the ability to prioritize activities and consider the entire clinical situation. Based on this criterion, the years of experience for inclusion in the study was determined to be one year and greater. Pediatric nurses working in a pediatric rehabilitation setting or out-patient setting would also be excluded since those settings pose a different patient profile that does not capture the impact and gravity of the COVID-19 pandemic that nurses working in a hospital setting experienced.

Nonprobability sampling was used from a convenience sample of nurses that belong to the Society of Pediatric Nurses and the New Jersey State Nurses Association. Minimal sample size for this study was determined using power analysis. The alpha level was set at the .05 level, power of .80, and a medium effect size (.15) was used to identify the sample size needed (Polit & Beck, 2017). Using G*Power analysis for the two main variables of moral distress and hospital ethical climate and 3 demographic predictor variables, a total sample size of 85 was required for this analysis. Hospital ethical climate, hospital setting, years of experience and educational background were identified as possible predictor variables.

Study Setting

Recruitment

Participants were recruited using email lists of members from the Society of Pediatric Nurses and the New Jersey State Nurses Association. The email included an introductory letter that discussed the purpose of the study, the duration of the survey and the voluntary and confidential nature of the study, contact information for the researcher should participants have questions, and an acknowledgement they could withdraw from the study at any time. The email was resent bi-weekly for 4 weeks. If the participant clicked the "I agree" button they were forwarded to the survey. Completion of the survey implied informed consent. IRB approval was obtained from Seton Hall University prior to distribution. Data was collected from November 2021 through January 2022.

All participants completed the Measure of Moral Distress for Health Care Professionals instrument, the Hospital Ethical Climate Survey and a demographic tool. The demographic questionnaire identified; age, gender, years of experience, work setting, hospital type, employment status, educational level, and certification status as well as specific questions regarding and additional training and work assignments related to the pandemic (See Appendix A). These characteristics were chosen to determine if any of these factors, influence moral distress and perception of ethical work environment.

Research Instruments and Measurement Methods

The Measure of Moral Distress for Health Care Professionals (MMD-HP). The Measure of Moral Distress for Healthcare Professional (MMD-HP) was developed in 2019 as a significant revision to the MDS-R. This instrument was revised to better understand the root causes of moral distress and to standardize one instrument for healthcare professionals in a variety of settings including pediatric and adult critical care, acute care, long term care facilities (LTACH) and outpatient clinic settings. "While the MDS-R has performed well, a significant

revision was necessary in order to more fully capture team and system-level sources of moral distress, minimize repetition of similar root causes, and simply use" (Epstein, Whitehead, Prompahakul, Thacker, & Hamric, 2019, p.115). The revision of the tool included five critical elements in understanding moral distress; "complicity in wrongdoing, lack of voice, wrongdoing associated with professional (not personal) values, repeated experiences, and the three levels of root causes (patient, unit, system.)" (Epstein et al., 2019, p. 114). In order to comprehensively analyze what changes needed to be made, the authors reviewed datasets from 22 prior studies, analyzed 510 identified root causes of moral distress and evaluated 14 publications from 2015-2017 to identify modifications to the current instrument. The outcome of this extensive analysis was the development of 11 new items, removal of 3 items and combining four items into 2 resulting in a 27-item tool.

The MMD-HP is a 27-item survey that measures current levels of moral distress. There is one version for use with all healthcare professionals in a variety of settings. The MMD-HP measures two dimensions of moral distress: the frequency of experiencing the situation and the intensity in terms of level of distress felt. Participants rate the frequency of the situation using a five-point Likert scale (0 = never to 4 = very frequent) and the intensity of the situation using a five-point Likert scale (0 = none to 4 = very distressing). The authors recommend calculating a composite score for each item by multiplying the frequency by intensity. Scores per item range from 0-16 (frequency x intensity) noting the two dimensions should be evaluated together since both contribute to overall moral distress. The overall composite score of moral distress is calculated by adding all item composite scores. This results in a range from 0 – 432 for all 27 items. Based on the extensive analysis, the authors identified new clinical situations to be included on the MMD-HP including: be required to care for more patients than I can safely care

for, have excessive documentation requirements that compromise patient care, feel unsafe/bullied amongst my own colleagues, be required to work with abusive patients/family members who are compromising quality of patient care, work with team members who do not treat vulnerable or stigmatized patients with dignity and respect, and work within power hierarchies in teams, units, and my institution that compromise patient care. The instrument has a section at the end where the participant can write in other situations that caused moral distress and rate the frequency and intensity of each. These results are not added to the current composite score, rather serving to track additional causes of moral distress. Two additional questions are listed asking a) if the subject has either left a position or considering leaving a position due to moral distress and b) is the subject considering leaving current position. The MMD-HP does not address how cultural differences may impact the interpretation of the clinical scenarios. Since the instrument is relatively new, the authors suggest scoring occur in two ways. First, to divide the sample scores into three categories to designate low, medium, and high groups, then compare the groups with other selected variables. Second, to calculate the mean and standard deviation for subjects intending to leave current position and those not intending to leave anticipating those intending to leave would have higher moral distress scores.

Epstein, Whitehead, Prompahakul, Thacker and Hamric (2019) reported acceptable psychometric properties for the MMD-HP. The authors collected data from 653 participants yielding the following results. Reliability of the MMD-HP was demonstrated by a Cronbach's alpha of 0.93 for the overall sample. Additionally, good reliability was found for each of the provider groups; nurse $\alpha = 0.931$, physician $\alpha = 0.901$, and other $\alpha = 0.936$. Construct validity was achieved by the successful testing of four hypothesis. The first hypothesis predicted that nurses experience greater levels of moral distress than physicians was supported by the following

findings nurses (M = 112.3, SD = 73.2) physicians (M = 96.3, SD = 54.7). Post hoc analysis of mean differences between nurses and physicians was significant p = 0.023. The second hypothesis that MMD-HP scores would be higher for those considering leaving their position due to moral distress was also supported. The mean score for those not considering leaving their position (n=525) was 94.3 (SD = 61.2) compared to that of those who were considering leaving their position (n=128) 168.4 (SD =75.0), $t(169) = 10.3$ $p < 0.001$. The third hypothesis which predicted an inverse relationship between levels of moral distress and perceived ethical climate, was supported (r = -0.55, $p < 0.001$). The final hypothesis which predicted the MMD-HP would have a three-factor structure of patient team and system was also supported. "Because the instrument behaves as would be predicted, we recommend that the MMD-HP replace the MDS-R for hospital-based studies" (Epstein et al., 2019, p. 121).

The MMD-HP was selected for this study since it represents the most current and comprehensive measure of moral distress. After a thorough revision, the MMD-HP incorporated new clinical situations that are relevant in today's healthcare environment. The instrument measures both the frequency and intensity of clinical situations providing an accurate account of the subject's level of moral distress. The MMD-HP has demonstrated adequate reliability and validity. The tool is easy to complete and takes approximately 15 minutes to finish. Permission to use the MMD-HP was granted by one of the primary authors.

The Hospital Ethical Climate Survey (HECS). The Hospital Ethical Climate Survey developed by Olson (1998) measures nurses' perceptions of the ethical climate in the healthcare setting. The HEC is a 26-item instrument using a five-point Likert Scale ranging from 1 - almost never true to 5 - almost always true. Subjects are asked to read each statement and circle the answer that best corresponds to their current work environment. Examples of statements

include: my peers listen to my concerns about patient care, nurses and physicians trust one another, my manager is someone I respect, hospital policies help me with difficult patient care issues/problems and patients know what to expect from their care. The 26 items represent five factors; the nurses' relationships with peers, patients, manager, hospital, and physicians. The greater the overall score of the 26 items represent a more positive perceived ethical climate.

Psychometric properties of the HECS demonstrate adequate reliability and validity. Confirmatory factor analysis was used to support construct validity and findings supported the author's hypothesis that the items in the instrument belong to specific factors. Adequate reliability was demonstrated by an overall Cronbach's alpha of 0.91 for the HECS. Reliability for each of the factor subscales were also reported: 0.73 for peers, 0.68 for patients, 0.92 for managers, 0.77 for hospital, and 0.81 for physicians.

The HECS was selected for this study since it is an accurate measurement of nurses' perception of ethical climate. The tool has acceptable validity and reliability results. The tool takes approximately 10 minutes to complete and is easy to understand. Permission to use the HECS was granted by the primary author.

Demographic Data Collection. Demographic data was collected using a researcher constructed collection tool. Subjects were asked to complete the following information: age in years, gender, years of experience, work setting, hospital type, employment status, educational and certification status. In addition, the demographic tool had three questions related to COVID-19. Participants were asked if they received any additional training to care for COVID-19 patients, if they float to adult units and to estimate the number of COVID-19 patients they cared for in the last 12 months (See Appendix A).

Data Analysis Procedures

Statistical analysis was completed using IBM Statistical Package for Social Sciences (SPSS) version 27. All descriptive data from the demographic questionnaire and data from the MMD-HP and HECS were entered into SPSS version 27. Descriptive statistical analysis for the demographic data (age, years of experience, and number of COVID-19 patients cared for) were calculated including sample size, range, mean, and SD. Descriptive analysis for the remaining demographic data (gender, work setting, hospital type, employment status, educational level, certification status, and COVID-19 education) were calculated including frequency and percentiles of each item. These descriptive statistics to describe the sample are presented in Table 1.

Statistics were calculated to measure the mean and standard deviation for overall scores on the two instruments (MMD-HP and HECS). Additionally, frequency and percentage were calculated for the two questions on the MMD-HP regarding leaving a position. Bivariate statistics measure the relationship between variables and would be used to evaluate the relationship between moral distress and ethical work environment. A simple correlation between these two variables of moral distress and ethical climate was run to identify a relationship. The Pearson r describes the linear relationship between pairs of variables and is expressed in numbers between -1.00 and +1.00, with the findings closer to -1 or +1 indicating a stronger relationship (Witte & Witte, 2013). Assumptions to be met for Pearson's r are the following: variables are either ratio or interval and normally distributed, linear relationship exists between the two variables, homoscedasticity is maintained, and outliers are reduced or eliminated. These assumptions were met. If the findings for the correlations are statistically significant, further statistical testing is warranted. This study found a statistically significant correlation between moral distress and ethical climate, therefore further statistical analysis was completed.

Multiple regression "is a method of predicting a continuous dependent variable on the basis of two or more independent (predictor) variables" (Polit & Beck, 2017, p.423). Multiple regression was used to evaluate the relationship between the two variables of moral distress and ethical climate with various demographic data collected. Assumptions of linear multiple regression including a linear relationship, multivariate normalcy, no multicollinearity and homoscedasticity are assumed to be met as discussed in Chapter IV. This analysis yields an R^2 number which "provides a way to evaluate the accuracy of a prediction equation" (Polit & Beck, 2017, p. 406), in addition to tests of the relative contribution of each predictor.

Protection of Research Subjects-Ethical Considerations

Approval from the Seton Hall Institutional Review Board was obtained prior to initiation of the study. Informed consent is a critical consideration for any research study and must include key criteria to protect the subjects. After reading the introductory letter which outlined the research study, the participants would be asked if they wish to participate. If so they were directed to click the "I agree" button and were taken to the survey. Completion of the surveys implied informed consent.

A Qualtrics account was established through Seton Hall University for on-line data collection purposes. No identifying participant information was solicited by the researcher including name or email address. Since the survey was voluntary and confidential, participants' feeling pressured to participate was decreased. Participants did not receive any compensation to participate in the study.

CHAPTER IV

FINDINGS

Introduction

The purpose of this study was to explore the relationship between moral distress and hospital ethical climate in pediatric nurses who cared for patients during the COVID-19 pandemic. This chapter will summarize the findings of this study. First, descriptive statistics were used to describe the demographic data of the participants. This information is presented by calculating the sample size, range, mean and standard deviation for the nominal data and the remaining characteristics of the participants will be displayed in a frequency table including frequency and percentiles of each. Next, the results of the two instruments used in the study- The Measure of Moral Distress for Healthcare Professionals and the Hospital Ethical Climate Survey will be discussed in terms of mean scores, standard deviation, actual range and potential range. In addition, the two items on the MMD-HP that inquire about leaving a position will be displayed for frequency and percentile and the write in section for the participant to describe a situation will be discussed. A Pearson r was used to describe the relationship between moral distress and ethical climate followed by a series of multiple regressions to describe the predictor variables of moral distress. Finally, an analysis of questions specifically related to the COVID-19 pandemic (number of patients cared for, receive adequate training and floating to adult units) will be discussed.

Description of the Sample

The sample was recruited through the Society of Pediatric Nurses and the New Jersey State Nurses Association. A total of 189 nurses logged in to site to complete the survey however, only 81 participants fully completed the demographic data collection tool, the MMD-

HP and the HECS. Most of the participants that did not fully complete the survey did not complete sections of the tools and demographic information. It is unclear as to why this occurred. Survey information was obtained using Qualtric Data Collection and then transferred into SPSS (version 27) for statistical analysis.

Demographic characteristics. The ages of the 81participants who completed the study ranged from 24 years to 70 years (M = 45.56, SD = 12.56). The sample of 81 was predominately female (95.1%) with the remaining male (4.9%). Years of experience was broken down into years of RN experience and years of pediatric RN experience. Years of RN experience ranged from 2 years to 50 years (M = 20.09, SD = 13.13). Years of pediatric RN experience ranged from 1 year to 50 years *(*M = 17.96, SD = 12.33). The highest level of education varied with the majority having a BSN degree (51.9%) followed by an MSN degree (32.1%). The majority of participants were nationally certified in their specialty (82.7%). The geographic area of the country where the nurse resided had varied findings with the highest participants from the Northeast (64.2%) followed by those from the South (17.3%), the west (13.6 %). Nurses from the Midwest represented the lowest number (4.9%). Most participants designated their hospital setting as urban (92.6%) compared to rural (7.4%).

The characteristics of the work setting varied as well. The majority of the participants worked full time (82.5%) and on the day shift (76.5%). Participants designated their hospital setting as academic (85.2%) versus non-academic (14.8%). The majority of participants worked at a Magnet designated facility (71.6%). The majority of participants (55.6%) designated their unit setting as inpatient medical-surgical followed by PICU (21.0%).

Demographic information was obtained that was specific to COVID-19 regarding educational training, floating to adult units, and actual number of COVID-19 patients cared for.

The number of COVID-19 patients cared for by the RN over the last 12 months ranged from 0 to 300 (M = 45.73, SD = 66.1). The majority of nurses (65.4%) felt as though they received adequate training to care for COVID-19 patients and did not float to adult units (63.0%). The description of the study sample is presented in Table 1.

Table 1
Demographics of Sample – Subject characteristics (N= 81)

Characteristics	N	%
Gender	4	4.9
- Male	77	95.1
- Female		
Educational level		
- Diploma/AD	3	3.7
- BSN	42	51.9
- MSN	26	32.1
- DNP	6	7.4
- PhD	1	1.2
- Other	3	3.7
Certification		
- Yes	67	82.7
- No	14	17.3
Employment Status		
- Full time	66	81.5
- Part time	13	16
- Perdiem	2	2.5
Shift Worked		
- Day shift	62	76.5
- Evening shift	1	1.2
- Night shift	18	22.2
Hospital Type		
- Academic	69	85.2
- Non-academic	12	14.8
Magnet designation		
- Yes	58	71.6
- No	23	28.4

Table 1 (continued)

Hospital Setting		
- Urban	75	92.6
- Rural	6	7.4
Geographic Area		
- Northeast	52	64.2
- Midwest	4	4.9
- South	14	17.3
- West	11	13.6
Receive adequate training		
- Yes	53	65.4
- No	28	34.6
Float to adult units		
- Yes	30	37.0
- No	51	63.0
Have you ever left/considered leaving position		
- No never considered	25	30.9
- Yes, considered but did not leave	39	48.1
- Yes, left position	17	21.0
Are you considering leaving position now		
- Yes	20	24.7
- No	61	75.3
Unit Type		
- Inpatient med/surg	45	55.6
- Inpatient PICU	17	21.0
- Inpatient NICU	3	3.7
- Inpatient peri-op	5	6.2
- Pediatric emergency department	11	13.6

Description of Study Variables

The Measure of Moral Distress of Healthcare Professionals (MMD-HP) and the Hospital Ethical Climate Survey (HECS) were used to operationalize the study variables to answer the following research question.

What is the relationship between moral distress and ethical climate in pediatric nurses who cared for patients during the COVID-19 pandemic?

Measure of Moral Distress for Healthcare Professionals

The MMD-HP consists of 27 items that measures the current levels of moral distress. The instrument measures the frequency of experiencing the situation as well as the intensity felt in terms of moral distress. Participants rate the frequency of each item using a five-point Likert scale from (0 = never to 4 = very frequency and the intensity of each item using a five-point Likert scale from (0 = none to 4 = very distressing). The overall score per item is calculated by multiplying the frequency score and the intensity score then adding all individual scores to equal the composite score for the tool. Cronbach's alpha was .92 for this study. Participants scores ranged from a minimum 0 to a maximum of 320 (M = 101.56, SD = 64.74). Per the authors direction, scores were divided into three groups to represent low medium and high levels of moral distress. Low scores ranged from 0 to 59.33, medium scores from 59.33 to 124.66 and high scores were greater than 124.67. The overall mean for each of the 37 items was 3.76 (SD = 2.39). Descriptive results for the MMD-HP are displayed in table 2.

Table 2

Measure of Moral Distress for Healthcare Professionals Descriptive Results (N=81)

MMD-HP	**N**	**Mean**	**SD**
Gender			
-Male	4	42.75	43.99
-Female	77	104.61	64.37
Education			
-AD	3	68.33	17.67
-BSN	42	90.21	63.09
-MSN	26	113.23	64.06
-DNP	6	122.67	67.00
-PhD	1	182.00	--------
Certification			
-Yes	67	101.52	62.16
-No	14	101.71	78.56
Hospital Type			
Table 2 (continued)			
-Academic	69	100.87	66.91
-Non-academic	12	105.50	52.68

Geographic Area			
-Northeast	52	89.87	57.95
-Midwest	4	112.00	81.38
-South	14	127.79	78.18
-West	11	119.64	66.23
Magnet Status			
-Yes	58	99.43	67.00
-No	23	106.91	59.71
Receive Adequate Training			
-Yes	53	90.15	58.56
-No	28	123.14	71.22
Float to Adult Units			
-Yes	30	106.17	56.19
-No	51	98.84	69.66
Unit Type			
-Inpatient med/surg	45	90.33	63.14
-PICU	17	118.12	77.03
-NICU	3	84.00	75.54
-Peds peri-op	5	110.20	45.46
-Peds ED	11	122.72	53.49
Consider leaving now			
-Yes	20	154.85	57.18
-No	61	84.08	57.40

Hospital Ethical Climate Survey

The Hospital Ethical Climate Survey (HECS) measures perceptions of an ethical climate in the healthcare setting. The HECS is a 26- item instrument using a five-point Likert scale ranging from 1 -almost never true to 5 – almost always true. The overall score is calculated by adding all responses for each individual item to come up with a total. The greater the score of the 26 items represents a positive ethical climate. Cronbach's alpha was .95 in this study. Participants' scores ranged from a minimum of 43 to a maximum of 130 (M = 100.15, SD = 16.27). The overall mean score for each of the 26 items was 3.87 (SD = 0.62). The top 5 highest ranking items are as follows: 1). My peers listen to my concerns about patient care (M = 4.43,

SD = 0.66), 2). My peers help me with difficult patient care issues/problems (*M* = 4.41, *SD* = 0.84), 3). I work with competent colleagues (*M* = 4.37, *SD* = 0.78), 4). The patient's wishes are respected (*M* = 4.19, *SD* = 0.86), and 5). Nurses use the information necessary to solve a patient care issue/problem (*M* = 4.18, *SD* = 0.74). The top 5 lowest ranking items are as follows: 1). Hospital policies help me with difficult patient care issues/problems (*M* = 3.09, *SD* = 0.87), 2). Conflict is openly dealt with and not avoided (*M* = 3.22, *SD* = 1.13), 3). Nurses are supported and respected in this hospital (*M* = 3.43, *SD* = 1.05), 4). The feelings and values of all parties involved in a patient care issue/problem are considered when choosing a course of action (*M* = 3.48, *SD* = 0.96), and 5). Physicians ask nurses about their opinions about treatment decisions (*M* = 3.49, *SD* = 1.06). The results for the MMH-HP and HEC are displayed in Table 3.

Table 3
The Measure of Moral Distress for Healthcare Professionals (MMD-HP), Hospital Ethical Climate (HECS) Survey Results

Instrument	N	Potential Range	Actual Range	Mean	SD	Alpha
MMD-HP	81	0-432	0-320	101.56	64.74	.92
HECS	81	26-130	43-130	100.15	16.27	.95

Note: This table denotes mean, actual range of scores, respondents, mean, standard deviation and Cronbach's alpha for each scale overall

Statistical Analysis

Each variable was assessed to ensure the assumptions for correlation and multiple regression were satisfied. Moral Distress is approximately normally distributed by the skewness (0.742) and the kurtosis (0.468) statistics being between -2 and 2. Also, the QQ plots show that the observed moral distress values are clustered near the expected normal moral distress values. Ethical climate is also approximately normally distributed because the skewness (-0.952) and

kurtosis (1.828) are also between 2 and -2. Neither variable had any significant outliers. Linearity is demonstrated in the statistically significant moderate inverse correlation between moral distress and ethical climate, $r = -0.572$, $p < .001$. Linearity is assumed since all independent variables have a non-zero correlation with moral distress demonstrating the data meets linear assumptions. There is an absence of multicollinearity since all VIFs for the independent variables were less than 10 indicating the data meets assumptions for multicollinearity. Homoscedasticity was assessed by a visual inspection of the residual plot for standardized residuals and standardized predicted values. The residuals showed a random pattern and are symmetric above and below zero.

Correlation statistics were run to assess the linear relationship between moral distress and ethical climate using the Pearson correlation. A p value of < 0.05 was used to represent significant findings. There was a statistically significant negative correlation between MMD-HP and HECS $r(79) = -.57$, $p < .001$). Based on these statistically significant findings a multiple regression was run to evaluate predictor variables.

Ethical climate, years of experience, education and type of unit setting worked were analyzed in a multiple regression to determine the best predictors of moral distress. The multiple regression model statistically significantly predicted moral distress $F(8,72) = 4.89$, $p < .001$, $R^2 = .352$. In this analysis total HEC was the only significant predictor of moral distress $\beta = -2.19$, $t(81)$ $p < .001$. This model explains 35.2% of the variance in moral distress.

Further statistical analysis was conducted using ANOVA and independent t-tests to evaluate difference between group with overall MMD-HP scores. Selected demographic items were evaluated and the means compared. There was a statistically significant difference in total MMD-HP for those considering leaving their position now due to moral distress ($M = 154.85$,

SD = 57.18) and those who are not considering leaving now (*M* = 84.08, *SD* = 57.40), *t*(79) = 4.789, *p* < .001. There was also a statistically significant difference in total MMD-HP for those who stated they received adequate training to care for COVID-19 patients (*M* = 90.15, *SD* = 58.56) and those that stated they did not (*M* = 123.14, *SD* = 71.22), *t*(79) = - 2.23, *p* = .028.

Additional Findings

Further statistical analysis was conducted on other demographic variables. A correlation matrix was completed to test for relationships among these variables. There was a relationship for this sample for nurses that reported working at a Magnet facility and receiving training to care for COVID-19 patients. Nurses who worked in a Magnet facility were more likely to receive training to care for COVID-19 patients *r*(81) = .23, *p* = .036. There was a positive relationship for nurses that received training to care for COVID-19 patients and ethical climate *r*(81) = .35, *p* = .001. Nurses that received training perceived a more ethical climate. There was a negative relationship for this sample for nurses that received training to care for COVID-19 patients and moral distress. Nurses who received training experienced less moral distress *r*(81) = -.24, *p* = .028. There was a relationship for this sample for nurses that stated were considering leaving due to moral distress and ethical climate. If nurses stated are considering leaving their position the ethical climate is perceived as lower. If stated not considering leaving they perceived a better ethical climate *r*(81) = -.44, *p* < .001. There was a positive relationship for this sample for nurses that stated were considering leaving due to moral distress and moral distress. If nurses stated they are considering leaving due to moral distress they reported greater moral distress. If they stated not considering leaving they experienced lower moral distress *r*(81) = .47, *p* <.001. The descriptive statistics and correlation coefficients for study variables are presented in Table 4.

Table 4.
Descriptive Statistics and Correlation Coefficients for Study Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	0.95	0.22													
2. Certification	0.83	0.38	0.047												
3. Hosp type academic vs. non-academic	0.85	0.36	-0.095	0.085											
4. Magnet	0.72	0.45	0.109	0.147	.354**										
5.Setting urban or rural	0.93	0.26	-0.064	0.120	0.147	-0.074									
6. Receive Training/ Education to care for COVID pts	0.65	0.48	-0.046	0.148	0.208	.233*	-0.007								
7. Float to adult units and care for COVID pts	0.37	0.49	-0.061	0.013	0.176	0.029	0.022	-0.088							
8. Are you considering leaving your position now	0.25	0.43	-0.002	0.035	-0.084	-0.211	-0.057	-0.005	-0.083						
9. Total HEC	100.15	16.27	-0.040	-0.014	-0.020	0.150	-0.070	.354**	0.078	-.436***					
10. Total MMD-HP	101.56	64.74	0.208	-0.001	-0.026	-0.052	-0.099	-.244*	0.055	.474***	-.571***				
11. Age	45.56	12.55	0.060	.345**	-0.201	-.229*	0.130	0.161	-0.057	0.041	0.116	-0.085			
12. Years experience	20.09	13.14	.233*	.313**	-0.186	-0.193	0.078	0.164	-0.070	0.033	0.075	0.019	.888***		
13. Years peds experience	17.96	12.33	.232*	.300**	-0.049	-0.049	0.041	0.199	-0.127	-0.010	0.167	-0.088	.765***	.870***	
14. Number COVID pts cared for in last 12 months	45.73	66.11	0.009	0.013	-0.003	-0.004	-0.015	-0.090	.535***	-0.071	-0.067	0.157	-0.015	0.010	-0.156

*** $p < 0.001$; ** $p < 0.01$ (2-tailed); * $p < 0.05$; N = 81

Based on review of the literature and the results of this study additional analysis was done comparing the root causes of moral distress between the overall sample of 81 to the 27 participants who were in the "high" moral distress group. Analysis of the root causes of moral distress for the 81 participants were evaluated by ranking the highest composite item scores for the 27 item MMD-HP and determining the mean score for each item. Mean scores ranged from a high of 7.59 to a low of .94. The top six highest ranking items (with an overall mean score > 5) are presented in Table 5.

Table 5

The Measure of Moral Distress for Healthcare Professionals (N = 81)

MMD-HP	**N**	**Mean**	**SD**
-Experience compromised patient care due to lack of resources/equipment/bed capacity	81	7.59	5.31
-Be required to care for more patients than I can safely care for	81	6.86	4.83
-Experience lack of administrative action or support for a problem that is compromising patient are	81	5.95	5.11
-Have excessive documentation requirements that compromise patient care	81	5.59	5.66
-Follow family's insistence to continue aggressive treatment even though I believe it is no in the best interest of the patient	81	5.31	4.93
-Be required to work with abusive patients/family members who are compromising patient care	81	5.92	4.54

Note: This table denotes items with a mean score of >5.

Respondents were equally categorized into three groups indicating low, medium and high moral distress. Of particular interest to this researcher was the group of 27 that reported high moral distress. The scores on the MMD-HP ranged from 125-320 (M = 175.93, SD = 43.49). The number of COVID-19 patients cared for ranged from 0-300 (M = 68.59, SD = 96.29). MMD-HP mean scores differed related to several demographic characteristics. There was no statistically significant difference in total MMD-HP for those who stated they were certified (M = 174.00, SD = 46.85) and those who were not (M = 182.67, SD = 31.91), t(25) = - 0.42, p = 0.67 or for those who worked in a magnet facility (M = 180.44, SD = 48.27) versus those who did not (M = 166.88, SD = 32.52), t(25) = 0.76, p = 0.46. In addition, there were no statistically significant difference in total MMD-HP for those who worked at an academic hospital (M = 180.44, SD = 45.86) and those that did not (M = 157.81, SD = 27.42), t(25) = 0.15, p = 0.31.

Analysis of the root causes of moral distress for this "high" group were evaluated by ranking the top six highest composite item scores for the 27 item MMD-HP (mean score > 8) and determining the mean score for each item as presented in Table 6. For the entire sample of 81, 24.7% of the respondents (n=20) reported they were currently considering leaving their position. When evaluating the high moral distress group, 14 stated they were considering leaving currently. The high moral distress group accounts for 70% of the total number of nurses that are currently considering leaving their current position due to moral distress.

Table 6

The Measure of Moral Distress for Healthcare Professionals (N = 27)

MMD-HP	**N**	**Mean**	**SD**
-Experience compromised patient care due to lack of resources/equipment/bed capacity	27	12.41	4.36
-Have excessive documentation requirements that compromise patient care	27	10.29	5.76
-Experience lack of administrative action or support for a problem that is compromising patient are	27	10.26	4.79
-Be required to care for more patients than I safely can care for	27	10.22	4.81
-Be required to work with other healthcare team members who are not as competent as patient care requires	27	8.63	4.93
-Watch patient care suffer because of lack of provider continuity	27	8.41	4.83

Note: This table denotes items with a mean score of > 8

Content Analysis for MMD-HP

In addition to the quantitative section of this analysis, 21 respondents (26%) offered write in comments on the MMD-HP. Respondents were asked to describe a situation in which they felt moral distress and score that situation on frequency and level of distress to achieve a

composite score for each item described. Each participant determined the overall score of the situation they described (range 0-16 or did not score). Several main themes were identified though this analysis: 1) COVID-19 challenges 2) Patient care concerns 3) Physician practice concerns 4) Lack of resources and administrative support and 5) Nursing concerns.

The items related to COVID-19 highlighted the frustration felt by front-line nurses such as: “At the start of the pandemic I left my unit after 17 years because I was expected to care for COVID patients without an N95 mask” (did not score), similar comments included “Having to reuse N95 masks over and over and not having time compensated if you ended up getting COVID even though you know you most likely got sick at work” (score = 16) and “Feeling distressed and wanting to call out but morally distressing knowing current staffing issues” (score = 8). Nurses commented on the visitor and visitation restrictions including: “Inability to allow more than one parent at the bedside or switch out with COVID rooms” (score = 16). Or comments regarding visitors including: “Find it stressful that visitors were able to visit our patients regardless of vaccine status” (score = 16), “Find it stressful that we continued to have to listed to patient complaints about patient care, resources, staffing, while many of the “complainers” were not doing their part in trying to reduce the spread of COVID (masking, vaccinating, distancing.” (score = 16). Additionally, “Caring for more adult elderly patients when I don’t know how to care for them.” (did not score).

Items not specifically related to caring for COVID patients regarding patient care concerns included: “Poor symptom management especially pain management without having the support needed to manage pain” (score = 8). “Taking care of children who are abandoned by their family” (score = 12). Several similar comments focused on addressing the mental health needs of the patient including: “Caring for children with mental health issues that we are unable

to address" (score = 9) or "Mental health patients -we do not have the support, resources or training to help" (score = 16).

Physician concerns included inconsistency in practice: "Physicians treating patient of the same religion or ethnicity as themselves differently than they treat others" (score = 9), "I feel there is a culture from a number of physicians to take exceptional care of illegal and uninsured patients with more attention and extra care then legal, insured patients" (score = 4), and "When physicians become customers and not the patients, and the physicians needs are prioritized over the patients' needs" (score = 8). One statement addressed physician competency "Work in PICU with residents that did not have enough experience to provide adequate care. The attending did not have to be in the hospital 24/7 but did not trust their judgment whatsoever" (score = 4).

Nurses commented on lack of resources and support. Comments related to supplies included: "Work without adequate or appropriate supplies, thus having to find "work arounds" in order to safely care for patients" (score = 12). Several comments discussed lack of staffing resources including: "Increased charge nurse responsibility related to lack of clerical, volunteer, transport and RN support staff" (score = 16) and "Being short staffed and having too many patients to give proper care" (score = 16). Finally, "Knowing a practice change would greatly benefit a patient and family but because people who are not at bedside caring for patients make decisions and rules without knowing evidenced base rationale" (score = 8).

Nurses also commented on issues regarding challenges with peers including: "Keeping nurses on staff whose practice is mediocre at best or outright unsafe, so that staffing needs can be met" (score = 9), "Lack of accountability of nurses to maintain competencies and advance their knowledge and skill" (sore = 12) and "Witnessing poor treatment of an older nurse team member

with whom I was paired who was set to retire in one month by a young charge nurse" (score = 12).

Summary

In summary, the results of this study indicate there is an inverse relationship between moral distress and ethical climate. Two other statistically significant findings were identified regarding level of moral distress and subjects considering leaving their current position and level of moral distress and subjects stating the received adequate training to care for COVID patients. Root causes of moral distress were somewhat consistent between the overall sample of 81 compared to the group of 27 who were in the "high" moral distress category. Qualitative data analysis revealed unique findings related to working during the COVID-19 pandemic. Several themes emerged from the qualitative analysis including: nursing concerns specific to the COVID-19 pandemic, lack of resources and concerns regarding patient care, physicians and nurses.

CHAPTER V

DISCUSSION OF FINDINGS

Introduction

The purpose of this chapter is to discuss the findings presented in Chapter IV. A descriptive correlational study was conducted to explore the relationship between moral distress and ethical climate among pediatric nurses who cared for patients during the COVID-19 pandemic. Participants were recruited through The Society of Pediatric Nurses and the New Jersey State Nurses Association. A letter of solicitation was sent to the membership asking for participation. This included the purpose of the study, inclusion criteria, and voluntary nature of the study. If the member chose to participate, they were directed to the hyperlink to bring them to the actual survey. Survey data was collected via the Seton Hall Qualtrics website. Participants were asked to complete the Measure of Moral Distress for Healthcare Professionals, the Hospital Ethical Climate Survey and a demographic data collection tool. Agreement to participate in the study implied informed consent. A total of 189 nurses responded to the on-line survey however, due to incomplete data completion, a total of 81 participants (43%) completed the survey in its entirety and were used as the sample size. Data obtained from Qualtrics was then downloaded in IBM SPSS (Version 27). Statistical analysis included descriptive statistics for all variables, reliability measures for the MMD-HP and the HECS, bivariate analysis using an ANOVA and independent *t*-tests, correlation analysis using the Pearson correlation and multiple linear regression.

The study sample yielded a sample size of 81 which was used for data analysis. Comparisons were made between this sample size and demographic results from the 2020 National Nursing Workforce Survey. Study participants mean age was 45.56 years compared to

national average of 52 years (Smiley, et al., 2021). The study participants held higher educational degrees with 51.0% BSN degrees and 32.1% MSN degrees compared to the 2020 National Workforce Survey results of 43.5% BSN and 15.8% MSN. The mean for years of experience was 20.09 years which is consistent with the median years of experience of 20 as reported by Smiley and colleagues.

Moral Distress

Moral distress was measured using the Measure of Moral Distress for Healthcare Professionals. This instrument was revised in 2019 to better understand the root causes of moral distress and to standardize one instrument for healthcare professionals in a variety of clinical settings including long term care facilities and outpatient clinic settings. While there is only one study available using the MMD-HP, comparisons will be made. The initial study for the revised instrument reported a mean score for nurses of 112.3 and *SD* = 73.2. The participants in this study reported a lower overall mean score of 101.56 and *SD* = 64.74. Based on the mean scores reported, participants overall experienced "medium" levels of moral distress. Prior studies report varying degrees of moral distress for subjects ranging from low among NICU nurses (Cavaliere et al., 2010) to moderate-high for nurses and other healthcare professionals (Allen et al., 2013).

Ethical Climate

Ethical climate was measured using the Hospital Ethical Climate Survey (HECS). This instrument measures perceptions of an ethical climate in the healthcare setting. The range of scores for this sample was 43-130 with an overall mean of 100.15 and *SD* = 16.27. The overall mean score for each of the 26 items was 3.87 (*SD* = .622). The overall mean score for each of the 26 items was 3.87 (*SD* = 0.62). These findings are consistent with mean scores reported by Lemmenes and colleagues (2018) who reported mean score of 3.22 and *SD* = 0.65 in their study

of nurses from a large academic medical center in the Midwest. In addition, they reported relationship with peers as high as also identified in this study with a mean of 3.94. Similar to findings in this study, working with competent colleagues and the patient's wishes being respected ranked high and low rankings were related to inter-professional interactions as well in a study by Bartholdson and colleagues (2015).

Research question: What is the relationship between moral distress and ethical climate in pediatric nurses that cared for patients during the COVID-19 pandemic?

Moral Distress and Ethical Climate

Correlation statistics were run to assess the linear relationship between moral distress and ethical climate. There was a statistically significant negative correlation between MMD-HP and HECS $r(79) = -.57$, $p < .001$). This indicates that nurses with higher perceived ethical climate experience lower levels of moral distress. These findings are consistent with prior research evaluating these two constructs. Sauerland and colleagues (2015) found a significant inverse relationship between nurses' moral distress and hospital ethical climate scores for PICU and NICU nurses ($r(53) = -0.39$, $p < .05$). Similar finding was reported by Whitehead and colleagues (2015) among nurses and other healthcare providers noting an inverse relationship between levels of moral distress and perceptions of an ethical work climate ($r = -0.516$, $p < .001$). Epstein and colleagues (2019) also reported a statistically significant inverse relationship between moral distress and ethical climate ($r = -0.55$, $p < 0.001$) among nurses, physicians and other healthcare professionals. Donkers and colleagues (2021) reported an inverse relationship between moral distress and ethical climate scores in ICU nurses ($r = -0.55$, $p<0.001$) and supporting staff ($r= -0.47$, $p < 0.001$) only. Findings of these studies as well as the present study

supports the premise that a perceived positive ethical environment has a significant impact on feelings for moral distress for nurses and other healthcare professionals.

A multiple regression was run with ethical climate, years of experience, education and type of unit worked as predictors of moral distress. The multiple regression model predicted statistically significant levels of moral distress $F(8,72) = 4.89$, $p < .001$, $R^2 = .352$. In this analysis total HEC was the only significant predictor of moral distress $\beta = -2.19$, $t(81)$ $p < .001$. This model explains 35.2% of the variance in moral distress.

Findings from this study are consistent with prior studies showing no statistically significant findings for educational level and levels of moral distress (Cavaliere et al., 2010; Dyo et al., 2016). With the exception of a study by Elpern (2005), prior studies did not report significant findings for years of experience and level of moral distress (Allen et al., 2013; Cavaliere et al., 2010; Dyo et al., 2016) as found in this study. The type of unit the participant worked in showed varied results. Although not statistically significant, MMD-HP mean scores from this study varied according to practice setting. The highest mean scores were for those working in the PICU ($M = 118.12$) compared to those working in med/surg areas ($M = 90.33$). This study supports the findings of Trotochaud and colleagues (2015) which reported pediatric practitioners working in the ICU experienced greater levels of moral distress then those in a non-ICU setting. Dyo and colleagues (2016) found practitioners caring for adults in the ICU experienced greater moral distress then those in non-ICU settings; however, practitioners working in the PICU reported less moral distress then those in non-ICU settings. Similar findings of greater moral distress in ICU vs non-ICU practitioners were reported by ffrench-O'Carroll (2021). Epstein and colleagues (2019) reported statistically significant higher scores for healthcare workers working in the ICU then those in acute care areas Welch $F(3,267.9 = 7.7$,

$p < 0.0001$). Results comparing adult versus pediatric ICU revealed lower levels of moral distress reported by pediatric providers versus adult providers.

Intent to leave position due to moral distress and the items related to COVID-19 warrant further analysis and discussion. Statistical analysis was conducted using ANOVA and independent *t*-tests to evaluate difference between group with overall MMD-HP scores. Selected demographic items were evaluated and the means compared. There was a statistically significant difference in total MMD-HP for those considering leaving their position now due to moral distress ($M = 154.85$, $SD = 57.18$) and those who are not considering leaving now ($M = 84.08$, $SD = 57.40$), $t(79) = 4.789$, $p < .001$. Data from the correlation matrix also identified a relationship between intent to leave and moral distress. There was a positive relationship for this sample for nurses that stated were considering leaving due to moral distress. If nurses stated they are considering leaving due to moral distress they reported greater moral distress. If they stated not considering leaving they experienced lower moral distress $r(81) = .47$, $p < .001$. These findings are consistent with prior research conducted. Cavaliere and colleagues (2010) reported statistically significant findings were noted for nurses who considered leaving their position due to moral distress ($p = 0.048$). Statistically significant results for staff that considered leaving or actually left a position versus those who did not ($p < .001$) was reported in several other studies (Allen, et al., 2013; Trotochaud et al., 2015). For those in the high moral distress group 14 of the 21 (67%) stated they were considering leaving their position now due to moral distress. For the total sample of 81, 24.7% stated they were considering leaving current position. These findings may be consistent with the situation in caring for COVID-19 patients.

Two study specific questions were related to caring for COVID-19 patients. There was a statistically significant difference in total MMD-HP for those who stated they received adequate

training to care for COVID patients (M = 90.15, SD = 58.56) and those that stated they did not (M = 123.14, SD = 71.22), $t(79) = -2.23$, $p = .028$. Statistically significant findings were not identified for staff that floated to adult units (M = 106.17, SD = 56.19) versus those who did not (M = 98.84, SD = 69.66) however differences in the mean MMD-HP scores were noted.

In addition, finding of the correlation matrix that were specific to caring for COVID-19 patients will be discussed. There was a relationship for this sample for nurses that reported working at a Magnet facility and receiving training to care for COVID-19 patients. Nurses who worked in a Magnet facility were more likely to receive training to care for COVID-19 patients $r(81) = .23$, $p = .036$. These finding support the premise that Magnet facilities have the resources and expertise to ensure adequate training and education is achieved. Nurses that received adequate training to care for COVID-19 patients perceived a more ethical climate $r(81) = .35$, $p = .001$. There was a relationship for this sample for nurses that stated were considering leaving their position due to the perceived ethical climate. If the nurse stated they are considering leaving their position, the ethical climate is perceived as lower. If stated not considering leaving they perceived a better ethical climate $r(81) = -.44$, $p < .001$. This supports the importance of promoting an ethical climate in the workplace.

Analysis of the root causes of moral distress were analyzed by ranking the 6 highest composite score for the overall sample of 81 as well as the group of 27 denoted as having high moral distress. The highest-ranking item for both groups was “experience compromised patient care due to lack of resources/equipment/bed capacity”. Both groups ranked “experience a lack of administrative action or support for a problem that is compromising patient care” as number 3. The group of 81 ranked “have excessive documentation requirements that compromise patient care” as number 4 and the group of 27 ranked it as number 2. “Be required to care for more

patients than I can safely care for" was ranked 2 by the group of 81 and ranked 4 for the group of 27. The group of 81 ranked "follow family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient" as number 5 and "be required to work with abusive patients/family members" as number 6. The group of 27 ranked "be required to work with other healthcare team members who are not as competent as patient care requires" as number 5 and "watch patient care suffer because of lack of provider continuity" as number 6. Three of the top ranked root causes reported by Epstein and colleagues in 2019 were newly added to the MMD-HP in 2019. These include excessive documentation, lack of resources and lack of administrative action (as ranked by the sample of 81 and 27).

These findings are consistent with prior studies. Specific scenarios that caused the greatest moral distress levels were consistent in the literature. Following the family's wishes even when not in the best interest of the child was consistently reported in multiple studies (Allen et al., 2013; Cavaliere et al., 2010; Dryden-Palmer et al., 2020; Dyo et al., 2016; Malloy et al., 2015; Thomas et al, 2016; Trotochaud et al., 2015). Care that was perceived as futile or aggressive in nature contributed to an increase in moral distress (Cavaliere, et al., 2010; Epstein, 2008; Lewis et al., 2017). Multiple scenarios involving caregiver resources, interactions, communication and collaboration were identified as well. These included working with incompetent coworkers (Cavaliere et al., 2010), provider staffing considered unsafe (Dryden-Palmer et al., 2020), perceived poor provider continuity (Allen et al., 2013; Dryden-Palmer et al., 2020).

Qualitative Analysis of Measure of Moral Distress for Healthcare Professionals

Although not the primary focus of this study, qualitative data was obtained from 21 participants asking them to describe a situation in which they felt moral distress and to score

them on frequency and level of intensity to achieve a composite score. Several main themes were identified including: unique challenges related to COVID-19, patient care concerns, physician practice concerns, lack of resources/support and nursing peer concerns. COVID-19 specific situations involved lack of N95 masks in caring for patients, inability to care for adult patient since not their expertise, frustration with visitor restrictions as well as visitors not being required to be vaccinated and not "doing their part" to decrease reduce the spread of COVID-19 and distress over inadequate staffing. Patient care concerns include ineffective pain management, lack of expertise to care for children with mental health issues and frustration in caring for children whose family has "abandoned" them. Issues related to physician behavior include inconsistency treating different patient populations, preferential treatment given to physicians and working with incompetent residents. Lack of resources and administrative support could also be linked to caring for COVID-19 patient although not specifically stated. Participants stated lack of resources (supplies and personnel), caring for too many patients, and frustration with inability to effect practice change as some of the scenarios causing moral distress. Comments related to nursing include concerns related to poor practice and lack of accountability and "poor treatment" of a colleague by another nurse.

Theoretical Linkage

Corley's Theory of Moral Distress is the theoretical framework used to guide this study and support the relationship between moral distress and ethical climate. In Corley's theory, nursing is described as a moral endeavor with many competing priorities that may interfere with ethical and moral decision-making. "When a nurse learns what is best for the patient, yet cannot provide it, the nurse suffers moral distress" (Corley, 2002, p. 637). Corley describes how the nurse operationalizes eight key moral concepts and how the institutional environment impacts moral

decision making. A key component of the theory is the manner in which the organizational culture impacts the presence of moral distress. The organizational ethical culture is intrinsically linked to moral distress as it helps direct how the nurse will react to morally distressing situations. If the nurse perceives the institutional climate as supportive, collaborative and one that promotes autonomy this has a positive impact on her decision-making abilities when faced with morally distressing situations. The type of ethical climate will influence the nurses' response to morally challenging situations. Corley's Theory of Moral Distress theory supports the findings of this research study. This is evident by the statistically significant relationship between moral distress and ethical climate found in this study.

Study Strengths

This is the first study of its kind in the United States to evaluate the relationship between moral distress and ethical climate in pediatric nurses that cared for patients during the COVID-19 pandemic. Although the sample size was 81, study results can be used to better understand moral distress to help mitigate the factors that may be causing an increase. Using a national sample is another strength since it can assist with the generalizability of the study findings. The use of the newly revised MMD-HP is a strength of the study as it the most comprehensive instrument to understand the root causes of moral distress and can be used with all disciplines in a variety of clinical settings. Other strengths include the good reliability measures for both the MMMD-HP and the HECS. The use of the MMD-HP adds to the body of knowledge supporting the use of the tool with reliability and statistical findings. Specific questions related to COVID-19 provided significant statistical data that had not been studied previously in this population. Qualitative data obtained also provided rich data not previously studied in this population.

Study Limitations

Limitations to the study include the low overall participation rate of 43% resulting in a sample size of 81 and using convenience sampling to obtain the data. The sample size was not equally distributed in terms of geographic area and type of unit where the subject practiced, this may also be a study limitation.

Summary

In summary by using Corley's Theory of Moral Distress as the theoretical foundation for this study the relationship between moral distress, ethical climate and other demographic variables was examined. Statistically significant findings were found for the relationship between moral distress and ethical climate. Additionally, statistically significant findings were found related to gender, training to care for COVID-19 patients and participants stating they were considering leaving their current position due to moral distress.

CHAPTER VI

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

Summary

This descriptive correlational study was conducted to investigate the relationship between moral distress and ethical climate among pediatric nurses that cared for patients during the COVID-19 pandemic. Two instruments were used in this study, The Measure of Moral Distress for Healthcare Professionals (Epstein et al., 2019) and the Hospital Ethical Climate Survey (Olson, 1998). A demographic data collection tool was also used including questions specific to caring for COVID-19 patients.

Participants were recruited via an on-line request from the Society of Pediatric Nurses and the New Jersey State Nurses Association. Inclusion criteria included pediatric registered nurses practicing in the hospital setting for a minimum of one year caring for patients during the COVID-19 pandemic. The total number of eligible subjects was 81 indicating a 43% response rate of those that had started the survey. Data was collected via Qualtrics and then statistical analysis was done using SPSS (version 27).

The sample was predominately female (95.1%) with a mean age of 45.56 years. Years of experience was broken down into years of RN experience and years of pediatric RN experience. Years of RN experience ranged from 2 years to 50 years (M = 20.09, SD = 13.13). Years of pediatric RN experience ranged from 1 year to 50 years (M = 17.96, SD = 12.33). The highest level of education varied with the majority having a BSN degree (51.9%) followed by an MSN degree (32.1%). Most participants were nationally certified in their specialty (82.7%). The geographic area of the country where the nurse resided varied with the highest participants from

the northeast (64.2%) followed by those from the south (17.3%), the west (13.6 %). Nurses from the Midwest represented the lowest number (4.9%). The majority of participants designated their hospital setting as urban (92.6%) compared to rural (7.4%). Most of the participants worked full time (82.5%) and on the day shift (76.5%). Participants designated their hospital setting as academic (85.2%) versus non-academic (14.8%). The majority of participants worked at a Magnet designated facility (71.6%). The majority of participants (55.6%) designated their unit setting as inpatient medical-surgical followed by PICU (21.0%).

A correlation study was used to assess the linear relationship between moral distress and ethical climate using the Pearson correlation. There was a statistically significant negative correlation between MMD-HP and HECS $r(79) = -0.57$, $p < .001$). Ethical climate, years of experience, education and type of unit setting worked were analyzed in a multiple regression to determine the best predictors of moral distress. The multiple regression model yielded statistically significantly findings in predicting moral distress $F(8,72) = 4.89$, $p < .001$, $R^2 = .352$. In this analysis total HEC was the only significant predictor of moral distress $\beta = -2.19$, $t(81)$ $p < .001$. This model explains 35.2% of the variance in moral distress.

Further statistical analysis was conducted using ANOVA and independent t-tests to evaluate difference between group with overall MMD-HP scores. There was a statistically significant difference in total MMD-HP for those considering leaving their position now due to moral distress ($M = 154.85$, $SD = 57.18$) and those who are not considering leaving now ($M = 84.08$, $SD = 57.40$), $t(79) = 4.78$, $p < .001$. There was also a statistically significant difference in total MMD-HP for those who stated they received adequate training to care for COVID-19 patients ($M = 90.15$, $SD = 58.56$) and those that stated they did not ($M = 123.14$, $SD = 71.22$), $t(79) = -2.23$, $p = .028$. Correlation studies explored the relationships among multiple variables.

Nurses who worked in a Magnet facility were more likely to receive training to care for COVID-19 patients $r(81) = .23$, $p = .036$. These finding support the premise that Magnet facilities have the resources and expertise to ensure adequate training and education is achieved. Nurses that received adequate training to care for COVID-19 patients perceived a more ethical climate $r(81) = .35$, $p = .001$. Intent to leave current position was also explored. If the nurse stated they are not considering leaving their position they perceived a better ethical climate $r(81) = -.44$, $p < .001$ and experienced lower moral distress $r(81) = .47$, $p < .001$. This supports the importance of promoting an ethical climate to help mitigate the effects of moral distress.

Analysis of the root causes of moral distress was achieved by ranking the six highest composite score for the overall sample of 81 as well as the group of 27 denoted as having "high" moral distress. The highest-ranking item for both groups was "experience compromised patient care due to lack of resources/equipment/bed capacity". Both groups ranked "experience a lack of administrative action or support for a problem that is compromising patient care" as number three. Both groups ranked "have excessive documentation requirements that compromise patient care" and "be required to care for more patients than I can safely care for" as one of the highest items. The remaining items differed between the two groups.

Although not the primary focus of this study, qualitative analysis from 21 participants revealed several main themes including: unique challenges related to COVID-19, patient care concerns, physician practice concerns, lack of resources/support and nursing peer concerns. Of particular interest to this researcher were COVID-19 specific scenarios. These included lack of N95 masks in caring for patients, inability to care for adult patient since not their expertise, frustration with visitor restrictions as well as visitors not being required to be vaccinated and not

"doing their part" to decrease reduce the spread of COVID-19 and distress over inadequate staffing.

This is the first known study to investigate the relationship between moral distress and ethical climate in pediatric nurses that cared for patients during the COVID-19 pandemic. The study findings support the hypothesis that there is an inverse relationship between moral distress and ethical climate in pediatric nurses who cared for patients during the COVID-19 pandemic meaning pediatric nurses who have perceived lower levels of ethical climate have higher levels of moral distress.

Implications

This important study has many implications for nursing practice. The new knowledge gained from this research study will likely have a positive impact on many facets of the nursing profession. Since the start of the COVID-19 pandemic in March 2020, there has been a paucity of research on moral distress and pediatric nurse caring for patients during the pandemic. Although the phenomenon exists, research is clearly lacking. "Anyone working in healthcare during the current COVID-19 pandemic should expect to experience moral distress" (Webster & Wocial, 2020). This research or moral distress and ethical climate will have impact on nursing practice, nursing leadership, nursing education and nursing research.

Nursing Practice. Findings from this study will have implications for both pediatric and adult nurses, advanced practice nurses and nursing leadership. Nurses are continually confronted with morally and ethically challenging situations often resulting in competing ethical obligations to the patient/family, colleagues, the healthcare organization and to self. The effects of the COVID-19 pandemic likely have exacerbated these situations as nurses faced unprecedented challenges including lack of personal protection equipment, changes to nurse patient ratios, fear

of the unknown, constantly changing practice recommendations, spikes in the number of cases and inconsistency in public and government sentiment. A focus aimed at increasing awareness of the phenomenon of moral distress among nurses is a priority. This includes education to better recognize the physical, emotional and psychological effects, identifying events that may cause moral distress and addressing these situations in real time. A clinical tool, checklist or scale that would identify scenarios causing moral distress in real time could be evaluated. Sharing findings of this study with nurses especially the root causes identified and the significant findings related to staff education in caring for COVID-19 patients and consideration of leaving their position due to moral distress could prompt meaningful discussion. Targeted discussions on the impact the pandemic has had on staff turnover and vacancy rates could help better understand why nurses are leaving and identify strategies to improve staff retention.

Nursing Leadership. Nursing and institutional leadership at all levels have a responsibility to understand moral distress and the negative impact it has on nurses and other healthcare workers in all settings. Helping staff understand moral distress and its effects could be a first step to mitigate or even prevent moral distress. Evaluating the healthcare system for situations known to increase moral distress and targeting "high risk" practice areas would certainly be beneficial. Nursing leadership has an obligation to promote an ethical climate as that is proven to decrease feelings of moral distress and decrease staff turnover. Findings of this study could assist leadership in promoting an ethical climate by supporting the promoting items and drilling down on the items that impede an ethical climate. Utilizing the American Association of Critical Care Nurses (AACN) framework the 4 A's to Rise Above Moral Distress (Ask, Affirm, Assess, and Act) leaders can better understand moral distress and provide guidance to staff on how to manage these feelings. One major finding of this study was the high

percentage of staff considering leaving their current position due to moral distress. This disturbing finding prompts and demands leadership to act to address moral distress. Evaluating staff satisfaction and engagement and using these findings to create meaningful staff driven action plans could promote staff satisfaction and well-being. Frequent communication with staff to address morally distressing situations either one-on-one or during a daily huddle would be beneficial. Providing staff accessible resources to help manage moral distress including Employee Assistance Programs, chaplain services, staff debriefing sessions and hospital ethics committees are all strategies to assist staff. Activities to promote self-care such as exercise, meditation, nutrition are also other venues to be explored. Nurse leaders play a pivotal role in promoting an ethical work environment to help mitigate the effects of moral distress to improve patient care outcomes and staff well-being.

Nursing Education. Education is needed for nursing and other healthcare professionals on the concept of moral distress. This is essential for practitioners to understand what moral distress is and to acknowledge that it exists to some extent among all nurses. Ways to decrease feelings of moral distress need to be shared so nurses can mitigate the negative effects. There is also a need at the undergraduate and graduate levels to educate students on this phenomenon so they may be better prepared in the workplace.

Nursing Research. This important study provides an excellent foundation for understanding moral distress and ethical climate in pediatric nurses during the COVID-19 pandemic. However, there is much needed research to be conducted. A replication study on a larger sample of pediatric nurses would be beneficial to evaluate if similar findings are present. A similar study design including other demographic variables such as race, ethnicity, and religion would be interesting to evaluate if these characteristics predicted moral distress among

pediatric nurses. Qualitative data obtained from this study represent important findings including the feelings expressed by front-line nurses working during the pandemic. Yet, further qualitative research is necessary on a larger sample of pediatric nurses to more fully evaluate these concepts. Research evaluating how levels of moral distress impact patient care outcomes and quality metrics would be extremely beneficial. Quantitative and qualitative studies evaluating moral distress among nurse leaders during the COVID-19 pandemic would also be of interest to this researcher and in need of inquiry.

Conclusions

The findings of this research study add to the current small body of knowledge investigating pediatric nurses during the COVID-19 pandemic. This study reports findings that are consistent with prior research evaluating the relationship between moral distress and ethical climate (Donkers, et al., 2021; Sauerland et al., 2015; Whitehead et al., 2015). Additional statistically significant findings as well as qualitative results contribute to a more comprehensive understanding of the concepts of moral distress and ethical climate. As the current pandemic transitions to an endemic further research is necessary to promote the well-being of nurses across the entire health care continuum.

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APPENDIX A

Demographic Questionnaire

1. Gender ____Male ____Female ____Other
2. Age ____
3. Highest educational level ____Diploma ____AD ____BSN ____MS ____DNP ____PhD ___MS/MA other
4. Do you hold national certification in your sub-specialty _____yes _____no
5. Years RN experience _____
6. Years as RN experience in pediatrics _____
7. Employment status _____full time _____ part time _____perdiem
8. Shift worked _____day shift _____ evening shift _____night shift
9. Hospital type _____academic _____non-academic
10. Designated Magnet hospital _____yes _____no
11. Hospital setting _____urban _____rural
12. Designate what geographic area of the country you are from _____Northeast _____Midwest _____South _____West
13. Did you receive adequate additional training and education to care for COVID-19 patients _____yes _____no
14. Did you float to adult units and care for COVID patients? _____yes _____no
15. Estimate of actual number of COVID-19 patients you cared for in the last 12 months _____
16. Type of Specialty ____inpatient pediatric medical/surgical unit ____inpatient pediatric intensive care unit

____inpatient neonatal intensive care unit

____inpatient peri-operative care unit

____pediatric emergency department

APPENDIX B

202 Jeanette Lancaster Way
McLeod Hall 4061
Charlottesville, VA 22903
Office: 434.982.3285
Mobile: 434.242.5927
meg4u@virginia.edu

March 5, 2021

Dear Kathy,

It is my pleasure to grant permission to use the Measure of Moral Distress for Healthcare Professionals (MMD-HP). The MMD-HP is an updated, revised version of the Moral Distress Scale-Revised (MDS-R) which has been used in multiple studies both in the US and internationally. When you publish your results, I would ask that you be sure to cite the article describing the revision and testing of the MMD-HP.

> Epstein EG, Whitehead PB, Prompahakul C, Thacker LR, Hamric AB. Enhancing Understanding of Moral Distress: The Measure of Moral Distress for Health Care Professionals. AJOB Empirical Bioethics. 2019 Apr-Jun;10(2):113-124. doi: 10.1080/23294515.2019.1586008.

I would be happy to answer questions along the way as your study progresses and as you're interpreting your results. Please do let me know how I can be helpful to you.

Best wishes,

Beth Epstein

Elizabeth Epstein, PhD, RN,
HEC-C, FAAN Associate
Professor
Interim Director for Academic Programs

APPENDIX C

October 6, 2020

Kathy Soriano
PhD Student
Seton Hall University
South Orange, New Jersey
07079

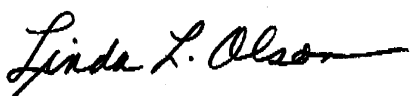
Dear Kathy:

Thank you for your interest in using the Hospital Ethical Climate Survey (HECS) in your dissertation research. You have my permission to use the HECS.

I would be interested in knowing the results of your research when completed.

Thanks.

Sincerely,



Linda L. Olson, PhD, RN, NEA-BC, FAAN

APPENDIX D

SETON HALL UNIVERSITY
1 8 5 6

07/26/2021

Katherine Soriano

Seton Hall University

Re: 2021-231

Dear Katherine,

The Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled, "Moral Distress and Ethical Climate in Pediatric Nurses in the time of COVID" as resubmitted. This memo serves as official notice of the aforementioned study's approval as exempt. If your study has a consent form or letter of solicitation, they are included in this mailing for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Sincerely,

Mara Podvey

Mara C. Podvey, PhD, OTR
Associate Professor
Co-Chair, Institutional Review Board

Phyllis Hansell

Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board
Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: 973.275.4654 · Fax 973.275.2978 · *www.shu.edu*

APPENDIX E

Dear Society of Pediatric Nurses Members,

This e-blast is a request for you to respond to a study about **"Moral Distress and Ethical Climate in Pediatric Nurses in the Time of COVID."** It is being conducted by **Katherine Soriano, MS, RN, NE-BC, PhD Nursing Student at Seton Hall University** and is being facilitated by the SPN Research Committee. This study has been approved by SPN Clinical Practice and Research Committee, and has Institutional Review Board/Human Subjects/Ethics Committee approval from Seton Hall University. Participation is entirely confidential and voluntary. The study results will be made available to members in the form of a report (newsletter abstract).

This study is asking for **pediatric registered nurses with at least one year of pediatric nursing experience caring for patients during the COVID-19 pandemic from the following pediatric hospital setting: inpatient medical-surgical, intensive care (including pediatric and neonatal), peri-operative services or units, and pediatric emergency departments** to participate in this study. The researcher is only seeking participation from SPN members, so please do not share this link with non-members. If you choose to participate, please take the time to examine the IRB consent form, and to click the link to the study. The study closes at **12:00am on November 1, 2021**.

Here is the survey link: https://shu.co1.qualtrics.com/jfe/form/SV_6yxOe5QNflJxYfs

Please Note: SPN member's email addresses, phone numbers or other personal information have not been distributed and are protected in this process.

The SPN Clinical Practice and Research Committee values inquiry that facilitates the health and welfare of pediatric patients, their families, and the pediatric nurses who care for them. We carefully review the requests we receive from members and nonmembers to perform research on Pediatric Nurses and Pediatric Nursing Topics. Please contact Judy Ascenzi, chair of the SPN Clinical Practice and Research Committee, if you have questions about the study or the review process.

Thank you,

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FIGURE 1

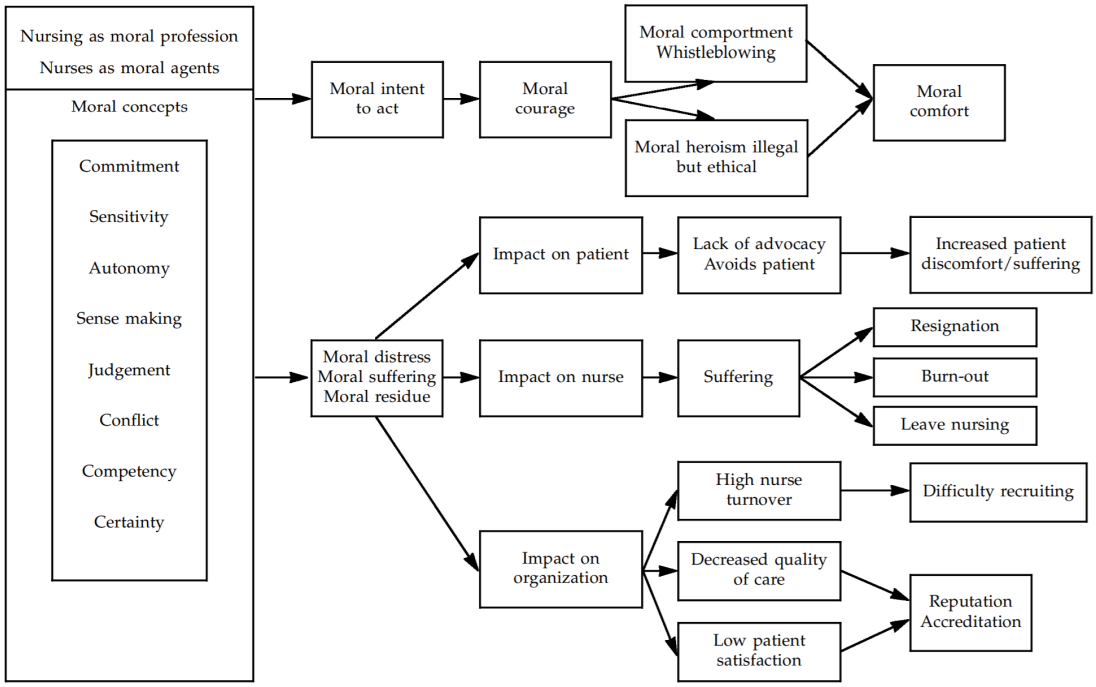

Figure 1 Model for a theory of moral distress

Corley, M. (2002). Nurse moral distress: A proposed theory and research agenda. *Nursing Ethics, 9*, 636-50