

Moral Distress among Thai Nurses: A Mixed Methods Study

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Abstract

Background: Moral distress is a common experience among nurses and can lead to frustration, withdrawal from patient care, and leaving a position or even the nursing profession. The Measure of Moral Distress – Healthcare Professionals (MMD-HP) is a newly updated moral distress scale and is recommended to be used cross culturally. This is the first study using the MMD-HP in Thailand.

Purpose: This dissertation study had 2 main aims: 1) to test the psychometric properties of the Thai version MMD-HP, and 2) to describe the phenomenon of moral distress among Thai nurses, including investigation of the relationships between moral distress and selected demographic and practice factors, and identification of predictors of moral distress.

Methods: A convergent parallel mixed-methods design was employed. The MMD-HP was translated into Thai language using the modified Brislin's (1970) cross-cultural instrument translation method. All questionnaires were distributed electronically to the target participants at 2 large tertiary care institutions in a Southern province in Thailand. The completed returned surveys (462) were analyzed using parametric statistics (e.g. mean, standard deviation, independent sample T-test, one-way ANOVA, and hierarchical multiple regression). Twenty nurses who completed the survey were interviewed and the interview data were analyzed using thematic analysis. The findings from both components were integrated. Of the 462 returned surveys, 448 cases maintained the statistical assumptions for factor analysis and were used to test the construct of the MMD-HP through exploratory factor analysis.

Results: A three-factor solution was accepted and named as system-level, team-level, and patient/family-level root causes of moral distress. Internal consistency of the overall MMD-HP was 0.94 and 0.897, 0.896, and 0.849 for system-level, team-level, and patient/family-level, respectively. The top seven ranked causes of moral were related to system-level root causes and end-of-life care situations. Work unit, considering leaving position, and number of moral distress episodes in the past year were significant predictors of moral distress. The interview data demonstrated 3 main themes: (1) powerlessness (at patients/family-, team-, and organizational level), (2) end-of-life issues, and (3) poor team function (poor communication and collaboration, incompetence healthcare providers, and inappropriate behavior of colleagues), and enrich the quantitative findings, especially as related to the top 7 causes of moral distress.

Discussion: The MMD-HP is a multi-dimensional scale to measure moral distress. Thai version MMD-HP is a reliable, valid, and useful tool to measure moral distress among nurses in the Thai context. The most problematic causes of moral distress for Thai nurses are similar to those among nurses in western cultures although there are unique components that require additional exploration. Interventions to mitigate moral distress also need to be developed and tested.

Key Words: moral distress; measurement; psychometric; mixed-methods, Thailand

Dedication

This work is dedicated to my family. There are no words that could express the depth of gratitude that I have for my parents, husband, and son. Never could this success and achievement have been attained by my own strength. My husband Chawengsak worked tirelessly to ensure that our child had the best dad taking care of him when I was ‘studying’ in the US and an exorbitant amount of love and support to fulfill my educational dreams. My beautiful son, Namo who reminds me every day about power of love, patience and forgiveness. You gave me the desire to want to be my best and to work hard every day at trying to be worthy of being called ‘mom’ by this incredible kid. My mom and dad, Tanee and Suithaim who inspired me from an early age to strive for what is hard and to always put myself in a position I was not comfortable in so that I knew I was growing and evolving into a better human-being. You are in every part of my life, both sadness and happiness. When there was a great decision in my life, I needed to decide whether I will accept or decline an offer of admission to a PhD program at the UVa, which was my big dream; but my son was just only a month old. I remembered you said to me that “if you think you are good, I will raise your son to be a good boy like you. I believe he will be proud of you.” Thank you, mom and dad for always walking beside me. Not only me, my son’s life is also fulfilled with warmth and love from both of you. Thank you very much for your unconditional love and support.

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CHAPTER 1

INTRODUCTION

This chapter includes the proposal of the overall study and the organization of this dissertation. First, the background and specific aims are introduced. Next, the significant, scientific gap, and conceptual framework are presented. Then, the innovation, methodology and approach are provided. In the next chapters, integrative literature review and results of this study are presented using formatting according to the target journals. Finally, the last chapter provides conclusion and implications of the study.

Specific Aims

Moral distress among nurses is one of the greatest problems facing the nursing profession as it negatively impacts aspects of nurses' physical and psychological well-being and the nursing shortage.¹⁻² Although the frequency and intensity of moral distress is variable, the negative outcomes associated with it, such as an increased incidence of burnout³⁻⁵ and intention to leave a position,^{3, 5-11} are pervasive in diverse healthcare settings.

Valid and reliable measures of moral distress levels are important for advancement in this area of research. The moral distress scale-revised (MDS-R) was, until recently, the only instrument with good reliability.⁹ This measure is widely used in western and non-western countries, although it has been modified to be more applicable to particular contexts.¹²⁻¹⁷ Recently, we revised and updated the MDS-R significantly using an in-depth literature review to identify new items and analysis of data sets from previous studies using the MDS-R. The newly revised instrument, the

Measure of Moral Distress for Healthcare Professionals (MMD-HP) has been recently tested at 2 institutions in the U.S. and found the moral distress root causes covered patient/family, team/unit, and organization/system levels.¹⁸ Translation of the English MMD-HP to Thai MMD-HP was accomplished according to an adaptation of Brislin's translation model for use in this study.¹⁹

Although research on moral distress is gaining attention, the majority of studies have been conducted in Western countries. Our understanding of the experience of moral distress is limited in non-Western cultures.⁹ A review of the literature reveals that healthcare system, healthcare policy, and culture play important role on moral distress amongst nurses in non-western countries.¹⁸ In Asian countries, paternalistic healthcare systems with strong hierarchies still exist²¹⁻²² and nurses may have limited autonomy and ability to advocate which could lead to high levels of moral distress.¹⁸

In Thailand, nurses are faced with numerous challenges such as staff shortage, job dissatisfaction, and developing of health care system and practice.²³⁻²⁵ The healthcare system in Thailand is in transition in the areas of palliative care and advanced technology.²⁶ These challenges could trigger moral distress among Thai nurses. Only one unpublished master's thesis reported a moderate level of moral distress among Southern Thai nurses; however, these findings are limited by the use of the moral distress scale (MDS) which is now outdated and contains items that are not relevant to current Thai nursing practice.²⁷ Given significant differences in culture, health care policy, and technology in nursing practice between the US and Thailand, there is a need for further study of moral distress using reliable and valid measures that are relevant in many cultures. The newly revised measure, MMD-HP

might be a better measure that captures root causes of moral distress among Thai nurses.

The broad goal of this program of research is to better understand the phenomenon of moral distress among nurses in Thailand and to develop interventions to mitigate moral distress in that population. Given previous work in moral distress research in Thailand²⁷ and in development and testing of the MMD-HP¹⁸, we are ideally positioned to test the MMD-HP among Thai nurses and to explore their experiences of moral distress. This goal will be accomplished with the following specific aims and using a convergent parallel mixed-methods design.²⁸

The specific aims of this study are:

Aim 1: To test the reliability of the Thai language MMD-HP among Thai nurses;

H1: The Thai language MMD-HP will show satisfactory internal consistency with a Cronbach α of > 0.7 .

Aim 2: To test the construct validity of the Thai language MMD-HP; the following hypotheses will be tested;

H1: ICU nurses will have higher MMD-HP scores than non-ICU nurses.

H2: Nurses contemplating leaving their position due to moral distress will have higher MMD-HP scores than nurses who are not contemplating leaving their position.

H3: Factor analysis of the MMD-HP will consist of three factors, clinical, unit/team, and system/organization root causes.

Aim 3: To explore Thai nurses' moral distress experiences, including additional causes, their professional actions in these situations, personal and professional coping, and what interventions would they suggest be used to alleviate.

1. Significance of Study

Moral distress, now a concern among healthcare providers in all healthcare settings, is associated with serious consequences such as burnout, withdrawal from the moral dimensions of patient care, or leaving the profession altogether.^{8, 9, 11, 18, 29-32} Moral distress occurs when “providers believe they are being involuntarily complicit in acting unethically—they are doing something that they believe to be morally wrong but have a little power to act differently or to change the situation”.³³

Recent studies suggest that approximately 40% of nurses experience severe burnout (emotional exhaustion and/or depersonalization) and that burnout is positively correlated with moral distress.³⁻⁵ In multiple studies, 45% to nearly 50% of nurses have left a position or have considered leaving a position because of moral distress.⁹⁻¹¹ Further, moral distress is positively associated with intention to leave a position now due to moral distress.^{3, 5-11}

Nurses, especially critical care nurses, tend to experience high levels of moral distress. Levels of moral distress among nurses tend to be significantly higher than those of physicians^{4, 5, 8, 9, 11, 18} although this is not always the case.^{3, 6, 34} According to studies of moral distress among nurses and physicians, the combined mean moral distress score (using the Moral Distress Scale-Revised, range 0-336) of nurses was 77.60 (SD = 46.10), whereas the mean moral distress score among physicians was lower at 61.19 (SD = 35.82).^{3, 6, 9, 11, 35} A proposed explanation has been that nurses are frontline care providers who provide 24-hour bedside care for patients. Other providers with direct patient care such as respiratory therapists and physical therapists have levels of moral distress on a par with nurses.^{3, 11} Additionally, nurses frequently confront situations of conflicting loyalties, specifically to patients, families, physicians, co-workers and the healthcare organization.

The phenomenon of moral distress was initially described among intensive care unit (ICU), nurses and this group consistently demonstrates higher levels of moral distress than nurses in non-ICU settings. This could be due in part to the high stress, high stakes environment where there is high risk for patient mortality and morbidity and daily confrontations with ethical dilemmas.³⁶ Critical care nurses are repeatedly exposed to work-related stresses, including involvement in end-of-life discussions, prolongation of life with artificial support device, and the potential for delivering inappropriate care.³⁷ These situations are commonly reported as causes of moral distress experience by the critical care nurses especially the futile situations.^{7, 11, 18, 38, 39}

Root causes of moral distress. Moral distress is a system-centered issue that impacts healthcare providers and healthcare institutions. A three-level structure of root causes of moral distress has been proposed.³³ In their experience with moral distress consultation in an academic medical center setting, Hamric and Epstein³³ identified that although consults are generally initiated by a specific patient case, the root causes underpinning the situations often involve unit- or organizational-level problems. For instance, a situation involving prolonged aggressive treatment for a dying patient may involve poor communication within the healthcare team or organizational policies which interfere with the clinician's ability to provide or offer more appropriate avenues of care. Common root causes of moral distress at the patient/family level include following a family's wishes to continue life support even though it is not in the best interest of the patient and inadequate pain management.^{4, 5, 9, 11, 18, 43-45} Team-level causes include poor team communication or collaboration that leads to inconsistency in goals and plans of care.^{3, 5, 9, 11, 46-50}

System/organization-level root causes such as providing less than optimal care to reduce costs^{3, 11, 46} and inadequate staffing are common root causes of moral distress.^{9, 11, 46} In a Korean study, nurses expressed that they felt pain when the economic benefits to the hospital were prioritized ahead of respect for human life and human rights, such as forcing the patients to be discharged or transferred with unresolved problems.⁴⁶ In addition, nurse to patient ratio, workload, and lack of resources were often reported as sources of moral distress in low middle-income countries.^{43, 51} Nurses were forced to provide care quickly as possible and had insufficient time to achieve gold standard of care or provide more comprehensive patient treatments.^{47, 48, 52-54} Not only did human resources serve as the source of moral distress; but, the lack of basic equipment and supplies also lead to moral distress due to unable to achieve the standard of care.^{48, 49, 51}

Moral distress's outcomes. For patients, the outcomes of moral distress can be negative. Although there are no studies measuring direct links between provider moral distress and patient care outcomes, several studies have explored nurses' perceptions of the impact of morally distressing situations on patient care quality and outcomes.³⁹⁻⁴² Wiegand and Funk³⁹ found that nurses perceive morally distressing situations to be associated with negative patient experiences suffering, prolonged dying, undignified dying, poor quality of life, inappropriate care, delayed treatment, prolonged hospitalization, disrespect, and the inability to be with family, and negative family experiences such as being unprepared, overwhelmed, and suffering. Varcoe et al.⁴⁰ found that nurses generally felt patient care was not impacted although prolonged suffering and wasted resources were mentioned and one nurse stated, "every single patient I took care of that night received an inappropriate and unsafe level of care" (p. 491). In her study of moral distress among mental health nurses, Austin⁴¹ found that

nurses in situations of chronic understaffing believed patient care to suffer—patients screaming and not receiving help, patients not receiving necessary care, or even patients dying alone. However, some nurses who experienced moral distress had acted on that distress by intervening to make the situation better and reduce the negative impacts on patients.³⁹ Thus, there is an important distinction between patient care quality in morally distressing situations and patient care quality when moral distress is addressed.

The outcomes for healthcare providers are the long-term effect of moral distress because the nature of moral distress is a lingering phenomenon that does not occur and end at a time. When nurses are faced with moral distressing situations that are not resolved, their level of moral distress rises. When the situation is resolved, the level of moral distress drops but still leaves a baseline for the next encounter. Therefore, repeated moral distress situation can finally lead to burnout or leaving a position.³⁰ Burnout and intention to leave a clinical position could finally lead to a long-term healthcare institutional outcome such as staff shortage that might be a feedback loop as a cause of moral distress latter. Healthcare administrators are now increasingly aware of the damaging long-term effects of moral distress in the workplace and seeking the ways to measure its cause and addressing interventions to alleviate moral distress.

Measure of moral distress. Valid, reliable, and current measures of moral distress are needed. Moral distress scale (MDS) was the first widely used instrument for measuring moral distress.⁵⁵ The challenges in using the MDS include its length (38 items), its ICU nursing focus, and items that no longer reflect current practice (e.g., engaging families in discussion about organ donation). Later, Hamric and Blackhall⁸ adapted the MDS in their study by shortening the scale to 21 items,

however, this adaptation is narrowly focused on end-of-life care in ICU settings and it lacked utility for non-ICU settings. The MDS was then revised to the moral distress scale-revised (MDS-R) which consists of 21 items and broadens applicability beyond critical care and beyond nursing to all patient care settings and healthcare professionals.⁹ The MDS-R has demonstrated good reliability with Cronbach's alpha coefficients of .89 for nurse and .88 for all participants and its construct validity was successfully evaluated using 4 hypotheses testing.⁹ The MDS-R successfully has replaced the use of the MDS and has been widely used internationally.^{12, 13, 16, 50} In the intervening 5 years, additional root causes have come to light via additional research.^{11, 15, 56} Additionally, the MDS-R had 6 versions; adult and child versions for nurses, physicians, and other providers which detracted from its ease of use. One standard measure would be more applicable in multidisciplinary study than six versions of the MDS-R. Therefore, the MDS-R was extensively revised again in 2017 and named as the measure of moral distress-healthcare professionals (MMD-HP).

In the process of updating the MMD-HP, both quantitative and qualitative data from studies that used the MDS-R were requested. Factor analysis was used in order to identify which items that should be kept or removed. Then, the qualitative data from the requested studies, moral distress consult service, and literature were analyzed to identify new root causes of moral distress. The final version of the MMD-HP consisted of 27 items and is usable by all HCPs across clinical settings. The MMD-HP has a good reliability of .93 for the nurses, .90 for physicians, .94 for other healthcare professionals, and .93 for all participants combined. The construct validity testing showed statistically significant results on all hypotheses in which nurses have higher levels of moral distress than physicians, participants who were considering leaving their position due to moral distress have higher MMD-HP scores than those

not considering leaving, and higher MMD-HP scores associate with poorer perceptions of ethical climate at work. Additionally, the result of exploratory factor analysis indicated 3 three-level structure of patient-, unit/team-, and system-level.¹⁸ Although the MMD-HP indicate a good reliability and construct validity in the primary study, testing in difference culture is needed in order to ensure its psychometric properties.

In this proposed study, the target population includes Thai nurses, therefore the Thai language of the MMD-HP was established. The original instrument was examined also for cross-cultural relevance and understanding in the Thai culture. This research utilized Brislin's¹⁹ cross-cultural instrument translation method which is considered to be the best method for cross cultural research.⁵⁷ As Brislin¹⁹ suggested, a good practice for translation is to employ at least two competent bilingual translators who might be familiar with the research, one to translate forward and another to translate back to the original language without having seen the original text. In this study, the translation process included three bilingual translators. Forward translation was done by the PI. A bilingual expert panel includes one nursing ethics professor, one scholar independent with experience in research measure development, and one advance practicing nurse (APN) reviewed the initial translated version. Group discussion with the translator (PI) to arrive at consensus regarding the most accurate and easily understood terms was accomplished. The cultural appropriateness and relevance of each item to Thai context was also considered. Other two bilingual native Thai speakers who were not familiar with the scales independently performed back translation from Thai to English. Then a native English speaker, an American professor and co-author of the revised MMD-HP compared the original MMD-HP with the back-translated English versions. Any errors in meaning were retranslated

and again blindly back translated by another bilingual expert. This iterative process was repeated until no errors in meaning.

Thai context. Most studies have been conducted in Western countries and our understanding of the experience of moral distress in non-Western countries is limited. This is an important avenue of study given significant cultural differences. For example, in Iran, providing aggressive treatment at the end of life care is also a major cause of moral distress among nurses and it related to the healthcare policy.⁴⁹ In some countries, DNR orders are legal but in Iran, it is not legal. Although healthcare providers realize that the aggressive treatments are not necessary and cause suffering on the dying patients but they could not withhold complete or partial the treatments because they fear of legal problems and criminal prosecution.⁴⁹ Additionally, the Iranian nurses must do CPR although they know it is a wasteful intervention, because according to the instructions of Islam, no one can end the life of another person.⁴⁹ This situation is different with the low-income country such as India. In India, there are limited funds, resources, and facilities. As a result, without the means to perform successful cardio pulmonary resuscitations, dying patients were not put on life support and transferred to the intensive care unit.⁵¹

Thailand, a country of 67.7 million people,⁵⁸ is listed by the UN Human Development Index⁵⁹ as a “high human development” country, indicating reasonable advances in life expectancy, education, and standard of living. Additionally, Thailand has shifted from a low-income country to an upper-middle income country within the past 30 years.⁶⁰ The Thai healthcare system is funded and managed by Ministry of Public Health (MoPH). Universal health coverage was successfully utilized for all Thai citizens since 2002. Healthcare treatments and services in governmental hospital are completely free for Thai citizens which increase the accessibility to health

services for the low-income people.⁶¹ Thailand has a rich cultural history that, in many ways, impacts healthcare systems, the healthcare professions, and healthcare decisions.

The governmental policy is also another concern among healthcare that might be a constraint lead nurses to moral distress. In 2015, Thailand is a member of the ASEAN economic community (AEC) which resulted in a large influx migrant. Although this regional initiative is expected to bring about economic prosperity and development in socio-cultural well-being of the people, healthcare in Thailand has been faced with financial constraints, supply-side constraints and ongoing epidemiological transition.⁶² Cross-border health services and migrant workers - both documented and undocumented - could considerably increase service workloads for providers in Thailand.⁶² From my observation, the difference in culture and language between providers and the immigrants is also an issue that leads to miscommunication and compromising the quality of care.

As in many Asian countries including Thailand, paternalistic healthcare systems still exist.^{21, 22} In these systems patients, family members, and other members of the healthcare team have less input in treatment decisions. Thus, hierarchies and power structures could be factors contributing to moral distress in Thai nurses as doctors are on the top of the hierarchy among healthcare professions. This structure influences the way in which treatment options are discussed and may play a role in how moral distress is experienced by nurses.

In Thai culture, social hierarchy is also a risk for moral distress among nurses. Seniority plays an important role in constructing order among nurses. The head nurse occupies a middle position in the hospital hierarchy while junior nurses are below.⁶³ The nurses with lower hierarchy might be excluded from the conversation or

discussion about patient care. They have less power to advocate for their patients. The social hierarchy extends to patient care as well. While nursing is viewed as a moral profession and nurses are moral agents who must respect patient dignity and provide equal care,⁶⁴ sometimes patients are treated unfairly by healthcare providers based on their social hierarchy.⁶³ Therefore, inability to advocate and witness the poor patients were treated with disrespected and unequally can be a precipitating factor of moral distress among Thai nurses.

With respect to culture and belief, in Thailand, the two main religions are Buddhism and Islam. Southern Thailand where the proposed dissertation study will be conducted is predominantly Muslim. Religious belief influences all aspects of life, including nursing and healthcare.⁶³ For example, Islamic patients and families made a decision about care and treatments based on religious belief.^{65, 66} They decided to withdraw the treatments because they believe in after death that they can be with God. In some cases, they decided to continue the treatments because euthanasia is a sin. They also believed that whatever happened in their life is the best wish of God.⁶⁶ Within the Muslim faith, there are at least three branches which have different beliefs on health and illness. Among Thai Buddhist, patients and families may decide to forgo life-sustaining treatments because they believe that prolongation of death is a sin.⁶⁵ Caring patients with diverse culture and belief might be a precipitating cause of moral distress in Thai nurses.

Some challenges faced by nurses are similar to those in Western countries. For example, in staff shortages, job dissatisfaction, and healthcare systems and practices that do interfere with effective communication and collaboration are common.²³⁻²⁵ Approximately 50% of Thai nurses report high levels of burnout and 10-60% intend to leave their job in the next 6-12 months.^{23, 24} A plausible explanation

for these concerning statistics is high levels of moral distress, yet our understanding of moral distress among Thai nurses needs to be examined. Additionally, these negative effects could be maladaptive coping mechanisms while encountering with moral distress.⁶⁷ In contrast, nurses who use proactive coping mechanisms may seek resources to address their moral distress such as co-workers and supervisors.⁶⁸ Seeking the ethics committee and debriefing are other potential mechanisms of coping with moral distress at work.⁶⁷ However, the knowledge of coping strategies and an intervention to alleviate moral distress among nurses in Thailand is lacking.

Regarding the healthcare system in Thailand, it is in transition of both palliative care and advanced care technology.²⁶ The palliative care system in Thailand is currently facing challenges.^{26, 69} One nursing role is to act as care coordinators in palliative care units; however, nurses have reported not having adequate skill or training for this role. Similarly, most medical doctors do not gain sufficient knowledge and experience about palliative care during their academic preparation or study. Both doctors and nurses have expressed difficulty in initiating end-of-life care discussions with patients and families.^{26, 69} Additionally, the medical doctors have absolute authority in opioid prescriptions but many have not been adequately trained. This results in inadequate symptom management.²⁶ These challenges could be a trigger of moral distress among Thai nurses.

Thai nurses are facing various potential factors that may contribute to moral distress. However, studies on moral distress in Thai nurses are scant. Only one unpublished master's thesis reported a moderate level of moral distress among Southern Thai nurses.²⁷ In part, studies are limited by the lack of an instrument that appropriately measures moral distress in this cultural context. In the previous study of moral distress, Corley's Moral Distress Scale was used, but multiple participants

reported that some items were not applicable to their nursing practice.²⁷ Given significant differences in culture, beliefs, healthcare system, and healthcare policy in nursing practice between the US and Thailand, there is a need for reliable and valid measure adapted for use among cultures of interest and exploring the experience of moral distress in Thai nurses. The findings of this study will provide foundational information for the design and conduct of interventions to reduce moral distress among Thai nurses in the future.

Addressing the Scientific Gap

A goal of Thailand Nursing and Midwifery Council ⁷⁰ is to increase standard ethical practice and alleviate ethical issues in clinical practice among nurses in order to retain nurses in the profession and improve the quality of care. However, there is a dearth of research pertaining to moral distress amongst nurses in Thailand. A reliable and valid measure of moral distress in the Thai language is not yet available. The contributing factors and consequences of moral distress in Thai nursing practice are unknown. The proposed study employs a convergent parallel mixed-methods approach, where the quantitative phase will test the psychometric properties of the Thai language of the MMD-HP and examine the relationship between moral distress, settings, years of current position, and perceived intent to leave the position. Additionally, the qualitative interviews, allowing an examination of this complex issue from multiple perspectives and create a depth understanding of causes, its outcomes, coping strategies and suggested interventions to address and alleviate the experience of moral distress.²⁸ The results of this study will impact three major parties: healthcare providers, research and practice; and organization policymakers. First, the results of this study may provide a clear informative description of current

moral distress and nursing turnover rate in Thailand. Second, researchers may use study findings to develop and test effective interventions to reduce moral distress specifically in the Thai context. Third, health policymakers should consider the issue of moral distress. The results of this study will be reported to the Thailand Nursing and Midwifery Council and Ministry of Public Health which are the main organization health policy maker in Thailand, in order to address moral distress as an indicator of patient safety and quality of care in Thailand. Moreover, an ethical consultant should also address as a change in health policy as a requirement for all hospitals in Thailand.

Research Conceptual Framework

The conceptual framework of the study was derived from the crescendo effect model³⁰ and related literature in the concerned field. Moral distress occurs when “providers believe they are being involuntarily complicit in acting unethically—they are doing something that they believe to be morally wrong but have a little power to act differently or to change the situation due to constraints”.³³ The constraint or root causes of moral distress currently could be categorized as patient/family, unit/team, and system/organization root causes.³³ In this proposed study moral crescendo effect model described the interrelationship between moral distress and moral residue. When the nurses face with morally distress situation and this situation is not resolved or their moral distress is not addressed, their level of moral distress rise which called as moral distress crescendo. Whenever the situation is resolved, the level of moral distress drops precipitously. However, the moral distress level does not drop to zero. Rather, there is a residual level of moral distress. Repeated the similar causes and inadequate attention to this feature of moral distress cause a buildup of both moral

distress and moral residue. Thus, moral residue rises gradually, the so-called moral residue crescendo.³⁰

Although the crescendo effect model had not been tested quantitatively, various empirical supported this model that the nurses who had higher year of current position had higher moral distress level,^{9, 53, 71, 72} especially the critical care nurses tended to repeatedly confront with prolonged aggressive treatment with little hope of survival, a common morally distress situation cited in the literature.^{7, 18, 15} As a consequence of moral distress, the nurses are leaving the position of profession altogether.^{3, 5-11} The conceptual framework of this study is summarized in the following Figure 1.

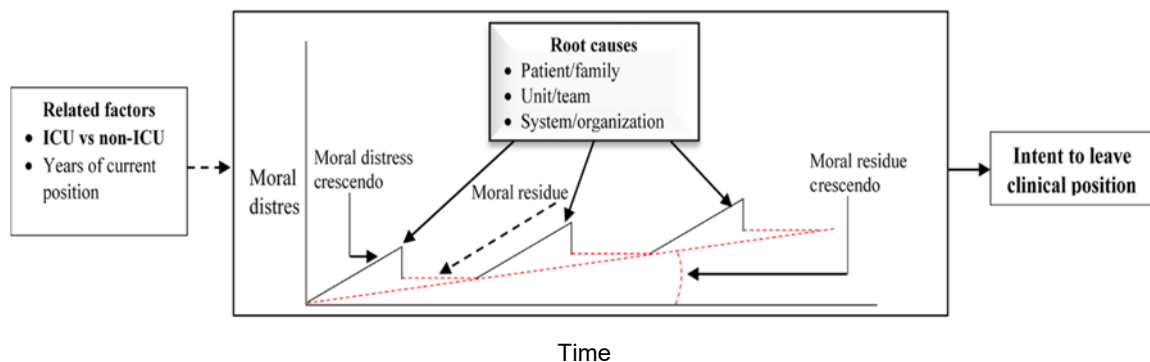


Figure 1. Conceptual framework of the study: adapted from Epstein and Hamric's model of the crescendo effect.³⁰

2. Innovation

The proposed study has several novel and innovative features: 1) While extensive evidence demonstrates that moral distress is a global issue in nursing practice, to our knowledge this will be the first study that aim to explore and describe the experiences of moral distress among nurses in Thailand. 2) This study is also the first study uses a newly revised and updated measurement to measure moral distress

in the Thai language. The result of this study will provide a valid and reliable moral distress measurement in the Thai language that can be used in the future. 3) While other studies have used a single quantitative or qualitative approach, this study will employ a convergent parallel mixed methods approach to triangulate findings of the root causes of moral distress and develop a more complete understanding on moral distress's outcomes, coping strategies, and proposed strategies to address and relieve moral distress among Thai nurses.

3. Methodology and Approach

Design

A convergent parallel mixed-methods design will be used in which qualitative and quantitative data are collected in parallel, analyzed separately, and then merged. According to Creswell and Clark,²⁸ the rationale for collecting both quantitative and qualitative data is to validate findings from the two forms of data in order that they may be mutually corroborated. This design will allow the researcher to link the themes regarding how Thai nurses describe causes of moral distress and the standard measure of moral distress which is the major aim of this study. Beyond the triangulation purpose, exploring coping strategies and suggestions for interventions to mitigate moral distress will expand upon what can be measured by the instrument alone. Mixed methods research is not only using two approaches in one study. The hallmark of mixed methods research is how the two approaches are connected or integrated.^{28, 73} In this study, the results of quantitative and qualitative will be integrated and this merge results will be interpreted with consideration that how it will produce a better understanding of moral distress among Thai nurses.

Setting and Sample

The participants will be Thai nurses from 2 institutions, Songklanagarind Hospital and Hatyai Hospital located in Songkhla province, Thailand. Both are tertiary care institutions and provide a wide range of acute and critical care. Each has over 500 inpatient beds. Songklanagarind Hospital is a university hospital, under the Ministry of Education which can admit the in-patient in a certain number; whereas, Hatyai Hospital is a regional hospital under the Ministry of Public Health and admits patient with unlimited cases. Combined, these two institutions have 31 acute care units and 12 critical care units. Songklanagarind Hospital has approximately 550 nurses and Hatyai Hospital has approximately 450 nurses.

The nurses at the 2 institutions will be recruited based on inclusion and exclusion criteria. The *inclusion criteria* are 1) licensed as a registered nurse (RN), 2) working in inpatient units, and 3) have worked in the current hospital for at least one year. The rationale of this inclusion criterion is based on research showing that work experience less than a year might not adequately capture the experience of moral distress. The *exclusion criteria* are 1) head nurse or nurse administrator, and 2) working in private units. The head nurses, nurse administrators, and the nurses who are working in private units are excluded from the study because they do not provide direct care to patients or, in the case of nurses in private units, do not provide direct patient care in the same way as in the general acute care units.

The minimum sample size requirements are related to communalities and the number of strong factor loadings.⁷⁴ However, it may be difficult in the planning stage of study to have a good idea of what communalities and loadings may actually be obtained. In this case, Fabrigar and Wegener suggest planning on moderate conditions in which communalities range from .40 to .70 and there are at least three

strong loadings per factor, which implies a minimum sample size of 200.⁷⁴ To get at least 200 responses, the survey will be sent out to all nurses who meet the criteria of this study (approximately 1000 nurses).

Instruments

Four instruments will be used (provided in Appendix B and C).

1. Sociodemographic Characteristics. An investigator-developed measure will be used to collect sociodemographic characteristics of participants. The items will include institution name, age, gender, religious, educational level, working unit, education about end of life care, years of current profession, years of current position and a question about the number of episodes of moral distress in the past year.

2. Measure of Moral Distress for Healthcare Professionals (MMD-HP).

The MMD-HP is a 5-point Likert scale with multidimensional developed by Epstein et al.¹⁸ which aims to measure moral distress among healthcare professions in any clinical setting. The MMD-HP offers five ordinal level, Likert type response choices, scored by participants in terms of the how often the situation arises (frequency) and how disturbing the situation is when it arises (intensity). Thus, the scale for frequency ranges from 0 (never) to 4 (very frequently), and for intensity from 0 (none) to 4 (great extent).

Scoring. The frequency and intensity scores for each item can be summed and examined separately, therefore the range of score for frequency and intensity is 0 to 108. Additionally, a composite score can be computed by multiplying frequency score by intensity score of each item, created a new variable (named “fxi”) which ranges from 0 to 16. Next, an overall score is obtained by summing each item’s fxi

score, with scores ranging from 0 to 432. Higher scores indicate higher levels of moral distress.

3. Intent to Leave. The MMD-HP includes two additional categorical items asking respondents about their current and past intent to leave their position due to moral distress. These items are separate from the MMD-HP score. Yes and no questions of this type are considered reliable as general perspective questions.

4. Semi-structured interview. The interview guide was constructed based on specific aim 3, specifically to identify additional causes of moral distress, professional actions in morally distressing situations, professional coping strategies, and suggestions for interventions to alleviate moral distress. Face-to-face interviews using semi-structured interview questions will be conducted and digitally audiotaped. Field notes will include descriptions of the setting, people, events, and investigator's instantaneous thoughts during the interview will be recorded immediately after each interview.⁷⁵ The target sample size will be 15-20; however; the exact numbers will be determined by data saturation.⁷⁶ Maximum variation sampling will be used to identify and expand the range of variation of moral distress experience in nurses.^{76, 77}

Procedure

An online consent form, Thai MMD-HP, and demographic survey will be distributed to a total of 1000 nurses at the 2 institutions via electronic chat group (Line app) using Qualtrics. Flyers and study invitation cards with a QR code linked to the study survey will be posted and distributed to nurses. One week after initial distribution, the PI will send a reminder to the Line app group. The survey will be closed one week after reminder and all data will be download from Qualtrics.

At the end of the Qualtrics survey, subjects will be invited to participate in an interview. If interested, they may provide their email or cell phone number and the PI will contact the subject to arrange the interview. For this phase of the study, participants will provide written informed consent before the interviews.

Data Analysis

Aim 1: To test the reliability of the Thai language MMD-HP among Thai nurses. Data obtained from the surveys will be cleaned and analyzed using IBM Statistics SPSS 23 or later. The reliability of the Thai language MMD-HP and its subscales will be calculated using a Cronbach's alpha coefficient to ensure the internal consistency. The necessary level to demonstrate adequate reliability of a new instrument is a coefficient of $\geq .70$.⁷⁸

Aim 2: To test the construct validity of the Thai language MMD-HP. The following hypotheses will be tested. (1) ICU nurses will have higher MMD-HP scores than non-ICU nurses. (2) Nurses contemplating leaving their position due to moral distress will have higher MMD-HP scores than nurses who are not contemplating leaving their position. These hypotheses will be analyzed using independent sample t-test or Mann Whitney U test if assumptions are not met. In addition, the additional analysis on predicting factors of moral distress will be performed using multiple linear regression based on the following models.

$$\text{Model 1: } \textit{Moral distress}_i = \beta_0 + \beta_1 \textit{MDEpisode}_i + \beta_2 \textit{age}_i + \beta_3 \textit{gender}_i + \varepsilon_i$$

$$\text{Model 2: } \textit{Moral distress}_i = \beta_0 + \beta_1 \textit{MDEpisode}_i + \beta_2 \textit{age}_i + \beta_3 \textit{gender}_i + \beta_4 \textit{workexperience}_i + \beta_5 \textit{Yearcurrent}_i + \varepsilon_i$$

$$\text{Model 3: } \text{Moral distress}_i = \beta_0 + \beta_1 \text{MDEpisode}_i + \beta_2 \text{age}_i + \beta_3 \text{gender}_i + \beta_4 \text{workexperience}_i + \beta_5 \text{Yearcurrent}_i + \beta_6 \text{ICU} + \beta_7 \text{Adult} + \beta_8 \text{Hospital} + \varepsilon_i$$

(3) Given its structure, we expect that the MMD-HP will consist of three factors; patient/family, unit/team, and system/organization. Exploratory factor analysis (EFA) will be used to evaluate the actual factor structure. Principal axis factor extraction will be performed and both varimax and oblimin rotations will be considered in an attempt to uncover simple structure. Eigenvalues greater than 1.0 will be used as general criteria. Both theoretical and empirical evidence will be considered when deciding on the number of factors to retain. In each instance, results were evaluated against the following criteria: (a) retained factors should satisfy Horn's parallel analysis;⁷⁹ (b) unrotated factors were required to satisfy Kaiser's criterion of eigenvalues greater than 1.00;⁸⁰ (c) accepted configuration had to account for an appreciable percentage of total score variance (i.e., $\geq 50\%$); (d) solution should meet Cattell's minimum scree requirement;⁸¹ (e) each rotated factor should include at least two appreciable factor loading (i.e., $\geq .30$); (f) no more than 5% of the items should load on more than one factor; and (g) resultant dimensions should demonstrate good internal consistency. (4) Those with more years in current position will have higher levels of moral distress. This will be analyzed using Pearson Product-Moment Correlation or Spearman Correlation if assumptions are not met.

Aim 3: To explore Thai nurses' moral distress experiences, including causes, professional actions in these situations, coping, and suggested interventions, all interviews will be transcribed verbatim and analyzed using thematic analysis.^{76, 82} Field notes and memo will be used to better describe participant environment and behavior when needed. Data analysis will be conducted

simultaneously with data collection.⁷⁶ Thematic analysis will be to describe patterns and identify themes within data. This analysis occurs in three phases: data expansion, data limitation, and thematic integration.^{76, 82} Data expansion consists of open-coding interview transcripts, giving labels to concepts or ideas in the data without regard to relative importance. Data limitation involves combining codes into higher order, more abstract thematic categories, and making decisions about relative salience of the categories; that is, do categories represent the range of variation of experiences expressed within and across the groups? The most salient themes represented by the categories will be conceptually defined, illustrated with data excerpts, and integrated to best describe the aims of this study.^{76, 82}

Trustworthiness. Strategies to improve the trustworthiness of the findings across 4 domains, credibility; transferability; dependability; and confirmability will be applied.^{76, 83}

Credibility: The PI will explain the research purpose, methods, and protection of anonymity as the ethical guarantee to each participant to obtain their trust. The interview guide will be reviewed and commented on by disciplinary experts (the dissertation committee) to ensure that the questions will reach to thick description. In addition, the PI will also employ deliberate, explicit probes in order to understand participants' responses with greater precision. During the interviews, the researcher will put aside all personal opinions and assumptions. Reflexivity will be also conducted so that the descriptions would fit the participants' views and that credibility would be attained.

Transferability: The PI will use heterogenous sampling to see the difference experiences of the participants. A review of the literature will be also performed to understand the context within which the work fall.

Dependability. The rigorous and logical process of the research methods that will be used during theoretical sampling, data analysis, and result descriptions will be designed and explained clearly. The PI will maintain an extensive audit trail throughout the analytic process, detailing decision rules and justifications through memo and reflexivity.

Confirmability. A peer check will be conducted; the peer is bilingual and Thai language is her mother tongue and have had experience in conducting qualitative research will read the translated analytic results to clarify the research data and reduce translation bias. During the above-stated analysis process, the texts will be constantly reflected on and compared, so that the consistency and coherence between similar data entries could be highlighted and various categories could be compared and contrasted to show the chronological development of the themes. These efforts help establish the trustworthiness and reduce the bias of this study.

Integrating Quantitative and Qualitative Findings

The findings from Aims 2 and 3 will be merged with the goal of providing a multilevel, contextual understanding of moral distress among Thai nurses. This approach is useful where a single method is insufficient to fully describe complex phenomena and to assess how findings from different perspectives converge and are different.^{28, 73} Merged results will be displayed using a matrix table. In addition, the qualitative findings will explain the statistical findings regarding situations that lead to high moral distress in Thai nurses, why some situations are more or less morally distressing. The qualitative findings will also clarify the relationship between moral distress and setting, intent to leave a position, and other demographic factors that can be a predictor of moral distress. Finally, coping strategies and suggested interventions

used in dealing with the experiences of moral distress emerged from the qualitative interview will also expand the understanding of this issue and will be recommended for future study.

Ethical Consideration

This study was conducted with the intention of protecting the human rights of all subjects. The research proposal and instruments were approved by the Institutional Review Board for Sciences Research, University of Virginia (IRB-HSR #20928) and the Institution Review Broad of the 2 local institutions (REC.61-261-19-6 and #79/2561). The information sheets were provided electronically for quantitative data collection and hard copied were given to participants before the interview. The written consent for the whole data collection process was exempted.

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Appendix A

Timeline

The one-year timeline is as follows:

Year	2018												2019											
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
<i>Aims/Tasks</i>																								
Apply IRB, UVA																								
Apply IRB, 2 Thai institutions																								
Progress report*																								
Conference call*																								
In-person meeting*																								
MMD-HP survey																								
Interviews																								
Data Analysis: Aim 1 & Aim 2																								
Writing draft manuscript 2**																								
Data Analysis: Aim 3																								
Writing draft manuscript 3**																								
Revise manuscripts 1, 2, 3																								
Defend dissertation																								

*Progress reports, submitted by email to advisor one week prior to conference call; Conference call by Skype to identify and resolve problems; In-person meetings will replace conference calls upon return to US.

** Manuscript 2: Translation and Psychometric evaluation of Thai language MMD-HP; Manuscript 3: Moral distress among Thai nurses: Mixed methods study

Appendix B

Measure of Moral Distress-Healthcare Professionals (MMD-HP): English version

Principal Investigator: Chuleeporn Prompahakul, PhD(c), M.N.S., RN

ID #: _____

Date: _____ (MM/DD/YYYY)

Sociodemographic Characteristics

1. Hospital name
 _____ 0) Songklanagarind Hospital
 _____ 1) Hadyai Hospital
2. Age _____ Years
3. Gender
 _____ 0) Male _____ 1) Female
4. Religion
 _____ 1) Buddhist
 _____ 2) Muslim
 _____ 3) Christian
 _____ 4) Others (identify)
5. Educational level
 _____ 1) Bachelor degree
 _____ 2) Master degree
 _____ 3) Doctoral degree
6. Current working unit (Name)
7. Type of your working unit
 _____ 1) Intensive care unit (ICU)
 _____ 2) Intermediate unit
 _____ 3) General unit
8. Type of your working unit
 _____ 0) Adult
 _____ 1) Pediatric

- 9. Working experience as a RN after your graduation (in years)
- 10. Working experience in this current unit (in years)
- 11. Have you ever received end of life care training?
 - _____ 1) Yes
 - _____ 2) No
 - _____ 3) No, but self-study
- 12. The number of episodes of moral distress in the past year

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

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

	Frequency					Level of Distress				
	Never		Very frequently			None		Very distressing		
	0	1	2	3	4	0	1	2	3	4
1. Witness healthcare providers giving “false hope” to a patient or family.										
2. Follow the family’s insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.										
3. Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.										
4. Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.										
5. Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.										

	Frequency					Level of Distress				
	Never		Very frequently			None		Very distressing		
	0	1	2	3	4	0	1	2	3	4
6. Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.										
7. Be required to care for patients whom I do not feel qualified to care for.										
8. Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.										
9. Watch patient care suffer because of a lack of provider continuity.										
10. Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/family.										
11. Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.										
12. Participate in care that I do not agree with, but do so because of fears of litigation.										
13. Be required to work with other healthcare team members who are not as competent as patient care requires.										
14. Witness low quality of patient care due to poor team communication.										
15. Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.										
16. Be required to care for more patients than I can safely care for.										
17. Experience compromised patient care due to lack of resources/equipment/bed capacity.										
18. Experience lack of administrative action or support for a problem that is compromising patient care.										
19. Have excessive documentation requirements that compromise patient care.										
20. Fear retribution if I speak up.										
21. Feel unsafe/bullied amongst my own colleagues.										
22. Be required to work with abusive patients/family members who are compromising quality of care.										
23. Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.										
24. Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.										

	Frequency					Level of Distress				
	Never		Very frequently			None		Very distressing		
	0	1	2	3	4	0	1	2	3	4
25. Work within power hierarchies in teams, units, and my institution that compromise patient care.										
26. Participate on a team that gives inconsistent messages to a patient/family.										
27. Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.										
If there are other situations in which you have felt moral distress, please write and score them here:										

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

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

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

- Yes
- No

Appendix C

Semi-structured Interview Questions

Principal Investigator: Chuleeporn Prompahakul, PhD(c), M.N.S., RN

Domains	Questions
Additional causes	1. Could you define what does moral distress means?
	2. Please tell me a situation based on the definition that you described (if correct)/ that you know it is morally wrong action but you need to do because you have a little power to act against it or there are barriers or constraints.
	3. What is a cause of moral distress in that situation you just described?
Professional actions	4. What action, if any, did you take in the situation you described?
Personal coping	5. How did you deal with your feelings at that time?
Professional coping	6. With whom did you discuss the situation? Why? Was that person helpful to you?
	7. What are the tools or resources available at your institution to address moral distress? - Have you ever taken an issue to the hospital ethics committee? If so, please describe. If no, why? - Do you feel that barriers exist to/ any factors facilitate bringing issues to the hospital ethics committee? If so, please describe.
	8. What resources are out there for nurses that could help prevent moral distress or help those who are experiencing moral distress?
Interventions	9. Reflecting on the situation you described, what would have been helpful to you? What would have helped the situation?
	10. What do want to see in order to alleviate moral distress at your institution?
	11. Is there anything else about this that you would like to share?

5. ระดับการศึกษา
 - () 1. ปริญญาตรี
 - () 2. ปริญญาโท
 - () 3. ปริญญาเอก
6. หอผู้ป่วยที่ท่านกำลังปฏิบัติงาน (ระบุชื่อ)
7. ประเภทของหอผู้ป่วยที่ท่านกำลังปฏิบัติงาน
 - () 1. หอผู้ป่วยวิกฤติ (ICU)
 - () 2. หอผู้ป่วยกึ่งวิกฤติ
 - () 3. หอผู้ป่วยทั่วไป/สามัญ
8. ประเภทของหอผู้ป่วยที่ท่านกำลังปฏิบัติงาน
 - () 0. หอผู้ป่วยเด็ก
 - () 1. หอผู้ป่วยผู้ใหญ่
9. ระยะเวลาที่ปฏิบัติงานพยาบาลหลังสำเร็จการศึกษาปริญญาตรี ปี เดือน
10. ระยะเวลาที่ปฏิบัติงานในหอผู้ป่วยปัจจุบัน ปี เดือน
11. ท่านเคยศึกษาหรือเข้าร่วมการอบรมที่เกี่ยวกับการดูแลผู้ป่วยระยะสุดท้ายหรือใกล้ตายหรือไม่
 - () เคย เข้าร่วมการอบรม
 - () ไม่เคยเข้าร่วมการอบรม หรือศึกษาด้วยตนเอง
 - () ไม่เคยเข้าร่วมการอบรม แต่ศึกษาด้วยตนเอง
12. ตามที่ท่านจำได้อย่างแม่นยำ ในปีที่ผ่านมาท่านประสบกับภาวะบีบคั้นทางจริยธรรมจำนวนกี่ครั้ง
..... ครั้ง

ส่วนที่ 2 แบบวัดภาวะบีบคั้นทางจริยธรรมสำหรับบุคลากรทางการแพทย์

ภาวะบีบคั้นทางจริยธรรมเกิดขึ้นเมื่อบุคคลไม่สามารถที่จะปฏิบัติในสิ่งที่ตนเชื่อว่าเป็นการกระทำที่เหมาะสมตามหลักจริยธรรม เนื่องมาจากข้อจำกัดหรืออุปสรรคใด ๆ ก็ตาม

แบบวัดภาวะบีบคั้นทางจริยธรรมนี้ประกอบด้วยสถานการณ์ต่าง ๆ ที่เกิดขึ้นในการปฏิบัติงานทางคลินิก ซึ่งหากท่านประสบกับสถานการณ์ต่าง ๆ ดังกล่าว โปรดระบุ “ความถี่” ที่ท่านประสบในแต่ละสถานการณ์ และประเมิน “ระดับความรู้สึกบีบคั้น” ที่ท่านมีต่อสถานการณ์นั้น ๆ

ในกรณีที่ท่านไม่เคยประสบกับสถานการณ์ในข้อใดข้อหนึ่ง โปรดให้คะแนนความถี่ “0” (ไม่เคย) และถึงแม้ว่าท่านไม่เคยประสบกับสถานการณ์นั้น โปรดระบุว่าหากสถานการณ์นั้นเกิดขึ้นกับท่าน ท่านอาจเกิด “ความรู้สึกบีบคั้น” ทางจริยธรรมในระดับใด

	ความถี่					ระดับความรู้สึก บีบคั้น				
	ไม่เคย		บ่อยมาก			ไม่รู้สึกเลย		รู้สึก บีบคั้นมาก		
	0	1	2	3	4	0	1	2	3	4
เอตส์ โรคทางจิต โรคผิวหนัง นักโทษ หญิงตั้งครรภ์(เป็น ต้น)										
หมายเหตุ: หากท่านประสบกับสถานการณ์ที่เป็นภาวะบีบคั้นทาง จริยธรรมที่ไม่ได้กล่าวถึงในข้อความต่าง ๆ ข้างต้น กรุณาเขียน เพิ่มเติม และให้คะแนนระดับความถี่และระดับความรู้สึกบีบคั้นที่ เกิดขึ้น										
.....										

ท่านเคยลาออกหรือคิดที่จะลาออกจากงาน ย้ายหอผู้ป่วย หรือย้ายโรงพยาบาล เนื่องจากความรู้สึก
บีบคั้นทางจริยธรรมบ้างหรือไม่

- ฉันทันไม่เคยลาออก หรือคิดที่จะลาออกจากงาน ย้ายหอผู้ป่วย หรือย้ายโรงพยาบาล
- ใช่, ฉันทันเคยคิดที่จะลาออก ย้ายหอผู้ป่วย หรือย้ายโรงพยาบาล แต่ไม่ได้ทำ
- ใช่, ฉันทันเคยลาออกจากงาน ย้ายหอผู้ป่วย หรือย้ายโรงพยาบาลมาก่อน

ท่านกำลังคิดที่จะลาออกจากงาน ย้ายหอผู้ป่วย หรือย้ายโรงพยาบาล เนื่องจากความรู้สึกบีบคั้นทาง
จริยธรรมหรือไม่

- ใช่
- ไม่ใช่

Appendix E

Semi-structured Interview Questions: Thai version

Principal Investigator: Chuleeporn Prompahakul, PhD(c), M.N.S., RN

ข้อคำถามปลายเปิดที่ใช้ในการสัมภาษณ์

องค์ประกอบ	คำถาม
1. สาเหตุที่ทำให้รู้สึกบีบคั้นทางจริยธรรม	1. ท่านทราบหรือไม่ว่าภาวะบีบคั้นทางจริยธรรม คืออะไร/ หมายความว่าอย่างไร
	2. กรุณายกตัวอย่างสถานการณ์ที่ท่านประสบและทำให้ท่านเกิดความรู้สึกบีบคั้นทางจริยธรรมที่สอดคล้องกับความหมายที่ท่านได้ให้ไว้ (หากบอกความหมายในข้อ 1 ได้ถูกต้อง) หรือ กรุณายกตัวอย่างสถานการณ์ที่ท่านพบว่าท่านต้องทำในสิ่งที่ท่านรู้้อยู่แก่ใจว่าไม่ถูกต้องหรือเหมาะสมทั้งทางหลักจริยธรรมหรือมาตรฐาน แต่ท่านจำเป็นต้องทำ เนื่องจากไม่มีอำนาจเพียงพอ หรือมีอุปสรรค/ข้อจำกัดต่างๆ ที่ทำให้ท่านไม่สามารถขัดแย้งการกระทำที่ไม่ถูกต้องนั้นได้
	3. จากสถานการณ์ที่ท่านได้ยกตัวอย่างมา ท่านคิดว่าอะไรเป็นอุปสรรคที่ทำให้ท่านไม่สามารถทำในสิ่งที่ท่านรู้สึกว่าเป็นสิ่งที่ถูกต้องได้
2. การตอบสนองเชิงวิชาชีพต่อสถานการณ์ที่ทำให้เกิดความรู้สึกบีบคั้นทางจริยธรรม	4. ท่านได้ตอบสนอง/ทำอย่างไร/จัดการอย่างไร เมื่อเกิดเหตุการณ์ดังกล่าวขึ้น
3. การเผชิญและรับมือต่อสิ่งที่เกิดขึ้นกับตนเอง เนื่องจากเหตุการณ์ที่ทำให้เกิดความรู้สึกบีบคั้นทางจริยธรรม	5. ท่านมีวิธีการจัดการกับความรู้สึกหรืออารมณ์ที่เกิดขึ้นต่อสถานการณ์อย่างไร
4. การเผชิญและรับมือต่อสิ่งที่เกิดขึ้นกับวิชาชีพ เนื่องจากเหตุการณ์ที่ทำให้เกิดความรู้สึกบีบคั้นทางจริยธรรม	6. จากสถานการณ์ดังกล่าว ท่านได้บอกเล่า ชี้แจง หรือขอความช่วยเหลือกับใครบ้าง - ทำไมท่านถึงเลือกที่จะขอความช่วยเหลือจากคน ๆ นั้น - ท่านคิดว่าคน ๆ นั้น ให้ความช่วยเหลือท่านในการจัดการปัญหาได้ดีมากน้อยแค่ไหน เพราะอะไร

องค์ประกอบ	คำถาม
	<p>7. ที่หน่วยงานของท่าน (หอผู้ป่วย/ โรงพยาบาล) มีแหล่งสนับสนุนในการรายงาน หรือจัดการกับสถานการณ์ที่ทำให้เกิดความรู้สึกบีบคั้นทางจริยธรรมหรือไม่ อย่างไร</p> <ul style="list-style-type: none"> - ท่านเคยรายงานเหตุการณ์ดังกล่าวต่อกรรมการจริยธรรมของโรงพยาบาลหรือไม่ ถ้าเคย กรุณาอธิบายขั้นตอนและผลของการพิจารณา, ถ้าไม่เคย กรุณาอธิบายเหตุผล - ท่านคิดว่ามีอุปสรรค หรือสิ่งขัดขวางในการรายงานเหตุการณ์ดังกล่าวต่อกรรมการจริยธรรมของโรงพยาบาลหรือไม่ ถ้ามี อธิบาย <p>8. ที่หน่วยงานของท่าน (หอผู้ป่วย/ โรงพยาบาล) มีแหล่งสนับสนุนในการป้องกัน หรือมีการให้ความช่วยเหลือเมื่อพยาบาลประสบกับเหตุการณ์ที่ทำให้เกิดความรู้สึกบีบคั้นทางจริยธรรม หรือไม่ อย่างไร</p>
5. ความช่วยเหลือที่อยากให้เกิดขึ้น	<p>9. จากสถานการณ์ที่ท่านกล่าวมา ท่านคิดว่าวิธีการใดที่มีประโยชน์/สามารถช่วยเหลือท่าน และสถานการณ์ที่เกิดขึ้น</p> <p>10. ท่านอยากให้หน่วยงานของท่าน (หอผู้ป่วย/ โรงพยาบาล) มีวิธีการรับมือเพื่อลดความรู้สึกบีบคั้นทางจริยธรรมอย่างไร</p> <p>11. ท่านมีข้อเสนอแนะ หรือเหตุการณ์ที่อยากเล่าสู่กันฟังอีกหรือไม่</p>

CHAPTER 2

MANUSCRIPT 1

Moral Distress Experienced by Non-Western Nurses: An Integrative Review

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Abstract

Background: Moral distress has been identified as a significant issue in nursing practice for many decades. However, most studies have involved American nurses or Western medicine settings. Cultural differences between Western and non-Western countries might influence the experience of moral distress. Therefore, the literature regarding moral distress experiences among non-Western nurses is in need of review.

Aim: The aim of this integrative review was to identify, describe and synthesize previous primary studies on moral distress experienced by non-Western nurses.

Review method: Whittemore and Knafl's integrative review methodology was used to structure and conduct the review of the literature.

Research context and data sources: Key relevant health databases included the OVID Medline, CINAHL, Web of Science, and Google Scholar databases. Two relevant journals, Nursing Ethics and Bioethics, were manually searched.

Findings: Seventeen primary studies published between 1999 and December 2016 were appraised. There was an inconsistency with regard to moral distress levels and its relationship with demographic variables. The most commonly cited clinical causes of moral distress were providing futile care for end-of-life patients. Unit/team constraints (poor collaboration and communication, working with incompetent colleagues, witnessing practice errors, and professional hierarchy) and organizational constraints (limited resources, excessive administrative work, conflict within hospital policy, and perceived lack of support by administrators) were identified as moral distress's stimulators. Negative impacts on nurses' physical, psychological, and spiritual well-being were also reported.

Conclusion: Further research is needed to investigate moral distress among other health care professions which may further build understanding. More importantly, interventions to address moral distress need to be developed and tested.

Keywords

Moral distress, ethics, literature, nursing, review, non-American, non-Western

Introduction

Moral distress has been identified as a significant problem in nursing practice for many decades. The American philosopher Andrew Jameton¹ initially characterized moral distress as a phenomenon in nursing and defined it as occurring “when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action.” He also distinguished moral distress from moral dilemmas, describing a moral dilemma as not knowing the correct moral choice and the need to make the decision between two or more justifiable choices. Moral distress, he argued, is knowing the correct course of action but not being able to pursue it.² In 1987, Wilkinson³ studied moral distress among staff nurses and extended the definition of moral distress to include “...a negative state of psychological disequilibrium.” While psychological or emotional distress or disequilibrium is always present in morally distressing situations, we now understand that what sets moral distress apart is the experience of being complicit in carrying out acts one believes to be wrong.

Various empirical studies have evaluated moral distress using the original Moral Distress Scale (MDS), the Moral Distress Scale-Revised (MDS-R), or modifications of these scales. Developed by Corley⁴, the MDS was designed to measure moral distress among intensive care nurses. The MDS was modified for many studies in both American and non-American countries.⁵⁻⁸ Hamric et al.⁹ revised Corley’s MDS to the Moral Distress Scale-Revised (MDS-R) to be more applicable to all acute care settings and to all healthcare providers. In 2019, the MDS-R was significantly updated, revised, and tested at two institutions. This scale, the Measure of Moral Distress for Healthcare Professionals (MMDHP) is usable for all healthcare providers in acute and critical care as well as long-term acute care settings.¹⁰ The MDS, MDS-R, and MMDHP are Likert scale instruments which capture the elements of frequency and intensity of morally distressing situations.

A three-level structure of root causes of moral distress has emerged from recent empirical studies; clinical situations, unit/team problems, and system/organization problems.¹¹ Examples of clinical situations are continuing life support even though it is not in the best interest of the patient and initiating lifesaving actions that only prolong death.^{9, 12-16} Examples of unit/team problems include poor team communication or collaboration that lead to inconsistency in goals and plans of care.^{9, 16-17} Examples of system/organization problems are inappropriate use of resources, chronic and critical low staffing, and policies that negatively impact care delivery.^{9, 12, 16}

Much of the work in this field, from defining the concept to instrument development, to identifying the three-level structure of root causes, has occurred in American or other Western cultures. In addition, although moral distress has been systematically studied in nursing, most involved American nurses or other Western medicine settings. The literature specifically in non-American or non-Western nurses is scant. Cultural differences between Western and non-Western countries might influence the experience of moral distress.¹⁸⁻¹⁹ Therefore, the literature regarding moral distress experiences, contributing factors and consequences of moral distress among non-Western nurses are in need of review.

Aim

The aim of this integrative review was to identify, describe, and synthesize previous primary studies on moral distress experienced by non-Western nurses.

Study questions

The review aimed to respond to the following research questions:

1. What is the moral distress experience as perceived by non-Western nurses?
2. What factors contribute to moral distress among non-Western nurses?
3. What are the outcomes of moral distress on non-Western nurses?

Methods

Design

An integrative review based on Whittmore and Knafl's²⁰ updated methodology was used to structure and conduct the review of the literature, as this is the only approach that allows for the simultaneous inclusion of diverse methodologies in order to develop a comprehensive understanding of the phenomena of moral distress experienced by non-Western nurses. The updated integrative review framework was established to enhance its rigor and accuracy and reduce the bias caused by the complexity inherent in combining various methodologies.²⁰ This framework is widely cited in the nursing literature and was chosen based on its explicit description of the integrative review process and applicability of this process to the topic under investigation.²¹

Whittmore and Knafl²⁰ defined five stages of review, beginning with the identification of a specified review of purpose and variables of interest, which will facilitate the ability to extract appropriate data from the primary source. In this case, the specific aims are to investigate the experiences, factors, and outcomes of moral distress perceived by non-Western nurses. After the identification of purpose and variables, a well-defined literature search strategy is conducted to gather the maximum number of eligible primary sources, using both electronic databases and hand searching. The next stage is evaluating the quality of primary sources which vary depending on the sampling frame. After data evaluation, data analysis is conducted to extract data from primary sources. The data are ordered, coded, categorized, compared, and summarized based on the purposes and questions of the review. Finally, the implication and the limitation of the studies are presented. The following sections will describe the process used for this review, and the steps taken to ensure fidelity to Whittmore's and Knafl's method.²⁰

Search process

The search process included key relevant health databases: the OVID Medline, CINAHL, Web of Science, and Google Scholar databases. Additionally, manual searches were conducted in order to avoid search bias and to maximize the number of relevant studies, two journals, *Nursing Ethics* and *Bioethics*, were included in the manual searches because of their close links to the research topic. The search employed keywords and MeSH terms, such as nurses, nurs*, moral distress, and moral suffering.

Primary research published between 1999 and 2016 that included qualitative, quantitative, or mixed methods methodology written in English and Thai that examined nurses' experiences, contributing factors, and outcomes related to moral distress were considered for this review. Articles were excluded if other healthcare professionals were included. Because the aim of this review has focused on non-

Western populations, studies conducted in the U.S., Canada, and other European countries were excluded. In addition, case studies, case series, commentaries, expert opinions, and editorials were not accepted for analysis.

Search outcomes

The initial search from the four databases and two specific journals yielded 376 articles. The screening process was adapted from the process outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement for reporting of systematic reviews.²² The retrieved articles were managed by Ref-Works (<http://www.refworks.com/>), an online reference management software tool. Duplicates (n=179) were eliminated. After applying the inclusion criteria to the titles and abstracts, 197 articles were selected for the first screening and 152 articles were removed because the studies were conducted in Western countries or were expert opinions or literature reviews. Finally, 45 studies were carefully reviewed and their content was analyzed and evaluated from the viewpoint of the study questions. After completing this evaluation, 17 articles were included and analyzed for this review (See Figure 1).

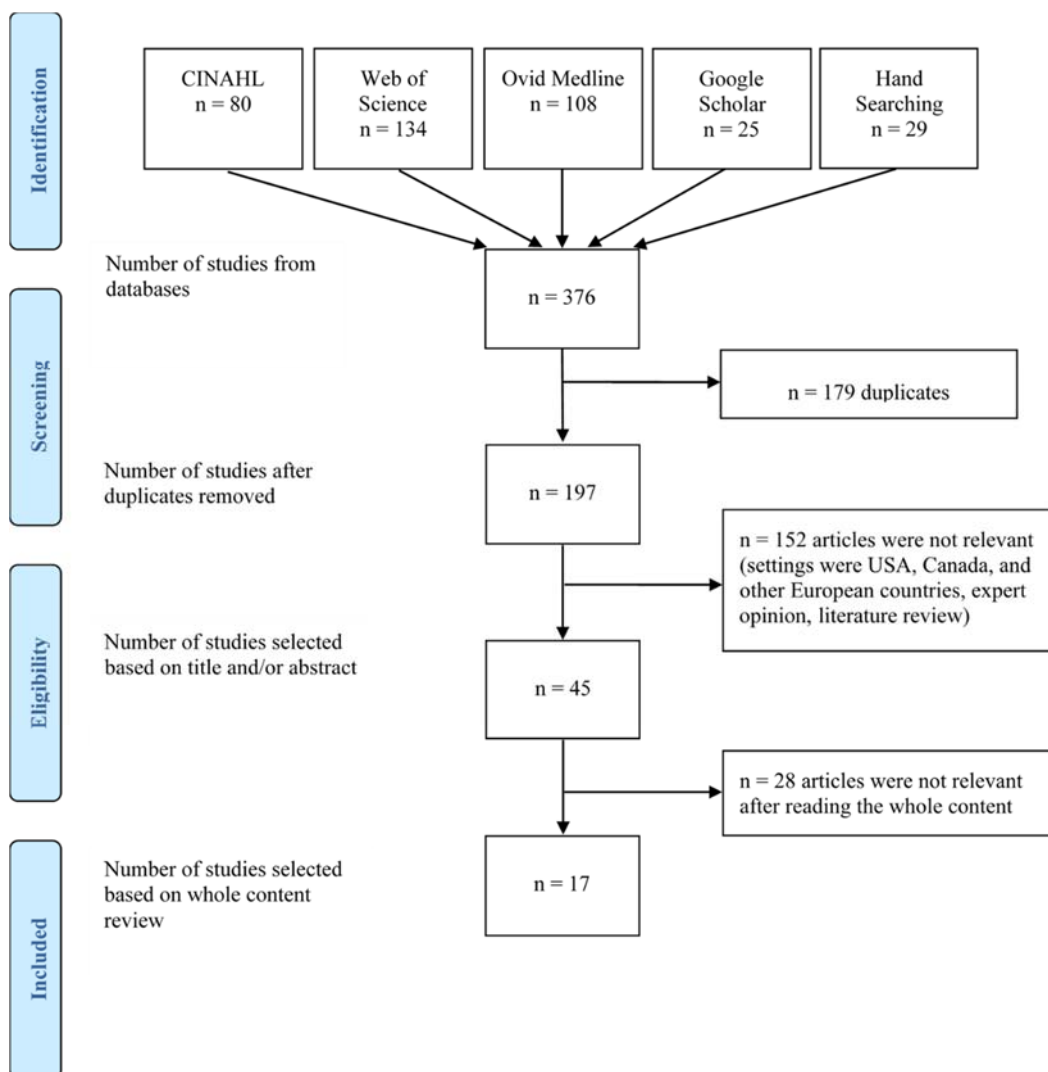


Figure 1. Summary of search outcome and study selection for integrative review.

Quality appraisal

The included studies were critically appraised prior to being included in the analysis. Evaluating quality of primary sources in the integrative review method where diverse primary sources are included increases the complexity and there is no gold standard for calculating quality scores.²⁰ To critically appraise each article, the authors used standardized critical appraisal instruments from the Joanna Briggs Institute, specifically the Critical Appraisal Checklist for Analytical Cross-Sectional Studies²³ and Critical Appraisal Checklist for Qualitative Research.²⁴ The checklist for cross-sectional studies consisted of 8 questions and 10 questions for qualitative research. Both checklists answered with a “yes” or “no.” In this study, a score of 5 points out of 8 (Cross-sectional) and 8 points out of 10 (Qualitative) are considered as good quality.

Data abstraction and synthesis

All seventeen studies were analyzed sequentially and the following elements were extracted: author, and year; country; sample and setting; purpose; research design; measurement; and results based on the perspective of study questions. Matrix tables were designed to present the relevant extracted data divided into two groups based on design of the evidence—quantitative, and qualitative—and then arrange by year (Tables 1 and 2). The data displays of primary sources were compared in order to identify patterns, themes, or relationships. Finally, the synthesis of important elements or conclusions of each study question are presented in the Results and Discussion sections.

Results

Three main focus areas were identified; moral distress experiences perceived by non-Western nurses, contributing factors, and outcomes of moral distress. In addition to these foci, the characteristics of the studies are summarized.

Characteristics of the Studies

Seventeen studies met the inclusion criteria were analyzed. Based on The Joanna Briggs Institute Critical Appraisal tools, the overall quality of the included research studies was good.²³⁻²⁴ The studies were conducted in ten different countries. Most studies were conducted in Middle Eastern or Asian countries such as Iran (n=7), Israel (n=1), Japan (n=2), Taiwan (n=1), China (n=1), Korea (n=1), and India (n=1) and 3 were conducted in African countries including Malawi (n=1), South Africa (n=1), and Uganda (n=1).

The studies included both quantitative (9) (Table 1) and qualitative approaches (8) (Table 2). In the 9 quantitative studies, the MDS was used in one study by Ganz et al.²⁵ and the MDS-R was used in one study.²⁶ Six research studies modified the MDS due to cultural differences^{7-8, 27-30} and one study³¹ modified the MDS-R. In those studies, using modified instruments, the authors conducted specific literature reviews of nursing practice in each country to guide the modifications. Therefore, some irrelevant items were removed and some new items were added. Scales to measure moral distress were available in 4 different languages. Back translation with bilingual process was used to

ensure the reliability of the instruments. All of the scales demonstrated high reliability with Cronbach's alpha coefficient greater than 0.80. Eight qualitative studies included in-depth interviews for data collection. Participants in 6 studies were both intensive care (ICU) and non-ICU nurses working in adult units and two explored moral distress in psychiatric nurses.

Non-Western Nurses' Experiences of Moral Distress

From studies using the MDS, MDS-R, or modifications of the MDS-R, ICU nurses experienced low²⁵ to moderate^{28, 30} levels of moral distress frequency, meaning that morally distressing situations were not encountered often. The intensity levels of moral distress are reported as moderate,^{25, 28} and high³⁰ suggesting that when moral distress is encountered, it is quite disturbing. In parallel, non-ICU nurses also reported low^{7, 27, 31} to moderate²⁹ levels of moral distress frequency and low^{27, 31} to moderate²⁹ levels of moral distress intensity.

Although the levels of moral distress experiences in ICU and non-ICU nurses seem to be similar, Borhani et al.³⁰ indicated that ICU nurses yield the highest mean of moral distress compared to other settings. Qualitative findings enriched this distinction in that ICU nurses more commonly expressed their moral distress in terms of futile care situations and those involving incompetent providers.^{25, 32-34} In contrast, non-ICU nurses reported that they were less familiar with the meaning of the word *moral distress* but their experiences met Jameton's definition of moral distress and had a broader array of root causes (e.g., lack of resources, communication/collaboration problems).³⁵⁻³⁸

Apart from the difference of the setting, demographic characteristics such as age, gender, educational level, and years of working may influence moral distress experiences. There is a discrepancy in moral distress levels for different age groups. Various studies found a positive association between age and years of clinical experience with moral distress, meaning that older nurses and expert nurses tended to have higher levels of moral distress than younger or novice nurses.^{8, 26, 28, 31} In contrast, two studies found that younger nurses experienced higher levels of moral distress frequency and intensity than older nurses.²⁹⁻³⁰ Soleimani et al.²⁶ reported differences in moral distress based on gender, with female nurses having higher moral distress levels than male nurses, however, a small number of men participated in the study (n=36, females n=157).

With respect to the definition of moral distress, most studies used Jameton's definition to construct their interview questions, such as "Would you please describe a situation when you know or believe what the correct thing would be to do but can't pursue this option".³³⁻³⁴ Only one qualitative study aimed to explore nurses' understanding of the moral distress concept.³⁵

Factors contributing to moral distress

Several factors related to nurse's moral distress were reported. Three main themes of contributing factors included inappropriate treatment, unit/team constraints, and organizational constraints.

End of Life Issues. Futility and unnecessary treatments are clinical situations frequently described as causes of moral distress among nurses in both quantitative and qualitative studies. Providing aggressive treatments or cardiopulmonary resuscitation (CPR) that are not in the best interests of the patient and performing unnecessary tests

and treatments demonstrated the highest frequency and intensity of moral distress among nurses in quantitative studies.^{25, 31} These futile medical treatments were perceived to only prolong the patient's death. Qualitative studies have reinforced this finding.^{25, 31-34, 36} Nurses reported experiencing moral distress when they participated in treatments when a patient had no hope of recovering. Examples of this include performing extracorporeal membrane oxygenation (ECMO) for an 83-year-old patient with acute respiratory distress syndrome who was unresponsive to treatment,³² or witnessing a physician provide false hope to a family in order to convince them to continue with aggressive treatments.³³ Nurses expressed concern that not only did patients suffer but that it also extended the grieving period of the family.³³ Not all participants found such situations to be morally distressing, however. Chen et al.³⁶ reported that some nurses believed that these intensive and unnecessary treatments were provided to terminal patients merely to meet the demands of family members and offer consolation. While many nurses defined futility and unnecessary treatments as causes of moral distress due to prolonging death, one study found that, these were hastening death.³⁷ These nurses were pressured to participate and witness cancer patients suffer and die because of the chemotherapy. Their sense of futility and inevitability was that the patient would not survive, no matter what they did.³⁷

Two unique situations arose in this review. Religious beliefs played an important role in some situations, especially regarding treatment decisions for patients at the end of life (EOL). In an Iranian study, where the dominant religion is Islam, nurses described a conflict between professional values and religious beliefs that lead them to experience moral distress. The nurses understood that CPR is not appropriate for some patients but they felt pressured to perform it because, according to the instructions of Islam, no one can end the life of another person.³⁴ A second unique cause was found among South African nurses who illustrated their moral distress due to requests by doctors to increase morphine doses to levels that could end a patient's life or to be involved in treatment decisions to hasten the deaths of terminally patients.³³

Unit/Team Constraints. This theme refers to moral distress caused by poor team collaboration and communication, working with incompetent healthcare providers, witnessing practice errors, and working in an inhibiting hierarchical environment. In quantitative studies, working with nurses or other healthcare providers who are not as competent as the patient care requires tended to be very disturbing for nurses.^{8, 25} In three qualitative studies, incompetent colleagues generated moral distress, particularly when their actions threatened the integrity of the patient.^{31, 33-34}

With regard to a poor team function, communication and collaboration within the team were crucial triggers of moral distress. Lack of communication among healthcare providers, especially between nurses and physicians, led to miscommunications between nurse and family and inconsistent goals of care.^{33-34, 36} When nurses were unable to provide accurate information to patients or family members, they felt that they were unsuccessfully providing holistic care.³³⁻³⁴ In addition, nurses reported feeling that they were not part of the team, although they wished to be included.³³

Hierarchical power structures were found to be a common cause of nurses' moral distress. Sometimes a person (nurse) who is lower in the hierarchical structure has to carry out orders from a superior (physician) that are against his or her own conviction.^{33-34, 36-37} The imbalance of power among the team was also reported by nurses as a barrier for them to advocate for the patient.³⁷ Some nurses experienced moral distress when they were provided with limited autonomy or input in decision

making in situations where they disagreed with physicians over a course of treatment.^{32, 36} In addition, one study reported situations in which seniority was used to cover up a nurse's medical error.³² Not only the narrative expression, but the statistical also evidence the highest frequency and intensity moral distress is that nurses are requested to acquiesce to violations of patients' rights.³²

Organizational Constraints. Organizational constraints refer to factors beyond the responsibility of management at the unit/team level such as limited resources (e.g., staff shortages, insufficient medical supplies and equipment), excessive administrative work, conflict with hospital policy, and perceived lack of support by administrators.

Among the factors related to institutional barriers and constraints, nurse to patient ratio, workload, and lack of resources were often reported as sources of moral distress. One correlational study finding concluded that low staffing was correlated with higher moral distress intensity.⁷ Nurses also expressed concern about being required to complete excessive general administrative tasks and written assignments,³⁶ low staffing resulting in higher workloads, and the necessity of overtime hours. Nurses were forced to provide care as quickly as possible and had insufficient time to achieve the standard of care or provide more comprehensive patient treatments.^{28-29, 32, 34-35, 37-38} For example, in a study of Ugandan nurses, nursing units with 25 beds often admitted 80–100 patients and were staffed by one or two nurses³⁸ which is similar to the staffing levels in LeBaron et al.'s study in India where the nurse: patient ratio could be as high as 1:60+. The Indian nurses reported that they generally felt unsupported by upper-level management, therefore, this staff shortage would become a chronic issue for them.³⁷

Not only did human resources serve as the source of moral distress; but, the lack of basic equipment and supplies also lead to moral distress due to an inability to achieve standard of care.^{28, 34-35, 37} For example, in India resources are allocated by the Ministry of Health and the financial reality of the patients served by the hospital. So, in LeBaron's study,³⁷ nurses experienced moral distress caused by both insufficient resources and unfair distribution of those limited resources based on hospital financial goals.

With regard to hospital policies, nurses in one study mentioned the legal situation as a major obstacle in their work because they cannot do any interventions based on ethical codes that conflict with legal requirements approved by a Nursing Council.³⁴ They experienced moral distress when the hospital legal requirements were in conflict with hospital policy. In contrast, some hospital regulations limited their legal ability to care for patients which also generated moral distress. Similarly, Malawi nurses reported situations in which they failed to follow hospital rules, regulations, or policies in order to protect their patients as well as their own interests.³⁵ For instance, the hospital policy requires that patients be seen by a clinician other than a nurse. When physicians were not available, they witnessed sick patients suffer when they (the nurses) could have assisted.³⁵

Outcomes of moral distress

Nine studies examined and described the outcomes or consequences of moral distress. All outcomes of moral distress in this review were found to be negative outcomes. These outcomes can be classified into three themes including personal impacts, patient impacts, and institutional impacts.

Personal impacts. Moral distress affected physical, psychological, and spiritual well-being of nurses in several studies.^{35, 37, 39} Physical symptoms associated with moral distress include headache, back pain, loss of appetite, diarrhea, nausea, heartburn, stomachache, sleeping disorder^{35, 39} and menstrual difficulties.³⁷

Psychological impacts included burnout, anger, sadness, stress, anxiety, depression, regret, and guilt.^{35, 37, 39} Feeling of worthlessness and losing faith are spiritual dimensions affected by moral distress.³⁹ Nurses expressed that moral distress made them feel that life is meaningless and human beings are worthless.³⁹ Some asserted that they quit their religious practices and do not say their prayers.³⁹

Patient impacts. Nurses' moral distress may affect the quality of patient care and subsequent health outcomes. Three studies indicated that nurses lost the ability to care for their patient, avoided patient interaction, or failed to provide the appropriate standards of patient care as a result of moral distress.^{35, 37, 39} Some nurses used negative strategies to cope with distress, which included distancing and avoidance that barely met the patient's basic physical needs.^{35, 37, 39}

Institutional impacts. Nurses in four studies demonstrated signs of burnout^{7, 38} or low job satisfaction.^{27, 31} Nurses also reported that they were considering leaving their jobs or abandoning the nursing profession altogether.³⁷ This relationship was also affirmed by a significant association between moral distress and intention to leave the job.²⁶

Discussion

This review provides a synthesis of both quantitative and qualitative studies of moral distress to characterize the experience and to identify common causes and outcomes among non-Western nurses. Some variation exists in the experience of moral distress among ICU and non-ICU nurses but no other professional or demographic variables correlate consistently with moral distress. The causes of moral distress for non-Western nurses are similar to those of nurses in Western countries, although there appear to be cultural factors that may shape the causes differently. Finally, the outcomes of moral distress are largely negative, again consistent with Western studies.

Both ICU and non-ICU nurses generally reported low to moderate levels of moral distress frequency, whereas the levels of moral distress intensity tended to be higher. In the west, moral distress scores are typically higher among ICU nurses than non-ICU nurses, although these scores are generally, but not always, reported as combined scores (frequency x intensity) rather than as separate frequency and intensity scores.^{16, 40} In this review, the use of different instruments (MDS-P, IMDS, MDS, MDS 21 item, MDS-R, or other modified MDS-R) and different scoring formulas made comparison difficult. In addition, there are no established parameters for low, moderate, or high levels of moral distress for any of the instruments, as these parameters may be different depending on factors such as setting and profession. With respect to nurses' demographic characteristics such as age, gender, educational level, years of working, and income, there is no clear congruence regarding the relationship between these sociodemographic variables and moral distress from this review. The incongruity in findings might be due to differences in culture, setting, individual coping strategy, and work environment.⁴¹⁻⁴³ These unmodifiable demographic variables may yet be confounding factors and should continue to be evaluated in future studies.

Common causes of moral distress among non-Western nurses reflect the three-level structure proposed by Hamric and Epstein.¹¹ At the patient level, Western studies often identify situations of inappropriate treatment as being the highest ranked causes of moral distress.^{13, 16, 40, 44-45} Examples include following a family's wishes to

continue life support even though it is not in the best interest of the patient, and continuing to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.^{9, 10, 15-16, 40, 46} In the current review, we identified similar patient-level causes. End-of-life situations involving inappropriate treatment were the most problematic causes of moral distress among non-Western nurses. Two studies found situations not commonly identified in western studies, that is, situations in which providers' religious beliefs added complexity to end-of-life decision making and situations in which nurse were ordered to hasten patients' deaths.^{33, 39} Moral distress occurs when professional values and beliefs are violated, not personal values and beliefs. Religious beliefs are typically considered to be personal beliefs, but in the case of Shoorideh et al's study, the religious beliefs were deeply held by other providers and patients as well as the nurses and, while the nurses realized that additional aggressive treatments were unlikely to be helpful, they felt compelled to provide them because of orders from physicians and interpretations of their faith.³⁹

Team-level causes in this review are comparable with Western studies. Poor team communication or collaboration, incompetent colleagues, and lack of provider continuity are common causes of moral distress in western studies.^{9, 13, 16-17, 47} Nurse-physician collaboration has been identified as a way of amending the power relationship and supporting nurses' autonomy.⁴⁸⁻⁴⁹ Problematic inter-professional collaboration is associated with the limited authority of nurses to apply their personal and professional moral reasoning and values in the care of patients. This may lead to individual nurses experiencing less input in decision making despite them having relevant and useful information to contribute to those decisions, and greater moral distress.⁴⁸⁻⁴⁹ Although professional hierarchical structures are present in both Western and non-western countries, one might argue that there might be more or different hierarchical constraints in non-western organizations due to the dominance of hierarchical structures in some countries.¹⁹ An additional team-level constraint among non-western nurses was incompetent colleagues, consistent with western studies.^{8, 25, 31, 33-34}

With respect to constraints at organizational level, providing less than optimal care to reduce costs and inadequate staffing are common root causes of moral distress at the organizational level that could be found in both Western^{9, 16-17, 44} and non-Western countries.^{28-29, 32, 34-35, 37-38} In a qualitative study conducted in Canada, nurses and physicians at the community level reported that a lack of appropriate equipment and a dearth of health professionals caused moral distress because of the impact on their ability to provide the best possible care.¹³ However, the economic statuses of the non-Western countries included in this review are lower than most Western countries and the lack of sufficient resources, for non-Western countries, can mean overwhelmingly high nurse: patient ratios (e.g., 1:60-100) and a severe absence of basic medical supplies.^{37, 38} Thus, while lacking sufficient resources is identified as a root cause of moral distress in both the west and non-west, the extent and experience of the problem appear to be different and worthy of further study.

Outcomes of moral distress in this review are negative. It impacts aspects of nurses' physical and psychological well-being, quality of patient care, and the intuition such as burnout and leaving the profession which aligns with the western findings. No studies have identified direct links between provider moral distress and patient care outcomes, but several studies have explored nurses' perceptions of the impact of morally distressing situations on patient care quality and outcomes.^{3, 18, 45, 50} Wiegand and Funk⁴⁵ found that nurses perceive morally distressing situations to be

associated with negative patient experiences of suffering, prolonged dying, undignified dying, poor quality of life, inappropriate care, delayed treatment, prolonged hospitalization, disrespect, and the inability to be with family, and negative family experiences such as being unprepared, overwhelmed, and suffering unnecessarily. In a study of moral distress among mental health nurses, Austin et al.⁵⁰ found that nurses in situations of chronic understaffing believed patient care to suffer—patients screaming and not receiving help, patients not receiving necessary care, or even patients dying alone. Additionally, considering leaving a nursing position is one outcome of moral distress that impacts clinicians and organizations as evident by both quantitative and qualitative studies in this review.^{26, 37} In multiple American studies, 45% to nearly 50% of nurses have left a position or have considered leaving a position because of moral distress.^{9, 16, 51} Further, moral distress scores are positively associated with intention to leave a position now due to moral distress.^{5, 9, 16-17, 44, 47, 51-52}

Conclusions

This integrative review was conducted in a systematic manner providing a rigorous representation of the results. The results confirm that while the concept of moral distress is not well-known among non-western nurses, both qualitative and quantitative studies indicate that they experience moral distress in similar ways to western nurses, although cultural differences may be important differentiators between the west and non-west. Moral distress is understudied in non-western nurses; however, moral distress scales developed by American academic experts have been used and adapted for use in these settings with good results. Consistency in measurement would allow for a more robust comparison between cultures and may allow for insights into the cultural influences of the phenomenon. In this regard, qualitative studies remain invaluable as they provide rich and culturally nuanced narratives.

Limitations

Although this review succeeds in answering the specified questions, this review has several limitations. First, the included studies were generally conducted using small sample sizes, convenience sampling, only a single setting, and often had low response rates. Second, the variety of instruments used to measure moral distress limited the interpretation of findings.

Implications

This review provides evidence that the experience of moral distress is universal. Further research is needed to deeply explore the effects of religious beliefs and cultural influences on moral distress. Multi-national, non-western studies of moral distress would allow for evaluation of the phenomenon over a broader range of cultures using a consistent measure of moral distress. Studies of other healthcare professions may broaden the understanding of moral distress, its sources, constraints,

and outcomes. More importantly, interventions to mitigate moral distress need to be developed and tested in non-western cultures.

Conflict of interest

The authors declare that there is no conflict of interest.

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Table 1. Quantitative studies on moral distress

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Ohnishi et al. ⁷ (2010)	- Japan - 6 hospitals - 391 psychiatric nurses	- To develop and evaluate a moral distress scale for psychiatric nurses (MDS-P) and test its validity and reliability. - To explore the correlation between moral distress and burnout.	<u>Design:</u> - Predictive study <u>Measurement:</u> - MDS-P*: modified MDS based on literature regarding psychiatric nursing (reliability: $\alpha=0.90$) - Maslach Burnout Inventory-General Survey (MBI-GS)	- MD frequency (M=2.47, SD=1.71), Intensity (M=2.86, SD=1.79) - Top three factors: 1. Work with levels of nurse staffing that I consider 'unsafe.' 2. Observe without taking action when patients continue to be hospitalized even though their condition is stable and they are ready to be discharged. 3. Treat patients inadequately because of understaffing. - No significant difference between gender, license type, age, and moral distress. - Positive correlation between MDS and burnout subscale scores for cynicism ($r=0.30, p<0.05$) and exhaustion ($r=0.23, p<0.05$). - MD (low staffing) predicts burn out.
Ganz et al. ²⁵ (2012)	- Israel - 6 different hospitals - 291 critical care nurses	- To determine levels of structural empowerment and moral distress. - To investigate the association between structural empowerment and moral distress.	<u>Design:</u> - Cross-sectional correlational study <u>Measurement:</u> - MDS - Reliability: α (F)=0.92, α (I)=0.97 - Conditions of Work Effectiveness Questionnaire	- MD frequency (M=1.5, SD=0.7), Intensity (M=3.7, SD=1.4) - Highest frequency items: performing medical tests that were not needed; conducting CPR only to prolong life. - Highest intensity items: conducting CPR to prolong life; working with unqualified physicians. - Negative correlation between MD frequency and structural empowerment ($r=-0.18, p=0.004$).
Borhani et al. ²⁹ (2014)	- Iran - Mixed wards - 220 nurses - two teaching hospitals	-To examine the relationship between moral distress, professional stress, and intent to stay in the nursing profession.	<u>Design:</u> - Cross-sectional correlational study	- MD frequency (M=2.21, SD=0.56), Intensity (M=2.25, SD=0.6) - Top three factors: 1. I have found myself in situations where there was not enough staff to adequately provide the necessary services (M(F)=2.83, M(I)=2.83).

Table 1. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
			<p><u>Measurement:</u></p> <ul style="list-style-type: none"> - Shorten form of MDS 21 items (reliability: $\alpha=0.93$) - Wolfgang's Health Professions Stress Inventory - Nedd Questionnaire on Intent to Stay in the Profession 	<ul style="list-style-type: none"> 2. I find myself caring for the emotional needs of patients ($M(F)=2.52$, $M(I)=2.65$). 3. I have so much work to do that I cannot do everything well ($M(F)=2.15$, $M(I)=2.17$). - MD increase with decreasing age ($r = -0.2$, $P < 0.05$). - Negative correlation between MD and number of years in service ($r = -0.3$, $P < 0.05$). - MD significant correlated with work setting ($P < 0.05$) - Pediatric nurses have highest MD mean score ($M = 2.63$, $SD = 0.26$). - No significant correlation was observed between moral distress, professional stress, and sex or type of employment. - Positive correlation between MD and professional stress - No correlation between MD and intent to stay in the profession
Borhani et al. ²⁸ (2015)	- Iran - ICU and CCU - 4 hospitals - 153 nurses	- To determine the relationship between moral sensitivity and moral distress.	<p><u>Design:</u></p> <ul style="list-style-type: none"> - Cross-sectional correlational study <p><u>Measurement:</u></p> <ul style="list-style-type: none"> - Shorten form of MDS 21 items (Reliability: $\alpha=0.88$) - Moral Sensitivity Questionnaire 	<ul style="list-style-type: none"> - MD frequency ($M=46.6$, $SD=16.45$), Intensity ($M=44.8$, $SD=16.68$) - Highest mean score: lower levels of care due to the pressure caused by staff shortage, equipment shortage, and cost reduction - MD increase with increasing in age - MD increase with increasing in work experience - Positive correlations between intention to leave and both moral distress frequency ($p=.02$) and intensity ($p=.03$). - Positive correlations between turnover and both moral distress frequency ($r=0.2$, $p < 0.01$).
Borhani et al. ³⁰ (2015)	- Iran - mixed unit - 3 hospitals. - 300 nurses	- To investigate the relationship between moral distress and perception of futile care.	<p><u>Design:</u></p> <ul style="list-style-type: none"> - Cross-sectional study <p><u>Measurement:</u></p> <ul style="list-style-type: none"> - Shorten form of MDS 21 items (Reliability: $\alpha=0.85$) 	<ul style="list-style-type: none"> - MD frequency ($M=3.11$, $SD=0.6$), Intensity ($M=3.54$, $SD=0.3$) - Highest average mean of intensity and frequency item is "My busy work schedule causes my job quality to be reduced." - Positive correlation between MD and nurses' perception of futile care ($r=0.4$, $p=0.03$).

Table 1. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Shoorideh et al. ⁸ (2015)	- Iran - 12 academic hospitals - 180 ICU nurses	- To determine the correlation between moral distress with burnout and anticipated turnover.	- Nurses' perception of futile care situations <u>Design:</u> - Cross-sectional correlational study <u>Measurement:</u> - Iranian moral distress scale (IMDS) (Reliability: $\alpha=0.96$) using content analysis of literature - Burnout Inventory - Anticipated Turnover Scale	- Negative correlation between MD with age ($r=-0.3, p=0.04$) and number of years in service ($r=-0.4, p=0.04$). - ICU nurses yield highest MD mean ($M=4.25, SD=0.25$) and highest mean of futile care of 3.2 ($M=3.2, SD=0.76$). - Overall MD ($M=2.08, SD=0.98$) - Top three MD mean scores 1. Inappropriate competencies and responsibilities ($M=2.08, SD=0.98$). 2. Errors ($M=2.07, SD=1.19$). 3. Not respecting the ethics principles ($M=1.83, SD=1.23$). - Positive correlation between age, years of nursing experience, years of ICU nursing experience, years of current ICU nursing experience, nurse-to-patient ratio, and moral distress. - No correlation between type of employment, shift type, and moral distress - Positive correlation between MD and burnout ($p < 0.05$) - No correlation between MD and anticipate turnover.
Ando and Kawano ²⁷ (2016)	- Japan - 130 psychiatric nurses	- To investigate the association between moral distress and job satisfaction	<u>Design:</u> - Predictive study <u>Measurement:</u> - MDS-P* (reliability: not given) - Job Satisfaction scale	- Top three MD mean scores 1. Unethical conduct by caregivers ($M(F)=1.80, M(I)=2.00$). 2. Low staffing ($M(F)=1.33, M(I)=1.69$). 3. Acquiescence to violation of patient's right ($M(F)=2.41, M(I)=2.64$) - Negative correlations between both intensity ($r=-.44, p<.001$) and frequency of moral distress ($r=-0.45, p<.001$) and job satisfaction). - Acquiescence to patients' rights violations was a predictor of job satisfaction.
Soleimani et al. ²⁶ (2016)	- Iran - 193 nurses - mixed units	- To examine the relationship between spiritual well-being and moral distress.	<u>Design:</u> - Cross-sectional correlational study	- Overall MD ($M=109.56, SD=58.70$) - Gender and educational levels were found to be independent predictors for moral distress.

Table 1. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Wenwen et al. ³¹ (2016)	- China - 3 general hospitals - 465 clinical nurses	- To describe the current situation of moral distress and to explore its influencing factors.	<p><u>Measurement:</u></p> <ul style="list-style-type: none"> - MDS-R with slight modification (reliability: $\alpha=0.88$) <p><u>Design:</u></p> <ul style="list-style-type: none"> - Cross-sectional correlational study <p><u>Measurement:</u></p> <ul style="list-style-type: none"> - Chinese version MDS-R (reliability: $\alpha=0.87$) - Job Diagnostic Survey 	<ul style="list-style-type: none"> - Female nurses reported higher MD than female. - Associate degree holders reported less moral distress than nurses with master degrees and above. - Increase age predicted higher moral distress level. - The tendency to leave the current job was a significant outcome of moral distress. - No significant correlation between moral distress and spiritual well-being. - Overall MD (M=36.01, SD=24.02), frequency: (M=1.13, SD=0.49), Intensity: (M=1.09, SD=0.58) - Highest frequency and intensity 1. Follow the family's wishes to continue life support even though I believe it is not in the best interest of the patient 2. Initiate extensive life-saving actions when I think they only prolong death 3. Work with nurses or other healthcare providers who are not as competent as patient care requires - Demographic variables including age, education, department, years of working in nursing, titles, position, nature of job, and monthly income were influencing factors for moral distress except for gender and marital status. - Negative correlation between Moral Distress and job dissatisfaction ($r=-0.216, p<0.01$).

Table 2. Qualitative studies on moral distress

Author, year	Country, Setting, sample	Purpose	Research design, method	Findings
Harrowing and Mill ³⁸ (2010)	- Uganda - 24 nurses	- To describe the manifestation and impact of moral distress	<u>Design:</u> - Ethnographic <u>Method:</u> - Semi-structured questions - Observation, field note, and memo - Thematic analysis	- Poor quality of care due to staff shortage - Nursing units with 25 beds often admitted 80–100 patients and were staffed by one or two nurses. - Sense of inadequacy and helplessness that resulted - Outcomes: losing the essence (burnout due to poor quality of care)
Maluwa et al. ³⁵ (2012)	- Malawi - Purposive sample of 20 nurses	- To explore the existence of moral distress among nurses.	<u>Design:</u> - Qualitative study <u>Method:</u> - Individual face to face interview - Tape-recorded and transcribed	- Malawi nurses were largely unfamiliar with the meaning of word moral distress, but they reported situations where they knew what to but failed due to factors beyond their control - Causes of moral distress consisted of six subthemes as follow: (1) shortage of staff (2) violating regulation in order to protect patients (3) lack of respect from patients (4) lack of resources (5) inappropriate behavior of colleagues and (6) mismanagement by superior and bosses. - Outcomes: Lack of sleep, physical pain)headache(, lack of appetite, sadness, irritation and anger over a small issue
Shoorideh et al. ³⁴ (2012a)	- Iran: 12 cities - 31 nurses: 28 clinical nurses and 3 nurse educators	- To explore the phenomenon of moral distress among ICU nurses in Iran.	<u>Design:</u> - Qualitative study <u>Method:</u> - Semi-structured in-depth interview - Tape-recorded and transcribed - Content analysis	- Four main themes 1. Institutional barriers and constrain 2. Communication problems 3. Futile actions, malpractice, and medical/care error eg. nurses were forced to do CPR due to Islamic rule 4. Inappropriate allocation of responsibilities, resources, and care worker competencies.

Table 2. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Shoorideh et al. ³⁹ (2012)	- Iran - 26 ICU nurses	- To elicit responses of ICU nurses to moral distress	<u>Design:</u> - Qualitative study <u>Method:</u> - 13 nurses were in-depth interviewed - Two groups of 6 and 7 for focus group - Content analysis	- Outcomes 1. Psychosomatic reactions - pain eg. headache, muscle contraction, backache - digestive disorders - sleeping disorders - fatigue and energy reduction 2. Spiritual reactions - Losing the meaning and concept of life - Feeling of worthlessness - Feeling of losing faith - Disorders in doing religious practice - Negative attitude toward life
LeBaron et al. ³⁷ (2014)	- India - South Indian Cancer Hospital - 37 oncology nurses	- To explore the experience of moral distress in oncology nurse.	<u>Design:</u> - Ethnographic study <u>Method</u> - Semi-structured interview - Observation - Field note	- Four main themes: 1. Clinical situation - Futile care: unnecessary treatment - Thwarted advocacy: their concerns were dismissed. - Patient suffering 2. External factor - Administrative hurdles: redundant documentation, unsupported by upper-level management - Interdisciplinary conflicts: hierarchical power - Lack of resources: blood products, number of nursing staff. - Cost containment 3. Internal factor - Increased moral sensitivity - Perceived powerlessness

Table 2. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Choe et al. ³² (2015)	- Korea - 14 critical care nurses - 2 university hospitals	- To examine the concept of moral distress among critical care nurses in Korea	<u>Design:</u> Phenomenological study <u>Method</u> - Individual and pair in-depth face-to-face interviews twice with the interval of 2-4 weeks - Interviews were audiotaped.	- Outcomes: 1. physical, psychological, and social 2. Leaving the job or profession 3. Compromised patient care, less interactions and communication between providers and patients and family members. 4. Erodes moral integrity (core values and beliefs) - Five main themes 1. Ambivalence towards treatment and care (notably prioritizing work tasks over human dignity, unnecessary medical treatments and the compulsory application of restraints) 2. Suffering resulting from a lack of ethical sensitivity; 3. Limited autonomy in treatments 4. Conflicts with physicians 5. Conflicts with institutional policy - No negative impacts were identified.
Langley et al. ³³ (2015)	- South Africa - 2 tertiary hospitals - ICU - 32 nurses	- To explore and describe nurses' experiences of situations that evoke moral distress in ICUs.	- Nurses write narratively respond to the open-ended care questions - MD definition: one knows/believes what the correct thing would be to do but cannot pursue this option	1. Collegial incompetence or inexperience 2. Resource constraints - staff shortage 3. Lack of communication and collaboration - Miracle do happen so you can't say the patient will die - Religious belief, the patient needs to move after death because a new patient is coming - A hierarchical structure of the healthcare system 4. EOL issues: maintain futile care, giving false hope, hasten death 5. Lack of support from management eg. EOL training

Table 2. (continued)

Author, year	Country, Setting, sample	Purpose	Research design, measurement	Findings
Chen et al. ³⁶ (2016)	- Taiwan - Regional teaching hospital - 15 nurses for interview - 60 nurses for Q sorting	- To identify and describe various types of perceptions of MD	<u>Design</u> Q methodology <u>Method</u> - In-depth interview - Construct Q statement from transcript - Nurses rank the severity of each Q statement. - Run factor analysis	- Outcomes: Patient safety, regret, guilt, emotionally exhausted, physically exhausted, anxiety, anger, avoid patient care and communication, decrease self-esteem, self-confidence, compassion fatigue 1. Futile care - Terminal patients are forced to continue intensive treatment because the physician refuses to give up - Medical treatment is performed against patients' will because of the requests made by family members - Disagreement to attain consensus exists between the family members of patients - Intensive treatment is provided to terminal patients merely to meet the demands of family members and offer consolation 2. Team issues - Physicians' inappropriate behavior - Inconsistent opinions and goal of care 3. Curbing autonomy - Forced to perform tasks that are beyond the permission of nurses - Lacking consistent opinions of the organization, supervisor, or interdisciplinary medical members - Forced to follow the instructions of physicians or other nurses with supervisory authority 4. Organizational constraints - Excessive administrative work and paperwork - Inadequate staffing - Excessive workload - Carelessness during shift exchange

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CHAPTER 3

MANUSCRIPT 2

Translation and Psychometric Testing of the Measure of Moral Distress for
Healthcare Professionals among Thai Nurses

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Abstract

Purpose: To describe the translation process and to test the psychometric properties of the Measure of Moral Distress for Health Care Professionals (MMD-HP) among Thai nurses.

Design: This study was a two-phased study; the translation of the MMD-HP from English to Thai and the psychometric evaluation of the Thai version MMD-HP. The MMD-HP was administered via electronic survey to approximately 1,000 registered nurses at 2 large tertiary care institutions in a Southern province in Thailand between October and December, 2018.

Methods: The MMD-HP was translated into Thai language using the modified Brislin's (1970) cross-cultural instrument translation method. The reliability was analyzed using a Cronbach's alpha coefficient and the validity was assessed using exploratory factor analysis with promax rotation.

Findings: A three-factor solution was accepted. The 3 factors were labeled as system-level, team-level, and patient/family-level root causes of moral distress. Internal consistency of overall MMD-HP was 0.94 and 0.897, 0.896, and 0.849 for system-level, team-level, and patient/family-level, respectively.

Conclusions: The MMD-HP appears to be a reliable, valid, and useful tool to measure moral distress among nurses in Thai context. It is an appropriate tool to be used cross culturally.

Clinical Relevance: Further study of psychometric of the Thai language MMD-HP is in need to be tested in other healthcare professions with a larger size across Thailand.

Key Words: moral distress; measurement; translation; reliability; validity; Thailand

Moral distress is a significant problem facing the nursing profession as it is associated with consequences such as burnout, withdrawal from the moral dimensions of patient care, or leaving the profession altogether (Colville, Dawson, Rabinthiran, Chaudry-Daley, & Perkins-Porras, 2018; Epstein, Whitehead, Prompahakul, Thacker, & Hamric, 2019; Hamric, Borchers, & Epstein, 2012; Trotochaud, Coleman, Krawiecki, & McCracken, 2015; Whitehead, Herbertson, Hamric, Epstein, & Fisher, 2015).

Moral distress occurs when providers believe they are being involuntarily complicit in acting unethically—they are doing something that they believe to be morally wrong but have little power to act differently or to change the situation (Hamric & Epstein, 2017). Valid and reliable measures of moral distress are helpful in identifying the most problematic causes of moral distress among a provider group or within a setting which, in turn, can provide a foundation for intervention development to mitigate moral distress.

Root causes of moral distress have been extensively studied for various different healthcare professionals, across healthcare settings, and in various countries. A growing body of evidence indicates that moral distress is not solely caused by specific patient situations, but also by unit-level and organizational-level problems (Hamric & Epstein, 2017). For instance, a situation involving prolonged aggressive treatment for a dying patient occurs at the patient level, but also may involve poor communication within the healthcare team or organizational policies which interfere with the clinician's ability to provide or offer more appropriate avenues of care (Chen, Lee, Huang, Wang, & Huang, 2018; Hamric & Epstein, 2017; Langley, Kisorio, & Schmollgruber, 2015).

Although moral distress has been studied internationally, most have been in Western countries and no studies have yet been done in Thailand. Over 98% of Thai

citizens have accessed to healthcare through the universal coverage scheme and advanced healthcare technologies (Center of Global development [CGD], 2015; Jongudomsuk et al., 2015) which has improved health status of Thais; however, Thai nurses are facing numerous challenges. The healthcare system is entering a nursing shortage and job dissatisfaction becoming problematic (Nantsupawat, Nantsupawat, Kunaviktikul, Turale, & Poghosyan, 2016; Nantsupawat et al., 2017; Sawaengdee et al., 2016). And, as in other countries, traditional hierarchies that impede healthcare professionals from contributing to important discussions treatment decisions or goals of care when they have relevant input to provide may put Thai nurses at risk of experiencing moral distress.

A newly revised measure, the MMD-HP, includes items addressing organization- and team-level root causes of moral distress and could be a reliable and valid measure of moral distress for Thai nurses. This paper describes the translation process and psychometric testing of the MMD-HP among Thai nurses.

Evolution of the measure for moral distress

The moral distress scale (MDS) was the first widely used instrument for measuring moral distress (Corley, Elswick, Gorman, & Clor, 2001). The challenges in using the MDS include its length (38 items), its intensive care (ICU) and nursing focus, and items that no longer reflect current practice (e.g., engaging families in discussion about organ donation). Later, Hamric and Blackhall (2007) adapted the MDS in their study by shortening the scale to 21 items, however, this adaptation is narrowly focused on end-of-life care in ICU settings and it lacked utility for non-ICU settings. The MDS was revised in 2012 to the moral distress scale-revised (MDS-R) which consists of 21 items and broadens applicability beyond critical care and beyond nursing to all patient care settings

and healthcare professionals (Hamric et al., 2012). The MDS-R has demonstrated good reliability with Cronbach's alpha coefficients of 0.89 for nurse and 0.88 for various healthcare professional groups and its construct validity was successfully evaluated using hypotheses testing (Hamric et al., 2012). The MDS-R has successfully replaced the MDS and has been widely used internationally (Asgari, Shafipour, Taraghi, & Yazdani-Charati, 2019; Chae et al., 2016; Soleimani, Sharif, Yaghoobzadeh, Sheikhi, & Panarello, 2016; Wenwen, Xiaoyan, Yufang, Lifeng, & Congcong, 2016). In the intervening 5 years, additional root causes have come to light via additional research (Bruce, Miller, & Zimmerman, 2015; Penny, Bires, Bonn, Dockery, & Pettit, 2016; Whitehead et al., 2015). Additionally, the MDS-R had 6 versions; adult and child versions for nurses, physicians, and other providers which detracted from its ease of use. One standard measure would be easier to use in multidisciplinary studies than six versions of the MDS-R. Therefore, the MDS-R was extensively revised again in 2017 and named as the Measure of Moral Distress among Healthcare Professionals (MMD-HP) (Epstein et al., 2019).

The MMD-HP consists of 27 items and aims to measure moral distress among healthcare professions in any critical, acute, or long-term acute care setting. The MMD-HP uses a five-level Likert-style format scored by participants in terms of frequency (how often the situation arises) and level of distress (how distressing the situation is when it arises). Both scales range from 0 (never or none) to 4 (very frequently or very distressing). A composite score is computed by multiplying the frequency score by the distress score of each item, creating a new variable (named "fxd") which ranges from 0 to 16. Next, an overall score is obtained by summing each item's fxd score, with scores ranging from 0 to 432. Higher scores indicate higher levels of moral distress. The MMD-HP's reliability was 0.93 for all participants combined (Epstein et al., 2019).

Construct validity testing showed statistically significant results on all hypotheses and indicated a four-factor structure, reflective of patient, unit, and system levels of moral distress (Epstein et al., 2019).

Methods

Design

This was a two-phased study; the translation of the MMD-HP from English to Thai and the psychometric evaluation of the Thai version MMD-HP.

Instrument Translation Procedure

We used a modified version of Brislin's (1970) cross-cultural instrument translation method, maintaining the good practice of employing at least two competent bilingual translators; one to translate forward and another to translate back to the original language without knowledge about the research topic and having seen the original text. This modified version consisted of 5-step process in which bilingual expert panel discussion was added into Brislin's original model.

In this study, the translation process involved seven bilingual translators and one native English speaker. Forward translation was done by the PI (bilingual, native Thai speaker). A bilingual expert panel including one nursing ethics professor, one scholar with experience in research instrument development, and one advanced practice nurse (APN) reviewed the initial translated version. Group discussion with the translator (PI) led to arrival at consensus regarding the most accurate and easily understood terms. The cultural appropriateness and relevance of each item to Thai context was also considered. Then, two bilingual native Thai speakers who were not familiar with the MMD-HP independently performed back translation from Thai to English. A native English

speaker, an American professor and author of the MMD-HP compared the original MMD-HP with the back-translated English versions. Any errors in meaning were retranslated and again blindly back translated by another bilingual translator. In this stage, five items were back translated again by the seventh bilingual translator. Finally, the Thai language MMD-HP was ready to be psychometrically tested. The translation model of the MMD-HP is presented in **Figure 1**.

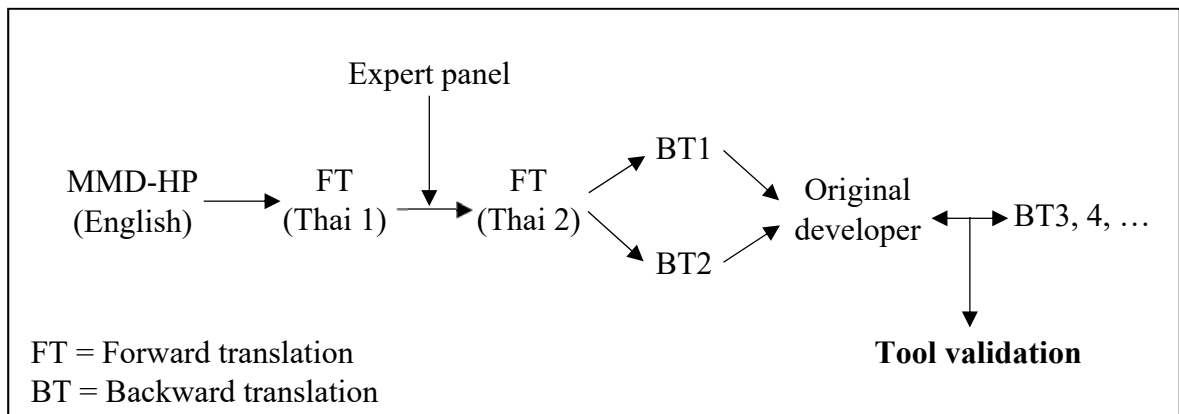


Figure 1. Modified Brislin's translation model for the MMD-HP

Reliability and Validity Testing

The translated MMD-HP was then distributed via Qualtrics, paper flyers, and study invitation cards to approximately 1,000 Thai registered nurses at 2 large tertiary care institutions in a Southern province in Thailand. Minimum sample size requirements were calculated based on expectations for exploratory factor analysis, that is, the communalities and the number of strong factor loadings (Fabrigar & Wegener, 2012). In this case, Fabrigar and Wegener (2012) suggest planning on moderate conditions in which communalities range from .40 to .70 and there are at least three strong loadings per factor, which implies a minimum sample size of 200.

Data Analysis

SPSS Version 23 was used to complete analyses. Four hundred sixty-two participants completed the survey. Assumption of normality, univariate outliers, multivariate outliers were tested. Log 10 transformation was conducted and 14 cases were deleted in order to maintain those assumptions. Finally, 448 cases were used for data analysis.

The reliability of the MMD-HP and its sub-dimensions were analyzed using a Cronbach's alpha coefficient with an acceptable coefficient of $\geq .70$ for the new instrument (Nunnally & Bernstein, 1994). Dimensionality of the MMD-HP was assessed using an exploratory factor analysis (EFA). Both varimax and promax rotations was considered in an attempt to uncover simple structure. The number of relevant factors was determined based on the following criteria: 1) satisfy Kaiser's criterion of eigenvalues ≥ 1 (Kaiser, 1958), 2) meet Cattell's minimum scree requirement (Cattell, 1966), 3) satisfy Horn's parallel analysis (Horn, 1965), 4) appreciable percentage of total score variance of $\geq 50\%$, 5) each rotated factor include at least two appreciable factor loading of $\geq .30$, 6) no more than 5% of the items load on more than one factor; and 7) resultant dimensions demonstrate good internal consistency (Pituch & Stevens, 2016).

Ethical Considerations

The conduct of the study was approved by organization's Institutional Review Board for Health Sciences Research (IRB), and by the IRBs of the two local institutions in Thailand.

Results

The dataset consisted of 448 cases. Most participants were female ($n = 435$, 97.1%). In total, 90.2% of the participants earned a bachelor's degree ($n = 404$) and

9.8% had a master's degree ($n = 44$). Participant ages ranged from 22 to 58 years ($M = 34.01$, $SD = 8.53$) and the average years working in the current setting ranged from 1 to 34 years ($M = 9.71$, $SD = 7.95$). A majority of participants were working in acute care units ($n = 243$, 54.2%), the remainder were working in ICUs ($n = 161$, 35.9%) or intermediate units ($n = 44$, 9.8%). More participants were providers for adult patients ($n = 375$, 83.7%) than for pediatric patients ($n = 77$, 16.3%).

Exploratory Factor Analysis

The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy was 0.948, above the commonly recommended value of 0.6 and Bartlett's test of sphericity was significant ($\chi^2_{351} = 6396.564$, $p < 0.001$), confirming sampling adequacy, suitability of data for structure detection, and appropriateness for EFA. A preliminary step, an EFA through principal component (PC) extraction, revealed the presence of four factors with eigen values greater than 1.0 which accounted for approximately 58% of the total observed score variance. However, a scree plot (see **Figure 2**) and Horn's parallel analysis suggested a 3 factor solution. PC extraction revealed that the 3-factor solution accounted for approximately 54% of the total observed score variance. Additionally, interpretation of the 3-factor solution was more logical than of the 4-factor solution. For these reasons the extraction process was fixed at 3 factors. Examination of the component matrix of an unrotated PC extraction failed to reveal a clear pattern of simple structure because all variables highly loaded on the first factor. As a result, both varimax (orthogonal) and promax rotation (non-orthogonal) were conducted. The factor correlation matrix revealed a strong correlation between factors, ranging from .60 to .65, supporting the use of a non-orthogonal rotation (see **Table 1**). In addition, promax rotation provided a clearer structure as compared to others. The first factor included system-level causes of moral distress and consisted of

7 variables. The second factor were team-level causes and consisted of 12 variables. The last 8 variables were patient/family level causes (See **Table 2**).

Reliability

Internal reliability estimates were strong for the overall MMD-HP and for each dimension; system-level, team-level, and patient/family-level. The overall MMD-HP demonstrated a satisfactory internal consistency with the Cronbach's α of 0.944, the coefficient of 0.897 for system-level factor, 0.896 and 0.849 for team level and patient/family level, respectively.

Discussion

In the past 10 years, the phenomenon of moral distress has received increased interest from researchers and clinicians in nursing and other healthcare professions and in settings outside critical care. Measuring moral distress levels among various healthcare professionals and in varying settings is important, especially as interventions to mitigate moral distress are being developed and tested. This study was the first to translate the newly revised MMD-HP to Thai and to test the psychometric properties of the Thai language version MMD-HP in Thai nurses.

Our EFA showed that the Thai version of the MMD-HP is a multidimensional construct among nurses, with a three-factor solution fitting the data best. A multidimensional construct is in line with several previous studies that used the MDS-R (Lamiani, Setti, Barlascini, Vegni, & Argentero, 2017; Schaefer, Zoboli, & Vieira, 2019; Soleimani et al., 2016). One previous study found that moral distress was unidimensional (Karagozoglu, Yildirim, Ozden, & Cinar, 2017).

The three factor-structure of the Thai version MMD-HP represents root causes of moral distress at the system level, team level, and patient/family level. These three levels of root causes of moral distress were proposed by Hamric and Epstein (2017). A study on moral distress consultation in an academic medical center setting, Hamric and Epstein identified that although consults were generally initiated by a specific patient case, the root causes underpinning the situations often involve unit- or organizational-level problems. In addition, the items loaded in each factor of the present study were generally parallel with the original study which tested the MMD-HP among American healthcare providers in the US. Although the study in the US indicated a four-factor structure, these were mainly grounded in system, team, and patient level root causes (Epstein et al., 2019).

Of the three factors, system-level root causes yielded the highest dimensional mean even though this dimension consisted of the fewest items. Most items in this factor are new items to the MMD-HP and most align with Factor 1 from Epstein's et al. (2019) study. Factor 2, team-level root causes, included situations that occurred regarding interactions within the team and as a result of personal threat by a team member. In Epstein et al.'s study, these were two separate factors. Poor team communication, working with incompetent colleagues, and lack of provider continuity were commonly reported as a cause of nurses' moral distress in several studies that used the MDS-R as its measure (Asgari et al., 2019; Austin, Saylor, & Finley, 2017; Colville et al., 2018; Karagozoglu et al., 2017; Trautmann, Epstein, Rovnyak, & Snyder, 2015). Communication between nurses and physicians is considered a principal part of the information flow in healthcare and a growing body of evidence suggests that inefficient or poor communication impacts patient outcomes and leads to moral distress (Allen et al., 2013; Henrich et al., 2016; Hiler, Hickman, Reimer, & Wilson, 2018). Hierarchies

within teams are common and necessary in healthcare settings, yet, if they inhibit information sharing and are dismissive of certain voices, patient care can suffer and moral distress can occur. Epstein et al. reported that in the MMD-HP, items such as feeling unsafe/bullied; fearing retribution to speaking up; participating in care because of fear of litigation; and being pressured to stay silent about a medical error or ethical violation were the personal threat by a team member. These threats aligned with qualitative reports from Thai nurses about causes of moral distress such as feeling pressured to participate in care that they truly knew that it was not the right thing but they had to do because they were fear of punishment, which is reported elsewhere (Lead author et al., in preparation).

The third factor was patient/family level root causes. Several previous studies found that situations of prolonged aggressive treatment for dying patients and unnecessary or inappropriate treatments tend to be significant causes of moral distress among nurses and other healthcare providers (Austin et al., 2017; Asgari et al., 2019; Colville et al., 2018; Dodek et al., 2016; Epstein et al., 2019; Trotochaud et al., 2015; Trautmann et al., 2015).

The reliability coefficients of the MMD-HP in the present study showed that the instrument and sub-dimensions have good reliability among Thai nurses. Thus, the Thai language of MMD-HP appears to be a valid and reliable instrument to measure moral distress among Thai nurses.

Conclusion

The MMD-HP was systematically translated into Thai language with the consideration of language and cultural appropriateness using Brislin's cross-cultural instrument translation method. The scale has shown evidence of being a reliable, valid, and useful tool to measure moral distress among nurses in Thai context. A strong three-

factor solution was obtained and the items loaded on each factor was similar to the primary study. The findings of this study support the MMD-HP is an appropriate tool to be used cross culturally.

Limitations were encountered in this study. The MMD-HP in the present study was tested only in nurses at two institutions located in southern Thailand. The primary purpose of the updating the MMD-HP was to improve the measure to be applicable in all healthcare professionals. Therefore, further testing of the psychometric properties of the Thai language MMD-HP is needed other Thai healthcare professions.

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Clinical Resources

American Association of Critical-Care Nurses: <https://www.aacn.org/clinical-resources/ethics-moral-distress>

American Nurses Association: <https://www.nursingworld.org/practice-policy/nursing-excellence/ethics/>

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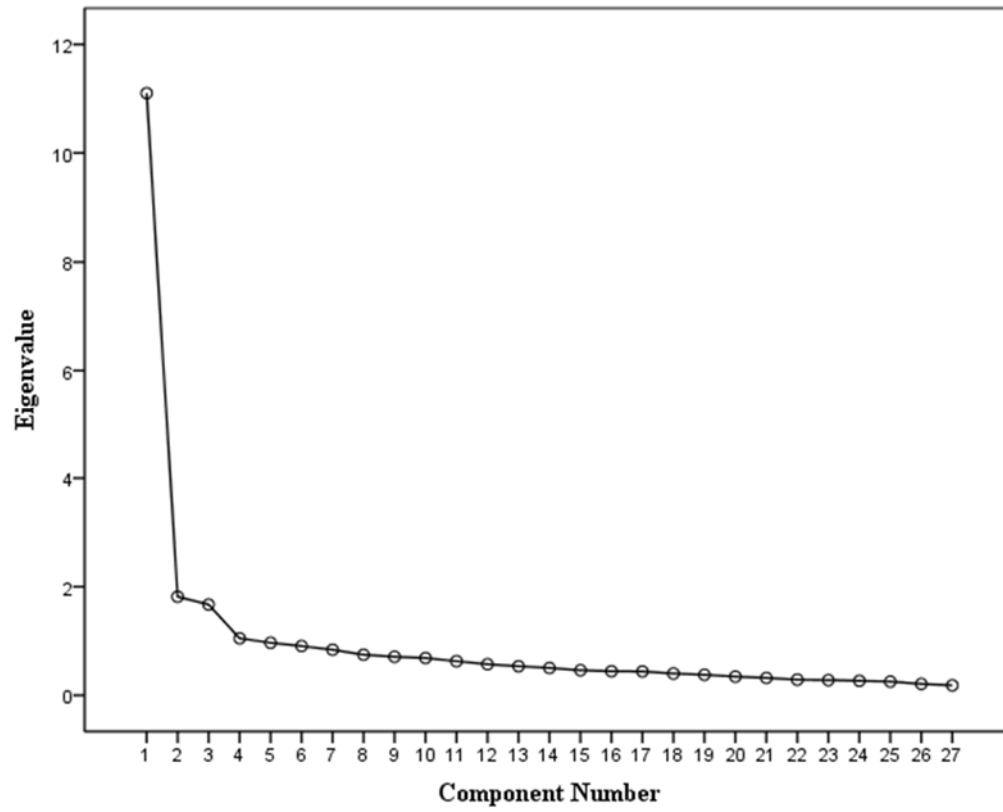


Figure 2. Scree plot of MMD-HP

Table 1

Correlation between MMD-HP Factors

Factors	F1	F2	F3	Cronbach's alpha
F1	-			.897
F2	.46	-		.896
F3	.603	.618	-	.849

Table 2

Exploratory Factor Loadings of Items in the MMD-HP

No.	Item	Factors		
		1	2	3
16	Be required to care for more patients than I can safely care for.	.962	-.046	-.268
23	Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.	.959	-.229	.061
17	Experience compromised patient care due to lack of resources/equipment/bed capacity.	.863	-.053	-.063
19	Have excessive documentation requirements that compromise patient care.	.798	-.089	.090
18	Experience lack of administrative action or support for a problem that is compromising patient care.	.777	.159	-.091
24	Be required to care for patients who have unclear or inconsistent treatment plans or who lack goals of care.	.595	.044	.226
22	Be required to work with abusive patients/family members who are compromising quality of care.	.530	.066	.161
21	Feel unsafe/bullied amongst my own colleagues.	-.001	.909	-.287
20	Fear retribution if I speak up.	-.044	.900	-.145
27	Work with team members who do not treat vulnerable or stigmatized patients with dignity and respect.	-.029	.867	-.133
6	Be pressured to avoid taking action when I learn that a physician, nurse, or other team colleague has made a medical error and does not report it.	-.285	.710	.164
11	Witness a violation of a standard of practice or a code of ethics and not feel sufficiently supported to report the violation.	-.162	.651	.288
7	Be required to care for patients whom I do not feel qualified to care for.	.019	.556	-.033
26	Participate on a team that gives inconsistent messages to a patient/family.	.225	.527	-.009
25	Work within power hierarchies in teams, units, and my institution that compromise patient care.	.342	.424	.024
12	Participate in care that I do not agree with, but do so because of fears of litigation.	.028	.423	.326
14	Witness low quality of patient care due to poor team communication.	.227	.420	.170

No.	Item	Factors		
		1	2	3
9	Watch patient care suffer because of a lack of provider continuity.	.227	.376	.197
13	Be required to work with other healthcare team members who are not as competent as patient care requires.	.194	.313	.296
2	Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	-.101	-.213	.979
5	Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.	-.097	-.163	.899
3	Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	-.023	-.021	.813
1	Witness healthcare providers giving "false hope" to a patient or family.	-.037	.079	.625
8	Participate in care that causes unnecessary suffering or does not adequately relieve pain or symptoms.	.189	.025	.565
10	Follow a physician's or family member's request not to discuss the patient's prognosis with the patient/family.	.104	.129	.464
15	Feel pressured to ignore situations in which patients have not been given adequate information to ensure informed consent.	.258	.226	.348
4	Be unable to provide optimal care due to pressures from administrators or insurers to reduce costs.	.118	.289	.313
Eigenvalues		11.13	1.79	1.71
Variance		41.23	6.63	6.33
Cumulative variance		41.23	47.85	54.18

CHAPTER 4

MANUSCRIPT 3

Moral Distress among Thai Nurses: A Mixed Methods Study

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ABSTRACT

Background: Moral distress is recognized as a problem affecting healthcare professionals globally. Unaddressed moral distress may lead to withdrawal from the moral dimensions of patient care, burnout, or leaving the profession. However, studies of moral distress study in Thailand are scant. This article describes the experience of moral distress and related factors among Thai nurses.

Methods: A convergent parallel mixed-methods design was employed. The MMD-HP was used to measure moral distress quantitatively in nurses at 2 institutions in southern Thailand. Nurses who completed the MMD-HP were interviewed and analyzed using thematic analysis. Finally, an integrated analysis of data from both components was conducted to understand causes of moral distress among Thai nurses.

Results: Four hundred sixty-two (462) completed the survey questions. The top seven ranked causes of moral were related to system-level root causes and end-of-life care situations. Hierarchical multiple regression showed that work units, considering leaving position, and number of moral distress episodes in the past year were significant predictors of moral distress. Twenty transcripts demonstrated 3 main themes of distressing causes: (1) powerlessness (at patients/family-, team-, and organizational-levels), (2) end-of-life issues, and (3) poor team function (poor communication and collaboration, incompetence healthcare providers, and inappropriate behavior of colleagues). The integration of data from both components indicated that the qualitative interviews enrich the quantitative findings, especially as related to the top 7 causes of moral distress.

Conclusions: The experience of moral distress among Thai nurses is similar to studies conducted elsewhere. Further studies should conduct in multi-healthcare professionals. Additionally, target interventions to mitigate moral distress need to be developed and tested in Thai context.

Key words: moral distress, predictors, Thai nurse, mixed methods

What is already known about the topic?

- The concept of moral distress includes knowing or having meaningful insight into the right ethical action to take, knowing that what is occurring is unethical, and being powerless to change course.
- Moral distress negatively impacts providers and healthcare institutions.
- Inappropriate or unnecessary treatments and poor team communication/collaboration are common causes of moral distress.
- Most studies are done in Western cultures and that the MMD-HP was developed in the west but included consideration of other cultures.

What this paper adds?

- The number of morally distressing episodes experienced per year is a predictor of overall moral distress levels.
- The MMD-HP is applicable to Thai nurses.

1. Introduction

Moral distress is a global phenomenon, causing serious negative outcomes for healthcare providers and organizations. This concept was first identified among nurses, as an event involving the clinician knowing or believing to know the ethically right course of action but feeling unable to pursue that course of action due to organizational and other constraints (Jameton, 1984). Moral distress affects the moral integrity of the agent which distinguishes it from other concept such as stress, emotional distress, or compassion fatigue (Varcoe et al., 2012).

Although initially described among critical care nurses, moral distress has also been found among medical-surgical (Rice et al., 2008), oncology (Lazzarin et al., 2012; Sirilla, 2014) and mental health nurses (Hamaideh, 2014; Musto and Schreiber, 2012; Ohnishi et al., 2010) and among other healthcare providers as well (Asgari et al., 2017; Colville et al., 2018; Coyle et al., 2016; Dodek et al., 2016; Epstein et al., 2019; Fumis et al., 2017; Houston et al., 2013; Whitehead et al., 2015). Focusing on nurses, several studies demonstrate higher levels of moral distress in critical nurses than nurses in non-critical care settings (Dyo et al., 2016; Epstein et al., 2019; Fumis et al., 2017; Hamric et al., 2012; Trotochaud et al., 2015; Whitehead et al., 2015).

This could be due in part to the high stress, high stakes environment where there is high risk for patient mortality and morbidity and daily confrontations with ethical dilemmas (Moon and Kim, 2015).

Common and problematic causes of moral distress occur at the patient level, unit level, and system level (Hamric and Epstein, 2017; Varcoe et al., 2012). Often, a morally distressing situation involves causes at two or more levels. For example, a situation in which a dying patient continues to receive painful, unnecessary treatments due to a family's demands (patient-level cause) may also involve powerful team hierarchies that inhibit relevant input from some clinicians (team-level cause) and a lack of policy guiding clinicians in situations of family demands for inappropriate treatment (system-level cause). Recurrent experiences of moral distress can lead to the "crescendo effect," with buildup of moral residue and moral distress in care providers (Epstein and Hamric, 2009). Inadequate attention to moral distress can lead to burnout or leaving a position as evidenced by several studies indicating that high levels of moral distress are associated with intention to leave a position (Allen et al., 2013; Austin 2017; Colville et al., 2018; Dodek et al., 2016; Epstein et al., 2019; Hamaideh, 2014; Hamric et al., 2012; Papathanassoglou et al., 2012; Trotochaud et al., 2015; Whitehead et al., 2015; Woods et al., 2015).

Moral distress has been studied internationally in an increasing number of non-western countries including Iran (Borhani et al., 2017; Shoorideh et al., 2012; Soleimani et al., 2016), Israel (Ganz et al., 2012), Japan (Ando and Kawano, 2016; Ohnishi et al., 2010), Taiwan (Chen et al., 2018), China (Wenwen et al., 2016), Korea (Choe et al., 2015), and India (LeBaron et al., 2014) and African countries including Malawi (Maluwa et al., 2012), South Africa (Langley et al., 2015), and Uganda (Harrowing and Mill, 2010). However, the literature on moral distress in Thailand is limited.

Some unique factors in Thailand create stressors for healthcare providers that could contribute to moral distress. First, the healthcare system is in transition in that there are simultaneous advances in both palliative care practice and healthcare technology (Nilmanat, 2016; Healthcare Asia, 2017). Studies by Krongyuth et al. (2014) and Nilmanat (2016) found that nurses and physician perceived that they had inadequate skill and were insufficiently

trained in palliative care practices. Second, in 2002 Thailand adopted a universal healthcare coverage system (UHCS), but the utilization of out-of-network services is still high which could imply a lack of universal access to services provided under the UHCS policy. (Paek et al., 2016). Third, Thailand is a member of the Association of Southeast Asian Nations (ASEAN) economic community (AEC), established in 1967 to promote regional peace, economic growth, and collaboration in various fields such as science, economics, and technology (ASEAN, 2017). While many outcomes of this agreement have been beneficial, some challenges are being realized such as a large influx migrant population, financial healthcare constraints, medical supply-side constraints, ongoing epidemiological transitions, and increasing workloads for healthcare providers (Sriratanaban, 2015). Finally, approximately 50% of Thai nurses report high levels of burnout and 10-60% intend to leave their job in the next 6-12 months (Nantsupawat et al., 2016; Nantsupawat et al., 2017). A plausible explanation for these concerning statistics is high levels of moral distress, yet our understanding of moral distress among Thai nurses is largely unknown.

1.1 Aims

The aims of this study were to describe the phenomenon of moral distress among Thai nurses, to investigate the relationships between moral distress and selected demographic and practice factors, and to identify predictors of moral distress.

2. Methods

2.1 Design

A convergent parallel mixed-methods design was used in which qualitative and quantitative data were collected in parallel, analyzed separately, and then integrated to yield a richer and more nuanced understanding of the experiences of moral distress among Thai nurses (Creswell and Clark 2011).

2.2 Setting and Participants

Participants were Thai nurses from 2 large tertiary care institutions in a Southern province in Thailand. Combined, these institutions have 31 acute care units and 17 critical care units and approximately 1,000 nurses in employment. Nurses were recruited based on inclusion and exclusion criteria. The inclusion criteria were 1) licensed as a registered nurse (RN), 2) working on an inpatient unit, and 3) have worked in the current hospital for at least one year. They were excluded if they were 1) head nurse or nurse administrator, or 2) working in private units (units in which nurses do not provide direct patient care in the same way as other inpatient units). A target sample size for the quantitative aspect of the study was 200, based on the communalities and the number of strong factor loadings, the primary goal of overall study not reported here (Fabrigar and Wegener, 2012). A target sample size of 15-20 was expected for the qualitative aspect although a more accurate sample size was determined by data saturation (Malterud et al., 2016).

2.3 Instruments

Two instruments, a sociodemographic questionnaire and the Measure of Moral Distress for Healthcare Professionals (MMD-HP), as well as a semi-structured interview were used.

The MMD-HP is a 27-item scale developed by Epstein et al. (2019) which aims to measure moral distress among healthcare professions in any clinical setting. The MMD-HP offers five ordinal level, Likert type response choices scored by participants in terms of the how often the situation arises (frequency, 0=never, 4=very frequently) and how disturbing the situation is when it arises (intensity, 0=none, 4=great extent). The frequency and disturbance scores for each item were summed and examined separately, with possible ranges of 0 to 108 for each. Additionally, a composite score was computed by multiplying the frequency score by the disturbance score of each item, creating a new variable ("fxd") with possible ranges of 0 to 16. Next, an overall score was obtained by summing each item's fxd score, with scores ranging from 0 to 432. Higher scores indicate higher levels of moral distress. The MMD-HP includes 2 additional categorical items about current and past intention to leave a position due to

moral distress. Forward-backward translation of the English MMD-HP to Thai MMD-HP was accomplished according to an adaptation of Brislin's (1970) translation model (first author, in preparation).

Face-to-face semi-structured interviews were conducted and digitally audiotaped. Maximum variation sampling was used to identify and expand the range of variation of moral distress experience in nurses (Palinkas et al., 2015; Sandelowski, 2000).

2.4 Procedures

An online consent form, translated MMD-HP, and demographic survey were distributed via electronic chat group (Line app) using Qualtrics, paper flyers, and study invitation cards with a QR code linked to the study survey. One week after initial distribution, the first author sent a reminder to the Line app group. The survey was closed one week later. At the end of the Qualtrics survey, participants were invited to participate in an interview. Participants provided their email or cell phone number which the first author used to arrange the interview.

2.5 Data Analyses

Quantitative and qualitative data were analyzed separately. Quantitative data were analyzed using SPSS 23. The statistical assumptions (normality, homogeneity of variance, linearity, non-collinearity, homoscedasticity) are met. Descriptive statistics were used to evaluate demographic data, MMD-HP scores, and intention to leave. T-tests, One-way ANOVA, and Pearson correlations were used to examine relationships variables. Predictive factors of MMD-HP scores were analyzed using hierarchical multiple regression.

All interviews were transcribed verbatim and translated from Thai to English by the first author. Data analysis was conducted simultaneously with data collection (Sandelowski, 2000). Thematic analysis was conducted to describe patterns and identify themes within data using Dedoose version 8.2.14 and manual evaluation. Analysis occurred in three phases: data expansion, data limitation, and thematic integration (Braun and Clarke 2006; Sandelowski, 2000). Data expansion consisted of open-coding interview transcripts, giving labels to concepts or ideas in the data without regard to

relative importance. Data limitation involved combining codes into higher order, more abstract thematic categories, and making decisions about relative salience of the categories. The most salient themes represented by the categories were conceptually defined, illustrated with data excerpts, and integrated to best achieve the aims of this study (Braun and Clarke 2006; Sandelowski, 2000). Analytic memos were also used to help with future directions, unanswered questions, frustrations with the analysis, and insightful connections (Saldaña, 2016).

Trustworthiness of the study was accomplished across 4 domains as described by Lincoln and Guba (1985). Credibility or confidence in the findings was established through explicit probes to get participants' responses with greater precision and reflexivity to eliminate researcher's bias. Transferability was maintained by heterogenous sampling to see the difference experiences of the participants. Dependability or audit-ability was established throughout the analytic process, detailing decision rules and justifications via memo and reflexivity. Lastly, confirmability, the translation of transcripts was validated by a bilingual translator who had experience in qualitative research and peer check was also conducted by the research team.

3. Results

3.1 Quantitative results

3.1.1 Participant characteristics

Five hundred ten (510) participants accessed the Qualtrics survey. Four hundred sixty-two (462) completed the survey questions and were included in the analysis. Participant characteristics are provided in Table 1.

Table 1

Participant characteristics

	Mean (SD), range/ n (%)		Mean (SD), range/ n (%)
Age	33.90 (8.48), 22-58	Setting	
Years in profession	11.01 (9.27), 1-36	- Pediatric	74 (16)
Years in current position	9.62 (7.91), 1-34	- Adult	388 (84)
Gender	n (%)	EOL training	
- Male	14 (3)	- Yes	224 (48.5)
- Female	448 (97)	- No	116 (25.1)
Religious		- No, but self-study	122 (26.4)
- Buddhist	373 (80.7)	Considering leaving in past	
- Muslim	87 (18.8)	- No	227 (49.1)
- Christian	2 (.4)	- Yes, but not leave	212 (45.9)
Education		- Yes, I have left	22 (4.8)
- Bachelor degree	417 (90.3)	Considering leaving now	
- Master degree	45 (9.7)	- Yes	95 (20.6)
Setting		- No	366 (79.2)
- Critical care	215 (46.5)	Episodes of moral distress in past year	2.33 (1.62), 0-6
- Acute care	247 (53.5)		

3.1.2 Root Causes of Moral Distress

The mean score for the composite, summed MMD-HP was 104.80 (SD=65.32, range 0-369). The top seven ranked causes of moral were related to system-level root causes and end-of life care situations (Table 2).

Table 2

Ranked root causes

Ranked		Mean	SD
1	Feel required to overemphasize tasks and productivity or quality measures at the expense of patient care.	7.15	5.35
2	Have excessive documentation requirements that compromise patient care.	6.96	5.30
3	Follow the family's insistence to continue aggressive treatment even though I believe it is not in the best interest of the patient.	6.61	4.38
4	Be required to care for more patients than I can safely care for.	6.32	5.35
5	Experience compromised patient care due to lack of resources/equipment/bed capacity.	5.76	5.16
6	Continue to provide aggressive treatment for a person who is most likely to die regardless of this treatment when no one will make a decision to withdraw it.	5.61	4.25
7	Feel pressured to order or carry out orders for what I consider to be unnecessary or inappropriate tests and treatments.	5.17	3.99

3.1.3 Moral distress and associated factors

Analysis of the relationships between MMD-HP scores and participant demographic variables indicated a non-significant difference between MMD-HP scores and age, years of working, and end-of-life training. Work unit (acute and critical care) was associated with moral distress in which acute care nurses demonstrated significantly higher moral distress scores than critical care nurses ($T(460)=2.16, p=.03$). Additionally, nurses who provided care for adult patients had significantly higher moral distress scores than those who provided care for pediatric patients ($T(460)=2.15, p=.03$). Besides working unit, MMD-HP scores were significantly positively correlated with the number of reported moral distress episodes in the past year ($r=.42, p<.001$). MMD-HP scores were significantly higher for participants considering leaving their positions now due to moral distress than for those not considering leaving now ($T(460)=6.88, p<.001$). Furthermore, those who had considered leaving the position in the past due to moral distress and either had left or had not left had significantly higher MMD-HP scores than those who not considered leaving (Welch $F(2, 58) = 24.35, p<.001$).

3.1.4 Predictors of moral distress scores

Hierarchical multiple regression models were conducted to identify predictors of moral distress. The initial models consisted of two variables significantly associated with MMD-HP scores, namely moral distress episodes in the past year and considering leaving position. The second model included two additional variables; unit type (acute, critical care) and patient type (adult, pediatric), which were significantly associated with MMD-HP scores in this study. The last model included three demographic variables such as institution, years of work experience, and end-of-life training. Among these three models, adjusted R^2 , root mean square error (RMSE), and incremental F-test were compared. Although the adjusted R^2 and RSME were not much different among the three, the second model was chosen for interpretation due to the significant in F statistic change $F(2,457)=6.29, p=.002$ which indicates that meaningful variables are included in the model.

Thus, 24% of the variance in MMD-HP scores is explained by 4 variables, 3 of which, numbers of moral distress episode in the past year, considering leaving a position, and unit type (critical-, acute care unit) are the significant predictors of moral distress. The result showed that an increasing in one unit of number of moral distress episode in the past year is associated with 15.38 points increase in MMD-HP score, holding the other 6 demographic variables. Relative to nurses who do not consider leaving position, the nurses who are considering leaving had 34.61 higher MMD-HP scores, holding other variables. The non-critical care nurses had 17.94 higher MMD-HP score than the critical care nurses, controlling for other variables (Table 3).

Table 3

Hierarchical multiple regression analysis predicting moral distress

	(1) Coef. (SE)	(2) Coef. (SE)	(3) Coef. (SE)
Institution	-	-	.42 (5.67)
Year of working	-	-	.37 (.37)
EOL training (Ref: Yes)			
- No	-	-	5.25 (6.92)
- Self-study	-	-	-6.52 (6.65)
Unit (Ref: Critical care)			
- Acute care	-	17.94** (5.41)	17.24** (5.56)
Unit (Ref: Pediatric)			
- Adult unit	-	6.03 (7.37)	6.34 (7.43)
Consider leaving (now) (Ref: No)	35.85** (6.83)	34.61** (6.80)	34.76*** (6.83)
Moral distress episode	14.79*** (1.71)	15.38*** (1.70)	15.58*** (1.72)
Adjusted R²	.22	.24	.23
RMSE	57.80	57.14	57.17
F change	64.86***	6.29**	.89

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

3.2 Qualitative results

Twenty participants who completed the survey were interviewed and these transcripts were used for the thematic analysis. Eleven participants worked in critical care units and 9 worked in acute care units. Participants included adult (15) and pediatric (5) nurses. Years of work experience ranged

from 1 to 22 years. Three major themes were identified including (1) powerlessness, (2) end-of-life issues, and (3) poor team function (Table 4). The three themes are not entirely distinct from one another. For example, several instances of powerlessness involved end-of-life situations. However, the three themes have enough differences to be described separately and they represent the three most problematic areas for this sample of Thai nurses.

Table 4

Categories, sub-themes and themes of causes of moral distress

Themes	Sub-themes
1. Powerlessness	1.1 Patient/family level 1.2 Team level 1.3 Organizational level
2. End-of-life issues	-
3. Poor team function	3.1 Poor communication and collaboration 3.2 Incompetence healthcare providers 3.3 Inappropriate behaviors of colleagues

3.2.1 Powerlessness

Most participants (n=15) expressed that moral distress occurred when they were unable to meet the standard of nursing care and their professional ethical values. They felt powerless when they believed they had failed to advocate for patients. Nurses are not only responsible to patients but also to families, physicians, co-workers and the healthcare organization; therefore, sources of powerlessness were evident at the patient/family level, the team level, and the organizational level.

3.2.1.1 Patient/family level

Ten participants experienced moral distress because inappropriate or unnecessary treatments were directed by patients' family members. In Thailand, surrogates are powerful decision makers when patients are incapable and they are able, as in other countries, to sue healthcare providers. Thus, some participants expressed moral distress when they thoroughly knew that the chosen treatment or decision was not appropriate for

a patient but they had to follow the surrogate's decision because of the power surrogates have (5 participants):

“For end-of-life patients, they used to tell their children like, if I [patient] am severely ill, please don't intubate me, please don't place me on surgery, or please don't give me any hurt, and please take me home. However, that is the oral living will, not an official one. When the patients are unconscious, their children are decision makers. They requested the aggressive treatment, no matter we tried to convince them.” – N6

“Most patient in my unit are elderly. Some patients are older than 100 years old. The patients always complain that they were on medical treatment for more than half of their life. They stayed in the hospital longer than their home. Some patients told their children that if they get worse, don't take them to the hospital and please let them die peacefully. When the time comes, they couldn't see their parents pass away in front of them without any action, so, they took the patients to the hospital and requested full treatment that could save the patients' life.” – N9

or because they feared a lawsuit (4 participants):

“..... They want us to perform CPR and other aggressive treatments that could prolong the patient's life. The prognosis was so poor. I truly knew that CPR was not going to extend the patient's life. The patient was going to die in 24 hr. Anyway, when the family requested the CPR, we [doctor and nurse] need to follow the request. If we rejected the request, they would sue us. That's why we had to follow.” – N18

In some morally distressing situations, decisions appeared to depend on finances. One respondent noted that the decision maker was the one who was responsible for paying hospital costs, although he/she lived far away and it was an inappropriate decision, the family members had to accept:

“Mostly the child who lived far away was the decision maker. Although they didn't look after the patient, they paid for the hospital cost. So, other children won't make decisions because they didn't have money to pay. Let's say if they decided on the treatment, they would be responsible for its cost. So, the key person was the one who paid. When the decision was made by

the one who didn't live with the patient, he/she didn't know the patient's wishes. They had not seen how the patient suffered. Of course, he/she decided on his/her wish. Because he was guilty that he didn't take care his parent [patient] and some might feel that this will be the last chance that he can pay back his parent" – N9

Although participants mainly described the power of decision making at the end-of-life, surrogates were influential at any point of care. Several participants mentioned that moral distress commonly occurred when the family decided to withdraw the treatment even though the disease was curable (3 participants):

"For this case, the patient passed the critical period. Although she couldn't sit or eat by herself, her condition was better and better. She just needed time to recover. No matter how much we explain to them [patient's family], they still insisted to take the patient home. We could only accept their decision; we had no choice. Their decision is final." – N7

3.2.1.2 Team level

From participants' responses, it was clear that a strong hierarchy among healthcare providers existed. Participants experiencing moral distress felt powerlessness and helpless to stop treatment that they thought was ethically wrong or involved sub-standard nursing care (7 participants). One nurse who witnessed a medical error in a pediatric patient said,

"The doctors requested that we stay quiet ... I was trying to avoid facing the mother [of the child] which is not me at all. Everyone knows I love talking with the parents, I love to talk with those kids. I was very happy when I talked with them, but now I couldn't. While I was talking with the mom, I had to look at the floor, I was scared to look at her eyes. When she asked about the patient's condition, I could only say that I didn't know much and please wait for the doctor. This is not me at all, I never said this to the parents. I felt like I was not a nurse" – N5

Another nurse explained that *"Nurses couldn't take much action when we saw one's unethical behavior because we have less power.... I had tried to do*

[advocate for patient] but I was hurt by his word like 'you are just only a nurse; you never know better than me.' I cried inside after listening to him." – N15

Among the healthcare team, nurses perceived themselves as having little power in decisions about treatment. In many cases, participants knew the right thing to do for patients; however, they could not take action because nurses lack practice independence to act. For example, six participants expressed that they knew that specialists from other departments such as palliative care should have been involved in a patient's care but that consulting the palliative care team was not their role and depended on the doctor's decision:

"..... Anyway, we need the doctors to sign on the consult form. The consultation needed an agreement from the doctors. If they don't agree, we couldn't consult. The patient would be treated aggressively. We are under them, we depended on them. Our profession was sometimes controlled by others" – N16

One participant recalled caring for a patient with severe pain due to an infected wound. She had asked the doctor for an opioid but he would not order it. *"Sometimes the standard of our profession is controlled by others. Nurses don't have autonomy to order pain medications. A nursing license doesn't cover drug prescription."* – N14

A hierarchy existed not only between professions but also within professions based on seniority, both in nursing and medicine. This was seen as a barrier by three nurses.

"..... I was forced to inject adrenaline instead of starting CPR. She was in charge of the team, so nursing care was under her decision. Although she had more experience than me, she was putting the patient in risk." – N8

3.2.1.3 Organizational level

Organization was perceived as strongly hierarchical and can be considered as an influential moral factor for nurses. Organizational support is one of the important indices of nursing work environment. However,

sometimes organizational policies did not align with standards practice (4 participants).

A participant noted that *“In the ICU, we need immediately respond to the doctor. We couldn’t wait, 1 or 2 minutes is meaningful for the patient. But you know about the regulation, right? When we notify the doctor, we couldn’t jump to the resident or staff. We had to start with the extern or intern. In a hard case, they needed to report to the resident and then treatment was delayed. Some patients were in vegetative stage because of this.”* – N8

Insufficient resources such as medical equipment, available beds, and staffing, were problematic organization-level causes of moral distress. Participants raised concerns to administrators, but they felt their voices were unheard (3 participants).

A nurse said *“I felt that the cardiogenic shock patient wouldn’t die if he got into our unit. In the general unit, there was no equipment. Everything was manual which was time consuming. We couldn’t measure arterial blood pressure there. If we had one more bed in the ICU, the patient would survive.”* – N20

Another nurse said *“..... When we transferred the patient to their unit [NICU]. They [nurses] were trying to blame us. They looked at our nurses’ note and questioned us. Although, we got 1:4 but when we had 1 or 2 very sick patients, we couldn’t record everything that happened like ‘the doctor couldn’t insert the central line so the antibiotic was delayed.’ We just only wrote down what was the time we administered antibiotic. We had so many documents to be completed before transferring the patient, it diminished our care quality. We had tried to raise our issue but we gave up.”* – N4

The head nurse is an administrator who works closely with the bedside nurses and who is relied on by the nurses. Three participants reported that although morally distressing situations commonly occurred in the unit, their head nurse was very supportive and open for them to address the issue and that moral distress was addressed. In contrast, unsupportive head nurses could raise moral distress in nurses as well.

“I have talked with the head nurse about this situation but it was useless. It became my mistake..... We never get any support from her. She is on the doctor’s side. No one walks with us. No one fights for us. Sometimes fighting alone is exhausting.” – N4

Some nurses perceived they were treated unfairly and feared retribution by the administrator if they objected to what was happening. They also felt an imbalance of power because the hospital is dominated by doctors (4 participants).

“We (nurses) were reported to the administrator that we didn’t complete what they ordered. It became our mistake and we got a punishment. Yes, they did. They investigated but it was biased. You will never win. See, many of the administrators were doctors.” – N19

3.2.2 End-of-life issues

The second theme of this study was end-of-life issues. This theme resonated in the first theme of powerlessness but not all end-of-life situations involved powerlessness. For example, five participants perceived that they had to witness the patients receive aggressive medical interventions at the terminal stage of life because of insufficient knowledge and poor attitudes about palliative care practices.

“..... I believed that this situation did not only happen in pediatric units but it also happened in adult units. It seemed to me that the palliative care system is developing. Doctors and nurses lack knowledge in this area. Although we were trained on palliative care, sometimes we don’t incorporate this concept in practice as it should be.” – N18

Nearly 80% of the morally distressing situations described by participants were end-of-life situations. Futile actions, unnecessary medical treatments, and providing false hope to patient and family at the end-of-life were common causes of moral distress. Ten participants felt distress in witnessing patients suffering due to overly aggressive and unnecessary treatments they believed were not the best interest of the patient.

“We had an end-stage cancer patient. The cancer metastasized to multiple organs. He developed organ failure. He was placed on extracorporeal membrane oxygenation (ECMO) and passed away after 2 days. I could feel how he suffered. He was in pain until the last minute of life” – N17

“For a patient with brain death.... he was still treated with full treatment. It was unnecessary to treat the diabetes insipidus, but the doctors still prescribed Minirin and corrected abnormal laboratory eg., high sodium.” – N1

Four participants felt that families were given false hope and that this was unfair.

“A cause behind futile treatment is the information that is given to the patient’s family. In the ICU, we have many end-of-life patients. Their prognosis was so poor. I think, they should not be treated aggressively. I felt bad every time that I had to witness the doctor’s providing false hope to patient and family. They talked only one side of the treatment. Of course, the positive side! They would like to convince the family to agree with what they wanted to do.” – N11

When the participants were asked to think deeply about what was actually the trigger of moral distress, they perceived that there were other influencing factors such as patient/family’s beliefs. Four participants reported that many end-of-life patients received life-prolonging treatments because of the family’s beliefs.

“When we [doctors and nurses] talked with them [Buddhist families] about death, they felt that we were cursing them. I found many cases perceived it in a negative way. So, we invited a palliative care team to make sure that they were prepared about death but we were blamed by the family that we were hastening death.” – N3

“For Buddhists, some of them believed in a fortune teller more than us [nurses]. A patient’s wife came to us and requested us to do CPR and any treatment that can extend the patient’s life. She said that the fortune teller told her that if the patient was alive until Sunday, he would survive. Sunday was his birthday, she believed he would be born again and get a new life.” – N1

These cases are in contrast with cases involving Muslim patients, in which the five nurses felt less distress because they tended to refuse aggressive treatments in lieu of supportive care or taking the patient home to be with the family. Muslim patients and families believe that Allah appoints their life and as Allah assigns, they would accept and be happy to meet the God after life.

“Of course, I feel better. At the end of life, a Muslim family is easy to talk with. They accepted the death. They told me that after death they will meet Allah. Life is planned by him. So, when the doctors discussed with them about palliative care, they accepted it easily. At the last minute of life, they will ask to take the patient home. You could see right, there were many family members and neighbors visited the patient, especially when they knew that this gonna be the last time they could meet....” – N3

3.2.3 Ineffective team function

The last theme of this study was ineffective team function. Different from sub-theme of the first theme, source of powerless at the team level, this theme mainly referred to factors that inhibited the effective team work included poor communication and collaboration, working with incompetence healthcare providers, and inappropriate behaviors of colleagues.

3.2.3.1 Poor communication and collaboration

Poor communication and collaboration impacted the quality of patient care in that nurses felt they were excluded as members of the team and could not communicate with patients and families sometimes because they were not sure about the goals of care (12 participants).

“The collaboration among the team wasn’t bad but it wasn’t good as it should be. We [nurses and doctors] had less discussion. We [nurses] were trying to be a part of team. We joined the morning medical rounds to know the goal and plan of each patient. But when they placed orders, they were totally different from what they had discussed during rounds. They changed the plan without informing us. They might feel that they don’t need to tell us. When the patient asked us about the plan, I could just tell him to discuss it with the

doctors. *I know I should not say that but I wasn't really sure about the plan*" – N15

"When the patient was transferred to our unit, we got so many treatment orders for him that were unnecessary. He was sent here for palliative care. It seemed like the ICU doctor hadn't cooperated with the doctor in our unit. So, their goal was different." – N19

3.2.3.2 Incompetence healthcare providers

Five participants noted that their colleague's incompetence threatened the integrity of the patient due to delayed treatment or inappropriate pain management.

"To me the cause of moral distress was delaying medical treatment. It was delayed because of the doctor's skill. He was so new. Actually, there was a septic shock care bundle that he could follow. The patient was critical and we need immediate decision on the treatment. Finally, the patient went into cardiac arrest and passed away." – N13

"They [patients] got fasciotomy which everyone knows causes severe pain. But when we asked the doctor for pain medication, they always refused. They were afraid that the opioid would decrease the patient's blood pressure. God! This was about knowledge. There were many kinds of medication that we could use. ..." – N14

3.2.3.3 Inappropriate behaviors of colleagues

Ignoring patients and treating them unequally due to social hierarchy are unethical behaviors of colleagues that four nurses found to be highly morally distressing.

"I witness the kid was suffering with pain. I notified him [doctor] so many times until I got mad at him. He didn't even come to visit the patient. He was ignoring the patient. I could give the kid only paracetamol but it didn't help. I needed more than that but he disappeared. Do you understand right, how I felt at that time?" – N5

“I notified him [doctor] that the baby’s respiratory rate was 100 bpm. He stood at the bedside and watched the baby breathe and said ‘it’s fast but shallow breathing’, it was acceptable. He said it was acceptable! I believed if the baby was his daughter or baby of the staff working in this hospital, he would immediately intubate and sent to NICU. It was unfair, life should be equal, no matter who was the parent.” – N4

3.3 Integration of the quantitative and qualitative findings

The qualitative data enrich the quantitative findings. Many participants recalled an end-of-life situation as their example of moral distress and this is reflected in the fact that 3 of the top 7 ranked causes of moral distress were end-of-life related. Additionally, the qualitative data broaden a contextual understanding of moral distress in Thailand where the power/authority from families comes from the person who pays and the religious beliefs of the family can be influential. These stories speak to end-of-life and give an indication about how powerlessness ties into these end-of-life situations. Furthermore, the nurses provided stories about excessive documentation, inadequate resources (bed availability, equipment availability) and having too many patients—all of which show up in the top 7 ranked causes using the MMD-HP.

4. Discussion

Of the seven highest ranked causes of moral distress, four addressed system-level workload issues (e.g., excessive documentation requirements, lack of resources) that compromise care quality and three were related to patient-level problems, especially end-of-life issues. In comparison to the most morally distressing root causes reported by Epstein et al. (2019), five of the top seven were the same. Epstein et al. (2019) found two team-level root causes; *watching patient care suffer because of a lack of provider continuity* and *witnessing low quality of patient care due to poor team communication*, that were not among the most distressing for our Thai nurse sample.

Three of the most morally distressing root causes for Thai nurses; *feeling required to overemphasize tasks and productivity or quality measures at the*

expense of patient care, having excessive documentation requirements that compromise patient care, and experiencing compromised patient care due to lack of resources/equipment/bed capacity are new items on the MMD-HP, making comparison to other studies using the MDS-R or MDS difficult. However, support for these items comes from the literature. For example, Wilson et al. (2013) invited nurses to respond to an open-ended question to describe morally distressing situations beyond the MDS items and found that nurses illustrated that workload made them experienced moral distress because it impacted their work performance and made them less empathetic and more careless. Chen et al. (2018) applied Q methodology to explore the perspectives of nurses regarding moral distress and found that excessive administrative work and paperwork distracted and prevented nurses to provide quality of the patient care.

End-of-life situations such as providing aggressive treatment due to family decision or because no one will make a decision, and carrying out unnecessary/ inappropriate treatments were found to be problematic via the MMD-HP and the interview data were consistent with this and provided additional depth. Approximately 80% of the representative nurses described stories about caring for patients at the end of life. The nurses in this study expressed a sense of powerlessness because they felt compelled to follow a family member's or a doctor's decision that they felt caused suffering or prolonged death. They felt forced to participate in aggressive and unnecessary/inappropriate treatments which is similar to several previous studies (Allen et al., 2013; Asgari et al., 2017; Austin et al., 2017; Colville et al., 2018; Coyle et al., 2016; Dodek et al., 2016; Dyo et al., 2016; Hamric et al., 2012; Hiler et al., 2018; Houston et al., 2013; Karagozoglu et al., 2015; Trautmann et al., 2015; Trotochaud et al., 2015; Whitehead et al., 2015). Varcoe et al. (2012) found that feeling powerless was predominantly described by the hierarchical nature of constraints. We found a similar finding in which nurses felt obligated to carry out a physician's "family-driven" order even when they knew it to be wrong.

Beyond system level and patient level root causes, team level root causes were also found to be a problem lead to moral distress among Thai nurses. Although team-related items in the MMD-HP did not rank as top

causes, analysis of the interview data revealed that poor communication and collaboration and working with incompetent colleagues were frequently described as morally distressing. Several quantitative studies showed that issues related to poor team function were the top cause of moral distress (Asgari et al., 2017; Austin et al., 2017; Colville et al., 2018; Coyle et al., 2016; Epstein et al., 2019; Karagozoglu et al., 2015; Hamric et al., 2012; Trautmann et al., 2015; Trotochaud et al., 2015; Whitehead et al., 2015). Poor communication and collaboration are unhealthy for healthcare teams and could affect patient outcomes (Busari et al., 2017). Having different goals or being unsure about goals could severely diminish the safety and quality of patient care (Chen et al., 2018; Langley et al., 2015; Shoorideh et al., 2012).

With regard to relationships between moral distress and demographic and practice factors, no differences in moral distress scores were found when comparing participating nurses by age, years of working, or end-of-life training. Our findings are consistent with some studies (Altaker et al., 2018; Coyle et al., 2016; Dyo et al., 2016; Karagozoglu et al., 2015) but not with others where positive correlations between moral distress and age (Hiler et al., 2018; Dodek et al., 2016) or years of experience or years in current position (Allen et al., 2013; Colville et al., 2018; Dodek et al., 2016; Hamric et al., 2012) were found. One explanation may be that this association demonstrates the crescendo effect in that as clinicians gain years of experience, they also repeatedly confront morally distressing situations causing a rise in moral distress over time. After consideration of the crescendo effect model, we questioned whether it was not the number of years of clinical experience but rather the number of morally distressing situations a provider encounters that triggers a rise in moral distress over time. Thus, in the present study, we asked nurses to estimate the number of morally distressing situations they had encountered in the last year and found that this correlated positively with MMD-HP scores. While not an objective measure, the number of episodes of moral distress may be a more reliable indicator of the crescendo effect than years in practice or years in current position. To explore this further, objective measures of episodes are needed.

In this study, acute care nurses' moral distress levels were significantly higher than those of the critical care nurses. This finding contrasts with

several previous studies (Dyo et al., 2016; Epstein et al., 2019; Fumis et al., 2017; Hamric et al., 2012; Trotochaud et al., 2015; Whitehead et al., 2015). Contextual differences between Thailand and western countries could offer some explanation although we did not investigate this directly. In some acute care units, nurse: patient ratios can be as high as 1:10-15. And, in these units, widely varying levels of patient acuity are admitted including stable patients, palliative care patients, terminally ill patients, and critically ill patients. The number of ICU beds is limited and patients who are critically ill may not be able to be transferred to a higher level of care. Additionally, acute care units are mostly manual and lack equipment such as cardiorespiratory monitors, blood pressure monitors, and intravenous pumps. Sometimes, higher technology equipment is used without appropriate training and preparation. Comparison of the narratives from the 9 critical care nurses and the 9 acute care nurses did not reveal specific or obvious differences. Therefore, this finding calls attention to the need for further exploration, paying particular attention to the context.

Previous studies have found that higher levels of moral distress are significantly and positively correlated with intention to leave a position due to moral distress (Allen et al., 2013; Austin et al., 2017; Colville et al., 2018; Epstein et al., 2019; Hamric et al., 2012; Trotochaud et al., 2015; Whitehead et al., 2015) and our findings were similar. Additionally, unit setting, number of moral distress episodes, and intention to leave were significant predictors of MMD-HP scores, controlling for other variables. These consistent findings strongly suggested that moral distress is a substantial threat to employment longevity within the international health care community, lending further support to the importance of interventions designed to mitigate moral distress in order to improve staff retention.

5. Conclusion

This study provides initial evidence that the Thai translation of the MMD-HP captures the root causes of moral distress among Thai nurses. Even if root causes are similar between cultures, the way they are experienced may vary according to culture and context. In this study, three specific findings

contribute to a growing body of literature about moral distress in different cultures. First, acute care nurses' moral distress levels were higher than the critical care nurses which is rather unique and may be partially attributable to environmental issues such as lack of resources and large nurse: patient ratios. Second, the number of morally distressing episodes, rather than years in practice or in current position, correlated positively with MMD-HP scores and may provide some new insight to the crescendo effect. Finally, the influence of patients' and family's religious beliefs on end-of-life care decision is similar to those in the west. However, the understanding of how clinicians approach non-Christian's decision at the end-of-life and how the religious perspective ties into the concept of moral distress is not yet clear.

This study was limited in that it explored moral distress only among Thai nurses. Future studies should measure moral distress among multiple types of healthcare professions so that 1) a clearer picture of moral distress among Thai clinicians is gained, 2) similarities and differences between cultures become better understood, and 3) interventions may be developed that are sensitive to cultural context and that are effective in mitigating moral distress. A large study at the national level might provide more comprehensive findings that may drive healthcare policy development. Studies of coping strategies in nurses and other providers who experience moral distress are needed as interventions may build on these strategies, keeping in mind that moral distress does not indicate a problem with the individual but with the healthcare system in which the individual works.

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CHAPTER 5

CONCLUSION

Strengths and Limitations of the Study

This study is the first study that aims to explore and describe the experiences of moral distress among nurses in Thailand. This study is also the first study using a newly revised and updated measure of moral distress, the MMD-HP, in the Thai language. The results of this study support the MMD-HP as a valid and reliable moral distress measurement in the Thai language that can be used in future studies. While other studies have used a single quantitative or qualitative approach, this study employed a convergent parallel mixed methods approach to develop a more complete understanding of the root causes of moral distress. Although this study demonstrated several strengths, there are some limitations that must be considered. First, the participants in this study were nurses. Thus, while the MMD-HP was designed to measure moral distress levels in a wide variety of healthcare professionals, this study did not seek to address other professions. The results cannot be generalized to other healthcare professionals. Second, this study was conducted in the southern part of Thailand which also may limit the generalizability of the findings. Religious differences of the patient in the southern, a high number of cross-border patients in the north, and a low literacy of people in the northeastern may influence how clinicians experience moral distress.

Implications and Recommendations

The findings of the study offer the following implications and recommendations.

Nursing practice. This study provides evidence that nurses would like to be more involved in decision making. They believe they have relevant information to add to the conversation.

Nursing administration. The findings of this study provide evidence that moral distress is a possible reason for nurses' intention to leave a position. For hospital administrators, this might enhance their awareness to find strategies to address or mitigate moral distress in healthcare providers.

Nursing education. Laws and Ethics in Nursing is the only course that has been taught about general laws related to the practice of nursing and midwifery in Bachelor of Nursing Science programs in Thailand. Ethics content tends to focus on ethical principle, code of ethics, patients' rights, ethical dilemma, and ethical decision making in nursing. Moral distress is currently not included as content. An integration of moral distress in the content of this course will provide important knowledge for nursing students as they prepare to become practicing nurses. Additionally, an integration of moral distress into practicum courses might enhance their skill and awareness from the real situations they encounter during practice. Furthermore, for nurses, conferences and workshops about moral distress—how to identify it and what to do when it occurs—would provide skills and practices that may ultimately influence the quality of patient care.

Nursing research. This study was limited to nurses but further studies should include other healthcare professionals to broaden the understanding of moral distress experiences in Thailand. A large study at the national level might provide comprehensive findings that will drive healthcare policies. Moreover, an understanding of coping strategies of healthcare professionals may provide a foundation of developing the interventions to mitigate moral distress. Additionally,

several western studies have linked the quality of the healthcare ethical environment to moral distress. Future studies should explore this in eastern countries as well as the culture of healthcare varies and may play a role in how moral distress is experienced. Most importantly, effective interventions to mitigate moral distress need to be developed and tested in Thailand and other countries.