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Moral Distress in Critical Care Nursing: The State of the Science

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Moral distress in critical care nursing: The state of the science

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Abstract

Background:

Moral distress is a complex phenomenon frequently experienced by critical care nurses. Ethical conflicts in this practice area are related to technological advancement, high intensity work environments, and end-of-life decisions.

Objectives:

An exploration of contemporary moral distress literature was undertaken to determine measurement, contributing factors, impact, and interventions.

Review Methods:

This state of the science review focused on moral distress research in critical care nursing from 2009 to 2015, and included 12 qualitative, 24 quantitative, and 6 mixed methods studies.

Results:

Synthesis of the scientific literature revealed inconsistencies in measurement, conflicting findings of moral distress and nurse demographics, problems with the professional practice environment, difficulties with communication during end-of-life decisions, compromised nursing care as a consequence of moral distress, and few effective interventions.

Conclusion:

Providing compassionate care is a professional nursing value and an inability to meet this goal due to moral distress may have devastating effects on care quality. Further study of patient and family outcomes related to nurse moral distress is recommended.

Keywords

Critical care nursing, end-of-life, ethical conflict, moral distress, professional practice environment

Introduction

Moral distress occurs when a nurse cannot follow through with moral actions and compromises professional integrity.[1–5] Ethical conflict is an antecedent to moral distress and occurs commonly in nursing practice.[6–10] Nurses describe moral distress as a painful experience of frustration, anger, sadness, helplessness, and suffering.[4,11,12] The phenomenon is complex and impacts the physical, psychological, and emotional well-being of nurses.[5,12–15] If the experience of moral distress remains unresolved, a nurse may experience emotional exhaustion and consider leaving a position or the profession.[5,16,17] In addition, certain nursing behaviors attributed to moral distress may compromise the quality and safety of patient and family care.[5,13–15,17–19]

Prior reviews provide knowledge about the general experience of moral distress in hospital nurses,[16] sources of moral distress,[17] organizational and psychological components of moral distress,[20] as well as nurse outcomes.[13] A major omission of prior reviews is specificity to the critical care practice area. Critical care nurses are at high risk for moral distress due to ethical conflicts created by technological advancement, high-intensity work environments, and frequent exposure to death.[13,21,22] Attention to moral distress in this practice area is important given the frequency ethical conflict occurs[10] and the impact on nurses, patients, and families.[1,8,12,13,16,23,24] These factors provide the rationale for an exploration of quantitative and qualitative literature. Understanding moral distress within the context of critical care nursing may better inform future research.

Objectives

The purpose of this state-of-the science review is to describe moral distress research in critical care nursing from 2009 to 2015. This timeframe was selected because prior reviews have addressed moral distress literature published before 2011. Specific questions included the following:

1. How has moral distress been measured?
2. What factors contribute to moral distress?
3. What is the impact of moral distress on nurses, patients, and families?
4. What interventions may be effective in mitigating moral distress?

Methods

Design

This state-of-the-science analysis followed the mixed-method review methodology described by Whittemore et al.[25] The scoring system for mixed-method reviews was used as a general guide to critically appraise research studies.[26]

Search strategy

Moral distress was the main search term used to identify the research literature and combined with other terms including intensive care unit (ICU), critical care, intensive care, critical care, moral, ethics, distress, and interventions. Core health sciences databases used in the search included the following: Cumulative Index to Nursing and Allied Health Literature (CINAHL), the National Library of Medicine (MEDLINE/PubMed), and Psychological Abstracts Information Services (PsycINFO). Reference lists also were reviewed to identify studies. Inclusion criteria were defined as publication in the years 2009 to 2015, full text, research articles, and English language. Pediatrics, neonatal intensive care, dissertations, and case studies were excluded.

A total of 525 studies were screened for inclusion. After removing duplicates, 321 articles remained. When applying the limits of full text, English language, and research studies, 60 articles met eligibility; however, 18 were eliminated due to lack of specificity to moral distress. There were 42 research studies subsequently included in this review (12 qualitative, 24 quantitative, and 6 mixed methods).

Analytic strategy

The four research questions guided data extraction during the iterative review process. A table was constructed to examine similarities and differences in study design, research focus, and findings. An independent reviewer critiqued results for clarity and consistency.

Results

The scientific literature was synthesized for moral distress measurement, contributing factors, patient, family and nurse outcomes, and interventions. Table 1 summarizes reviewed studies.

Moral distress measurement

Various tools have been developed to quantitatively measure moral distress.[7,37,62] The Moral Distress Scale (MDS)[64] and the MDS-Revised (MDS-R)[37] were the most frequently used instruments in the reviewed literature. The MDS-R measures the intensity and frequency of moral distress like the MDS; however, it also provides an overall summative moral distress score.[37] New tools for moral distress measurement include the Moral Distress Thermometer[62] and the Ethical Conflict in Nursing Questionnaire–Critical Care Version (ECNQ-CCV).[7] The Moral Distress Thermometer is a single-item tool with an 11-point analogue-type scale.[62] This tool provides a real-time assessment of moral distress that may be applied to actual clinical situations. The ECNQ-CCV measures ethical conflict by placing moral distress along a continuum of moral responses.[7]

Frequency and intensity of moral distress

In the reviewed studies, moral distress intensity is reported as moderate[7,21,29,37,38,42,43,52,54,60] to high.[27,44,47] The frequency of moral distress is reported as low[21,36,38,47] to moderate.[39] A work environment survey showed that moral distress increased significantly from 23.2% in 2008 to 32.7% in 2013.[55]

Sociodemographic factors

While some have reported no relationship between moral distress and demographics,[21,27,41,44] others have found that culture, role, gender, religion, age, and years in practice may influence reports of moral distress.[33,36–38,45,47,58] Italian, Greek, Spanish, Belgian, and German nurses reported higher levels of moral distress than other European national groups.[25,47] Staff nurses have greater moral distress than nurse managers[36,38] and physicians.[37,58] Female nurses reported more moral distress than males.[38,45] Nurses who base ethical decision-making on religious beliefs reported higher levels of moral distress than those guided by work or life experience, family values, or the code of ethics.[33] Some studies report that younger nurses experienced higher levels of moral distress.[35,63] In contrast to these findings, others have found that nurses with more nursing experience or years within a clinical position had greater levels of moral distress.[37,52]

Nurses in critical care settings experience higher levels of moral distress than other nursing practice areas.[58] Medical and surgical critical care nurses report greater moral distress frequency than nurses working in coronary, neurosurgical, pediatric, neonatal, or cardiac surgery ICUs.[38] Those working with adult populations reported significantly higher moral distress than those in pediatrics.[27] Nurses who had left a position or considered leaving reported higher moral distress scores.[47,52,58]

In summary, there are conflicting findings on demographics in the moral distress literature. It is unclear whether moral distress intensifies during the time one works in a critical care nursing position or if moral distress intensity diminishes over time. There may be important differences in the experience of moral distress that are dependent upon the practice environment and patient population.

Factors that contribute to moral distress

The organizations in which critical care nurses practice impact the nursing experience of moral distress. A negative relationship has been found between moral distress and nurse–physician relationships and collaboration,[21,38,47] elements of the practice environment,[21] organizational ethical climate,[37,52,54] nurse autonomy,[38,47] and nurse psychological empowerment.[29] Moral distress is frequently experienced during the process of end-of-life decision-making.[11,22,29,37,48,49,53,57] Lack of limit setting for futile treatment may potentiate the experience of moral distress in critical care nurses.[48,49]

Nurse–physician relationships

Collaboration, the quality of nurse–physician relationships, and moral distress have a negative relationship.[21,38,47] Assisting a physician who is providing incompetent care has been identified as a high scoring item for both frequency and intensity of moral distress.[21,29,47,52,60] Nurses were more likely to report physician communication as a cause of a medication error when they reported higher levels of moral distress.[42]

The challenges of working within an interdisciplinary team and consequential poor communication and collaboration were described in many studies[11,22,30,31,49,53,56,57] Nurses reported that medical values take priority over nursing values within the organizations they practice.[43,53] Unprofessional behavior of physician colleagues is also described by nurses as a barrier to addressing ethical conflict in patient care.[48,56]

Nursing autonomy/collaboration

Nurses described the need to be involved in decisions about patient care.[11] Nurses have expressed feeling devalued and their contributions to care ignored.[31,53,56] Moral distress frequency has a negative relationship with nurse autonomy and collaboration.[38,47] Nurses value healthcare team relationships[11] and conflict resolution.[30] When nursing efforts fail to promote team cohesion, nurses report increased emotional investment in the case,[30] anger with physicians, and moral distress.[31]

Organizational challenges

Numerous studies have examined the influence of the organization on moral distress.[21,28,38,47,52,54,55] The organizational ethical climate has been negatively correlated with moral distress,[37,54,58] and climates dominant in rules, individualism, or organizational interest are positively related to moral distress.[28] Moral distress was predictive of nurse reports of participation in hospital affairs, leadership and support, and resources and staffing in a study examining the influence of moral distress on the practice environment.[21] Organizational barriers to nursing autonomy and holistic nursing care include the following: (a) hierarchical relationships, (b) poor teamwork, (c) incompetent healthcare workers, (d) fear of reporting unsafe behaviors, (e) poor staffing ratios, (f) inadequate time to care for patients, (g) lateral violence, (h) critical care technology that may not meet patient needs, (i) overwhelming demands of the ICU environment, and (j) lack of support.[42,43,52,56,50]

A disconnect between an organization's efficiency and quality of care is a source of nursing moral distress.[56] High moral distress scores are associated with financial constraints in the healthcare

environment.[47] Nurse managers have reported high levels of moral distress in response to questions about balance between administrative and patient care responsibilities.[36] Similarly, nurses described discomfort when work-related tasks hindered their ability to advocate for patients or the economic benefits of the hospital were considered a priority over human life.[31]

Communication

Communication problems among the nurse, patient, family, and physician during end-of-life decision-making are frequently described as a source of moral distress.[22,43,51,53,57] Unified communication plans and shared team goals may decrease moral distress.[11,22,57]

Nurses report not being heard during inter-professional interactions about end-of-life care and describe feeling powerlessness, anger, and frustration.[11,22,43,52,53,57,59] In research examining perceived inappropriate care in ICUs, nurses were more likely to perceive a discrepancy between the level of patient care and prognosis and subsequently experienced higher levels of moral distress than physicians in training or senior physicians.[51]

Moral decision-making and advocacy

There is a small body of literature addressing nurse moral decision-making.[11,22,48,49] Patient and family advocacy is a theme in nurses' description of their professional role.[22,48,49,53,57,59] Nurse perceptions of an unsuccessful advocacy attempt may result in the experience of moral distress[11,22,40,43,48,49,52,53,57] and negatively impact future attempts of advocacy in nursing practice.[59]

Nurse, patient, and family outcomes

Moral distress is associated with negative outcomes for nurses, patients, and families.[32,34,35,42,43,46,48,49,56,59,61] Some nurses report changes in their nursing practice and consider leaving critical care or the nursing profession because of moral distress.[38,42,47,52,59] Patients and families may experience poor communication, prolonged deaths, and inadequate nursing support.[22,30,31,48,49,53,56,57,59]

There is a weak positive relationship between moral distress and burnout.[32] Elements of nurse burnout including depersonalization and emotional exhaustion are both negatively correlated with job satisfaction.[46] Unresolved moral distress may lead to compromised patient and family care.[31,56,59] The consequences of nurse moral distress identified in the literature include patient and family avoidance, desensitization, withdrawing from patient care, and depersonalization of patients.[30–32,34,46,48,49,56,57,59] A positive correlation between moral distress and nurse avoidance behaviors was found in one study.[34] Nurses reported "looking away" from ethical issues when the healthcare team was in conflict due to the challenges imposed by addressing ethical issues in care.[50]

Negative social judgments about patients and families by nurses and other healthcare providers is another factor that may impact patient and family care.[56] Some also found that nurses expressed regret for treating patients "mechanically in a cool manner" and noted that more experienced nurses were indifferent to ethical nursing concerns.[31] In a study that explored team dynamics, critical care nurses shared that when disagreement among team members about treatment options occurred,

mixed messages about a patient's condition were presented in family meetings.[30] Negative outcomes for the patient and family included the following: (a) suffering, (b) prolonged and undignified dying, (c) poor quality of life, (d) lack of time with family, (e) delayed or prolonged treatment, and (f) false hope.[59]

Many nurses report compromises to care quality as the result of moral distress.[35,42,56,61,63] The sources of moral distress most often connected with care quality were workload and pressure to provide less-than-optimal care for cost reduction.[31,39,56,61,63] Positive correlational relationships were found among moral distress, compassion fatigue, intent to resign, nurse staffing, and medications errors.[42] Nurses experiencing moral distress were fearful about reporting unsafe behaviors in the workplace.[35,42,52]

Interventions

Few moral distress interventional studies have been conducted.[41,44] Of the two interventional studies reviewed, both utilized educational strategies with nurses. Leggett et al.[41] developed four 60-min classes, and Molazem et al.[44] conducted an 8-h workshop using role-play and group discussion teaching methods. A concerning finding in Leggett's et al.[41] study was that moral distress scores were significantly higher in the group that had moral distress measured after the intervention. In contrast, Molazem et al.[44] found that those who participated in educational sessions had a significant decrease in moral distress.

Discussion

The majority of the reviewed studies were descriptive,[11,21,22,29,31,34,38,40,42,43,47,52,53,57,59] and correlation was the most frequently used analytic strategy.[21,29,34,38,40,42,43,47,52] Many of the studies used independent t-tests or analysis of variance (ANOVA) to provide a comparison of moral distress scores based on demographic nurse characteristics.[55,60,63]

There are limitations of the reviewed studies including those imposed by design, sampling, measures, and procedures. Descriptive, exploratory, and correlational approaches cannot provide information about causation. Within the correlational studies, most relationships were weak to moderate, and there is a risk for type 1 errors as the number of analyses increase.[65] Use of multivariate tests may decrease this risk; however, few studies[32,40,51,54] used this approach.

Sampling bias was a factor in many of the studies because moral distress was examined within a specific population, culture, or practice area of critical care. Some of the studies used lists provided by professional organizations or nursing conferences to recruit participants. Nurses who attend conferences may be more engaged in professional development and not accurately represent the general population of nurses in critical care. Small sample sizes and low response rates are the additional limitations in the reviewed literature. Few studies enrolled participants from multiple institutions.[36,51,53,54] Of the two interventional studies,[41,44] there was risk of nurses sharing knowledge about the intervention due to sampling from the same practice area.

While the majority of studies used a reliable and valid tool to measure moral distress,[8,21,27,29,32,35,39,40,41,43–45,46,58,63] modifications to existing tools or new tool development make comparison across studies difficult. The lack of diversity in research design may also speak to

measurement challenges with moral distress.[16,66] New measurement tools may hold promise for future research and require further testing. The Moral Distress Thermometer[62] may better gauge moral distress in daily clinical practice or in repeated measures study designs. The ECNQ-CCV[7] measures moral distress; however, it also examines other responses such as moral outrage, moral indifference, moral uncertainty, moral well-being, and moral dilemmas. This additional information may be used to develop or tailor interventions to address ethical problems in nursing practice.

Implications for future research

Moral distress is increasing in critical care nursing.[39,55] Culture, gender, religion, age, years in practice, as well as role within an organization may impact moral distress;[33,35–38,47,52,58,63] however, these findings have not been consistent across studies and require further research. There are conflicting findings in terms of age and years of nursing experience in relationship to moral distress.[35,37,52,63] While it is theorized by Epstein and Hamric[67] that moral distress may create a residue over time that leads to intensification of moral distress, this has not been extensively tested.

Critical care nurses experience greater moral distress than those in other practice areas,[58] with adult medical and surgical nurses experiencing more moral distress than those in other types of critical care units.[27,38] There may be important differences in moral distress that are specific to the ethical issues occurring in certain patient populations; however, this requires further research.

The practice environment within the organization may contribute to the experience of moral distress.[21,38,47,52,68] This finding is consistent with prior reviews;[13,16,20] however, measures of the practice environment have been limited and varied across studies.[21,38,47,52] Future multi-site studies with reliable and valid measures would allow meaningful comparison among different types of institutions.

Nurse–physician relationships and level of collaboration is a significant contributor to moral distress in critical care nursing practice.[11,22,38,47,53,57] The negative relationship between moral distress and autonomy as well as collaboration[38,47] is of concern. If nurses do not feel valued in professional interactions, this may have serious consequences for patients and families. The ability to uphold nursing values within interdisciplinary relationships has not been explored and remains a gap in the scientific literature. Understanding the views of other disciplines is important for development of effective interventions to enhance collaborative practice. Comparing the experience of moral distress in nursing to moral distress experienced by other disciplines may illuminate new perspectives to stimulate inter-professional dialogue and targeted areas for interventional research.

Challenges imposed by healthcare organizations are recognized as a source of moral distress. Moral distress research remains predominately within the limits of individual nurse perspectives rather than addressing the systems that impact the experience.[14,15,57,69] Concerns about conflict resolution, staffing levels, fears of reporting unsafe behaviors, lateral violence, hierarchies, and devaluing of nursing[43,52,53,55] may contribute to moral distress; however, none of the reviewed studies quantified these specific organizational-related barriers. Measurement of these factors is required to test interventions aimed at improving working conditions in the organizations' nurses' practice.

End-of-life decision-making is a major contributor to moral distress in critical care nursing.[11,22,29,31,48,49,51,53,57] Research examining the prevalence of medical futility, the impact of organizational ethics, and ethical conflicts unique to patient populations is recommended.

Almost half of the literature about moral distress in critical care is qualitative and contributes to depth in understanding the phenomenon. A limitation of this analytic strategy is the lack of measurement and control required to determine the effectiveness of interventions. Moral distress may decrease nursing empowerment[29] and hinder nurse advocacy behaviors.[59] In the reviewed literature, nurses described difficulty caring for patients and families when experiencing moral distress.[31,56] This is important to study further, as patients and families depend on nurses for support. Measurement of nurse moral distress, nurse advocacy behaviors, and patient and family outcomes may provide information about the impact of moral distress on patients and families.

While moral distress may be a negative experience for many nurses, it can also increase autonomy and result in professional growth and development.[5,13,16,56,70] Critical reflective practice[40] may be an intervention to help nurses identify the complexities of the moral distress experience and develop strategies to cognitively reframe the situation.[71,72] Multidisciplinary team involvement may enhance critical reflective practice. Further research is required to gain insights into nurse growth and development as a consequence of moral distress and the impact on the healthcare team.

There is a paucity of literature exploring the impact of moral distress on care quality.[34,35,59] Research addressing moral distress and patient and family outcomes is predominately qualitative and from the perspective of nurses and physicians.[22,30,31,48,49,56,57,59] Of the reviewed studies, only one actually measured a patient outcome.[42] None of the reviewed studies directly measured family outcomes. While it is accepted that moral distress negatively impacts care for patients and families,[13,16,20] without measurement it is difficult to know whether interventions aimed at mitigating moral distress are successful and positively impact patient and family outcomes as intended.

Few interventional studies[41,44] exist and have conflicting findings. Some have found that moral distress scores increase after moral distress education,[41] while others have appreciated a decrease in moral distress scores.[44] Education is the only tested intervention, and the measure of change is moral distress scores. Measurement of nursing autonomy, advocacy, and collaboration may provide meaningful information about changes in moral distress before and after interventions. Moral distress interventions need to match the complexity of the experience and address multifactorial causes. Interventions aimed at improving shared decision-making, collaboration, nurse–physician relationships, end-of-life decision-making, and organizational ethical climate require development and testing.

Limitations

Inclusion criteria were full text and research studies only, and thus, content available in abstracts, philosophical papers, editorials, and dissertations may have broadened the findings reported in this article. Additionally, limiting to English language potentially eliminated articles that may elucidate cultural differences in moral distress literature. Due to the fact that critical care was the focus of the review, any generalizations about findings are only pertinent to this practice area. Neonatal and

pediatric critical care was excluded and should be included in future reviews. Finally, inclusion of qualitative and quantitative research evidence with methodological diversity complicate synthesis.[73]

Conclusion

The research on moral distress in critical care continues to progress, and this review provides an update on the state of the science. Representative samples from multiple healthcare institutions are required to provide meaningful insights about moral distress in critical care nursing practice. Providing compassionate care is a professional nursing value, and an inability to meet this goal due to moral distress may have devastating effects on the quality of care to patients and families in critical care. Further study of patient and family outcomes related to nurse moral distress is recommended.

Conflict of interest

Funding

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Table 1. Evidence table for moral distress literature.

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Allen et al.[27]	MD among healthcare professionals	Descriptive, cross-sectional	523 physicians, 1794 adult and pediatric nurses/other disciplines Six hospitals (Southeast United States) MDS-R RR: physicians (12%), nurses (15%), social workers (16%), RT (12%)	Higher MD in adult hospitals (t = 2.86) MD higher for those who had left a position (F = 24.326) or considering leaving (t = 4.410)
Atabay et al[28]	Relationships between ethical climate type and MD	Descriptive, cross-sectional	Turkish nurses—online survey HECS MDS RR: 72%	MD three main factors: organizational constraints ($\alpha = 0.89$), misinformed and over-treated patients ($\alpha = 0.84$), and lack of time/resources ($\alpha = 0.80$)
Browning[29]	Relationship between MD and psychological empowerment?	Descriptive, cross-sectional	Nurses from American Association of Critical-Care Nurses (AACN) MDS Psychological Empowerment Instrument (PEI) RR: 277 critical care nurses	PEI scores negatively correlated with MD frequency (r = −0.194) ELNEC critical care training ($\beta = -0.215$) and PEI ($\beta = 0.222$) predicted MD frequency ($R^2 = 0.289$)
Bruce et al.[30]	Intrateam dynamics and MD	Descriptive, exploratory Case study methodology	Nurses, physicians, and ancillary staff Medical and surgical ICU Open-ended questions RR: 29 interviews (16 nurses, 6 physicians, 7 ancillary staff)	Team disagreements mentioned 3 to 5 times per interview
Choe et al.[31]	Experiences of moral distress	Descriptive/ exploratory Phenomenological analysis	Critical care nurses Two hospitals in South Korea RR: 14 nurses	Ambivalence towards treatment and care Dilemmas from limited autonomy in treatments Conflicts with physicians/ institutional policy
Dalmolin et al.[32]	Relationship between MD and burnout	Descriptive, cross-sectional	500 nurses, nursing assistants, and nursing technicians Three hospitals in southern Brazil MDS Maslach Burnout Inventory (MBI) RR: 75%	MD and burnout (r = 0.102) MD with burnout as predictor showed professional fulfillment was significantly negatively related to MD ($\beta = -0.107$)

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Davis et al.[33]	Nurses' ethical beliefs and MD	Descriptive, cross-sectional	1144 nurses (Idaho) Researcher-developed tool RR: 10%	Significant differences in MD based on ethical beliefs (F = 9.063)
De Villers and DeVon[34]	Relationship between MD and avoidance behaviors	Descriptive, cross-sectional	121 nurses from critical care or noncritical care units MDS Horowitz's Impact of Event Scale (IES) RR: 24%	Small positive correlation between MD and avoidance behavior
Falco-Pegueroles et al.[7]	Development of tool	Descriptive, cross-sectional	205 critical care nurses Two hospitals in Spain ECNQ-CCV	$\alpha = 0.882$ EFA = explained 33.41% of variance Confirmatory factor analysis model ($\chi^2 = 243.45$, $p = 0.189$, comparative fit index = 0.972)
Falco-Pegueroles et al.[8]	Exposure to ethical conflict	Descriptive, cross-sectional	292 nurses Two hospitals in Spain ECNQ-CCV RR: 69%	Indifference and moral well-being = low levels of exposure to ethical conflict Uncertainty and moral dilemma = intermediate levels of exposure Moral distress and moral outrage = high levels of exposure
Ganz and Berkovitz[35]	Ethical dilemmas, MD, and quality of care	Descriptive, cross-sectional	Surgical nurses from Two hospitals in Israel Ethical Dilemmas in Nursing (EDN) Quality of Nursing Care (QNC) RR: 74%	Frequency of ethical dilemmas/moral distress negative correlation with nursing skill (r = −0.25), meeting patient needs (r = −0.23) and quality of care (r = −0.27) Age negatively correlated with MD intensity (r = −0.23)
Ganz et al.[36]	Frequency and intensity of ethical dilemmas and MD	Descriptive, cross-sectional	Middle managers Four hospitals in Israel Ethical Dilemmas in Nursing–Middle Manager (EDN-MM) Questionnaire RR: 133 nurse managers	Assistant head nurses and supervisors had significant differences in scores (F = 4.43)

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Hamric et al.[37]	Revision of MDS	Descriptive, cross-sectional	Physicians and nurses Academic medical center MDS-R HECS RR: 60% (physicians) and 48% (nurses)	$\alpha = 0.89$ More nurse experiences higher MD (r = 0.22) Physicians lower MD than nurses (t = −5.786) MDS-R scores higher for those considering leaving (F = 48.392) MD was negatively correlated with ethical climate (r = −0.402)
Karanikola et al.[38]	Relationship between MD and professional autonomy and collaboration	Descriptive, cross-sectional, secondary data analysis	637 Italian nurses European Critical Care Conference Varjus' Autonomy tool MDS-R Bagg's Collaboration and Satisfaction about Care Decisions Scale RR: 90.2%	Female MD higher (t = −4.178, 95% CI, CI −10.31, −3.84) MD negatively associated with collaboration (r = −0.169) and autonomy (r = −0.134)
Kleinknecht-Dolf et al.[39]	MD instrument modification	Descriptive, cross-sectional, pilot study	Survey emailed to German-speaking nurses' Switzerland hospital MDS-R—translated into German RR = 55%	Ethical principles relate to decision making (M = 3.36, SD = 0.69)
Lawrence[40]	Relationship among MD, work engagement, and critical reflective practice	Mixed methods Descriptive, content analysis	198 ICU nurses (medical, pediatric, and neonatal) Utrecht Work Engagement Scale (UWES) MDS Critical reflective practice questionnaire RR: 14%	Moral distress and work engagement negatively correlated (r = −0.48) Work experiences "exhausting and demoralizing"
Leggett et al.[41]	Effect of a MD educational intervention	Mixed method, grounded theory, quasi-experimental Intervention = 60-min classes for 4 weeks	Interviews with 7 BICU nurses in United States 13 nurses were randomized to group A (MD measured before intervention) or group B (MD measured after intervention) Interviews MDS-R Self-efficacy scale (SE)	Difference in median scores of MDS-R (U = 36, z −2.14) with MDS median higher for group B (92) versus group A (40.5) No differences 6 weeks post intervention Qualitative results: feelings of stress

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Maiden et al.[42]	Relationship between compassion fatigue, MD, and medication errors	Mixed method, descriptive, thematic analysis	205 AACN certified nurses MDS The Professional Quality of Life Scale (ProQOL) Medication Error Survey RR: 20%	Positive relationship between MD and compassion fatigue ($r = 0.21$) Higher levels of MD more likely to report physician communication as reason for error ($r = 0.24$) Need process and practice changes
Mason et al.[43]	Compassion satisfaction, compassion fatigue, MD and educational level and work engagement	Mixed method, descriptive, content analysis	34 trauma surgical ICU nurses at an academic medical center MDS ProQol-5 UWES-9 Work Engagement (shortened version) Open-ended questions RR: 77%	MD associated with role conflict, suffering during end-of-life decision-making, powerlessness and medical versus nursing values
McAndrew and Leske[22]	End-of-life decisions	Exploratory, grounded theory	Nurses and physicians from four different ICUs Midwest academic teaching hospital Unstructured interviews RR: 11 participants (7 nurses and 4 physicians)	Main theme: End-of-life decision-making is a balancing act 1. Emotional responsiveness 2. Professional role and responsibilities 3. Intentional communication and collaboration
McAndrew et al.[21]	Relationship of moral distress to the professional practice environment	Descriptive, cross-sectional	235 nurses ICUs in Midwest teaching hospital MDS Practice Environment Scale (PES) RR: 33%	MD intensity and nurse–physician relationships negatively correlated ($r = -0.25$) Moral distress frequency and participation in hospital affairs, $r = -0.34$, leadership and support, $r = -0.32$, resource and staffing, $r = -0.25$, nurse–physician relationships $r = -0.30$ MD predictive of professional practice ($R^2 = 0.11$)

Table I. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
McLeod[11]	Perception of ethics when withdrawing treatment	Exploratory, thematic analysis	Nurses in England Neuroscience/trauma ICU Semistructured interviews RR = 6 nurses	Three related ethical factors related to decision-making: 1. Personal moral beliefs 2. Nursing experience 3. Decision-making process
Molazem et al.[44]	Effect of educational intervention	Experimental, RCT Intervention = 4-h educational workshop for 2 weeks	60 nurses working in a cardiac care unit in Iran n = 30 (intervention) n = 30 (control) MDS	Intervention group significant decrease in MD scores after the intervention Prior to intervention (M = 4.44, SD = 1.24) 1 month post (M = 3.34, SD = 0.996) 2 months post (M = 3.048, SD = 1.25)
O'Connell[45]	Gender differences in MD	Descriptive, cross-sectional	Online survey to US critical care nurses RR = 33%	MD scores different between men and women (t = 2.48) Females (CI = 112.75, $\pm$54.31) higher MD than males (CI = 60.43, $\pm$18.83)
Ozden et al.[46]	Perceptions of futility, exhaustion, and job satisfaction	Descriptive, cross-sectional	206 nurses working in ICUs 3 teaching hospitals in Turkey MBI Futility Questionnaire Minnesota Satisfaction Questionnaire (MSQ) RR: 66%	Job satisfaction negatively correlated with depersonalization (r = −0.426) and emotional exhaustion (r = −0.324)
Papathanassoglou et al.[47]	Relationship between MD, professional autonomy, and nurse–physician collaboration	Descriptive, cross-sectional	Nurses attending European Critical Care international conference Varjus' Autonomy tool MDS-R Bagg's Collaboration and Satisfaction about Care Decisions Scale RR: 255 surveys (17 countries)	MD frequency negative correlation with autonomy and collaboration (r_s = −0.174) Intent to leave positively associated with MD (r_s = 0.229)
Pavlish et al.[48]	Ethically difficult situations	Exploratory, descriptive, critical incident technique (CIT)	Nurses from an Ethics of Caring Conference in Los Angeles, CA Structured questionnaire RR: 91 nurses	Early indicators = conflict, suffering, poor communication

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Pavlish et al.[49]	Moral regrets	Exploratory, descriptive, CIT	Nurses from an Ethics of Caring Conference in Los Angeles, CA Structured questionnaire RR: 91 nurses	41.4% of the sample expressed regret for unnecessary patient suffering
Pavlish et al.[50]	Ethics Screening and Early Intervention Tool for clinical nursing practice	Mixed method, descriptive and categorical analysis, feasibility study	ICU and oncology nurses from two urban community hospitals Participants used tool 3 months Focus groups RR: 28 nurses	Not prepared for difficult conversations Contact with ethics and palliative team risky
Piers et al.[51]	Perceived inappropriate care	Descriptive, cross-sectional	1651 total participants (1218 nurses, 180 physicians in training, and 227 senior physicians) in European ICUs Inappropriate Care Questionnaire RR = 93%	Perceived workload independently associated with higher perceived inappropriate care (OR = 1.50; 95% CI 1.08, 2.08)
Sauerland et al.[52]	Perceptions of MD and ethical climate	Mixed methods, descriptive, thematic analysis	948 critical care nurses Academic hospital in the Southwest MDS HECS Open-ended questions RR: 23%	MD and hospital ethical climate (r = −0.51) Positive relationship between MD frequency and years in current nursing position (r = 0.15) Difference in hospital ethical climate responses for nurses who had left a position due to MD (t = 2.65) Theme: the environment of care
Shorideh et al.[53]	Experience of MD	Exploratory, content analysis	Iranian ICU nurses Teaching hospitals Semistructured interview RR: 31 ICU nurses (28 nurses and 3 educators)	1. Institutional barriers 2. Communication problems 3. Futile actions/errors 4. Inappropriate allocation of resources
Silen et al.[54]	Relationship between MD and ethical climate	Descriptive, cross-sectional	432 Swedish nurses from 16 wards (including ICU) from 2 hospitals MDS HECS RR: 58%	Negative correlation between MD frequency and ethical climate ($r^2 = -0.328$)

(continued)

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Ulrich et al.[55]	Work environments	Descriptive, cross-sectional	Convenience sample of AACN members AACN Critical Care Nurse Work Environment Survey RR: 8444 surveys	23.3% MD frequently/9.4% very frequently
Varcoe et al.[56]	Nurses' perceptions of and responses to MD	Exploratory, interpretive description	1700 acute care nurses from a database in British Columbia, Canada MDS HECS Three open-ended questions RR: 22%	Result of actions: "being blown off" and reprimanded
Weinzimmer et al.[57]	Team and individual factors in MD	Exploratory	Health professionals Tertiary care center in Houston, TX Semistructured interviews RR: 29 health professionals (13 nurses)	1. Advocacy 2. Preparing families 3. Team dynamics
Whitehead et al.[58]	Levels of MD among healthcare providers	Descriptive, comparison, cross-sectional	Web survey to 1513 nurses and other disciplines Tertiary medical center in Virginia MDS-R HECS RR = 28%	MD higher in ICU versus non ICU (M = 89 versus M = 70.5) ICU and adult practice areas higher than pediatric (M = 81.1 versus M = 57.9) HECS scores negatively correlated with MD (r = −5.16)
Wiegand and Funk[59]	Consequences of MD	Descriptive, exploratory, thematic analysis	204 nurses from 6 critical care units at University Hospital Open-ended survey RR: 23%	Changes practice: 60% intervened and 40% would not intervene in the future
Wilson et al.[60]	MD in ICU and transitional care unit	Descriptive, cross-sectional	105 Nurses working in a Medical–Surgical ICU (MSICU) (n = 81) and transitional care unit (n = 24) MDS-R Author developed Coping Strategies and Resource Questionnaire RR: 58%	Ethics committee (79%)/ debriefing (78%) as resources

Table 1. (continued)

Source	Research focus	Study design	Sample, measurement, and response rate (RR)	Summary of findings
Winters and Neville[61]	Missed care in practice	Exploratory, categorical analysis	Acute care nurses from New Zealand Semistructured interviews RR: 5 nurses	MD = unable to complete care/compromise standards
Wocial and Weaver[62]	Instrument development	Descriptive, cross-sectional	3751 Nurses Tertiary care hospitals in the Midwest MDS Moral Distress Thermometer (MDT): visual analogue scale RR: 28.3%	Convergent validity for MDT to MDS low-to-moderate correlation between the instruments ($r = 0.404$, adult) and ($r = 0.368$, pediatric)
Woods et al.[63]	Frequency and intensity of moral distress	Descriptive, cross-sectional	1500 nurses New Zealand Nurses Organization MDS-R Open-ended questions RR: 27.4%	Differences age groups ($F = 5.06$) Younger nurses higher ($M = 72.27$) versus ($M = 52.07$) Difference in hours of ethics preparation ($\chi^2 = 31.83$)

MD: moral distress; MDS-R: Moral Distress Scale–Revised; HECS: Hospital Ethical Climate Survey; ELNEC: End-of-life Nursing Education Consortium; OR: odds ratio; SD: standard deviation; RT: respiratory therapist; ECNQ-CCV: Ethical Conflict in Nursing Questionnaire Critical Care Version; BICU: burn intensive care unit; ICU: intensive care unit; RCT: randomized controlled trial; CI: confidence interval.
All significant relationships reported as p < 0.05.