Emotional Intelligence in Neonatal Intensive Care Unit Nurses: Decreasing Moral Distress in End-of-Life Care and Laying a Foundation for Improved Outcomes

An Integrative Review

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End-of-life care in the neonatal intensive care unit (NICU) is one of the most challenging practices for nurses. Negative emotions associated with moral distress often cause care to be incomplete or nurse disengagement. Emotional intelligence in nurses holds potential to address this issue, while improving patient outcomes. The purpose of this study was to critically appraise the evidence about emotional intelligence in nursing and to explore the relationship between emotional intelligence, moral distress in NICU nurses, end-of-life care, and other priority nurse and patient outcomes. A PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses)-structured integrative review was conducted, and CINAHL, Ovid, PubMed, and other databases were searched. Twelve studies were identified as relevant to this review after exclusion criteria were applied. Evidence supports the efficacy of emotional intelligence in bedside nurses as a method of improving key nurse and patient outcomes. Additionally, research suggests that emotional intelligence can be improved by training interventions. Clinical educators should integrate emotional intelligence concepts and strategies into staff training. Further research is recommended to validate previous findings in the NICU setting. Exploration of the relationship between emotional intelligence and moral distress in NICU nurses would provide a foundation for experimental designs to evaluate the effectiveness of emotional intelligence training interventions.

KEY WORDS
emotional intelligence, end-of-life care, moral distress, NICU, neonatal intensive care unit, palliative care

The neonatal intensive care unit (NICU) is a complex, stressful, and at times emotion-laden area for physicians, nurses, and families. These characteristics of the NICU are frequently evident during palliative care or end-of-life care (EOLC). Strong feelings of responsibility, helplessness, powerlessness, fear, and apprehension have been reported by NICU nurses in previous research studies. These feelings are often associated with futile care in intensive care settings and frequently contribute to increased moral distress.1-8 Multiple episodes or prolonged moral distress can lead to increased nurse stress, anxiety, burnout, attrition from the profession, and, most importantly, adverse patient outcomes.1-4,7,8 Studies indicate that higher levels of emotional intelligence (EI) could temper the negative effects of moral distress, especially during palliative or EOLC.9-13 However, research examining this relationship is lacking in the NICU setting. The following are the findings of an integrative review of these concepts, current research, and suitability for application in the NICU.

RATIONALE
Moral distress in the nursing discipline is not a new issue. Jameton14 first described the phenomenon, and since that time, a multitude of studies has examined its incidence and...
outcomes in the profession. More recently, Corley\textsuperscript{15} authored the theory of moral distress, which has been tested abundantly and found to be rigorous in its framework. Moral distress occurs when nurses know the morally correct option in a given situation but are not able to carry it out because of various institutional constraints.\textsuperscript{1,7,8,14,15} Likewise, this distress can result from ethical dilemmas in which health care providers have multiple ethically sound choices, but only one can be taken, and it, like the others, has negative consequences of some kind.\textsuperscript{8} The degree of moral distress can vary among nurses, depending upon the frequency and magnitude of its occurrence. Many sources of moral distress in nursing have been identified: insufficient staffing, limited involvement with the plan of care, futile care, palliative care, and EOLC. Nurses who often find themselves exposed to these circumstances typically report higher levels of moral distress and subsequent stress, anxiety, burnout, and patient avoidance behaviors.\textsuperscript{2,7,15} The constellation of moral distress attributes and consequences is rooted in nurse emotions.

Moral distress in the NICU appears to be very much the same phenomenon as in other areas of nursing. Studies conducted over the last decade reveal that NICU nurses who provide prolonged futile interventions during EOLC or palliative care suffer higher levels of moral distress than other nurses.\textsuperscript{2} Futile care is defined as continued, invasive curative care when there is little to no hope for survival.\textsuperscript{1,3,7} Neonatal intensive care unit nurses who are charged to carry out physician orders with which they disagree often feel powerless and angry.\textsuperscript{1,8} Furthermore, the inability to adequately manage symptoms, such as for pain or sedation needs, and conflict among health care team members are common sources for moral distress during these times.\textsuperscript{1}

Moral distress in all nurses, if not managed properly, leads to an increased intent to leave the unit or even the profession, increased nurse turnover rates, and avoidance behaviors, which significantly influence patient outcomes.\textsuperscript{1,8} A framework created to understand the complex process of and effects of moral distress illustrated activation of emotions after a triggering event. If the emotions are not regulated adequately, nurses often avoid patient and family engagement.\textsuperscript{4} In fact, the idea that nursing involvement is key to quality palliative care and EOLC is termed as “essential engagement” in a qualitative study.\textsuperscript{16} A lack of clinical engagement, decreased motivation to provide care, and decreased satisfaction with the quality of care provided may lead to negative patient outcomes.\textsuperscript{1,4,15,17}

The implementation of palliative care and EOLC in the NICU is a necessary, albeit challenging, part of nurses’ roles. As noted earlier, the experience of moral distress among care providers can lead to decreased patient and family engagement and thus less than adequate palliative care and EOLC. Research indicates that EOLC is not always given in a comprehensive manner. End-of-life care is complex and involves multiple dimensions of care and interventions to achieve closure.\textsuperscript{5} Therefore, there is continued need for research into efforts that might improve patient and family end-of-life outcomes. Research that examines the effect of EI in bedside nurses on nurse and patient outcomes has begun.

Credited with coining the phrase emotional intelligence in 1990, educators Salovey and Mayer unleashed a new perspective on intelligence and opened the door for other researchers to examine the impact of it in organizations and other work groups.\textsuperscript{18} Findings from this research defined EI as “…the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions.”\textsuperscript{18} Goleman\textsuperscript{19} further refined the idea of EI as “…the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions… in our relationships…” This complex construct is the compilation of many different concepts, such as self-awareness, self-regulation, social awareness, and social skills.\textsuperscript{20} The ability to combine intellectual reasoning with emotion regulation produces better outcomes personally, in the workplace, and in relationships. Higher EI is defined as (1) the ability to correctly identify emotions in self and others, (2) the ability to use emotions to facilitate reasoning, (3) the ability to understand emotions, and (4) the ability to manage emotions in one’s self and in emotional situations.\textsuperscript{21} The recognition that EI skills can produce better outcomes in the workplace has long been embraced by diverse disciplines, and in fact, nurse researchers have worked to build a body of knowledge specific to the profession.

The concepts that compose EI relate closely to nursing’s patterns of knowing.\textsuperscript{22,23} The emphasis on self-awareness as an essential skill in EI is reflected in nursing’s pattern of personal knowing. Self-regulation of emotion requires identification and recognition of an emotion in one’s self in order to invest fully in a therapeutic relationship with a patient. Self-confidence, another EI component of self-awareness, is often demonstrated by expressing opinions about what is right even when others disagree. This idea aligns closely with both ethical and emancipatory patterns of knowing in nurses, which is the developmental process by which a practitioner can identify issues of human injustice and inequity and choose the correct path. The ability to refuse to act because of moral beliefs is, in fact, at the heart of futile care. Moral distress is essentially a by-product of perceived injustice and the frustration that arises when it seems impossible to right a wrong. It has been suggested that EI facilitates coping mechanisms during the emotional labor that nurses experience.\textsuperscript{12,24} Additionally, EI, in a just organizational environment, was found to improve work engagement.\textsuperscript{25}
Critical Reflective Practice in NICU Nurses During EOLC

Previous research findings related to EOLC have described the concepts of personal knowing, emancipatory knowing, reflective practice, and professional growth. To date, only elements, such as reflective practice, of the EI construct have been examined specifically to NICU nurses. Reflective practice, long believed to be a component of problem solving, has been studied in relation to EOLC among nurses. The development of highly attuned critical reflection practices among NICU nurses giving care to dying infants has been the focus of a handful of research studies. A study that explored the experiences of NICU nurses who care for dying infants reported a pattern among a NICU nurse sample of “…exploring experience for transformation of practice.” A concept analysis of critical reflection suggested the use of this technique could lead to improved EOLC in the NICU. Providing NICU nurses with formal, regular opportunities to debrief, discuss, and share their thoughts and feelings about events surrounding the death of an acutely ill infant is a valuable method of learning and emotional regulation. Further research confirmed an association between the use of critical reflection practices and the acquisition of care expertise during EOLC situations.

A cross-sectional correlational study was conducted that examined the concepts of work engagement, moral distress, critical reflective practice, and education level among intensive care nurses, a subset of which were NICU nurses. Findings revealed a positive, direct correlation between critical reflective practice scores and work engagement scores. Work engagement is an essential concept within the nurse-patient relationship and quality patient outcomes, including EOLC. Emotional intelligence correlates with increased work engagement in nurses. Most impressive was a negative, direct relationship between moral distress and reflective practice, as well as between moral distress and work engagement. Carper included reflection as a necessary process in order to know the oneself and further mature as a person and professional. Chinn and Kramer describe this process as an integral requirement to nurses’ personal knowledge development.

Emotional Intelligence, Moral Distress, and EOLC

Emotional intelligence in nursing and health care professions has been studied in the past and is believed to have a moderating effect on moral distress, stress, anxiety, and other negative emotions that often occur during EOLC. Research has centered on EI and palliative care in just a few different nursing areas, such as oncology, medical-surgical nursing, and nursing education. Only a handful of studies have examined any part of EI, EOLC, and intensive care unit (ICU)-type setting. In order to evaluate the research on these concepts in the NICU setting, an integrative review of the literature was designed, and evidence was synthesized to document the effects of EI on bedside nurse outcomes and patient outcomes, particularly during EOLC.

OBJECTIVES

The objectives of this review were 2-fold. The primary objective was to locate, appraise, and synthesize the evidence to determine the effective use of EI abilities in EOLC, as a means of limiting the frequency and severity of moral distress in nurses and improving patient outcomes. The secondary objective was to determine the evidence of this relationship in NICUs. Research on this topic is somewhat limited, given the multiple concepts of interest. Therefore, studies were examined that combined at least 2 of the dimensions of this issue, with the exception of moral distress and EOLC, which is well documented: EI, patient outcomes, EOLC, moral distress, and NICU nurses.

METHODS

The 2009 PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) Statement was used to structure this integrative review. In an effort to encourage rigorous research protocols and standardized reporting, the PRISMA statement consists of a 27-item checklist and a flow diagram.

Eligibility, Databases, and Search Methods

Multiple databases were searched in an effort to locate the most current and highest levels of evidence related to EI, patient outcomes, moral distress, the NICU setting, and EOLC. Because of the relative scarcity of current evidence on this topic, articles were initially included if they contained 2 of the 4 concepts of interest. CINAHL, Ovid, PubMed, Joanna Briggs Institute EBP Database, and Nursing and Allied Health Database were utilized to search for key MeSH (Medical Subject Headings) terms, such as moral distress, emotional intelligence, nurses, NICU, neonatal intensive care unit, end-of-life care, and patient outcomes. Google Scholar and gray literature, including professional nurse organization position statements, were searched. The search was limited to peer-reviewed studies published in the last 6 years and written in English.

Study Selection

A total of 34 studies were appraised, and after excluding duplicate results and studies that used nonbedside nurses, nonnurse participants, or unstructured literature reviews, a total of 12 studies were utilized for this review. See Supplemental Digital Content 3 (Supplemental Digital Content 3, http://links.lww.com/JHPN/A25) for PRISMA flow diagram. While the majority...
of acceptable reports were of low-level evidence stemming from descriptive or exploratory designs, 4 experimental designs were located. Supplemental Digital Content 1 (see Supplemental Digital Content 1, http://links.lww.com/JHPN/A23) illustrates the number of articles located, search designs, and concepts addressed. None of the research reports addressed all the concepts of interest: EI, moral distress, patient outcomes, and EOLC in a NICU setting. In fact, there were no studies that were conducted with NICU nurses at all.

Data Extraction and Data Items
Data from the studies included in this review were categorized as descriptive or exploratory, measuring EI and 1 or more other concepts of interest or experimental, measuring the effect of an intervention on nurse EI. Outcomes of interest were also grouped together for consideration and analysis. Furthermore, these studies were reviewed with regard to setting, geographical location, methods of measuring EI, and interventions.

Risk of Bias Assessment
The studies were assessed for several different types of bias that might have occurred at the design or outcome levels. As is somewhat common in nursing research, selection bias is commonplace with nonrandomly drawn or assigned samples. Self-report measures, such as EI scores, are a potential source of performance bias, as well. Finally, with a somewhat subjective concept that can begin developing long before the time of intervention or measure, cultural influence must be considered. The majority of the included studies originated in countries with different cultural, spiritual, and religious beliefs than the United States. The findings from the studies conducted in Australia, Iran, and the United Kingdom should be considered, but with cultural differences in mind. Supplemental Digital Content 4 (see Supplemental Digital Content 4, http://links.lww.com/JHPN/A26) illustrates the risk of bias according to PRISMA methods.

Summary Measures
Changes in mean EI scores and significance levels were the main outcome measures in the experimental studies. Pearson r was calculated to illustrate relationships between EI and a variety of dependent variables, such as nurse competence, patient safety, quality of care indicators, nurse caring behaviors, job stress, nurse performance, and nurse retention.

RESULTS
For each study in this review, sample size, population, and setting were analyzed. Furthermore, the country in which the research was conducted and concepts addressed were identified. Supplemental Digital Content 2 (see Supplemental Digital Content 2, http://links.lww.com/JHPN/A24) illustrates the studies' characteristics. In all, more than 1736 nurses and other health care professionals have been studied with regard to levels of EI and various outcomes. Intensive care unit nurses were included in at least 3 studies, but the exact number cannot be calculated because some reports did not specify how many nurses were included from each area of a facility. Three studies were conducted with American nurses.

Risk of Bias Findings
Two of the 4 experimental studies included in this review have a risk for participant selection bias due to the lack of randomization to experimental and control groups. The other 2 studies utilized random assignment, but not random selection. Because of the scarcity of experimental research related to improving bedside nurses' EI, these studies are considered rigorously designed. One exploratory study utilized a random selection process.

Performance bias is also a concern with all of the included studies. To date, measurement of EI is via a self-report questionnaire format. Self-report measures are inherently nonrigorous methods of collecting data. Until reliable and valid methods of more objective measures of EI are developed, researchers must rely on these lower-level methods. Measurement bias is a concern due to the various tools utilized to measure EI, as well. However, the Bar-on EI measurement tool was the most frequently used, which has acceptable reliability and validity.

Finally, cultural bias must be discussed as a factor in collected data and subsequent outcome measures. Six of the included studies were conducted outside the United States in countries such as Australia, Iran, and the United Kingdom. Cultural influence, international nursing curricula, and foreign work environments may play significant roles in EI qualities among nurses.

Results of Individual Studies
A brief summary of negative and positive findings is included in Supplemental Digital Content 2 (see Supplemental Digital Content 2, http://links.lww.com/JHPN/A24). Overall, higher EI scores positively associate with many of the concepts of interest presented here: decreased nurse stress, anxiety, burnout, and moral distress, increased caring behaviors, performance, and competence among nurses. Key patient outcomes, such as perception of caring, clinical quality indicators, and patient safety, may also be positively influenced by higher nurse EI levels. The experimental studies indicate that EI can be facilitated and taught, resulting in improved and sometimes sustained EI scores.
DISCUSSION

Summary of Evidence
Overall, the strength of evidence for the effects of EI in nursing is weak. Most of the studies examining EI in bedside nurses are at the descriptive and exploratory levels. Higher levels of evidence are beginning to emerge, however. A handful of quasi-experimental and randomized controlled trials, testing interventions to effect EI in bedside nurses, have been conducted with positive findings published.

Theoretical Research on EI in Nursing
The body of knowledge related to the role of EI among a diverse group of health care providers is growing. However, theoretical and lower-level evidence that focuses solely on bedside nurses is much smaller. Communication abilities are an integral component of overall EI. It has long been believed that improved communication is key to maintaining patient safety. A theoretical framework was developed purposing that EI emotional awareness and management can serve as a mediating factor between communication and patient safety. It is suggested that EI abilities can change the clinical environment in such a way that risk for error is decreased.

Further advancement of an existing model, the Job Demands Resources Model, was completed and illustrated the positive effect of EI and organizational justice on work engagement. Work engagement and avoidance are considered antonyms, and this study’s findings bring the role of organizational systems into the conversation about EI and moral distress.

Emotional Intelligence, Nurse, and Patient Outcomes
Emotional intelligence in clinical practice improves the nurse’s ability to do 2 things: regulate his/her own emotional responses in order to avoid a negative effect on his/her cognition and behavior and also to respond appropriately to patient needs and express caring and empathy, essential aspects of the art of nursing. Logically, if negative affective responses can be moderated by EI, skills, quality of care, to include EOLC, and patient outcomes will improve. Twelve studies are discussed here and offered for consideration for application of the findings in the NICU setting.

In order for patient outcomes to improve, there must be an associated nursing or health care variable. Nurse performance and competence have been demonstrated at higher rates in those with higher EI. Performance was measured in 2 different ways in the studies reviewed: placement on an institution’s clinical ladder and a self-report to determine the stage of development according to Benner’s Novice to Expert. Competence is another outcome examined in relation to nurse EI levels. Again, self-report measures have been utilized in studies, but with tools with acceptable reliability and validity.

One study looked at the relationship between bedside nurses’ EI and quality of care through the measurement of quality indicators, such as infection, falls, and pressure ulcers. The objective method of measuring the patient outcomes lends rigor to this study, and it was revealed that higher EI scores were associated with lower Clostridium difficile and methicillin-resistant Staphylococcus aureus infections, decreased patient falls with injury, and increased documentation of pressure ulcer findings.

Another study examined the relationship between EI and perceived professional competence. Although all measures were self-reported, a significant relationship was revealed between competence and EI scores.

Emotional intelligence abilities have been positively linked in studies to nurses’ caring behaviors toward patients. An integrative review examined the link between EI and physical and emotional caring behavior. Findings supported the positive relationship between the 2 concepts. A different study utilized a sample of bedside nurses and their patients to measure caring behaviors. Findings from this correlational study revealed that EI, notably self-encouragement and self-control against criticism, accounted for most of the caring behaviors by nurses. Most interestingly, caring behaviors in this study were measured according to patient perception.

Caring behaviors by NICU nurses are essential in palliative or EOLC. Closer to the concepts of interest of this review, one study examined the impact of emotional labor and intelligence on nurse well-being and job stress. Decreased nurse well-being, anxiety, stress, and other negative emotions are components of the larger concept of moral distress; thus, this particular study is of interest. It was found, through a cross-sectional study that utilized structural equation modeling, that EI can moderate levels of job stress. Likewise, emotional labor was found to be positively related to job stress. In a randomized controlled study, a sample of 135 bedside nurses were recruited. After the intervention, which consisted of 6 sessions of EI training by an expert, EI scores were measured along with anxiety scores of participants. The experimental group demonstrated significantly higher EI scores and lower anxiety scores than the control group. Therefore, it seems logical that improved EI may be a moderator of moral distress among nurses.

Efforts to Facilitate EI in Nurses
Studies that measure the effect of interventions to improve EI in bedside nurses are few. From the review of the body of knowledge, it appears that EI can be affected through targeted interventions. Key nursing and patient outcomes have also been shown to improve, as a result of these interventions. Interventions implemented in EOLC settings with ICU nurses are even scarcer. As noted earlier, no studies set in the NICU with NICU bedside nurses were located in this search.
The impact of EI utilization has been illustrated in relation to oncology and palliative care nurses. Researchers implemented an EI rounds intervention in an oncology unit. Prior to the rounds, nurses were asked to rate their own emotional state and during rounds, to identify emotions that their patient was experiencing. Attrition from data collection measures prevented the researchers from examining change in EI before and after the intervention. However, participating nurses’ documentation of patient emotions and emotional care planning increased significantly post-intervention, indicating an improvement in patient care. Nurse satisfaction with the intervention was high, with 75% reporting that the EI rounds were more than a little or very helpful.

Four other studies with the aim of affecting bedside nurses’ EI have also been conducted. One study targeted ICU nurses with a 2-day EI training workshop, whereas a control group received no intervention. Emotional intelligence scores were significantly increased in the experimental group, as were general health scores. While the sample was small (n = 52), it is one of the only randomized controlled trials published on this topic.

A third study utilized a control and experimental group to evaluate the effectiveness of an EI training intervention with bedside nurses. This intervention consisted of a 5-hour group workshop combined with a 30-minute private feedback session. Again, the intervention was found to be highly effective in improving EI scores. Finally, increasing EI development in nursing students has been explored. Utilizing peer-coaching sessions, researchers measured EI before and after to detect changes. There was no statistically significant change from preintervention to postintervention. However, the students qualitatively reported perceived improvements in EI ability.

Limitations
The main limitations to the studies included in this review are weak designs and small sample sizes. Of course, lack of research conducted in the NICU is a limitation where this review’s topic is concerned. Additionally, different measures of EI and other outcomes of interest were utilized, making it difficult to reach a strong conclusion about correlation between EI and other nurse attributes. Interventions varied, as well. The majority utilized an education-centered approach, whereas one implemented an active, experiential learning model. In order to enrich the nursing knowledge on this topic, additional exploratory and experimental research studies must be conducted.

CONCLUSION
While research on EI, moral distress, and EOLC in the NICU is nonexistent, studies in other settings on different elements of this topic are emerging. Applicability of these findings in the NICU is worthy of consideration and further research. All of the concepts of interest, EI, moral distress, and EOLC, are complex issues that are composed of many moving parts. As part of a comprehensive approach to this complex issue, EI has the potential, based on this integrative review, to improve nurse competence, quality of care, and caring behaviors while moderating the anxiety and stress nurses experience as the result of morally distressing situations, thereby decreasing nurse avoidance behaviors, rates of burnout, and attrition from the profession. Intervention testing has produced encouraging findings. It appears that EI can be taught, increased, and facilitated in order to effect other outcomes of interest.

Neonatal intensive care units can be unique, isolated environments in the nursing sphere. Moral distress is experienced at high rates in NICUs and often a barrier to palliative care and EOLC. As a result of this distress, NICU nurses may use avoidance behaviors and disengage from critical care interactions with the patient and family. Moral distress can also cause high levels of stress, anxiety, and attrition among all nurses, but NICU nurses are especially susceptible because of the frequency of futile care that occurs in this setting.

The role of EI is unknown in NICUs at this time. However, the potential for its use and positive effects is enormous, given previous research. The findings from this integrative review support the recommendation for its use and empirical measure in nursing education, practice, and research related to the care of high-risk neonates. As with so many other critical concepts in nursing, EI development should begin in nursing curricula. Faculty are encouraged to improve their own EI skill set and research effective interventions aimed at students. Nurse managers hold a crucial role and can influence the focus on EI on their units and in their nurses. Advocating for resources to implement EI training would be a worthy effort. Finally, additional research is needed. A series of studies that explore the relationship between EI skills and key nurse and patient outcomes in the NICU is necessary. If findings are similar to other nurse and patient populations, then NICU-specific interventions should be tested.

References


