2023

Mitigating Moral Distress in Pediatric Critical Care

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Moral distress was initially defined by Andrew Jameton in 1984 as a scenario in which a provider feels that there is a moral right versus wrong decision to be made, but they cannot follow through with the right choice due to barriers that exist (Jameton, 1984). The term has since become ambiguous, due to inconsistent use of concepts creating moral distress—such as moral judgement, constraints, and awareness vs. belief (Morley et al., 2019). It is important to recognize that moral distress can be caused not simply by a barrier to doing the right thing, but also by situations of uncertainty or internal moral conflict (Morley et al., 2019). A more complete, appropriate definition of moral distress acknowledges that moral distress occurs for healthcare professionals when they are pressured to act in a way that compromises their professional values and ethics (Epstein & Hamric, 2009). External factors force them to act in discordance with the integrity of their professional role (Epstein & Hamric, 2009). This concept has major impact in the healthcare arena particularly in times of high stress, working long hours, and the emotional burden that accompanies the work. Many working in a healthcare setting could be subject to moral distress, but the scope of practice for the nurse (especially in pediatric critical care) makes them uniquely vulnerable (Mu et al., 2019). Furthermore, it is well documented that moral distress has negative repercussions for nurses, including compassion fatigue and leaving the profession altogether (Morley et al., 2019).

The nurse’s responsibilities in pediatric critical care may include providing pain control and sedation management, providing or withdrawing life support, maintaining nutrition and hydration, basic comfort needs, managing hygiene, and supporting the parents/family of the child (Mu et al., 2019). While the nurse spends time at the bedside providing these services, they have little autonomy over decision-making in the child’s end-of-life care (EOLC) (Mu et al., 2019). In a recent study conducted among pediatric critical care professionals, over 85% reported
that they felt moral distress, with nurses reporting higher levels of moral distress than any other
discipline (Thomas et al., 2021).

The effects of moral distress on healthcare workers have been studied for decades, though
vague definitions and often small sample size make findings difficult to generalize (Prentice et
al., 2016). Further, studies that are available are typically conducted in the adult setting, not
pediatrics (Prentice et al., 2016). Moral distress is more prominent in the pediatric critical care
setting due to the emotional burden of supporting grieving parents/guardians, repeated exposure
to dying children, nature of the deaths, and inconsistencies in end-of-life care (EOLC) (Mu et al.,
2019 & Passos et al., 2018). Moral distress challenges one’s integrity, which creates an internal
struggle (Prentice et al., 2016). Over time, those facing moral distress become less engaged with
their role which can lead to burnout (Dryden-Palmer et al., 2018). Burnout has been directly
linked to higher rates of turnover among nurses (Sundin-Huard & Fahy, 1999). Lack of retention
of skilled and experienced nurses in the specialty (such as Pediatric Intensive Care Unit [PICU])
has the potential to compromise patient safety (Dryden-Palmer et al., 2018). Additionally,
research has shown that poorer patient outcomes occur when nurses are less engaged or
experiencing burnout (Abbasi et al., 2019; Flanders et al., 2020). These outcomes include nurses
disconnecting from their patients and families, prolonged suffering, delayed or prolonged
treatment, an undignified death, and providing false hope (McAndrew et al., 2018).

Moral distress negatively impacts patients, family members, healthcare providers, and
potentially the healthcare system at large. Nurses in the pediatric critical care setting are at
increased risk for developing moral distress, however the amount of applicable research in this
area is lacking.
Purpose

The purpose of this project was to determine whether a resource toolkit for nurses would serve as relevant support in mitigating moral distress. The toolkit not only provided education that is often, lacking but served as a reference that could be applied in future clinical cases. The project endeavored to answer the question: For pediatric critical care nurses, will an educational resource toolkit increase understanding of moral distress as well as confidence in addressing moral distress?

Aims

The objectives for the project were as follows:

1. Assess pediatric critical care nurses’ understanding of moral distress
2. Increase pediatric critical care nurses’ knowledge & understanding of moral distress
3. Demonstrate increased confidence of pediatric critical care nurses’ ability to identify and manage moral distress
4. Provide a resource toolkit that can be utilized when nurses encounter moral distress

Review of Literature

The review of the literature describes moral distress as a construct, as well as other related concepts that can be misconstrued as interchangeable. Circumstances that are often responsible for the development of moral distress are also presented. Finally, evidence on mitigation strategies and their effectiveness are discussed.

Moral Distress Defined

The definition of moral distress has evolved since its inception, which has resulted in ambiguity and discordance regarding what constitutes moral distress (Morley et al., 2019). To provide clarity, it is important to differentiate moral distress from other similar concepts in the
literature relating to psychological side effects of the role of the healthcare worker. Related concepts include secondary trauma, burnout, and moral injury (Cartolovni et al., 2021).

Secondary trauma refers to an emotional response to providing care to someone who has experienced a traumatic event (Epstein et al., 2020). The individual may feel sadness and/or anger due to learning of their patient’s trauma, in addition to providing the care required as a result of the event (Epstein et al., 2020). Secondary trauma can progress to secondary trauma stress disorder (STSD), characterized by hyperarousal, avoidance and intrusive thoughts (Epstein et al., 2020).

Burnout is characterized by emotional exhaustion and depersonalization (Epstein et al., 2020), which can cause one to become disengaged with their role (Rushton et al., 2021). Burnout can impede a nurse’s ability to provide quality care, and can progress to depression, moral distress, or moral injury (Abbasi et al., 2019; Dryden-Palmer et al., 2018; Epstein et al., 2020; & Flanders et al., 2020). High turnover and leaving the profession of nursing have been linked to burnout (Rushton et al., 2021).

First identified in war veterans, moral injury has since been applied to professionals in the medical field (Čartolovni et al., 2021). Moral injury is specific to the experience of witnessing another endure suffering or injustice (Čartolovni et al., 2021). It is described as an intense emotional response to a traumatic situation, resulting in ongoing side effects which can include anger, guilt, anxiety, sleep disorders, and potentially post-traumatic stress disorder (PTSD) or symptoms consistent with PTSD (Čartolovni et al., 2021).

These phenomena can be related to each other and occur individually or simultaneously (Epstein et al., 2020). It is important to understand these terms in order to discuss and develop
strategies to mitigate them. Research is ongoing to provide further clarity on these concepts
(Epstein et al., 2020).

Moral Distress Contributing Factors

Many situations in healthcare have the potential to foster moral distress in nurses. Specific to the pediatric intensive care environment, two major themes emerged from a review of the literature; ineffective communication leading to poor collaboration (Hamric & Epstein, 2017; Mu et al., 2019; Rushton et al., 2021; Taylor et al., 2020; Wocial et al., 2016), and the need to advocate for the child’s best interest (Hamric & Epstein, 2017; Mu et al., 2019; Passos et al., 2018; Prentice et al., 2016). Situations that create internal conflict are unavoidable in pediatric critical care, but understanding and addressing the contributing factors may decrease moral distress for nurses.

Communication & Collaboration

Effective communication is paramount to the nursing role and becomes even more instrumental with a critically ill (potentially at the end of life) child. The condition of this patient population often changes rapidly and unexpectedly; the uncertainty of the situation can diminish a nurse’s confidence in communicating with the patient’s family (Mu et al., 2019). This insecurity surrounding communication in End of Life Care (EOLC) was directly cited by nurses as being emotionally taxing and leading to moral distress (Mu et al., 2019). In multiple studies, nurses have reported that ineffective communication, specifically regarding an unclear plan of care and conversations about death, contributes to moral distress (Hamric & Epstein, 2017; Madrigal & Walter, 2019; Mu et al., 2019; Taylor et al., 2020; Wocial et al., 2016). Interestingly, many providers also feel incompetent in communicating with families at EOL, which emphasizes the uncertainty of nurses in these scenarios (Madrigal & Walter, 2019). Furthermore,
various disciplines of the care team identified diminished quality of patient care as a consequence of poor interdisciplinary communication (Wocial et al., 2016).

Conversely, effective communication is the most highly reported element of what nurses consider to be a “good death” (Taylor et al., 2020). Healthcare providers felt that prompt and transparent communication would allow for a well-defined plan of care, and ultimately a positive EOL experience (Taylor et al., 2020). By improving communication among the interdisciplinary team, goals of care can be more clearly defined which will increase collaboration (Wocial et al., 2016). Appropriate collaboration allows for nurses to advocate for their patients, realistic goal setting with families, and overall decreases moral distress (Hamric & Epstein, 2017; Wocial et al., 2016). Proper communication should be a goal in mitigating moral distress.

**Child’s Best Interest**

Another source of moral distress for nurses in pediatric critical care is the inability to advocate for the child’s best interest (Mu et al., 2019). Advocacy is a mainstay in the nursing role, and even more so for this vulnerable population who cannot advocate for themselves. Because of this, the team must determine what will be in the child’s best interest—meaning the benefit to the child outweighs the risks, and the child’s wellbeing is the objective of care (Passos et al., 2018). Of course, there is uncertainty in this as parents and members of the medical team discuss treatment options, possible outcomes, and timelines. This scenario is further complicated if the parents and medical team are not in agreement on what actually is in the child’s best interest (Passos et al., 2018). Interventions the family may believe are best can actually be detrimental to nursing staff, such as extensive resuscitation efforts (Taylor et al., 2020).

Nurses report that the inability to advocate for their patients as well as performing interventions for the child’s best interest caused them moral distress (Prentice et al., 2016).
Additionally, nurses place emphasis on preserving the dignity and autonomy of the child (Mu et al., 2019). When they perceived either of these were compromised, they became frustrated with their inability to maintain these values and experienced moral distress (Mu et al., 2019).

**Interventions**

Several strategies to mitigate moral distress have been studied. These are presented in two major groups; resilience and coping training, and meetings and debriefings. All interventions include providing education about moral distress and recommend fostering an environment with open communication and supporting interdisciplinary collaboration with mutual respect. Addressing these key components is essential to mitigating moral distress.

**Resilience and Coping**

While resilience and coping training for nurses likely will not eliminate moral distress, it may lessen the effects of moral distress on nurses, thereby decreasing the negative outcomes associated with it. Abbasi et al. (2019) implemented a two-day moral empowerment training program for 60 intensive care nurses at a teaching hospital in Iran. The program focused on improved communication and collaboration, increasing confidence in expressing concerns to the medical team, asking for peer support, and ethics in nursing (Abbasi et al., 2019). The program was considered a success, as their second interval post-intervention survey demonstrated a statistically significant decrease (p < 0.05) in the mean moral distress score using the moral distress scale-revised (MDSR) (Abbasi et al., 2019).

Rushton et al., (2021) also sought to increase resilience of nurses facing moral distress by providing teaching on moral distress, communication, and various coping skills. The study included a convenience sample of 192 nurse who participated in the intervention, and 223 nurses in the control group from two hospitals within an academic hospital system (Rushton et al.,
Post-intervention, mean scores for moral confidence (p<.001), resilience (p<.001), engagement (p<.001), and mindful awareness (p=.03) had statistically significant increases (Rushton et al., 2021). While not statistically significant, there was a decrease in turnover intention (p=.05) and moral distress (p=.85) (Rushton et al., 2021).

This information is promising given that moral distress will likely continue to be an issue in critical care nursing. However, both aforementioned studies (as many others found in the literature) were conducted among participants working in adult Intensive Care Units (ICUs), making it difficult to generalize the results to a PICU or Pediatric Cardiovascular Intensive Care Unit (PCVICU).

A study conducted in a 34 bed PICU at a level I trauma center children’s hospital expanded on this idea, implementing a 10-session course with the objective of assessing the program’s effect on nurses’ engagement, compassion satisfaction and turnover rates (Flanders et al., 2020). There were 150 participants who were PICU nurses who had worked in the unit for a minimum of 3 months (Flanders et al., 2020). Included in the program was consultation with the facility ethicist, various therapies, communication skills, and discussions with the chaplain (Flanders et al., 2020). While the results were not statistically significant, they did demonstrate improved engagement and compassion satisfaction on their post-intervention survey (mean score 4.15 to 4.18), as well as reduced turnover by 6% (Flanders et al., 2020). Participants reported that the program had a positive impact and they would utilize the skills they learned moving forward in practice (Flanders et al., 2020).

These findings are useful as the program was held in a pediatric critical care setting and the results express that the resilience training model is helpful to nurses. It is beneficial to know that these resources many facilities already have available can be advantageous to nurses.
Unfortunately, this study did not directly evaluate moral distress. Compassion fatigue and decreased engagement can lead to moral distress, but these concepts are not interchangeable.

**Meetings and Debriefings**

Gathering the team together to discuss clinical cases which may create moral distress has been shown to be beneficial. There are many ways of implementing this, from informal discussions to scheduled rounds with mandatory attendance from multiple disciplines. Hamric and Epstein (2017) offer the idea of a morals/ethics consult. A pager number is made available to staff when a consult is to be called (Hamric & Epstein, 2017). This call will be returned by a designated member of the hospital’s morals and ethics team, to determine whether the situation is an issue of morals, ethics or both (Hamric & Epstein, 2017). The consultation is then scheduled and can be attended by team members to work on the issue at hand with the expert’s guidance (Hamric & Epstein, 2017). This program was evaluated with post-intervention interviews, in which themes of improved collaboration, increased empowerment, a potential for higher level of staff engagement, and positive changes within the unit or institution (Hamric & Epstein, 2017). 59 moral distress consultations were included in the study, across 25 units of the hospital including outpatient areas, critical care, and specialty units (Hamric & Epstein, 2017).

Similarly, one facility implemented Pediatric Ethics and Communication Excellence (PEACE) rounds in the PICU to combat moral distress. PEACE rounds consisted of formal weekly meetings including the attending physician, consulting physicians, nursing leadership (charge or management), bedside nursing and any other staff providing direct care who wished to attend (Wocial et al., 2017). The purpose of PEACE rounds was to establish appropriate goals for critically ill children with length of stay greater than 10 days (Wocial et al., 2017). This ensures that the interdisciplinary team is in agreement regarding the plan of care, in addition to
providing an opportunity for staff to bring up concerns they may have (Wocial et al., 2017). Of note, there was a statistically significant decrease in participants “witnessing diminished care quality due to poor team communication” (Wocial et al., 2017). Multiple items on the post-intervention surveys revealed a statistically significant decrease, though the overall moral distress score differences in pre- versus post-intervention surveys was not statistically significant (Wocial et al., 2017).

Summary of the Literature

There is a noticeable gap in research and support for medical professionals on this subject. Often terms such as moral distress and moral dilemma are used interchangeably despite their different definitions. Terms should be more clearly defined and used appropriately to improve research and application of findings (Prentice et al., 2016). More specifically, a lack of information on moral distress in the pediatric critical care setting is evident, despite the fact that providers in this setting are more likely to develop moral distress.

The results of the interventions discussed above have proven to be beneficial. However, the Covid-19 pandemic presents an unforeseen barrier to many interventions. Nurses are experiencing burnout simply from their physical work in caring for patients during a pandemic (Thomas et al., 2021) - it may be difficult to gain buy in for an intervention that is time consuming or requires them to devote effort outside of their scheduled shifts. In addition, safety protocols on social distancing, masks, and large gatherings have altered and reduced in-person meetings.

Theory Application in DNP Project Construction

The Theory of Moral Reckoning was developed by Alvita Nathaniel in 2006. Through interviews with nurses, Nathaniel (2006) found that there was a pattern in their accounts of moral
distress. Inductive reasoning through a Grounded Theory Method allowed the author to expand on the pattern, revealing four major concepts: ease, situational binds, resolution, and reflection (Nathaniel, 2006). Ease can be described as a state of homeostasis; the nurse is free from emotional burden and is most competent in this phase (Nathaniel, 2006). To reach a state of ease, the nurse moves through four processes: becoming, professionalizing, institutionalizing, and working (Nathaniel, 2006). Becoming is how the clinician develops their personal set of beliefs and values (Nathaniel, 2006). Through professionalizing, norms and expectations of the profession are instilled (often beginning in nursing school) (Nathaniel, 2006). Institutionalizing occurs when the nurse adopts the cultural norms of their work setting, whether they conflict with the individual’s values (Nathaniel, 2006). In the final stage of working, the nurse incorporates their values into practice, exemplifying professional standards, and does so within the guidelines set by their institution (Nathaniel, 2006). The period of ease is maintained until interrupted by a situational bind.

A situational bind is any disruption to this homeostasis, whether internal or external, that forces the nurse to make some sort of decision (Nathaniel, 2006). To get out of the situational bind, a resolution must be found (Nathaniel, 2006). Resolution, then, is the point when a decision is made and executed (Nathaniel, 2006). Nathaniel (2006) identified two options in coming to a resolution: giving up or taking a stand. Giving up can include carrying out actions the nurse believes to be morally incorrect, or leaving their role (Nathaniel, 2006). Taking a stand is risky, as it involves sacrificing professional and/or institutional expectations by refusing to carry out orders, or practicing out of one’s scope (Nathaniel, 2006).

After resolution comes reflection, a process by which the nurse can ponder about the scenario and their actions; Nathaniel (2006) notes that this could be a lifelong process. Within
this stage, the individual remembers, tells the story, examines conflicts, and ultimately lives with consequences (Nathaniel, 2006). Through Nathaniel’s (2006) interviews, she noted that nurses had extremely detailed memories of the clinical scenario that lasted over time. Though often emotional, participants preferred to talk about the event through storytelling and found it therapeutic (Nathaniel, 2006). Next, they examined the conflicts from the case; this presented a struggle and a consideration of how they may act differently in the future (Nathaniel, 2006). In the end, the consequences are lifelong and often resulted in some sort of change for nurses in the form of furthering education, role change or environment change (Nathaniel, 2006).

This project was an intervention (a resource toolkit in the format of a video presentation and handout) to help nurses process and face morally distressing clinical scenarios. Nathaniel’s (2006) Theory of Moral Reckoning provided guidance in further developing the project. The toolkit was developed with professional nursing values and institutional culture in mind. Additionally, the components of the intervention were geared towards helping nurses move towards reflection without a traumatic resolution. Of course, the resolution process still has to occur, but the goal of the intervention was to empower nurses so they did not feel that their only options were to give up or take a stand that could affect their interpersonal relationships or career.

The reflection period was well documented through surveys concurrent with and after the intervention. Interviews may also be conducted to elaborate on findings, if approval can be obtained, participants are willing, and time allows. Interviews would provide an opportunity for storytelling and discussion regarding situational conflicts and anticipated consequences. For the purposes of this study, time constraints did not allow for post-survey interviews; this would be a relevant continuation of the study.
Methodology

Design

This was a quality improvement, feasibility project for a pediatric cardiovascular intensive care unit (CVICU) within a 216 bed children’s hospital. The project used a pre-test/post-test design and descriptive data analysis.

Participants

Participants included a convenience sample of 10 nurses who were currently employed in the CVICU. Nurses were recruited via hospital email, as well as discussion of the project at staff meetings and shift huddles.

Setting and Resources

The setting was the (CVICU) at a 216 bed children’s hospital with level I trauma center certification in the Southeast region of the United States. Resources included staff email lists for the unit, and computers or smartphones to access the questionnaires and toolkit.

Instrument/Tools

Pre-test and post-test questionnaires developed by the primary researcher with approval by Dr. Denise Tucker PhD, RN, CCRN, Dr. Susan Porterfield, PhD, FNP-C, and Dr. Alissa Swota, PhD, were utilized to evaluate the aims of the project.

Intervention and Data Collection

The intervention included a short video which provided education about moral distress, resources available to staff, how to implement these resources, and coping skills for nurses. In addition, a simple brochure with a condensed version of the information in the video was provided. Pre and post intervention surveys were used to evaluate nurses’ knowledge of moral distress and their confidence/satisfaction with the toolkit. Nurses were asked to complete the
survey prior to and after utilizing the toolkit. The surveys and toolkit were distributed via email for ease of access and use. A QR code for the survey was also provided to increase participation. The unit manager and facility bioethicist (Dr. Alissa Swota) assisted with the project. Dr. Swota advised the content of the toolkit and served as a resource throughout the process. Univariate analyses were performed using Chi-squared tests (P <0.05) (Table 2). IBM SPSS Statistics v27 was used to conduct analysis of the data collected.

**Human Subjects and Informed Consent**

Approval from the Nursing Science Research Council at the facility in which the study will be conducted was obtained in August 2022. Approval by the Florida State University IRB followed in September 2022. Hospital IRB approval was received in December 2022. The process was expedited and did not require a full review since a convenience sample of nurses was used. Informed consent was implied as the surveys and content of the toolkit were completely voluntary to access and there was no risk to participants.

**Results**

A total of 10 participants completed both the pre- and post- intervention surveys. Demographics are demonstrated in Table 1, with the majority of participants being female, holding a bachelor’s degree in nursing, and of Caucasian descent, and 100% of participants work as full time RNs. 40% of participants were in the 26-30 years of age range, 20% were 20-25 with the remaining 40% 31 years and above. Religious/spiritual affiliation was divided equally with 50% of participants answering yes, 50% answering no.
Table 1

<table>
<thead>
<tr>
<th>Demographics</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (80%)</td>
</tr>
<tr>
<td>Male</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>Non-binary</td>
<td>1 (10%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
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</tr>
<tr>
<td>Hispanic/Latino</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>7 (70%)</td>
</tr>
<tr>
<td>Asian</td>
<td>2 (20%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>26-30</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>31-35</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>36-40</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>51-55</td>
<td>1 (10%)</td>
</tr>
<tr>
<td><strong>Full time vs. Part time</strong></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>10 (100%)</td>
</tr>
<tr>
<td><strong>Religious/ Spiritual affiliation</strong></td>
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</tr>
<tr>
<td>Yes</td>
<td>5 (50%)</td>
</tr>
<tr>
<td>No</td>
<td>5 (50%)</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
</tr>
<tr>
<td>ADN</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>BSN</td>
<td>9 (90%)</td>
</tr>
<tr>
<td><strong>Years of Experience in Healthcare</strong></td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>5 (50%)</td>
</tr>
<tr>
<td>6-10</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>11-15</td>
<td>3 (30%)</td>
</tr>
</tbody>
</table>

While a statistically significant P value was unable to be demonstrated through the data collection due to a small sample size (10), a positive improvement on the post-test resulted in all five of the questions compared to the pre-test responses. This indicates participants’ increased competence in defining moral distress (Q1), recognizing moral distress in themselves and colleagues (Q2), identifying a morally distressing scenario at work (Q3), presence of coping skills (Q4) and knowledge of moral distress resources offered through the employer (Q5) (see Table 2). In addition, 80% of respondents answered, ‘strongly agree’ that they would use the
resources discussed in the intervention video should they experience moral distress; the remaining 20% answered ‘somewhat agree’.

**Table 2**

<table>
<thead>
<tr>
<th>Q</th>
<th>Pre</th>
<th>Post</th>
<th>Improvement rate</th>
<th>P-value</th>
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<tbody>
<tr>
<td>Q1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>9</td>
<td>10</td>
<td>1 (10%)</td>
<td>…</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>2</td>
<td>8</td>
<td>6 (60%)</td>
<td>0.429</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>8</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>8</td>
<td>2 (20%)</td>
<td>0.068</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>4</td>
<td>3 (30%)</td>
<td>0.703</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>5</td>
<td>4 (40%)</td>
<td>0.298</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1</td>
<td></td>
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</tbody>
</table>

The final question on the survey asked respondents to identify resources available through their employer to address moral distress in a ‘select all that apply’ fashion. These responses were interpreted by percentage of respondents who selected each item (see Table 3). An increased percentage of respondents chose all 6 answer selections on the post-test compared with the pre-test, indicating that the respondents gained an increased knowledge of the resources available to them after watching the video.
Finally, Cronbach’s alpha was calculated to determine the internal consistency (“reliability”) of the multiple Likert survey questions. Cronbach’s alpha was 0.564, indicating an acceptable level of reliability, most likely due to a small sample size and participants’ unfamiliarity with moral distress as a concept on the pre-test.
Discussion

The results are promising given the small sample size. All items on the survey demonstrated improvement from the pre-test to the post-test, indicating that the 10 participants gained increased knowledge of and confidence in their ability to cope with moral distress. There was also an increased percentage of participants who correctly selected all available moral distress resources on the post-test, indicating that they learned what resources are offered by their employer through the video. Furthermore, 80% of respondents answered, ‘strongly agree’ that they would use the resources discussed in the intervention video should they experience moral distress; the remaining 20% answered ‘somewhat agree’.

Much of the literature on moral distress, specifically relating to pediatrics, evaluate its prevalence and effects on healthcare providers. There is notably less information on interventions to mitigate moral distress. Education on the subject for nurses is important, and it has been documented that increased acknowledgement and reflection is beneficial to nurses (Prentice et al., 2022). The ability to identify moral distress and confidence in resource utilization can be beneficial to nurses by increasing role engagement and job satisfaction, thus positively impacting patient care. Ann Hamric, Elizabeth Epstein and colleagues (2009, 2017, 2020) have completed many studies on the subject of moral distress, finding that support from an established bioethics team is beneficial to nurses facing moral distress. The study completed by Wocial et al., (2017) exemplifies that structured weekly rounds including the interdisciplinary team with the main objective of clarifying goals and plan of care can decrease moral distress for PICU healthcare professionals.

In summary, this intervention is congruent with current research findings and strategies to manage moral distress. While more research is needed to discern which interventions are most
beneficial in managing moral distress, interventions such as this and the others mentioned provide promising results.

Limitations

This study was limited by a short data collection period of 3 months. Additionally, the sample size was small at 10 participants after data cleaning was completed. Initially the project was set to include both the PICU and CVICU at the facility, but due to conflicts with concurrent projects, only the CVICU was able to be included. Of note, the CVICU experienced increased nursing turnover during the data collection period as compared with previous years, with over 40% of the staff having been hired during 2022. This may have negatively impacted participation.

Implications for future studies

It is recommended that this project be replicated multiple times in other units in a variety of acute care settings with more participants, to increase generalizability. Additionally, increasing the collection time may attract more participants. This intervention may be particularly helpful to new graduate nurses who may struggle with the emotional impact of moral distress- it could be integrated into new graduate residency programs.

Conclusion

Moral distress is a prevalent problem among nurses, and as discussed, has the potential to be detrimental not only to nursing professionals, but to patients and the healthcare system in general. Ongoing research on the subject is warranted and can be beneficial in determining the best mitigation strategies. The results of this study demonstrate that providing education and resources for moral distress can be relevant to the conversation of reducing moral distress among nurses. It appears that no single intervention will be successful in eradicating this problem, but
rather a multifaceted approach will be most effective. Continuing research specific to pediatric critical care staff is necessary to implement effective strategies to alleviate moral distress.
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