Moral Distress and Resilience Amongst Pediatric Emergency Department Nurses

By

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ABSTRACT

The purpose of this study was to quantify moral distress and resiliency amongst pediatric nurses (RNs) working in the emergency department (ED) and explore the relationship between resilience and moral distress in pediatric ED nurses. Both moral distress and resilience have been associated with nursing burnout for nurses who work in high stress environments, including EDs and pediatrics. Resiliency may help mitigate the harmful impact of working in high stress work environments. An online cross-sectional exploratory correlational methodology was utilized to quantify moral distress and resiliency. In this sample, there was not a significant relationship between moral distress and resiliency amongst pediatric ED RNs. While there was a significant correlation ($p<0.05$) between years of nursing experience and resiliency score, this relationship did not have a significant impact on the moral distress score, despite 21% of pediatric ED RNs in the sample currently considering leaving their position. While moral distress and resiliency has been shown to have an inverse linear relationship, with limited resources available to support nursing practice, it is important that multiple approaches are utilized in the effort to reduce moral distress and burnout amongst RNs.

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DEPARTMENT NURSES

Pediatric emergency department (ED) registered nurses (RNs) are faced with numerous challenges and stressors in their practice. RNs who practice in this ever-changing environment work in an unpredictable and fast paced setting; they care for patients and families during some of the most frightening and challenging moments of their lives. An understanding of the current state of pediatric ED RNs practice is needed to develop tools and resources to better understand how to both support and fortify these nurses as: well as to help to ensure a prepared and empowered workforce for the future.

The pediatric ED is a unique environment. In one room there can be an active resuscitation, while in another, the nurse may be educating a parent on the use of over the counter antipyretics. There is no way to know how many patients will show up, at what time, and with what needs; yet the pediatric ED nurse (RN) must always be prepared and maintain constant vigilance. In every encounter the RN is asking questions such as, is this just a fever or is this sepsis? They need to be skilled to make near instantaneous rapport with patients and their caregivers, to build a trusting relationship in mere moments. The pediatric ED is a high stress environment that is a sub-specialty of a sub-specialty.

It is well established that there is a growing shortage of RNs in the United States (Armmer, 2017). Sub-specialty nursing units face a greater challenge to ensure they have staffs who are equipped to perform their role. Facing a nursing shortage, it is imperative

that we retain highly skilled and specialized nurses to not only care for patients, but to precept and mentor newer nurses. Researchers have found that high stress working environments can lead nurses to leave their working environments (Aiken, Clarke, Sloan, Sochalski, & Silber, 2002). Additionally, these high stress environments have been associated with high levels of burnout and moral distress (Elpern, Covert, & Kleinpell, 2005).

Moral distress has been shown to be a predictive factor in burnout amongst nurses working in high stress environments and that there is an association between higher levels of resilience and lower levels of burnout (Rushton, Batcheller, Schroeder, & Donohue, 2015). Research has shown a relationship between increasing healthcare worker's resiliency and improved quality of life (Werneburg, Jenkins, Friend, Berkland, Clark, Rosedahl, …, & Sood, 2018).   Studies have also demonstrated an increase in the resiliency scores of healthcare employees after receiving interventions to foster resiliency (Werneburg, Jenkins, Friend, Berkland, Clark, Rosedahl, …, & Sood, 2018).

Several definitions of both moral distress and resilience exist, reflecting an emerging understanding of these phenomena. Moral distress in nursing has been defined as when a nurse knows what the right thing to do is, but is unable to perform those actions due to organizational and other constraints (Whitehead, Herbertson, Hamric, Epstein, & Fisher, 2014). Connor and Davidson (2003) define resilience as a measure of a person's ability to cope with stress and face adversity.

Many factors that make pediatric ED units stressful for nurses are inherent to all ED practices. The unpredictable census, acuity, and patient and family needs are factors that are difficult to control. As a result, alternative approaches should to be sought to

support pediatric ED RNs and ensure a safe and educated nursing workforce. Resilience has been associated with counteracting the effects of burnout and moral distress (Connor, 2006). Research has shown that there is an inverse relationship between the concepts of moral distress, and burnout and resilience in pediatric nurses (Perkin, Young, Freir, Allen, & Orr, 1997). This relationship has not been explored specifically in pediatric ED RNs.

PURPOSE STATEMENT

The purpose of this study was to quantify moral distress and resiliency amongst pediatric nurses working in the emergency department and explore the relationship between resilience and moral distress in pediatric ED nurses

SIGNIFICANCE

Both moral distress and resilience have been associated with nursing burnout for nurses who work in high stress environments, including emergency departments and pediatrics (Rushton, Batcheller, Schroeder, & Donohue, 2015). High levels of burnout have been associated with decreased nurse retention and increases in safety errors amongst nurses. Rushton, Batcheller, Schroeder, and Donohue (2015) found high levels of moral distress are a predictive factor for burnout. They also found an association between higher levels of resilience and decreased stress (2015). New knowledge gained from this study will provide essential insights for the development of interventions to support resiliency in pediatric emergency department nurses and to mitigate moral distress.

LITERATURE REVIEW

Overview

A review of literature related to moral distress and resilience in pediatric nursing populations was completed. The topics of moral distress, resilience, and the relationship between moral distress and resilience were reviewed to assess the literature for relevancy to problem statement, research aim, and study design implications. Studies that used tools to measure moral distress and resilience in nursing were also reviewed. Gaps in the literature were identified related to moral distress and resilience in pediatric emergency department nurses.

A search of databases including the Cumulative Index to Nursing and Allied Health (CINAHL) and PubMed using the search terms, pediatric emergency nurse, emergency nurse, pediatric nurse, resilience, nursing resilience, moral distress, moral distress nursing, or moral distress healthcare in various combinations was conducted. Of note, there was no literature identified that explored moral distress and resilience in pediatric emergency department nurses.

Moral Distress

Moral distress in nursing has been defined as when a nurse knows what the right thing to do is, but is unable to perform those actions due to organizational and other constraints (Whitehead, Herbertson, Hamric, Epstein, & Fisher, 2014). Carse and Rushton (2017) describe moral distress as an epidemic in healthcare and after reviewing

the history of the phenomenon, have called for a change in how moral distress is approached (2017). They see potential in utilizing knowledge that moral distress exists as a catalyst, or call to action, to develop positive strategies to improve the clinical ethics of healthcare practice. Others see this phenomenon in a different light. Thomas and McCullough (2017) offer a response to Carse and Ruston and advocate for an increased focus on the causes of moral distress, rather than the symptoms. They describe that there has been a focus on the psychological responses that cause moral distress including: anxiety, frustration, anger, and burnout. They suggest a shift in the focus to the various causes of moral distress and are researching methods to develop an updated taxonomy, based on Aristotle's concept of akrasia or moral weakness, to focus on reducing the causes. Winsdale, however, advocates that when researching moral distress, there should be a greater interest in both the implicit and explicit causes of the nurse's feelings of distress to understand on a personal level the source of the distress (2017).

Despite the various viewpoints on what the focus of moral distress research should be, the phenomenon of moral distress is being studied. Whitehead, Herbertson, Hamric, Epstein, and Fisher (2014) examined moral distress across multiple health care fields and found that it is a common occurrence amongst all healthcare workers. Interestingly and contrary to other critical care environments, Fernandez-Parsons, Rodriquez, and Goyal (2013) found overall low levels of moral distress amongst general emergency nurses in a community hospital setting. However, the researchers highlighted the impact that moral distress has on important organizational outcomes such as nurse retention. In their study of 51 emergency nurses from a single community hospital, they found that 6.6% of nurses reported leaving a previous nursing job because of moral

distress. Additionally, 20% of nurses reported that they have considered leaving in the past and 13.3% are currently considering leaving their nursing job because of moral distress.

Resilience

Resilience has emerged as an important topic within the nursing profession. Hart, Brannan, and De Chesnay (2014) performed an integrative review of resilience in nursing in an attempt to describe the phenomenon. They concluded that understanding the phenomenon of resilience can assist with the development of programs to increase resiliency and that increased resiliency in nursing can aid in the recruitment and retention of nurses. While nursing is growing its body of research related to resilience, the phenomena has been researched and defined in various ways by different professions and there are several definitions and models of understanding (Ledesma, 2015). Young and Rushton (2017) performed a literature search to better define what resilience is. They found a paucity of literature related to moral resilience and a lack of a clear definition. They have called for additional research and further exploration of the topic. Despite the lack of consensus, a common definition of resiliency is the measure of a person's ability to cope with stress and face adversity (Connor, & Davidson, 2003).

In nursing, resiliency research is still developing. Perez et al. (2015) described working with palliative care clinicians to understand stressors and coping strategies in an effort to develop a targeted approach to building resiliency. The authors found a dearth of research that investigated programs designed to build resiliency and designed their study to look first at the relationship and factors that impact burnout in nursing. Other researchers have also explored the impact of resiliency on nursing practice. Statistically

significant improvements were found when measuring resiliency, stress, quality of life, and healthy behaviors following a 12-week program in resiliency training, based on the stress management and resiliency training program, or SMART, (Werneberg et al., 2018). This research team identified that resiliency can be used to counteract the impacts of stress in the workplace and that increasing resiliency can result in the reduction of stress and improvement in workplace quality.

Utilizing a different method, Schmidt and Haglund (2017) described a case study of employing Personal Reflective Debriefing in the emergency department in an effort to increase resiliency in nurses by reducing compassion fatigue. The authors describe the promotion of resiliency as a tool to help support the nurse's ability to provide compassionate care. Additionally, Stutzer and Bylone (2018) report that critical care nurses face challenges to their moral integrity as part of their daily nursing practice. They described the need for strategies to support both personal and organizational resilience in healthcare. They also found that increasing moral resilience can help shift a nurse's internal thinking from a feeling of powerlessness to one of strength.

The relationship between moral distress and resilience

There is a growing body of literature exploring the relationship between moral distress and resilience. Schroeter (2017) describes the recent development of a moral resilience professional issues panel convened by the American Nurses Association to increase understanding of moral distress in nursing, identifying strategies to increase moral resiliency, and identifying available strategies to improve resilience. In an effort to more fully understand the relationship between moral distress and resilience, Rushton (2016) calls for increased understanding and research to further understand the

relationships between the two phenomena. Rushton (2016) explores the various components of moral resilience and opportunities to increase moral resilience amongst nurses. The components of moral resilience focus on the aspects of the human experience, the complexity of choices, responsibilities, and relationships, and the challenges that kindle conscience, misperceptions and anguish (Rushton, 2016). They discuss that this may be a method to counteract moral distress. Lachman's (2016) understanding of how resiliency is able to counteract moral distress is the belief that resiliency enables nurses to view and understand their current situation through transformational coping strategies and to reevaluate the situation to one they can control. They discuss that more research is needed to understand the relationship between moral distress and resilience, but discuss the importance of the ability of leaders to influence resilience amongst their teams.

Rushton and Carse (2016) explored this relationship in a specific subgroup of nurses: those who work in critical care. They questioned what characteristics allowed critical care nurses to effectively navigate moral distress. After completing resiliency training, they found critical care nurses had increases in their ethical confidence and competence. Rushton, Batcheller, Schroeder, and Donohue (2015) used aspects of burnout to describe the experience of nurses who work in high stress environments. These aspects included emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment (2015). They included both pediatric and adult critical care as high stress units. They found that moral distress was a significant predictor of burnout. In addition, they found that there was a positive relationship between increased levels of resilience and reduction of stress (2015).

Gaps in Literature

A growing body of evidence suggests that moral distress is an important phenomenon within the nursing profession. Furthermore, researchers suggest that resiliency may help mitigate the harmful impact of working in high stress work environments. Despite concern regarding the potentially detrimental impact of moral distress and the importance of resilience for nurses, to date, the relationship between these factors in pediatric emergency nursing has not been studied.

CONCEPTUAL FRAMEWORK

Neuman's System Model provided the conceptual framework for this study. Neuman's System Model (NSM) looks at the patient as a system and how stressors and the reaction to these stressors impact a system (Neuman & Fawcett, 2011). The NSM has been described by its developer as an inclusive process to problem solving with the ability to evaluate (Neuman & Fawcett, 2012). The NSM contains five factors that impact with a person's intrinsic and extrinsic environments.

These five factors or variables include the physiological, psychological, sociocultural, developmental, and spiritual and each of these variables is present within each circle of a patient's system. The basic system of each person is encircled by various levels of defense and these levels of defense are impacted by stressors, reaction, interventions and reconstitution. Nursing interventions are then developed as primary, secondary, and tertiary prevention interventions to strengthen lines of defense (Neuman & Fawcett, 2011). The NSM was developed as a theory to guide a holistic approach to systems level thinking and to guide nurses in developing interventions to manage the impact of stressors (Neuman & Reed, 2007).

Turner and Kaylor describe the nurse as being the basic structure when using the

NSM as a conceptual model for resilience (2015). The nurse is the basic structure within

the environment of their practice and that the nurse develops concentric levels of

resistance and defense to stressors. Resilience is described as an adaptive response to

stress and can be viewed as a protective variable to manage the degree of reaction to

stressors such as moral distress. Resilience has the potential to be increased by primary,

secondary and tertiary interventions and for a nurse's lines of resistance to be improved

by both strengthening and increasing resilience (Turner & Kaylor, 2015). For this study,

moral distress will be conceptualized as a stressor and resilience will be viewed as a line

of resistance. Figure 1 presents the key concepts of the NSM.
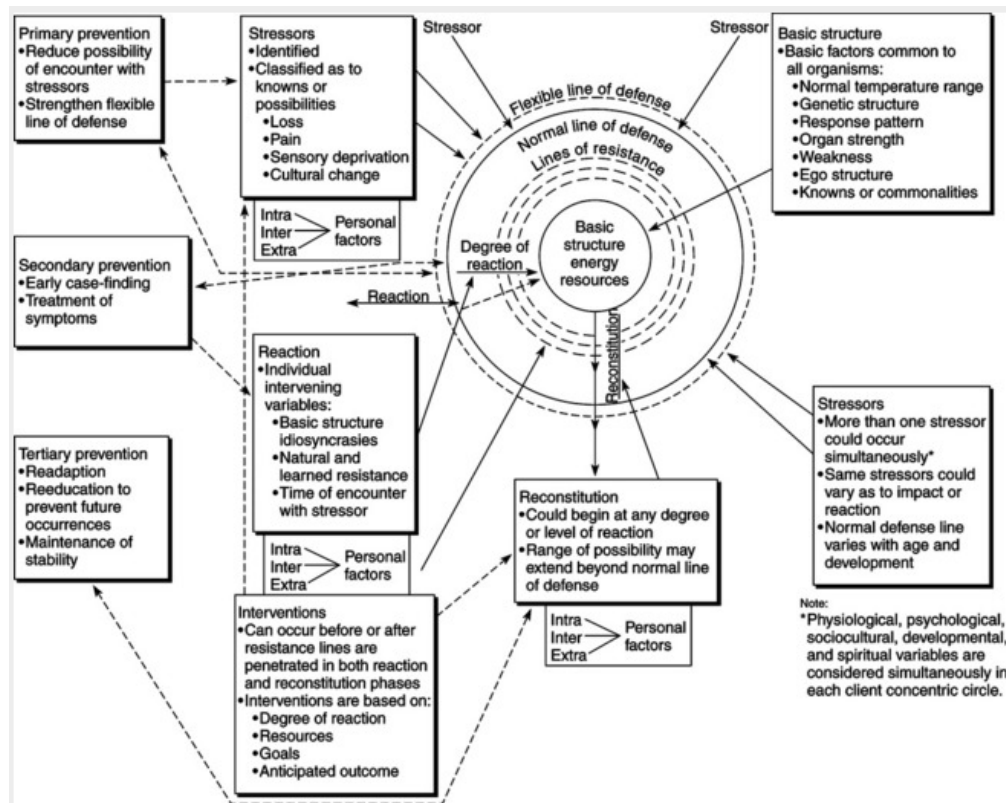

Figure 1 Neuman's System Model ©1970 (Neuman & Fawcett, 2012)

METHODS

Project Design

A cross-sectional exploratory correlational methodology was utilized to quantify moral distress and resiliency, as well as to explore the relationship between the two concepts in nurses who work in pediatric emergency departments.

Setting

This was an online survey distributed to nurses who are currently employed and work in pediatric emergency departments. Online surveys have several noted benefits, including speed and low cost in comparison to mailed paper surveys (Dillman, Smyth, & Christian, 2014). Electronic surveys are the fastest growing form of surveying and are particularly well suited for collecting data (Dillman et al., 2014).

Description of Sample

The target population for this study was pediatric emergency department nurses who have worked at minimum one clinical shift in the last month. The sample inclusion criteria included: registered nurses who work in the United States of America, work in the clinical subspecialty of pediatric emergency care, and have worked at least one clinical shift as a nurse in a pediatric emergency department within the last month. There were no exclusion criteria for this study.

This study used a three-tiered convenience sampling approach to recruit participants. The accessible sample for this study was pediatric emergency department

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nurses that use the social media sites Facebook and LinkedIn, or who heard about the study through word of mouth and by snowball effect. By accessing the survey via a public link, this aids to ensure that the identity of respondents was not exposed. Facebook posts with embedded study link to nursing organization group pages provided a free and successful viral marketing and snowballing strategy for recruiting registered nurses (Child et al., 2014). The use of social media as a recruitment strategy will expand the representativeness of the sample by supporting the inclusion of nurses from diverse geographic locations and varying levels of educational preparation.

Variables and Project Data Collection Instruments

The survey instrument was developed electronically and included: general demographic and descriptive information, the Connor-Davidson Resilience Scale 25 (CD-RISC-25) and the Moral Distress Scale-Revised (MDS-R) nurse questionnaire (pediatric). A pilot study was performed prior to administering the survey to ensure usability and ease of access.

Demographics

Demographic information was obtained to describe the study sample and to obtain information related to study variables of age and years of nursing experience. The researcher developed a nine item demographic questionnaire including: age, years of nursing experience, years of pediatric emergency nursing experience, highest education level, ED patient population, trauma center designation, ethnicity, race and gender.

Moral Distress Scale-Revised (Pediatric)

The Moral Distress Scale-Revised is a validated tool that contains 21 questions using a five-point scale from zero to four (Hamric, Borchers, & Epstein, 2012). The

reliability of the tool for nurses was tested and the Cronbach's alpha score was 0.89 and

construct validity was evaluated through hypothesis testing. This testing demonstrated

that significantly higher score results from nurses who considered leaving their positions

(Hamric, Borchers, & Epstein, 2012). The scale was used with permission from the

author (A. Hamric, personal communication, April 3, 2018).

Each question is divided into two categories, with respondents ranking carious

clinical scenarios for both frequency and intensity. Intensity is referred to as level of

disturbance. A score is then obtained by calculating the frequency by the level of

disturbance resulting in a score between zero to 16 for each question. A composite score

can then be obtained by totaling the cumulative score of all of the questions with a range

from zero to 336. Higher scores are associated with higher frequency and intensity of

moral distress; however, there are not specified ranges to classify results as reflective of

low, medium or high levels of moral distress (Hamric, Borchers, & Epstein, 2012). For

this study, scores that are associated with intention to leave or stay in their current

position are reflective of high versus low levels of moral distress (A. Hamric, personal

communication, April 3, 2018).

The Connor-Davidson Resilience Scale 25 (CD-RISC-25)©

The Connor-Davidson Resilience Scale is a validated survey tool that contains 25

questions using a five-point Likert scale with score ranges from zero to 100. The Flesch-

Kincaid score of reading ease is five, which is representative that it should be easily

understood by people age 12 years. The survey was used with permission (J. Davidson,

personal communication, April 2, 2018). There was a $30 user fee to utilize the Connor-Davidson Resilience Scale and the project was self-funded.

It is a self-rated scale and asks that survey takers reflect specifically on their experiences in the previous month. Each item was scored on a scale of zero to four and a cumulative score was then obtained, resulting in a total score range from zero to 100. Higher scores are reflective of greater resilience and scores that are greater than 92 are considered resilient (Connor, & Davidson, 2003). Score results are interpreted based on median and quartile scores based on the country the scale is being used in.   In the United States the quartiles (Q) are broken down by cumulative score groupings as such: Q1 0-73, Q2 74-82, Q3 83-90, Q4 91-100; with a mean score of 79 and a median score of 81 (Davidson & Connor, 2018).

Pilot Study

The survey instrument was piloted to determine usability and ease of access. The electronic survey instrument was tested several times by both clinical and non-clinical staff with educational backgrounds ranging from bachelors to doctoral level of academic preparation. Reviewers ranged in research experience from novice to expert. The instrument was evaluated for time required to complete survey, spelling and grammar, ease of use on both a personal computer and a smart phone, function of branching logic, and general feelings and feedback while completing survey.

The median time to complete the survey was 11.5 minutes. One spelling error was identified. Reviewers described the survey as easy to follow and understand. They reported ease of use when using both a personal computer and a smart phone to complete the survey. When reviewers selected answers that met exclusion criteria, they reported

that they were brought to the end of the survey. One reviewer described the instructions to the survey tool as lengthy and preferring a single line of instructions. Since the instructions to the survey were a part of the validated survey tool, no changes were made. An error in the survey was identified when answering questions on the Moral Distress Scale. If a respondent did not have a write in answer and left the question blank, they were not allowed to move forward with the survey and the survey prompted the respondent to complete the question.

Several modifications were made to the initial electronic survey instrument as a result of the pilot study feedback. The spelling error was corrected. For the write in question within the Moral Distress Scale, a survey instruction was included for this question with instructions to score the question as zero if they had no response to decrease confusion.

Human Subjects Protection

This study was approved by the West Texas A&M University Institutional Review Board (IRB). This study posed minimal risk to subjects. Risk was minimized by having the investigators complete CITI training, data was locked and stored via a password protected Qualtrics online survey service, and by having data analyzed and reported in aggregate with no unique or identifiable information.

DATA COLLECTION

Data Analysis

A power analysis for multiple linear regression with three independent variables was performed using a power of 0.80 and an alpha of 0.05, for a moderate effect size of 0.13 there would need to be 77 responses, and for a large effect size of 0.30, there would

need to be 30 responses. The goal was to obtain 77 responses to represent a moderate

effect size. (Polit & Beck, 2012).

Calculation (Munro, 2005)

$$N = \frac{L(1 - R^2)}{R^2} + \mu + 1$$

$$77 = \frac{10.90(1 - 0.13)}{0.13} + 3 + 1$$

N=total sample size

L=effect size index

μ = number of independent variables

RESULTS

Data Cleaning and Checking for Assumptions

Descriptive and inferential statistics were used to describe and analyze the data

collected using IBM SPSS version 24.0. A total of 142 participants accessed the survey

via Qualtrics, following data screening, 63 participants' survey responses were delated

for having greater than 15% missing data (Munro, 2005). A final sample of 79 nurses

was used in the analysis which met the requirements for moderate effect size as

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previously calculated in the power analysis (Munro, 2005). The median time to complete the survey was nine minutes.

Data was subsequently checked for outliers, skewness, normality, linearity, homoscedasticity, and multicollinearity. Inspection of the boxplots and assessment of the mean revealed a concern for two significant outliers, that would impact the ability to perform multiple linear regression. These outliers were removed prior to analysis, adjusting the final N to 77, which satisfied the power analysis (Table 1, Table 2).

Table 1

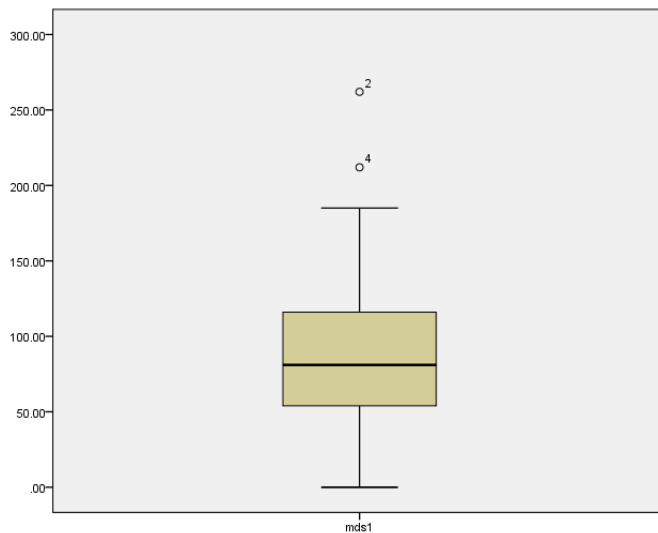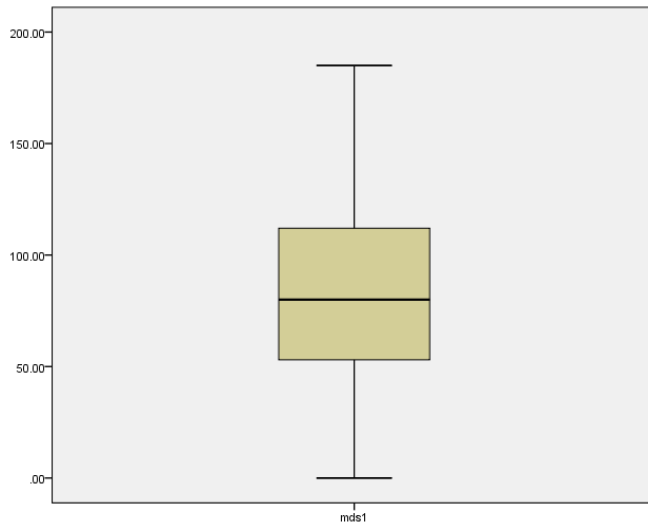*Boxplot of Moral Distress Scale (MDS-R) (N=79)*

Table 2

Boxplot of Moral Distress Scale (MDS-R) (N=77)

Demographics

The sample population demographics were identified for both personal information describing the participant and general information regarding the ED environment they work in. Personal demographic information included: highest level of completed education (Table 1), ethnicity (Table 6), race (Table 7), and gender (Table 8). For general information regarding the ED environment that the participant works in, the following descriptive information was collected: pediatric patient population (Table 4) and pediatric trauma designation (Table 5). The greatest percentage of participants can be described as having completed a bachelor's degree and identifying as white, non-Hispanic or Latino, females. The environments the majority of the participants work in are primarily pediatric EDs that are designated level one trauma centers by the American College of Surgeons.

Table 3

Demographics: Education (N=77)

		Frequency	Percent	Valid Percent	Cumulative Percent
Highest Completed Level of Education					
Valid	Associate's Degree	11	14.3	14.3	14.3
	Bachelor's Degree	49	63.6	63.6	77.9
	Diploma Program	1	1.3	1.3	79.2
	Doctoral Degree	2	2.6	2.6	81.8
	Master's Degree	14	18.2	18.2	100.0
	Total	77	100.0	100.0	

Table 4:

Demographics: Population (N=77)

		Frequency	Percent	Valid Percent	Cumulative Percent
Population of ED Patients Cared For					
Valid	Mixed pediatric and general ED patients	4	5.2	5.2	5.2
	Only pediatric ED patients	66	85.7	85.7	90.9
	Pediatric ED specialty area designated within a general ED	7	9.1	9.1	100.0
	Total	77	100.0	100.0	

Table 5:

Demographics: Pediatric Trauma Designation (N=77)

		Frequency	Percent	Valid Percent	Cumulative Percent
Pediatric trauma designation, as designated by the American College of Surgeons					
Valid	Level I pediatric trauma center	57	74.0	74.0	74.0
	Level II pediatric trauma center	7	9.1	9.1	83.1
	Level III pediatric trauma center	3	3.9	3.9	87.0
	Not a pediatric trauma center	10	13.0	13.0	100.0
	Total	77	100.0	100.0	

Table 6:

Demographics: Ethnicity (N=77)

		Frequency	Percent	Valid Percent	Cumulative Percent
Ethnicity					
Valid	Hispanic or Latino	2	2.6	2.6	2.6
	Not Hispanic or Latino	73	94.8	94.8	97.4
	Prefer not to respond	2	2.6	2.6	100.0
	Total	77	100.0	100.0	

Table 7

Demographics: Race (N=77)

	Racial Designations Identified				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black or African American	1	1.3	1.3	1.3
	Other	1	1.3	1.3	2.6
	Prefer not to respond	1	1.3	1.3	3.9
	White	74	96.1	96.1	100.0
	Total	77	100.0	100.0	

Table 8

Demographics: Gender (N=77)

	Gender Identity				
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cisgender	1	1.3	1.3	1.3
	Female	73	94.8	94.8	96.1
	Male	3	3.9	3.9	100.0
	Total	77	100.0	100.0	

Descriptives

Descriptive statistics including mean, median, range, standard deviation were calculated on all study variables (Table 9).

Table 9

Descriptive statistics (N=77)

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
Years of Nursing Experience	77	39	1	39	14.98	10.154
Age	77	37	23	60	39.05	10.324
MDS-R	77	185.00	.00	185.00	81.2338	42.64754
CR RISC 25	77	46.00	54.00	100.00	82.0909	11.54417
Valid N (listwise)	77					

Frequency percentiles were calculated and reported on the single question from the

MDS-R scale, which asks participants if they left a position because of their moral

distress. According to Hamric, scores related to intention to leave a position are

suggestive of high moral distress (HAMRIC PERSONAL COMM). Sixteen of the 77

(21%) participants answered yes, that they are considering leaving their position now

(Table 10).

Table 10

Intention to Leave Position (N=77)

Are you considering leaving your position now?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No = 0	61	79.2	79.2	79.2
	Yes = 1	16	20.8	20.8	100.0
	Total	77	100.0	100.0	

Inferential Statistics

Bivariate correlational analysis revealed no significant relationship between resiliency, age, and years of nursing experience and the outcome variable: moral distress. There was a small positive correlation between the independent variables resiliency and years of nursing experience ($r = 0.24$, $p<0.05$). The relationship between resiliency and age was not significant (Table 11).

Table 11

Pearson Product-moment Correlations Between Study Variables (N=77)

Correlations		MDS-R	CR RISC 25	Years of Nursing Experience	Age
MDS-R	Pearson Correlation	1	.029	-.049	-.105
	Sig. (2-tailed)		.800	.675	.362
	N	77	77	77	77
CR RISC 25	Pearson Correlation	.029	1	.237[*]	.198
	Sig. (2-tailed)	.800		.038	.084
	N	77	77	77	77
Years of Nursing Experience	Pearson Correlation	-.049	.237[*]	1	.898[**]
	Sig. (2-tailed)	.675	.038		.000
	N	77	77	77	77
Age	Pearson Correlation	-.105	.198	.898[**]	1
	Sig. (2-tailed)	.362	.084	.000	
	N	77	77	77	77
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

Multiple linear regression analysis was conducted to evaluate to what extent resiliency, age, and years of nursing experience predict moral distress in nurses who work in pediatric emergency departments.   After for controlling for age and years of nursing

experience, resiliency (p = .63) did not explain a significant portion of moral distress

(Table 12, Table 13).

Table 12

Multiple Regression Analysis Model Evaluation (N=77)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3219.595	3	1073.198	.580	.630[b]
	Residual	135010.198	73	1849.455		
	Total	138229.792	76			
a. Dependent Variable: MDS-R						
b. Predictors: (Constant), CR RISC 25, Years of Nursing Experience, Age						

Table 13

Multiple Regression Analysis Standardized Coefficients (N=77)

Coefficients[a]												
	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
Model	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	106.152	45.584		2.329	.023	15.304	197.001					
Years of Nursing Experience	.943	1.113	.224	.847	.400	-1.275	3.160	-.049	.099	.098	.191	5.246
Age	-1.298	1.085	-.314	-1.197	.235	-3.461	.864	-.105	-.139	-.138	.194	5.155
CR RISC 25	.142	.440	.038	.323	.748	-.735	1.019	.029	.038	.037	.943	1.061
a. Dependent Variable: MDS-R												

DISCUSSION

In this sample, there was not a significant relationship between moral distress and resiliency amongst pediatric ED RNs. While there was a significant correlation ($p<0.05$) between years of nursing experience and resiliency score, this relationship did not have a significant impact on the moral distress score (Table 11). While a statistically significant relationship could not be demonstrated with this sample, it is not definitive that a relationship does not exist.

There was a significant ($p<0.01$) relationship between age and years of experience (Table 11). Where years of nursing experience and resiliency did have a statistically significant relationship, age and resiliency did not. This data is suggestive that years of experience is a greater predictor of resiliency, rather than chronological age. Increased chronological age is associated with increased years of nursing experience; however, additional research would be needed to explore this topic.

Interestingly, the results were not able to reject the null hypothesis ($p = .63$) that resiliency, age, and years of nursing experience do not impact moral distress score (Table 13). The plotline for this data is reflective of a linear relationship, despite the results not being statistically significant. This may reflect that a relationship may exist, however a larger and more diverse sample size may be necessary to explore this relationship further. From this study, age and years of nursing experience, and resiliency do not impact moral distress, but there may be other factors not captured in the scope of this project that do.

In relation to NSM (Neuman & Fawcett, 2011), resiliency was not demonstrated to be a significant protective variable for nurses in relation to the stressor of moral distress. There is not statistically significant evidence to support the concept that by increasing a nurses' resiliency will strengthen and increase their lines of resistance to the stressor of moral distress (Neuman & Fawcett, 2011; Turner & Kaylor, 2015). In contrast to Rushton, Batcheller, Schroeder, and Donohue (2015) increased resiliency scores did were not demonstrated to have an inverse relationship with moral distress scores of pediatric emergency department nurses. Rushton, Batcheller, Schroeder, and Donohue found in their research that nurses who worked in high stress environments, such as pediatrics and critical care found a positive relationship between increasing resilience and decreasing stress that leads to burnout (2015). A similar relationship between increased resiliency and moral distress in pediatric emergency department nurses was not found in this study.

Interestingly, compared to previous research that demonstrated a low level of moral distress amongst nurses working in an emergency department (Fernandez-Parsons, Rodriquez, & Goyal, 2013), this research team characterized a low level of moral distress amongst its staff. While the Fernandez-Parsons, Rodrquez, and Goyal (2013) study noted that 13.3% of the nursing staff, in a single ED were considering leaving their position, this study found that 21% of pediatric emergency department nurses were considering leaving their position because of moral distress. This discrepancy may be related to a lack of clear definitions for what score is indicative of high versus low moral distress. Hamric's recommendation is to consider scores associated with leaving a position as

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reflective of high moral distress (Hamric, personal communication, April 3, 2018), yet does not specify what percentage is considered high.

Limitations

This study had several limitations related to its sample, recruitment, and data collection. This study sample lacks diversity, consisting primarily of white, non-Hispanic or Latino, females (Table 7, Table 8, and Table 9). Participants were recruited via social media posts on Facebook and LinkedIn. This strategy was low cost and provided a sample in a short amount of time; however this method is vulnerable to self-selection bias by utilizing a self-report survey instrument (Polit & Beck, 2012). By using an internet based survey tool, response rates were not able to be calculated, as the researcher does not have information on how many potential participants viewed the survey and choose not to participate (Dillman, Smyth, & Christian, 2014).A significant portion of the participants who started the survey, did not complete the survey and 45%) of the data was eliminated for being incomplete.

CONCLUSIONS

The findings of this study are that increased resiliency did not have a statistically significant relationship to decreased moral distress in pediatric emergency department nurses in this study. While there is a growing body of literature and evidence that is calling for nursing profession to prioritizing increasing resiliency as a method to combat moral distress that can lead to burnout, the relationship between those concepts was not demonstrated by this study (Rushton, 2016; Rushton, Batcheller, Schroeder, & Donohue, 2015; Rushton & Carse, 2016; Schroeter, 2017). This research diverges from current trends in the nursing profession in that it does not support the outcome that increased

resiliency may act as a line of defense to combat moral distress in nursing. With limited

resources available to support nursing practice, it is important that multiple approaches

are utilized in the effort to reduce moral distress and burnout amongst nursing, and not to

rely solely on increasing resiliency.

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Appendix A Demographic Questionnaire

1. Please provide the number of years you have been a nurse.

2. Please provide your age in years.

3. Please provide the number of years you have worked as a pediatric emergency

    department (ED) nurse.

4. Please identify your highest completed level of education

    Diploma program education

    Associate's Degree

    Bachelor's Degree

    Master's Degree

    Doctoral Degree

5. Please describe the population of ED patient's cared for in your unit

    Only pediatric ED patients

    Pediatric ED specialty area designated within a general ED

    Mixed pediatric and general ED patients

6. Please indicate the pediatric trauma designation of the ED you work in as

    designated by the American College of Surgeons

    Not a pediatric trauma center

    Level I pediatric trauma center

    Level II pediatric trauma center

    Level III pediatric trauma center

7. Please describe your ethnicity

   Hispanic or Latino

   Not Hispanic or Latino

   Prefer not to respond

8. Please select the one or more racial designations

   American Indian or Alaska Native

   Asian

   Black or African American

   Hispanic or Latino

   Native Hawaiian or Other Pacific Islander

   White

   Other

   Prefer not to respond

9. Please select the answer that you feel best describes your gender

   Female

   Male

   Transgender

   Cisgender

   Other

   Prefer not to respond

Appendix B Moral Distress Scale-Revised

Nurse Questionnaire (Pediatric)

Moral distress occurs when professionals cannot carry out what they believe to be ethically appropriate actions because of internal or external constraints. The following situations occur in clinical practice. If you have experienced these situations they may or may not have been morally distressing to you. Please indicate how frequently you experience each item described and how disturbing the experience is for you. If you have never experienced a particular situation, select "0" (never) for frequency. Even if you have not experienced a situation, please indicate how disturbed you would be if it occurred in your practice. Note that you will respond to each item by checking the appropriate column for two dimensions: *Frequency* and *Level of Disturbance.*

	Frequency					Level of Disturbance				
	Never				Very frequently	None				Great extent
	0	I	2	3	4	0	I	2	3	4
l.Provide less than optimal care due to pressures from administrators or insurers to reduce costs.										
2. Witness healthcare providers giving "false hope" to parents.										
3. Follow the family's wishes to continue life support even though I believe it is not in the best interest of the child.										
4. Initiate extensive life-saving actions when I think they only prolong death.										
5. Follow the family's request not to discuss death with a dying child who asks about dying.										
6. Carry out the physician's orders for what I consider to be unnecessary tests and treatments.										
7. Continue to participate in care for a hopelessly ill child who is being sustained on a ventilator, when no one will make a decision to withdraw support.										

Situation									
8. Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.									
9. Assist a physician who in my opinion is providing incompetent care.									
I0. Be required to care for patients I don't feel qualified to care for.									
II. Witness medical students perform painful procedures on patients solely to increase their skill.									
12. Provide care that does not relieve the child's suffering because the physician fears that increasing the dose of pain medication will cause death.									
13. Follow the physician's request not to discuss the child's prognosis with parents.									
14. Increase the dose of sedatives/opiates for an unconscious child that I believe could hasten the child's death.									
15. Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing.									
16. Follow the family's wishes for the child's care when I do not agree with them, but do so because of fears of a lawsuit.									
17. Work with nurses or other providers who are not as competent as the child's care requires.									
18. Witness diminished patient care quality due to poor team communication.									
19. Ignore situations in which parents have not been given adequate information to insure informed consent.									
20. Watch patient care suffer because of a lack of provider continuity.									
21. Work with levels of nurse or other care provider staffing that I consider unsafe.									
If there are other situations in which you have felt moral distress, please write them and score them here:									

Have you ever left or considered quitting a clinical position because of your moral distress with the way patient care was handled at your institution?

No, I've never considered quitting or left a position_____ Yes, I considered quitting but did not leave
Yes, I left a position_

Are you considering leaving your position now?   Yes   No

Appendix C Permission to Utilize MDS-R

Dear Ms. Sexton,

Thank you for your interest in the Moral Distress Scale – Revised (MDS-R). There are six versions of this scale: nurse, physician and other healthcare professional versions for adult settings (including ICUs and other inpatient units), and parallel versions for healthcare providers in pediatric settings.   The MDS-R is designed for providers who deliver direct patient care in inpatient settings. The instrument shows evidence of reliability and validity, published in the *American Journal of Bioethics: Primary Research:*
Hamric, A.B., Borchers, C.T., & Epstein, E.G. (2012). Development and testing of an instrument to measure moral distress in healthcare professionals. *AJOB Primary Research, 3*(2), pp. 1-9.
You should read this article before deciding whether the MDS-R will be appropriate
for your project.

The MDS-R has a unique scoring scheme, designed to give a measure of current level of moral distress. Conceptually, items that have never been experienced or are not seen as distressing do not contribute to an individual's level of moral distress. As noted, the Likert scales for each item have been adjusted to 0-4 from Corley's original 1-7 scoring range. To generate a composite score, the frequency score and intensity (named "level of disturbance") score for each item should be multiplied; note that this results in eliminating items never experienced or not distressing from the composite score. In addition, items rarely experienced or minimally distressing have low scores and items experienced frequently and as most distressing have higher scores.   Each item product of frequency and intensity will range from 0 to 16. To obtain a composite score of moral distress, these individual item products should be added
together. Using this scoring scheme allows all items marked as never experienced or not distressing to be eliminated from the score, giving a more accurate reflection of actual moral distress. The resulting score based on 21 items will have a range of 0 – 336.

In terms of the overall score, here is some additional guidance that may be helpful: There are no specific numbers for high, medium, or low moral distress, as the MDS-R is a norm-referenced measure and we don't have enough experience with it to know whether certain numbers indicate a discrete level of moral distress. I think you can conclude that individuals who are thinking about leaving a position due to moral distress have a high level; those who are not thinking about leaving clearly have lower levels. In my own early work, I divided the sample MDS-R scores into three categories or "cut scores" (high, medium, and low groups; 1/3 of the sample in each category). Then I compared the high and low scorers against selected other variables -- see Hamric & Blackhall for an earlier description of the differences between high and low scoring groups. If you are not familiar with cut scores, I hope you have a statistician with whom you can consult.

With that said, we have data from different studies demonstrating that moral distress is associated with individuals considering leaving their positions. I think we could safely say that someone who leaves or is contemplating leaving a position due to moral distress has "high" moral distress, where someone who never considered leaving has "low" (or at least lower) moral distress. I'm attaching a copy of our latest research using a large sample of professionals from various disciplines, published in the *Journal of Nursing Scholarship* in 2015. Look at Table 4 at the top of page 122.

It shows that individuals who considered or left previous positions or were considering leaving their current position had MDS-R mean scores of 92 - 108. Individuals who had not left or were not considering leaving had scores of 54 - 70. In the earlier study validating the MDS-R we saw somewhat higher scores - - look at Table 6, page 6 in the Hamric, Borchers, & Epstein article (2012); these subjects were only in ICU settings. That second study separates the responses of nurses and physicians.

So I think you have two possible approaches to trying to interpret whether a score indicates "high" moral distress:
  1. You could say that the scores I described from previous studies are an indication of high distress versus low distress.
OR, and I think this second approach is stronger,
  2. You could say that in your study, scores associated with intentions to leave or stay in a position are indicative of high versus low moral distress in your study population.

I am happy to give you permission to use the MDS-R. I have attached the pediatric nurse version, as requested. I do request that you let me know your findings from using the MDS-R.

Best

wishes,

Ann

Hamric

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*****************************************
*** Ann B. Hamric, PhD, RN, FAAN
Professor Emeritus, School of
Nursing Virginia Commonwealth
University Richmond, VA
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Appendix D Connor-Davidson Resilience Scale

Connor-Davidson Resilience Scale 25 (CD-RISC-25) ©

For each item, please mark an "x" in the box below that best indicates how much you agree with the following statements as they apply to you over the last <u>month.</u> If a particular situation has not occurred recently, answer according to how you think you would have felt.

		not true (0) time	rarely true (1)	sometimes true nearly at all (2) true	often true (3)	all the (4) true all the
1.	I am able to adapt when changes occur.	O	O	O	O	O
2.	I have at least one close and secure relationship that helps me when I am stressed.	O	O	O	O	O
3.	When there are no clear solutions to my problems, sometimes fate or God can help.	O	O	O	O	O
4.	I can deal with whatever comes my way.	O	O	O	O	O
5.	Past successes give me confidence in dealing with new challenges and difficulties.	O	O	O	O	O
6.	I try to see the humorous side of things when I am faced with problems.	O	O	O	O	O
7.	Having to cope with stress can make me stronger.	O	O	O	O	O
8.	I tend to bounce back after illness, injury, or other hardships.	O	O	O	O	O
9.	Good or bad, I believe that most things happen for a reason.	O	O	O	O	O
10.	I give my best effort no matter what the outcome may be.	O	O	O	O	O
11.	I believe I can achieve my goals, even if there are obstacles.	O	O	O	O	O
12.	Even when things look hopeless, I don't give up.	O	O	O	O	O
13.	During times of stress/crisis, I know where to turn for help.	O	O	O	O	O
14.	Under pressure, I stay focused and think clearly.	O	O	O	O	O
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	O	O	O	O	O
16.	I am not easily discouraged by failure.	O	O	O	O	O
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.	O	O	O	O	O
18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	O	O	O	O	O
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	O	O	O	O	O
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	O	O	O	O	O
21.	I have a strong sense of purpose in life.	O	O	O	O	O
22.	I feel in control of my life.	O	O	O	O	O
23.	I like challenges.	O	O	O	O	O
24.	I work to attain my goals no matter what roadblocks I encounter along the way.	O	O	O	O	O
25.	I take pride in my achievements.	O	O	O	O	O
	dd up your score for each column	0	+	+	+	+

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Add each of the column totals to obtain CD-RISC score _____

Appendix E Permission to Use CD-RISC

From: Jonathan Davidson, M.D.
To: Sexton, Jessica
Subject: Re: Request Form from: Jessica Sexton [EXTERNAL]
Date: Monday, April 02, 2018 8:59:27 PM
Attachments: aRISC Manual 01-01-18 F.pdf
                    aCD-RISC-25 01-01-18.pdf

Dear Jessica:

Thank you for returning the agreement and sending payment. I have pleasure to enclose the scale and manual. Please let me know if I can be of further assistance.

With good wishes for much success with your research,

Jonathan Davidson

Appendix F Informed Consent

This will appear as the first item of the survey:

Title of Research: Moral Distress and Resilience Amongst Pediatric Emergency Department Nurses

Purpose: The purpose of this study is to quantify moral distress and resiliency among pediatric nurses working in the emergency department (ED) and explore the relationship between resilience and moral distress id pediatric ED nurses.

Procedure: You are being asked to complete this electronic survey. It should take approximately 20 minutes to complete. Completion of this survey is absolutely voluntary, and you may choose not to participate in the study. Even though your responses to all items on the survey will be beneficial, you do not have to answer every question, and you may terminate participation at any time prior to final submission.

Risks and/or Discomforts: The risks of participation are few and minimal. All data will be reported anonymously. Your responses will not be identified with you personally or with your institution in any written reports or verbal presentations. While you may not directly benefit from participating in this study, it is hoped that the information gained will be of benefit to the nursing profession.

Opportunity to Ask Questions or Withdraw: I understand I am free to ask questions via email or phone or to withdraw from participation at any time.

Confidentiality: All information collected during this research will remain

confidential. Research reports or publications will report data in aggregate form only and individual responses will not be identifiable.

For any questions or concerns about this research project, you may contact:

Principal Investigator: Jessica Sexton

7 Crombie St, Salem, MA 01970

508.981.0703

Instructor: Dr. Collette Loftin, Associate Professor

OM-309-D, WTAMU Box 60969, Canyon, TX 79016

806.651-2653

Dean of Graduate Dr. Angela Spaulding

School & Research KRC-102-C, WTAMU, Canyon, TX 79106

806.651.2731

aspaulding@mail.wtamu.edu

Consent: By selecting the "agree" button below, you agree that you have read and understand the above information and are agreeing to voluntarily participate in this study.

Appendix G Sample Solicitation Post for Social Media

Social media post to solicit participation:

Pediatric Emergency Department Nurses: We Want to Hear From You!

We are reaching out to you in an effort to gain some understanding of the relationship between moral distress and resiliency in pediatric emergency department nursing. As you are aware, pediatric emergency department (ED) nurses (RNs) today are faced with numerous challenges, ED RNs work in an unpredictable and stressful environment, caring for patients and their families during challenging times. We want to better understand how to support and fortify ED RNs. A better understanding of the current state of ED RNs is needed to develop tools and resources to do so.

The purpose of our study is to quantify moral distress and resiliency amongst pediatric nurses working in the emergency department (ED), and explore the relationship between moral distress and resilience in pediatric ED nurses.

We truly value the information you have to share. No personal or identifying information is collected via this survey. By participating in this survey, you can make sure we have up-to-date data and facts. You can access the survey by clicking here <Survey Link>

Thank you again for your time and input,

Jessica Sexton, BSN, RN, CPEN