Caring for Victims of Child Maltreatment: Pediatric Nurses’ Moral Distress and Burnout

Angela Karakachian

Follow this and additional works at: https://dsc.duq.edu/etd

Part of the Pediatric Nursing Commons

Recommended Citation

This One-year Embargo is brought to you for free and open access by Duquesne Scholarship Collection. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Duquesne Scholarship Collection.
CARING FOR VICTIMS OF CHILD MALTREATMENT: PEDIATRIC NURSES’ MORAL DISTRESS AND BURNOUT

A Dissertation

Submitted to the School of Nursing

Duquesne University

In partial fulfillment of the requirements for the degree of Doctor of Philosophy

By

Angela Karakachian

May 2020
CARING FOR VICTIMS OF CHILD MALTREATMENT: PEDIATRIC NURSES’
MORAL DISTRESS AND BURNOUT

By

Angela Karakachian

Approved March 17, 2020

Alison Colbert
Associate professor, School of Nursing
(Committee Chair)

Eric Vogelstein
Associate Professor school of Nursing and
Department of Philosophy
(Committee Member)

Diane Hupp
Chief Nursing Officer and Vice President,
Operations and Patient care Services
UPMC Children’s Hospital of Pittsburgh
(Committee Member)

Rachel Berger
Chief Child Advocacy Center, Child
Protection Team, Pittsburgh Child
Advocacy Center Children’s Hospital of
Pittsburgh of UPMC
(Committee Member)

Mary Ellen Glasgow
Dean and professor School of Nursing

Rick Zoucha
Professor/Chair of Advanced Role and
PhD Program School of Nursing
ABSTRACT

CARING FOR VICTIMS OF CHILD MALTREATMENT: PEDIATRIC NURSES’ MORAL DISTRESS AND BURNOUT

By

Angela Karakachian

May 2020

Dissertation supervised by Dr. Alison Colbert

Background: Moral distress is a significant concern for nurses as it can lead to burnout and intentions to leaving the profession. Pediatric nurses encounter stressful and ethically challenging situations when they care for victims of suspected child maltreatment. Data on pediatric nurses’ moral distress in this situation are lacking, as most research in this field has been done in adult inpatient and intensive care units.

Aims: The purpose of this study was to describe pediatric nurses’ moral distress and determine the impact of caring for victims of suspected child maltreatment on nurses’ moral distress, burnout, and intention to leave.

Design and Method: This descriptive cross-sectional correlational study was conducted in a mid-Atlantic, urban area magnet pediatric level I trauma center hospital that cares for
over 1,800 cases of suspected maltreatment annually. An electronic survey was sent to all
the nurses working the hospital. Study participation was voluntary and anonymous.

**Findings:** Overall, nurses (N = 146) reported low levels of moral distress with a mean
score of 59.54 ± 49.22 and a range of 0-300 on the Moral Distress Scale Neonatal-
Pediatric version (MDSNPV). Although the frequency of caring for victims suspected of
child maltreatment did not affect nurses’ moral distress, caring for victims with severe
injuries due to abuse contributed to nurses’ intention to leave, $\chi^2 (1) = 5.35, p = 0.02.$

**Conclusions:** The results of this study add to the understanding of moral distress in
pediatric nursing. Caring for victims of severe injuries impacts pediatric nurses’ intention
to leave.
DEDICATION

I would like to dedicate this manuscript to my husband and my children who were very supportive and encouraging during my education.
ACKNOWLEDGEMENT

I would like to thank my dissertation committee members for all their help. I am very grateful for all their guidance and support.

Alison Colbert, PhD, PHCNS-BC, FAAN (Chair), Duquesne University School of Nursing
Eric Vogelstein, PhD, Associate Professor, Duquesne University School of Nursing
Diane Hupp, DNP, RN, NEA-BC, Chief Nursing Officer and Vice President, Operations and Patient care Services UPMC Children’s Hospital of Pittsburgh
Rachel Berger, MD, MPH, Chief Child Advocacy Center, Child Protection Team, Pittsburgh Child Advocacy Center Children’s Hospital of Pittsburgh of UPMC
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td></td>
<td>iv</td>
</tr>
<tr>
<td>Dedication</td>
<td></td>
<td>vi</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td></td>
<td>vii</td>
</tr>
<tr>
<td>List of Tables</td>
<td></td>
<td>ix</td>
</tr>
<tr>
<td>Chapter 1: Introduction</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chapter 2: Integrative Review</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Chapter 3: NIH style proposal</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Chapter 4: Results</td>
<td></td>
<td>84</td>
</tr>
</tbody>
</table>
LIST OF TABLES

Table 1: Demographics and Level of Moral Distress According to Nurses’ Characteristics .................................................. 109

Table 2: The Burnout Subscales ................................................................. 113

Table 3: The Work Environment and Nurses’ Moral Distress, Burnout, and Intention to Leave .............................................. 114

Table 4: Levels of Moral Distress, Burnout, and Nurses’ Intentions to Leave According to Caring for Different Types of Child Maltreatment .......................................................... 115

Table 5: Multivariate Linear Regression on Burnout ............................................ 116

Table 6: Logistic Regression on Intention to Leave ....................................... 117
Chapter 1

Introduction

Moral distress defined by Jameton (1984) as knowing the right thing to do and not being able to do it, leads nurses to experience burnout and to leave their jobs and even the nursing profession. In addition, moral distress has negative consequences on the quality and the cost of nursing care on patients contributing to nurses feeling powerless. The majority of research on moral distress is conducted with nurses working in adult inpatient units and more specifically in critical care environments.

Pediatric nurses encounter ethically challenging situations because they care for vulnerable populations (children) who can’t make their own decisions. Although children need to give an assent before a procedure, parents or guardians are the ones signing the consent based on the healthcare provider’s recommendations, which adds to nurses’ stress specially if the child refuses the treatment or the procedure. In addition, pediatric nurses often care for victims suspected of child maltreatment and they may have negative feelings towards the abuser who is often the parent or the guardian. Despite the negative feelings, the nurse should respect the parents’ wishes, which may also be ethically challenging to the nurse leading him/her to experience moral distress.

In addition pediatric nurses caring for victims of suspected child maltreatment may know the right thing to do, but are unable to do it because of internal constraints such as lack of confidence or fear of losing a job (Hamric, Davis, & Childress, 2006) and/or because of external constraints such as lack of administrative support (McAndrew, Leske, & Garcia, 2011). Although pediatric nurses who care for victims suspected of child maltreatment may have many reasons to experience moral distress, the information is missing. Research on moral distress,
burnout, and intentions to leave in pediatric nursing in the context of caring for victims of child maltreatment is important as it will increase the understanding of the role of moral distress and burnout in this specialty. This in turn may potentially help organization leaders identify effective ways to increase retention rates and improve quality of care.

The purpose of this study is to determine if caring for victims of suspected child maltreatment leads pediatric nurses to experience moral distress, burnout and intention to leave their jobs. This study has three aims; the primary aim is to describe pediatric nurses’ level of moral distress and to assess the relationships between pediatric nurses’ demographics, the frequency of caring for victims of suspected child maltreatment, and nurses’ moral distress. Secondarily, the study aims to explore the relationships between key variables (pediatric nurses’ demographics, frequency of caring for victims of suspected child maltreatment, nurses’ work environment, and nurses’ moral distress) and outcomes (burnout and intentions to leave). Third, the study aims to examine the influence of frequency of caring for victims of suspected child maltreatment and nurses’ moral distress on nurses’ burnout and intention to leave.
Chapter 2


Nurses’ Moral Distress, Burnout and Intentions to Leave: An Integrative Review

Copyright © 2019 International Association of Forensic Nurses. Unauthorized reproduction of this article is prohibited
Abstract

Moral distress has been widely addressed across the nursing profession and within other disciplines. Forensic nurses are a vital part of the nursing profession as they care for complex patients who may suffer physically and psychologically. However, forensic nurses’ moral distress in the context of caring for victims of violence has not been addressed. This integrative review of the literature reveals the consequences of moral distress on the nursing workforce particularly regarding nurses’ burnout and intentions to leave their jobs. Turnover contributes to the country’s critical shortage of nurses, which affect the quality of care patients receive and increases the costs for healthcare institutions.

Keywords: Nurses, Moral distress, Burnout, Intention to leave
Background

Forensic nurses are an integral part of the nursing profession as they address the needs of patients who are affected by different types of violence such as sexual assaults or abuse. In addition to caring for victims of trauma, forensic nurses collaborate with healthcare providers and social and legal personnel to investigate and interpret clinical signs to determine the reasons for intentional and unintentional injuries, describe the relationships between injury and evidence, and interpret the association of influencing factors (International Association of Forensic Nurses & American Nurses Association, 2015). Because forensic nurses care for patients with complex health care needs, these nurses encounter situations in which they face many ethical challenges—such as reporting the abuse of patients who wish to remain anonymous. This may be challenging to forensic nurses, as they are committed to protecting patients’ confidentiality and respecting their wishes (Walker, 2017). These situations among others may lead forensic nurses to experience moral distress.

Defined by Jameton (1984) as the phenomenon in which a person knows the right action to take but is constrained from taking it, moral distress depends on the individual’s obligations and values and is separate and distinct from emotional distress. Moral distress relates to a person’s own professional integrity that constrains him/her from taking the ethically correct action (Epstein & Hamric, 2009). Emotional distress, on the other hand, occurs when a person encounters distressing situations without the ethical component (McCarthy & Deady, 2008). Although all healthcare providers may experience moral distress, nurses are at higher risk (Allen et al., 2013; Whitehead, Herbertson, Hamric, Epstein, & Fisher, 2015).

Implementing treatments that will not benefit patients’ outcomes is believed to cause the highest level of moral distress in nurses (Cavaliere, Daly, Dowling, & Montgomery, 2010; Piers
et al., 2012; Rice, Rady, Hamrick, Verheijde, & Pendergast, 2008). In addition, nurses’ work environments have been shown to affect nurses’ moral distress; when nurses’ work environments deteriorate, the level of nurses’ moral distress increases (Hiler, Hickman, Reimer, & Wilson, 2018). Lack of communication, providing care to terminally ill patients, and working with incompetent coworkers have been also been linked to moral distress in nurses (de Veer, Francke, Struijs, & Willems, 2013; Varcoe, Pauly, Storch, Newton, & Makaroff, 2012; Woods, Rodgers, Towers, & La Grow, 2015).

Studies related to the work experience of forensic nurses highlight significant concerns that may be connected to moral distress. For example, forensic nurses have higher levels of burnout—a syndrome characterized by depersonalization, emotional exhaustion, and decreased personal accomplishment (Maslach & Jackson, 1986)—during their career because they are exposed to obligations and stresses that are unusual for the general nursing population (Ewers, Bradshaw, McGovern, & Ewers, 2002; Townsend & Campbell, 2009). In one study, 73% of forensic nurses had moderate to high levels of burnout and moderate to high levels of secondary traumatic stress (Flarity, Nash, Jones, & Steinbruner, 2016). In a different study, 46% of Sexual Assault Nurse Examiners (SANE) across four states experienced vicarious trauma and burnout (Maier, 2011). Burnout has been found to be a reason that nurses leave their jobs and even the nursing profession (Moloney, Boxall, Parsons, & Cheung, 2017; Rudman, Gustavsson, & Hultell, 2014).

Nurses leaving the profession contributes to the critical shortage the country is currently experiencing. It is predicted that by 2022, 500,000 experienced nurses will retire, and there will be a need for 1.1 million new nurses in the United States alone (American Nurses Association, 2018). Nurse turnover affects quality of care and leads to adverse patient outcomes (Aiken,
Clarke, Sloane, Sochalski, & Silber, 2002; O’Brien-Pallas et al., 2006), decreases nurses’ job satisfaction (Aiken et al., 2002), and increases the cost for healthcare institutions. The cost of replacing one nurse is between $12,000 and $67,00 (Purcell, Kutash, & Cobb, 2011).

Optimal healthcare, specifically in forensic nursing, requires an adequate number of trained professionals, and yet the number of forensic nurses who are in practice is much lower than the demand (United States Government Accountability Office, 2016). Therefore, understanding whether moral distress results in the loss of experienced and trained forensic nurses is of paramount importance. While there are no studies specific to moral distress in forensic nurses, the literature on nurses in general will help to illuminate this topic’s significance.

**Problem Identification & Specific Aims**

Violence of all types is a social phenomenon that necessitates specialized and trained forensic nurses who can provide the necessary treatment and support the needs of victims, suspects, or perpetrators. However, evidence shows that SANE retention is challenging (Logan, Cole, & Capillo, 2007).

The purpose of this integrative review is to describe the relationship between nurses’ moral distress and both burnout and intentions to leave the nursing position. Understanding the moral distress experienced by nurses is the first step in determining interventions to potentially provide support and retention. An exploration of nurses more broadly will inform thinking and future research about forensic nurses.
Review Method

This study is an integrative review using the method of Whittemore and Knafl (2005), allowing researchers to include experimental and non-experimental studies in the review to help readers to fully understand a phenomenon of concern (Whittemore & Knafl, 2005).

Literature Review

CINHAL, PubMed, and Scopus were searched to identify primary research studies that investigate the effects of moral distress on practicing nurses. The timeframe of the research results was restricted to the period from January 2000 to June 2018. In addition, the Nursing Ethics journal was manually scanned from 2000 to 2017 to find relevant articles. The original search of the literature included quantitative, qualitative, and mixed method studies that reported nurses’ subjective experiences along with more objective measures of the consequences of moral distress on nurses. The literature review was conducted by electronic searching of databases using the keywords “moral distress”, “burnout”, “intention to leave”, and other synonyms and search terms. A detailed list of all search terms is included in Table 2.

The primary investigator screened titles and abstracts and included studies if they met the following criteria: (1) empirical quantitative, qualitative, or mixed method research, (2) addressed the relationship between nurses’ moral distress and burnout, or nurses’ moral distress and their intentions to leave their positions, and (3) published in English from 2000 to 2018. Articles in foreign languages; articles that were not primary research; articles not discussing the relationship between moral distress, burnout, and/or intentions to leave; and articles not involving nurses were excluded from this review.

All relevant articles were exported to Endnote7 where the duplicates were removed. The investigator screened the titles and abstracts of remaining articles for relevance based on the
inclusion and exclusion criteria. The initial search revealed 602 articles. Five hundred fifty-eight articles were excluded because they discussed sources, intensity, and frequency of moral distress. The remaining 44 articles were screened, and only the articles meeting the inclusion criteria were included in this review. Seventeen articles matched the inclusion criteria. Figure 1 shows the details of the data collection process.

**Data Evaluation**

Each study was critically appraised using an assessment sheet prepared and tested by Hawker, Payne, Kerr, Hardey, and Powell (2002). The quality appraisal sheet includes nine components: (1) title and abstract, (2) introduction and aims, (3) method and data, (4) sampling, (5) data analysis, (6) ethics and bias, (7) results, (8) transferability, and (9) implications for practice. The primary author assessed each area of the articles using the standard scale of 1 (very poor) to 4 (very good). The scores were calculated and tallied; a score of 9 indicated a very poor study, and a score of 36 indicated a very good study. Methodological quality appraisal for the majority of the studies was generally good and the scores ranged from 21 to 33. None of the articles were excluded on the basis of inadequate rigor. All of the articles had an abstract, included a research question and/or an objective, described the design, identified the tools used, and explained and justified the sample size. Some studies determined the sample size by using power analysis, and the majority of the articles explained the process of ethical consideration. The most common weaknesses in the studies resulted from the researchers’ failure to adequately explain the implications and usefulness of their research and their failure to propose ideas for further research.

**Data Analysis**
In this review, data abstraction, organization, and synthesis were accomplished by reading and re-reading the articles, comparing them, and categorizing the relevant themes and information. Results were classified and then summarized in two categories: nurses’ moral distress and its relation to their burnout, and nurses’ moral distress and its relation with their intentions to leave their positions. A matrix table (Table 1) was developed that outlined the aims, population, sample size, key outcomes from each study, and the tools researchers used to measure nurses’ burnout and their intentions to leave their jobs. In order to identify important themes and patterns, the investigator analyzed and organized the results using a constant comparative method (Whittemore & KnafI, 2005).

**Review Results**

**Description of Sample Studies**

Demographic characteristics, including participants’ gender, age, education level, and years of experience, varied among the studies. Most of the participants in these studies were female, and the percentage of female participants’ varied from 56.9% (Hamaideh, 2014) to 100% (Gutierrez, 2005; Harrowing & Mill, 2010). The ages of the participants in this review ranged from 19 to 64 (See Table 1). One study did not report participants’ ages (Harrowing & Mill, 2010).

Five of the 17 studies recruited healthcare professionals in addition to nurses. However, in each of those five studies, nurses compromised the largest proportion of the total sample of participants. The percentage of nurses among these studies ranged from 48% (Fumis, Amarante, Nascimento, & Junior, 2017) to 77.1% (Larson, Dryden-Palmer, Gibbons, & Parshuram, 2017). The overall nurses’ education level in the studies varied from associate’s degree to PhD, and
most of the nurses either had a diploma or an associate’s degree in nursing. (Table 1 provides the details of participants’ demographic characteristics).

Among the 13 quantitative studies, sample sizes ranged from 100 participants to 1,541 participants, and the nurses who participated were employed in intensive care departments, cardiovascular surgical intensive care, mental health, pediatric intensive care, geriatrics, all units in a Veterans Health Administration (VHA), neonatology, and hematopoietic cell transplantation. Study locations included the United States, Iran, Southern Rio Grande do Sul, Japan, Italy, Jordan, Canada, and Brazil.

In the three qualitative studies, sample sizes ranged from 12 to 49 participants. Two out of three qualitative studies were conducted in critical care units in the United States, and one was conducted with nurses providing care to HIV patients in Africa. One mixed methods study that included nine nurses working in critical care units in the United States is included in this review. (details in Table 1).

**Measures**

**Measures for moral distress.** Three different versions of the Moral Distress Scale—the Moral Distress Scale (MDS), the Moral Distress Scale Revised (MDS-R), and the Moral Distress Scale for Psychiatric Nurses (MDS-P)—were used to determine participants’ perception of moral distress. The MDS (Corley, Elswick, Gorman, & Clor, 2001) was used in seven studies (see Table 1). The reliability of the MDS in these studies varied between Cronbach’s $\alpha \geq 0.70$ (Kelly, 2012) and Cronbach’s $\alpha \geq 0.97$ (McClendon & Buckner, 2007). The MDS-R (Hamric, Borchers, & Epstein, 2012) was used in five studies (see Table 1), and the reliability of the MDS-R in these studies varied between Cronbach’s $\alpha 0.88$ (Austin, Saylor, & Finley, 2017) and Cronbach’s $\alpha = 0.89$ (Larson et al., 2017). The MDS-P (Ohnishi et al., 2010) was used in two
research articles (see Table 1), and the reliability of the MDS-P was measured by Cronbach’s $\alpha$ which was 0.89 and 0.90. In the qualitative studies, researchers asked open-ended questions to determine participants’ perceptions of moral distress.

The results of this review reveal that all healthcare providers experience moderate to high levels of moral distress. Scores of moral distress range from 0-336; higher scores on the Moral Distress Scale indicate higher levels of moral distress (Hamric et al., 2012).

Measures for burnout. To measure burnout, six studies used the Maslach Burnout Inventory (MBI) (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1996) (see Table 1). The MBI has 22 items divided in three subscales; emotional exhaustion, depersonalization, and personal accomplishment. Higher scores for both emotional exhaustion and depersonalization indicate higher levels of burnout. In contrast, lower levels on personal accomplishment indicate higher burnout levels. The reliability of the MBI varied from Cronbach’s $\alpha = 0.61$ (Dalmolin, Lunardi, Lunardi, Barlem, & Silveira, 2014) to Cronbach’s $\alpha = 0.87$ (Fumis et al., 2017). While most of the quantitative studies employed the MBI, Austin, Lemermeyer, Goldberg, Bergum, and Johnson (2005) used the Professional Quality of Life Scale (ProQOL), and Cronbach’s $\alpha$ for the three subscales of the ProQOL was measured to show the reliability of the instrument: (1) for compassion satisfaction Cronbach’s $\alpha$ was 0.89, (2) for burnout Cronbach’s $\alpha$ was 0.80, and (3) for secondary traumatic stress Cronbach’s $\alpha$ was 0.81. Shoorideh, Ashktorab, Yaghmaei, and Alavi Majd (2015) used the Copenhagen Burnout Inventory (CBI), which showed with high reliability that Cronbach’s $\alpha$ was 0.82. In the qualitative studies, participants were asked open-ended questions to determine if they were experiencing burnout. Despite the studies’ use of different methods to explore participants’ burnout, the results reveal that all healthcare providers experience moderate to high levels of burnout (see Table 1). Higher scores on the two subscales
from the MBI, emotional exhaustion and depersonalization, signal a high level of burnout whereas lower scores on personal accomplishment from the MBI signal a high level of burnout (Maslach et al., 1996).

**Measures for intentions to leave positions.** Participants’ intentions to leave were determined by using the last two items from the MDS, the MDS-R, or the MDS-P (Table 1). Some researchers used other tools: Maningo-Salinas (2010); Shoorideh et al. (2015) used the Anticipated Turnover Scale (ATS); Fogel (2007) used the Intent to Turnover of the Quality of Work Life Measurement tool (QWL); Hamaideh (2014) used the Job Satisfaction Scale (JSS); Karanikola et al. (2014) used Varju et al.’s Autonomy Scale (VAS); Kelly (2012) used the Practice Environment Scale of Nursing Work Index (PESNWI); and Neumann et al. (2017) asked participants to either strongly agree, agree, strongly disagree, or disagree with the statement “I am satisfied with my career” in order to show their level of career satisfaction.

While intention to leave was assessed with many different tools, it is clear that healthcare providers experiencing high levels of moral distress had high intentions to leave their positions. Evidence shows that 10% to 38% of nurses leave their jobs because of moral distress (Fogel, 2007; Wiegand & Funk, 2012).

**Difference in Moral Distress among Healthcare Professionals**

In three of the five studies that recruited healthcare professionals in addition to nurses, nurses had higher mean scores of moral distress than other healthcare professionals (scores ranging between 62.3 and 107.7) (Fumis et al., 2017; Larson et al., 2017; Neumann et al., 2017). In two of the five studies, nurses had lower mean scores of moral distress than physicians; nurses’ mean score of moral distress ranged from 92.9 to 47.3 compared to physicians’ mean
score of moral distress ranging from 106.1 to 62.8 respectively (Austin et al., 2017; Trotochaud, Coleman, Krawiecki, & McCracken, 2015).(see Table 1).

**Difference in Burnout among Healthcare Professionals**

Four of the five studies that recruited healthcare professionals in addition to nurses measured burnout (Austin et al., 2017; Fumis et al., 2017; Larson et al., 2017; Neumann et al., 2017). Two of these four studies determined that nurses had higher levels of burnout compared to other healthcare professionals (Austin et al., 2017; Fumis et al., 2017). Neumann et al. (2017) found that pharmacists had a higher prevalence of burnout compared to other healthcare providers. Larson et al. (2017) did not specify the prevalence of burnout for each of the groups; the author provided the median level of burnout (6) and explained that 39% of all participants had high levels of depersonalization (see Table 1).

**Difference in Intentions to Leave among Healthcare Professionals**

Two of the five articles that recruited healthcare professionals in addition to nurses explored caregivers’ intentions to leave in relation to moral distress (Austin et al., 2017; Trotochaud et al., 2015). In both studies, nurses had higher intentions to leave compared to other healthcare professionals (see Table 1).

**Nurses’ Moral Distress and Its Relation with Burnout**

Seven quantitative articles in this review reported positive correlation between moral distress and burnout (see Table 1). Neumann et al. (2017) had the largest sample, with 1541 participants, and found that moral distress was the only variable correlated with healthcare providers’ burnout. Neumann et al. (2017) also found that each additional point of moral distress increased the risk of healthcare providers’ burnout by 2% and participants who had burnout had lower levels of career satisfaction.
In qualitative studies, moral distress and burnout were reported differently. As a result of moral distress, nurses expressed experiencing emotional issues such as sadness, anger, and frustration (Gutierrez, 2005; Wiegand & Funk, 2012). Some nurses experienced professional effects such as withdrawing from patients and their families (Gutierrez, 2005). Furthermore, nurses felt that moral distress led to a lower standard of care (Harrowing & Mill, 2010; Wiegand & Funk, 2012) and prohibited them from completing their tasks (McClendon & Buckner, 2007).

**Nurses Moral Distress and Their Intentions to Leave Their Positions**

Ten studies explored the relation between nurses’ moral distress and their intentions to leave their jobs/profession (see Table 1). Six of these studies found that high levels of moral distress increased nurses’ intentions to leave their jobs (Table 1). Three studies did not find any correlation between moral distress and intention to leave jobs (Harrowing & Mill, 2010; Kelly, 2012; Shoorideh et al., 2015). One qualitative study found that although 38% of the participants will change their jobs if they face similar situations in the future, 62% of the participants will not (Wiegand & Funk, 2012). The overall percentage of participants who were thinking of leaving their jobs as a result of moral distress ranged from 10% (Fogel, 2007) to 49% (Austin et al., 2017). Trotochaud et al. (2015) had the largest sample size with 1113 participants and found that 35.7% of respondents reported having left their position or thinking about leaving their positions because of moral distress.

Two of these studies explored the relationship between nurses’ moral distress with their burnout and their intentions to leave (Hamaideh, 2014; Shoorideh et al., 2015). While Hamaideh (2014) found that moral distress is strongly positively related to both nurses’ burnout and their intentions to leave ($r^2 = 0.193$ for burnout and 0.202 for intentions to leave), Shoorideh et al. (2015) did not find a significant relation between moral distress and anticipated nurse turnover.
Specific statistics were not provided; results were presented as \( p > 0.05 \). However, Shoorideh et al. (2015) found that there was a positive correlation between age and years of nurses’ experience with burnout \( p < 0.01 \) and moral distress \( p < 0.05 \), and positive correlation between nurse-to-patient ratio and burnout and moral distress \( p < 0.001 \).

**Strengths and Limitations of the Studies**

Research designs in these studies were qualitative open-ended interviews or quantitative surveys in which strong reliability and the validity of each of the instruments was reported. However, most of the participants in the studies were female, and male participants constituted a small percentage of the total number of participants, a fact that may have affected the results.

Some studies did not provide detailed information about the characteristics of the sample such as nurses’ years of experience or nurses’ ethnicity, which limits the amount of information regarding the samples. Nurses’ years of experience may influence the way they handle conflicting situations, and, therefore, they may not experience moral distress or have the intentions to leave their jobs. Previous research has shown that experienced nurses are more comfortable with patients and physicians and therefore don’t experience the negative consequences of moral distress (Traudt, Liaschenko, & Peden-McAlpine, 2016). Research also showed that experienced nurses are more satisfied with their jobs and have fewer intentions to leave than nurses who have less experience (Delobelle et al., 2011; Masum et al., 2016).

Most studies did not take into consideration nurses’ work environments or the perceived organizational support that may also lead to nurses’ moral distress, burnout, and intentions to leave their jobs. Previous studies have shown that when the work environment is favorable, nurses have low levels of job dissatisfaction (Unruh & Zhang, 2013), low levels of burnout (Li et al., 2013), and fewer intentions to leave positions (Van den Heede et al., 2013); on the other
hand, poor work environment is related to high levels of nurses’ moral distress (Hiler et al., 2018), high levels of burnout (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Maslach, Schaufeli, & Leiter, 2001), and high turnover rates (Aiken et al., 2012; Bogaert, Clarke, Willems, & Mondelaers, 2013). Therefore, since the information on nurses’ years of experience and their work environment is missing, the ability to infer specific reasons for nurses’ moral distress, burnout, and intentions to leave their jobs is limited. In addition, the relationship of type of nursing (e.g., bedside nurse, nurse manager, unit director) and moral distress was not specified in most of the studies. While the meaning of the nursing profession is universal, nurses’ moral distress may be different depending on the role of the nurse on the unit. In future studies, it would be beneficial to determine the different levels of moral distress in relation to the type of nursing on the units.

Furthermore, lack of longitudinal work across the studies made causal statements impossible. Researchers conducted their research in different settings, each of which brought unique challenges to participants; these differences resulted in different dimensions for nurses’ moral distress, burnout, and intentions to leave and affected the generalizability of the findings.

**Discussion**

This review examined the relation between nurses’ moral distress and burnout, and nurses’ moral distress and intention to leave their position. The evidence clearly shows that moral distress is positively correlated with burnout. All nurses included in this review experienced burnout because of moral distress. While not all of the studies determined the level of nurses’ burnout, all of the studies showed a positive correlation between moral distress and burnout (details in Table 1).
However, studies examining nurses’ intentions to leave their jobs in relation to their moral distress had mixed results. While most studies found that moral distress increased nurses’ intentions to leave their jobs (Table 1), three studies did not find any correlation between moral distress and nurses’ intentions to leave their jobs (Harrowing & Mill, 2010; Kelly, 2012; Shoorideh et al., 2015). This can be explained by the fact that these three studies were conducted with specific groups of participants who worked under unique conditions and circumstances that may have affected participants’ decisions to stay in their jobs. Harrowing & Mill (2010) conducted their study in Africa where nurses had financial needs and their chances of finding another job were minimal, leading them to maintain their positions regardless of their moral distress. Kelly (2012) conducted her study with experienced nurses; 61% of them had over 11 years of experience in the VHA system. When nurses work in one place for a long period, they develop a sense of security and comfort that may prevent them from leaving their positions (Nathaniel, 2006). Shoorideh et al. (2015) conducted their study in Iran where 72.3% of the participants were female. Women in Iran were expected to be more submissive and introverted and obtaining employment was difficult for everyone, which may have affected participants’ decisions to stay in their jobs (Shoorideh et al., 2015).

People with different cultural backgrounds have different perceptions of nursing, which may affect nurses’ decisions to stay in their jobs. For example, the restriction of Iranian women’s rights in 2015 may have affected Iranian nurses’ decision to stay in their jobs. A recent study explained that they tolerated poor working conditions because they valued having a role in and being useful for society and the family (Alilu, Zamanzadeh, Valizadeh, Habibzadeh, & Gillespie, 2017). On the other hand, nurses working in Africa had no intention to leave their job
despite experiencing moral distress as they needed the financial income to support their families (Harrowing & Mill, 2010).

Although most studies showed that moral distress leads to negative consequences, some studies reported positive effects. Some nurses expressed a desire to advocate for their patients (Gutierrez, 2005), and other nurses maintained their moral integrity and showed resilience and perseverance to alleviate the suffering of their patients (Harrowing & Mill, 2010). Studies also showed that nurses experience high levels of moral distress, which shows the importance of addressing this issue in the nursing profession and more specifically in forensic nursing.

It is evident that the literature on moral distress and its relation with nurses’ burnout and intentions to leave their jobs is a universal topic; however, the lack of research on forensic nurses’ moral distress is a concern. Although forensic nurses in different countries may have different practice parameters, it is important to explore if these nurses experience moral distress as they care for victims of violence, suspects, or perpetrators.

**Implication for Forensic Nursing**

Studies have shown that when forensic nurses care for victims of violence, the amount of hours victims wait in the emergency room decreases and the quality of care improves (Campbell, Bybee, Kelley, Dworkin, & Patterson, 2012; Campbell, Patterson, & Lichty, 2005). However, the number of forensic nurses is less than the demand, and retaining forensic nurses in practice is challenging (Iritani, 2016). This may be related to the fact that forensic nurses work in high-stress work environments where they face frustrations, challenges, and ethical issues as they care for vulnerable patients who are suffering not only physically but also psychologically. In addition to the stressful environment, forensic nurses are at high risk of being subjected to verbal and physical aggression, which increases their risk of experiencing burnout (Mason, 2002).
Defined as the psychological syndrome involving depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment that happens to professionals who work with other people during challenging situations (Maslach, 1982), burnout has been found to be a reason that nurses leave their jobs and even the nursing profession (Moloney et al., 2017; Rudman et al., 2014).

Studies in this review reveal that moral distress is positively correlated with burnout (Austin et al., 2017; Dalmolin et al., 2014; Fumis et al., 2017; Larson et al., 2017). Evidence also shows that moral distress increases nurses’ intention to leave their jobs and nursing overall (Fogel, 2007; Hamaideh, 2014; Karanikola et al., 2014; Trotochaud et al., 2015; Wiegand & Funk, 2012). Considering the shortage of forensic nurses, the profession cannot afford to lose experienced nurses due to moral distress, a potentially preventable condition. It is therefore important to determine if forensic nurses experience moral distress while caring for victims of violence, and yet the information in the literature is missing. Helping forensic nurses recognize the situations that lead to moral distress is the first step in helping them to relieve their distress, reduce their burnout, and continue longer in practice.

**Implications for Practice, Policy, and Research**

This integrative review provides important information to hospital administrators, unit directors, and unit managers about nurses’ burnout and their intentions to leave their positions as potentially serious consequences of nurses’ moral distress. Nurse turnover affects the quality of care, leading to adverse patient outcomes (Aiken et al., 2002; O’Brien-Pallas et al., 2006), and decreases job satisfaction (Aiken et al., 2002). Therefore, understanding the potential causes of moral distress, and developing effective interventions to combat it, is of paramount importance.
This is an important step in helping administrators find ways to relieve nurses’ moral distress to retain them longer in practice and, ultimately, improve the quality of care patients receive.

Several gaps in the literature are identified. None of the studies included in this review evaluated nurses’ physical and emotional well-being before or during the study. Hanna (2005) questions the consequences of moral distress on nurses who have underlying conditions or chronic illnesses. Therefore, conducting a study that takes into consideration nurses’ health conditions will be beneficial for understanding if nurses who have predisposing conditions react differently to morally distressing situations than nurses who have no underlying health issues. In addition, there is a lack of longitudinal studies related to the effects of moral distress. Longitudinal studies that look at phenomena over time may show the pattern of moral distress, its causes, and its effects, helping researchers understand the cause and effect relationships between moral distress, burnout, and intentions to leave. This is important for the nursing profession because it will help unit directors understand the long-term effects of moral distress on nurses.

Furthermore, to date, forensic nurses’ moral distress in the context of caring for victims of violence and their families has not been addressed in the literature. Forensic nurses are at the front line of contact with the most vulnerable populations, both deceased and living. From victims to abusers and perpetrators, forensic nurses treat intentional/unintentional physical and psychological injuries, and therefore they may experience moral distress. However, the literature is missing the information on forensic nurses’ moral distress. Therefore, it is worthwhile to conduct a study that focuses on forensic nurses’ moral distress that helps in determining reasons for their burnout, in order to keep them longer in practice.
It is important to note that this body of literature covers a wide span of years and during this time the nursing profession and the quality of patients changed, which may have affected the results of this research. For example, with the aging and the more diverse population, nurses need to have the necessary training and education to care for patients with complex health conditions. Without the necessary training and education, nurses may not be confident in caring for these patients, leading nurses to experience burnout and leave their jobs. Therefore, it is important to explore nurses’ education and determine if their education/training affects their moral distress, burnout, and intentions to leave their jobs.

**Limitations**

This integrative review provides information on the effects of moral distress on nurses’ burnout and their intentions to leave their jobs. Despite the rigor of the methodology and the analysis of this review, several limitations are identified. In this review, the authors tried to capture all of the articles that discussed nurses’ moral distress and its relation with burnout and their intentions to leave their positions. However, the concept of moral distress is used broadly in the literature, and it is therefore possible that some studies are unintentionally excluded. Furthermore, the scoring of the articles included in this review was done by the one author, and, therefore, it is possible that some articles were excluded due to investigator’s bias.

Based on this review, burnout and increased intentions to leave positions are the major effects of nurses’ moral distress. However, burnout and intentions to leave are not the only side effects of moral distress. This review does not encompass all of the physiological and psychological consequences of moral distress on nurses and their patients. Therefore, a more in-depth approach to the literature review should be attempted in the future.
Finally, because of the relatively small amount of empirical work in this specific area, this review covers a relatively broad time period (2000-2018), and thus there have likely been significantly changes in healthcare delivery, financing, and the nursing professional take may also contribute to the key outcomes. This review is fairly comprehensive of work to date, but given the increasing attention to the topic, the authors anticipate a significant increase in the body of literature moving forward.

**Conclusion**

Despite the diversity of the instruments, the different sample sizes, and the different countries and work environments in which these studies were conducted, this set of studies shows that moral distress is related to negative consequences on nurses’ professional and personal lives, potentially contributing to burnout and leading to an increase in intentions to leave. Nurses leaving their positions lead to poor quality of care (Aiken et al., 2002; O’Brien-Pallas et al., 2006), jeopardizing the safety of patients and threatening the reputation of institutions. Therefore, moral distress needs to be addressed with diligence to achieve nurses’ moral comfort and help them continue longer in practice.

In a world where violence is prevalent and highly visible, forensic nurses are needed more than ever. Forensic nurses experience a variety of events and situations that may be associated with moral distress. It is therefore important to find the sources of moral distress and develop strategies to assess, prevent, and decrease forensic nurses’ moral distress. Findings from this review reveal an important gap in the literature; forensic nurses’ moral distress in the context of providing care to victims of violence is not addressed. Evidence shows that providing care to victims of violence and their families is stressful and traumatizing to forensic nurses (Zimmer &
Cabelus, 2003). Therefore, future research should be conducted to investigate nurses’ moral distress as they provide care to victims of violence.
References


Chapter 3

Study Proposal

Specific Aims

Child maltreatment, defined as “when an individual acts or fails to act be committed intentionally, knowingly or recklessly to prevent something that causes serious harm to a child under the age of 18” (Pennsylvania Family Support Alliance, 2018), is a universal health concern. In 2014, it was estimated that up to 1 billion children between ages of 2 and 17 were victims of child maltreatment around the world (Hillis, Mercy, Amobi & Kress, 2016). Although child maltreatment is a universal health concern, the United States has high rates with an average of five children per day dying as a result of child abuse and neglect (Office of the Administration for Children & families, 2018). In 2016, 4.1 million cases of child maltreatment were reported in the United States (Office of the Administration for Children & Families, 2018).

Data on child maltreatment across different countries is lacking due to varying definitions of, policies, and data collection methods related to child maltreatment (Jud, Fegert, & Finkelhor, 2016). One study collected information from Belgium, Germany, Canada, New Zealand, South Korea, the Netherlands, Switzerland, and the United States to determine the efforts these countries have made regarding child protection services and the efforts made regarding collecting data on child maltreatment (Jud et al., 2013). Jud et al. (2013) found that the rate for child maltreatment in 2011 in Belgium was 5.94 per 1000 minors, 0.63 per 1000 children in Korea, 33.8 per 1000 children and 99.4 per 1000 adolescents in the Netherlands, and 9.1 per 1000 children in the United States. Data regarding the prevalence of child maltreatment in the other countries (Germany, Canada, New Zealand, and Switzerland) was not determined.
Victims of child maltreatment are suffering physically and emotionally and, therefore, they need help and protection. Intervening in the lives of children victims of maltreatment and protecting them from harm requires the combined effort of every healthcare provider and every individual in the society. Each healthcare provider has his/her own responsibilities toward victims of child maltreatment, and the goal is to provide a safe and nurturing environment and promote healthy growth and development for these children.

Nurses who care for victims of child maltreatment are the front line of contact and have important responsibilities such as recognizing signs of abuse, reporting cases to the appropriate authorities, caring for victims, and respecting perpetrators’ (often parents’) wishes. Caring for abused children, dealing with multiple health care providers, and keeping a professional relationship with abusive parents are causes of stress for nurses (Rowse, 2009). It is therefore critical that the nursing workforce be well-equipped to serve this very vulnerable population.

The stress of caring for victims of child maltreatment and their families may lead nurses to experience burnout, defined as the psychological syndrome involving depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment that happens to professionals who work with other people during challenging situations (Maslach, 1982). Burnout is a significant healthcare concern affecting individuals and health care organizations, frequently leading to poor quality of care (Vahey, Aiken, Sloane, Clarke, & Vargas, 2004). In addition to the implications for quality of care, there is also the impact of burnout on the nursing workforce, as it has also been found to be a reason for nurses to leave their jobs and even the nursing profession (Moloney, Boxall, Parsons, & Cheung, 2017; Rudman, Gustavsson, & Hultell, 2014). Nurse turnover affects the quality of care, leading to adverse patient outcomes (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; O’Brien-Pallas et al., 2006), and decreases
job satisfaction (Aiken et al., 2002). Therefore, understanding the potential causes of burnout, and developing effective interventions to combat it, is of paramount importance.

Moral distress, defined by Jameton (1984) as the phenomenon in which a person knows the right action to take but is constrained from taking it, is positively correlated with burnout (Austin, Saylor, & Finley, 2017; Dalmolin, Lunardi, Lunardi, Barlem, & Silveira, 2014; Fumis, Amarante, Nascimento, & Junior, 2017; Larson, Dryden-Palmer, Gibbons, & Parshuram, 2017).

Although there are other, more recent definitions of moral distress (Campbell, Ulrich, & Grady, 2016; Kälvemark, Höglund, Hansson, Westerholm, & Arnetz, 2004; Webster & Baylis, 2000), Jameton’s (1984) definition is more appropriate for use in this study because it is employed frequently in the literature (Karanikola et al., 2014; Sauerland, Marotta, Peinemann, Berndt, & Robichaux, 2014; Wilson, Goettemoeller, Bevan, & McCord, 2013). Furthermore, Jameton’s (1984) definition of moral distress applies more in clinical decision making while nurses are providing care to victims of child abuse as such nurses need to respect and follow parents’ decisions related to the care of the child knowing that the decision may not be in the child’s best interest, which leads to nurses’ moral distress. In these situations, the other definitions of moral distress would not be appropriate to use. For example, Kalvemark at al. (2004) define moral distress as “traditional negative stress symptoms that occur due to situations that involve ethical dimensions and where the health care provider feels she/he is not able to preserve all interests and values at stake” (p.1082-1083). This definition of moral distress is based on the findings from the research conducted by Kalvemark et al. (2004) who found that healthcare providers experienced moral distress when they had to make difficult choices between following rules or following their conscience.
Pediatric nurses who care for victims of child maltreatment do not have the choice between following rules or following their conscience; they have to respect the parents’ decisions because parents or legal guardians are entitled to make medical decisions on behalf of their children as they have the responsibility and in the absence of abuse or neglect they are assumed to act in the child’s best interest, a concept that is hard to define and is often subjective (Kuther, 2003). Therefore, moral distress defined by Jameton (1984) as the phenomenon in which a person knows the right action to take but is constrained from taking it is more appropriate for use in the proposed study.

Evidence shows that moral distress increases nurses’ intention to leave their jobs and nursing overall (Fogel, 2007; Hamaideh, 2014; Karanikola et al., 2014; Trotochaud et al., 2015; Wiegand & Funk, 2012). Nurses leaving the profession contribute to the critical shortage the country is currently experiencing. It is predicted that by 2022, 500,000 experienced nurses will retire, and there will be a need for 1.1 million new nurses in the United States alone (American Nurses Association, 2018). In light of the nursing shortage, the profession cannot afford to lose experienced nurses due to moral distress, a potentially preventable condition. To prevent nurses’ moral distress, it is important to find the factors that cause or make it worse.

Futile care, defined as implementing treatments that will not benefit patients’ outcomes, is found to cause nurses the highest level of moral distress (Cavaliere, Daly, Dowling, & Montgomery, 2010; Elpern, Covert, & Kleinpell, 2005; Gutierrez, 2005; Hamric & Blackhall, 2007; Mobley, Rady, Verheijde, Patel, & Larson, 2007; Piers et al., 2012; Rice, Rady, Hamrick, Verheijde, & Pendergast, 2008). Other reasons for nurses’ moral distress include the following: lack of communication with other health care providers, providing care to terminally ill patients, working with incompetent coworkers (de Veer, Francke, Struijs, & Willems, 2013; Varcoe,
Pauly, Storch, Newton, & Makaroff, 2012; Woods, Rodgers, Towers, & La Grow, 2015), and nurses’ work environments; when nurses’ work environments deteriorate, the level of nurses’ moral distress increases (Hiler, Hickman, Reimer, & Wilson, 2018). No data was found relating to nurses’ moral distress as they care for victims of child abuse.

Caring for victims of child abuse is challenging and may also cause moral distress for nurses because parents’ desires may conflict with what healthcare providers think is in the child’s best interest. Nurses’ inability to act as moral agents, defined as being capable of and having the responsibility for making moral decisions (Rodney & Starzomski, 1993), when events occur may result in nurses’ moral distress (O’Haire & Blackford, 2005). Other situations such as sending the child back to the abusive environment may not appear the right thing to do for nurses caring for these children, which may lead to nurses’ moral distress.

Many nurses routinely encounter serious and terminal illnesses such as cancer, but providing care to victims of child abuse may be much harder to cope with emotionally (Lazoritz, Rossiter, & Whiteaker, 2010; Tingberg, Bredlöv, & Ygge, 2008).

Emotional distress and moral distress are two different concepts. Pediatric nurses caring for victims of child abuse may experience emotional distress defined as negative emotional reaction including suffering, anxiety, anger, and fear (Wallace & Wild, 2006) because they know that the victim will suffer physiological and psychological consequences as a result of the child maltreatment. Nurses caring for victims of child maltreatment may also experience moral distress in situations such as when they provide what they perceive to be futile care to the victim potentially leading to ethical and emotional barriers between nurses and parents that may prevent nurses from engaging with these parents in a meaningful way.
Several researchers assessed moral distress in pediatric settings and found that prolonging a child’s life when it is not in the child’s best interest is the main reason for pediatric healthcare providers’ moral distress leading to providers’ burnout and high intentions to leave their jobs (Ghasemi, Negarandeh, & Janani, 2017; Larson et al., 2017; Molloy, Evans, & Coughlin, 2015; Trotochaud, Coleman, Krawiecki, & McCracken, 2015). To date, there is no evidence regarding pediatric nurses’ moral distress as they care for victims of child maltreatment. The proposed cross-sectional correlational study guided by Lazarus and Folkman (1984) Transaction Model of Coping and Stress will achieve the following:

Aim 1: Describe pediatric nurses’ moral distress.

Aim 2: Assess the relationships between pediatric nurses’ demographics, the frequency of caring for victims of suspected child maltreatment and neglect, and nurses’ moral distress.

Aim 3: Describe the relationships between pediatric nurses’ characteristics (experience, education, demographics), frequency of caring for victims of suspected child maltreatment and neglect, nurses’ work environment, nurses’ moral distress, burnout, and intentions to leave.

Aim 4: Examine the influence of frequency of caring for victims of suspected child maltreatment and neglect and nurses’ moral distress on nurses’ burnout and intention to leave while controlling for nurse characteristics and work environment.

Significance

Assessing Pediatric Nurses’ Moral Distress in the Context of Child Abuse

Nurses working with victims of child maltreatment may be confronted with ethical challenges in which they know what they think is the right thing to do such as providing palliative care to the victim or removing the victim from the abusive environment, but they are unable to do it because of internal constraints such as lack of moral awareness, lack of nursing
skills, and lack of knowledge. Other factors such as institutional policies, peer pressure, lack of resources, and family preferences are external constraints that may also prevent nurses from doing what they know is right (Johnstone & Hutchinson, 2015). Knowing what is the right thing to do and not being able to do it may lead nurses to experience moral distress that leads them to provide minimal care to patients (Gutierrez, 2005; Henrich et al., 2017; O'Haire & Blackford, 2005) and increases their intentions to leave their position (Morrell, 2005).

The proposed descriptive cross-sectional correlational study will be the first to examine moral distress in pediatric nurses in the context of caring for victims of suspected child maltreatment. This is an initial step toward understanding the role of moral distress in this specialty and potentially beginning to address nurses’ moral distress in order to subsequently improve the quality of care victims of child abuse receive and increase pediatric nurses’ retention rates.

**Consequences of Moral Distress on Nurses**

Moral distress causes various physiological and psychological consequences including headache, nausea, insomnia, sadness, depression, anger, and frustration (Gutierrez, 2005; Wiegand & Funk, 2012). In addition to these feelings, moral distress has been linked to other effects on nurses, such as burnout and an increase in their intentions to leave their jobs.

**Moral distress and nurses’ burnout.** Evidence suggests that nurses’ moral distress leads them to experience burnout (Austin et al., 2017; Dalmolin et al., 2014; Fumis et al., 2017; Hamaideh, 2014; Larson et al., 2017; McClendon & Buckner, 2007; Neumann et al., 2017; Ohnishi et al., 2010). Burnout, according to Maslach (1982), has three dimensions: 1) exhaustion related to an individual’s response to stress; 2) cynicism: seeing things negatively,
which leads the individual to withdraw from others; and 3) ineffectiveness: evaluating accomplishments negatively.

Although the literature indicates that all health care providers experience burnout (Embriaco, Papazian, Kentish-Barnes, Pochard, & Azoulay, 2007; Portoghese, Galletta, Coppola, Finco, & Campagna, 2014; van Mol, Kompanje, Benoit, Bakker, & Nijkamp, 2015), nurses experience burnout at a much higher level than the expected norm (Aiken et al., 2017). When nurses are burnt out, the quality of care they provide often decreases, leading to poor patient satisfaction (Vahey et al., 2004). Furthermore, when nurses experience burnout, they leave their jobs and even the nursing profession (Moloney et al., 2017; Rudman et al., 2014).

Pediatric nurses are at high risk of experiencing high levels of burnout related to traumatic stress (Berger, Polivka, Smoot, & Owens, 2015). Caring for victims of child abuse may be traumatizing to nurses, and without the proper support, nurses may experience moral distress and burnout.

**Moral distress and nurses’ intentions to leave their positions.** Research shows that 10% to 38% of nurses leave their jobs because of moral distress (Fogel, 2007; Wiegand & Funk, 2012). Pediatric nurses may be more vulnerable to job dissatisfaction because they face issues such as caring for children in pain and children suffering from terminal illnesses, which requires specialized medications and extra monitoring while providing atraumatic care to children and their families. These conditions may influence pediatric nurses’ intentions to leave their jobs. The results of a recent study showed that 24.4% of nurses working in a pediatric hospital in Western Australia are planning to leave their jobs within a year and 29% of nurses were looking for another job (Evans, 2017). The results of another study showed that nurses working in pediatric ICU and nurses working in adult non-ICU units had the highest odds of intentions to
leave their jobs; however, these nurses had significantly lower levels of moral distress compared to nurses working in adult ICU units (Dyo, Kalowes, & Devries, 2016). This finding suggests that there are reasons other than moral distress that lead pediatric nurses to leave their jobs.

Unrelieved stress, negative perception of managers, and insufficient resources are some of the reasons that lead pediatric nurses to leave their jobs (Foglia, Grassley, & Zeigler, 2010). Caring for victims of child maltreatment is stressful and may be a potential reason for pediatric nurses to leave their jobs. However, pediatric nurses’ intentions to leave their jobs in the context of caring for victims of child maltreatment is not addressed in the literature.

Nurses’ work environment. The importance of work environment has been discussed since the nursing profession began with Florence Nightingale. A healthy work environment is a workplace where systems, procedures, and policies help employees meet the objectives of the organizations where they work and gain personal satisfaction (Disch, 2002). Previous studies have shown that when the work environment is favorable, nurses have low levels of job dissatisfaction (Unruh & Zhang, 2013), low levels of burnout (Li et al., 2013), and fewer intentions to leave positions (Van den Heede et al., 2013); on the other hand, poor work environment is related to high levels of nurses’ moral distress (Hiler et al., 2018), high levels of burnout (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Maslach, Schaufeli, & Leiter, 2001), and high turnover rates (Aiken et al., 2012; Bogaert, Clarke, Willems, & Mondelaers, 2013). Therefore, exploring nurses’ work environment is important as this exploration will help researchers determine if it influences nurses’ moral distress and burnout in the context of the proposed study.
Gaps in Research on Moral Distress in the Context of Child Abuse

To date, the literature has mostly focused on nurses’ moral distress, burnout, and intentions to leave as they work in adult settings (Fogel, 2007; Fumis et al., 2017; Gutierrez, 2005; Karanikola et al., 2014; McClendon & Buckner, 2007; Shoorideh, Ashktorab, Yaghmaei, & Alavi Majd, 2015; Wiegand & Funk, 2012). Pediatric nurses who care for victims of child maltreatment may encounter ethical issues and experience high levels of moral distress and burnout and yet this information is missing. Filling the gap in the literature is important because it will provide an understanding of moral distress in the specialty and ultimately help administrators develop strategies to reduce pediatric nurses’ moral distress, which may in turn retain nurses longer in practice and improve the quality of care that victims of abuse receive.

Theoretical Framework

The Transaction Model of Coping and Stress (Lazarus & Folkman, 1984) will be used as a framework to help guide the exploration of moral distress in pediatric nurses. The Transactional Model of Coping and Stress focuses on the individual, the environment, and the person’s cognitive evaluation defined as the level of adjustment, which helps the individual identify options and resources available to him/her (Lazarus, 1966). This cognitive evaluation affects the person’s coping behavior (Sannon & Bazarova, 2016). Coping (emotion focused and problem focused) affects the short-term and long-term outcomes of an individual and has three functions: to help an individual deal with environmental and social demands, to help create the motivations to meet these demands, and to maintain a psychological equilibrium when meeting these external demands (Mechanic, 1974).

In the proposed study, the theory posits that the work environment and the frequency of caring for victims of child abuse are the potential stressors and that nurses’ level of moral
distress may be the result of undesirable coping that leads to nurses’ burnout, which in turn may increase their intentions to leave their jobs. Specifically, the model defines the relationship between the stressors: 1) frequency of caring for victims of child abuse, 2) the work environment and coping (moral distress), and how these variables are related to the key outcomes (nurses’ burnout and intentions to leave jobs).

The Transactional Model of Coping and Stress (Lazarus & Folkman, 1984) is used in the literature in a variety of settings and with a variety of populations, including in nursing research to help individuals recognize their stress and their appraisal response, generate and execute coping skills, and promote better outcomes (Antoni et al., 2006; Colbert & Durand, 2016; Northouse, Kershaw, Mood, & Schafenacker, 2005). Using the Transactional Model of Coping and Stress (Lazarus & Folkman, 1984) is appropriate for this proposed study because it will help the researchers explore the relationship between the stressors and nurses’ coping and will guide the investigators to measure the key outcomes (nurses’ burnout and intentions to leave jobs).

See Figure 1 for the conceptual framework for the study guided by the Transactional Model of Stress and Coping.
Importance of the Proposed Study to Health and Nursing

This study contributes to nursing science in many ways. First it will help researchers determine if the frequency of caring for victims of child abuse contributes to nurses’ moral distress. Second, the proposed study will demonstrate whether the frequency of caring for victims of child abuse leads to nurses’ burnout and increases their intentions to leave their jobs. Previous studies have shown that nurses working in adult intensive care units have high job-related stress leading to high levels of burnout (Poncet et al., 2007) and high turnover rates (Stone et al., 2006).

Pediatric nurses, on the other hand, are at high risk of experiencing high levels of burnout related to traumatic stress (Berger et al., 2015). In addition to their role as health care providers,
pediatric nurses caring for victims of child maltreatment play an important role in pediatric environments as they are expected to care for victims and remain professional with families in a situation that may lead to high stress levels that result in nurses’ burnout and high intentions to leave their jobs. Understanding pediatric nurses’ moral distress, burnout, and intentions to leave in the context of caring for victims of child maltreatment is the first step in determining interventions to potentially provide support and retention.

**Innovation**

The proposed study is innovative for several reasons. The study will be the first to examine nurses’ moral distress in the context of caring for victims of suspected child maltreatment. To date, the literature has mainly focused on nurses’ moral distress in adult settings in critical care units and found that nurses had high levels of moral distress (Fogel, 2007; Fumis et al., 2017; Gutierrez, 2005; Karanikola et al., 2014; McClendon & Buckner, 2007; Shoorideh et al., 2015; Wiegand & Funk, 2012). Similar results are reported in several studies that explored nurses’ moral distress in pediatric units (Cavaliere, Daly, Dowling, & Montgomery, 2010; Ghasemi, Negarandeh, & Janani, 2017; Larson et al., 2017; Trotochaud, et al., 2015). Providing care to victims of child abuse is difficult and disturbing for nurses (Feng, Fetzer, Chen, Yeh, & Huang, 2010; Tingberg et al., 2008). It is therefore important to know if the frequency of caring for victims of child abuse affects nurses’ moral distress.

Second, this study will explore multiple complex variables as it will examine the relationship of pediatric nurses’ moral distress with burnout and their intentions to leave while controlling for their demographic characteristics and work environment, which may act as an additional stressor. The integrative review that included studies conducted from 2010 to 2018 showed that only two studies have explored the combined relationship of nurses’ moral distress
with burnout and their intentions to leave (Hamaideh, 2014; Shoorideh et al., 2015). These two studies were conducted in mental health and ICU units, respectively, which makes the proposed study novel as well because it will be conducted in a pediatric setting.

Third, this study will be guided by Lazarus and Folkman’s (1984) Transactional Model of Coping and Stress. To date, most studies have used Corley’s (2002) Moral Distress theory when conducting research on the moral distress concept (Corley, Minick, Elswick, & Jacobs, 2005; De Villers & DeVon, 2012; Elpern et al., 2005; Zuzelo, 2007). Corley’s (2002) theory considers nursing as a moral profession and nurses as moral agents and addresses the consequences of moral distress, the internal context (nurses’ psychological responses), and the external context (the work environment). Corley’s (2002) theory also distinguishes the concepts that precede nurses’ moral distress (commitment, sensitivity, autonomy, sense making, judgment, conflict, competency, and certainty) and discusses the concepts that follow nurses’ moral distress (moral suffering and moral residue) (Corley, 2002). Corley’s (2002) theory focuses more on the outcomes of moral distress whereas using the Transactional Model of Coping and Stress gives the researcher the opportunity to explore factors related to moral distress.

Although most studies have used Corley’s (2002) moral distress theory, one study used the Transactional Model of Coping and Stress while exploring the relationship between the severity of critical care nurses’ moral distress, the practice environment, and patient safety and found that nurses’ moral distress is associated with negative perceptions of the work environment and patient safety (Hiler et al., 2018). In their study, Hiler et al. (2018) did not measure the stressor(s) or nurses’ coping. In the proposed study, researchers will use the Transactional Model of Coping and Stress to guide them in exploring reasons for nurses’ moral distress, whether it is related to the frequency of caring for victims of child abuse or is associated
with the fact that nurses are following parents’ wishes knowing that these wishes are not in the best interest of the child. The Transactional Model of Coping and Stress will also guide the researchers investigation of nurses’ coping (the frequency and the intensity of their moral distress) and detect the outcomes of the study (burnout and intentions to leave).

**Approach**

**Preliminary Work**

During the fall of 2017, I conducted a qualitative mini-study exploring nurses’ experiences while caring for victims of child abuse. Although I had only three participants, it was clear that these nurses were distressed as they discussed cases of child abuse. Nurses expressed having “nightmares for weeks” after caring for a victim of child abuse. Nurses used words such as, “sad,” “horrible things,” “really frustrating,” “awful,” “the worst thing,” “ton of pressure,” “rough shift,” and “bite your tongue” to express their distress, indicating that they were feeling constrained. Although these expressions could be signs of emotional distress, they may also be related to moral distress.

Nurses’ distress was related to providing care to victims of child abuse that was not perceived as in the best interest of the child: “we let parents make the decisions on the care of the victim, and a lot of times they make these decisions because they don’t want to go to jail”; “these children came asking for help and by sending them back to their abusive parents, we are letting every single one of these kids down.” However, since the sample size was very small (N=3), the results of this study cannot be generalized. It is therefore important to conduct a study on a larger scale to determine if the frequency of caring for victims of child abuse is related to nurses’ moral distress, burnout, and intention to leave their jobs.
Research Design

The proposed cross-sectional, correlational study is designed to explore pediatric nurses’ moral distress, burnout, and intentions to leave their jobs by comparing nurses who have cared for victims of child abuse and those who have not. The advantage of conducting a cross-sectional study is that it allows the researcher to measure the outcomes (burnout and intentions to leave) in a relatively fast and efficient way. The cross-sectional study also allows the researcher to study the association between variables (Setia, 2016).

Setting

The study will be conducted in Allegheny County at the UPMC Children’s Hospital of Pittsburgh (CHP), where 1,000 registered nurses work in inpatient and the emergency department. Children’s Hospital of Pittsburgh is a magnet hospital and cares for and treats patients from Pittsburgh and neighboring locations and beyond. Children’s Hospital of Pittsburgh treats more than 24,000 children nationally and internationally in inpatient units and over 1 million patients in outpatient units in one year ("Children's Hospital of Pittsburgh of UPMC," 2018). Children’s Hospital treats over 1800 cases of suspected maltreatment (physical, sexual, and neglect) both in inpatient and outpatient units per year (personal communication with Dr. Berger, May 2018).

Participants

The study population will include registered nurses working in inpatient units and in the emergency department at Children’s Hospital of Pittsburgh. The inclusion criteria are as follows: (1) nurses working in inpatient units and in the emergency department who have at least one year of experience in the pediatric environment; and (2) nurses working full time, part-time, or per-diem/casual. Nurses working in outpatient units have fast patient turnover rates and do not
care for victims of child abuse over a long time, which may affect their level of moral distress and therefore they will be excluded. Before sending the survey, the PI will have a meeting with nurses working in inpatient units and in the emergency department at Children’s Hospital of Pittsburgh to discuss the objectives of the study.

**Power Analysis**

A power analysis was conducted for multiple student t-tests; two hundred (200) registered nurses will be needed to detect 0.80 power, alpha of 0.015, and an effect size of 0.50. A total of 1,000 nurses will be invited to participate, requiring a 20% participation rate, which is well within the expected response rate. A minimum generally used power is 0.08, and an effect size of 0.50 is enough to detect a medium relationship between variables (Cohen, 1988).

**Recruitment and Data Collection Procedure**

With the permission of the chief nursing officer and unit directors and following IRB approval from Duquesne University and from the University of Pittsburgh, administration will send an initial email to the registered nurses working in inpatient units and in the emergency department at Children’s Hospital of Pittsburgh. The responsible PI must work at Children’s Hospital; as such, Dr. Berger will be listed. The initial email will contain a cover letter from the PI addressed to nurses to invite them to participate in the study. The cover letter will contain the PI’s contact information as well as the contact information of the Institutional Review Board officers from Duquesne University and from the University of Pittsburgh, should the participant wish to speak to the investigator or have concerns regarding the study.

The cover letter will also explain that participation is voluntary and anonymous and that the collected data will be treated according to the ethical guidelines for the conduct of research.
Two definitions will be included in the initial email—of moral distress and burnout—to ensure nurses’ clear understanding of these concepts. At the end of the cover letter, participants will be asked to click on the link to start the survey, and by clicking on the link they indicate their agreement to participate in the study. (See Appendix A for the cover letter).

The maximum anticipated time to complete the five surveys is 12 minutes. The survey was sent to and piloted with 10 people and the average time was 11.2 minutes. The entire consent and survey process will be conducted using the secure Qualtrics system that protects participants’ privacy by using high-end firewalls and conducts regular checks to detect vulnerabilities (Qualtrics, 2018). Once data is downloaded from the Qualtrics system, it will be stored on the personal computer of the primary investigator, which is locked with a personal password. The data collection period will be one month; previous research has shown that those who are willing to participate will do so within one week of receiving the survey (Zheng, 2011). After the initial email, all nurses working in inpatient units and in the emergency department at Children’s Hospital of Pittsburgh will receive two reminder emails to increase participation rates. Best practices for survey administration include using multiple contacts with participants (Dillman, Smyth, & Christian, 2014). The first reminder will be sent two weeks after the initial email and the second reminder will be sent a week after the first reminder. If the researcher encounters difficulty in recruitment, an additional recruitment strategy will be used such as giving the survey on paper and pencil. Participants who complete the survey will receive a thank-you note, and nurses will have the option to provide their email address for a random drawing for one of five $50 gift certificates. (See Appendix B for a copy of the reminder emails and the thank-you letter.)
After the data collection period, data will be downloaded from the Qualtrics system, cleaned, and prepared for analysis. The PI will divide the participants into groups depending on the frequency of caring for victims of child abuse.

**Variables**

The proposed study’s key variables are: 1) nurses’ characteristics (nurses’ experience, education, and demographics), 2) nurses’ work environment (nurses’ participation in hospital affairs; nursing foundation for quality of care; nurse managers’ availability, ability, leadership, and support of nurses; staffing and resource adequacy; and nurse-physicians relations), 3) the frequency of caring for victims of child abuse, 4) nurses’ levels of moral distress (frequency and intensity), 5) nurses’ levels of burnout, and 6) nurses’ intentions to leave their jobs.

**Instruments**

**Demographics.** A demographic tool developed by the researcher will be used to assess the nurse participants’ characteristics including gender, race/ethnicity, age, experience as a pediatric nurse, total years of experience as a nurse, average nurse-to-patient ratio (work overload), nurses’ education level, and role in the unit. (See Appendix C for the demographics tool.)

**Work environment.** The nurse work environment will be measured using the Practice Environment Scale of the Nursing Work Index (PES-NWI) (Lake, 2002). The PES-NWI is a 31-item instrument that measures the presence of organizational features that support professional practice using a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

The PES-NWI has five subscales: 1) nurse participation in hospital affairs reflects if nurses participate in hospital policy decisions; it contains 9 items; 2) nursing foundation for quality of care reflects if the hospital provides in-service and continuing education programs to
nurses; it contains 10 items; 3) nurse manager ability, leadership, and support of nurses reflects the support managers provide to their nurses; it contains 5 items; 4) staffing and resource adequacy refers to whether the nurse-to-patient ratio is appropriate for providing quality care to patients; it contains 4 items; and 5) nurse-physician relations; it contains 3 items. These subscales showed high reliability at the individual and hospital levels. At the individual level, internal consistency was high and Cronbach’s alpha $\geq 0.80$ for all of the subscales except for the nurse-physician subscale, which was 0.71. At the hospital level, the reliability was strong with average inter-item correlation of 0.64-0.91 (Lake, 2002). The construct validity of the scale was checked by comparing scores of nurses working in magnet and non-magnet hospitals. Nurses working in magnet hospitals had higher scores indicating a favorable work environment compared to those working in non-magnet hospitals (Lake, 2002).

To generate a score on the PES-NWI, the researcher will use measurement techniques used previously in the literature (Lake & Friese, 2006; Shang, Friese, Wu, & Aiken, 2013). Nurses will be asked to rate each item of the PES-NWI on a scale from 1 (strongly disagree) to 4 (strongly agree). Nurses’ responses will be aggregated to determine a unit-level mean for each item. Higher scores (above 2.5) will indicate nurses’ satisfaction with their practice environment, and values below 2.5 will indicate dissatisfaction. These values will be transformed into three level variables (favorable, mixed, and unfavorable nurse practice environments). Units with four of the five subscales above the median values will be classified as favorable; units with one, two, or three subscales above the median level will be classified as mixed; and units with zero subscales above the median will be classified as an unfavorable nurse practice environment.
The validity of the PES-NWI is proven by its use in the nursing literature (Aiken et al., 2011; McHugh & Ma, 2014). The PES-NWI was also recently used to explore the relationship among the severity of critical care nurses’ moral distress, their work environment, and patient safety; the study found that as the quality of the practice environment decreases, the level of nurses’ moral distress increases (Hiler et al., 2018). (See Appendix D for the PES-NWI tool.)

**Frequency of caring for victims of child maltreatment.** A tool developed by the PI will be used to assess the frequency of care and the ages of child abuse victims that pediatric nurses care for (Appendix E).

**Moral distress.** Nurses’ moral distress will be measured using the Moral Distress Scale Neonatal-Pediatric version (MDSNPV) (Hamric, Borchers, & Epstein, 2012b). The MDSNPV is a 21-item scale that measures the frequency and intensity of pediatric health care providers’ moral distress.

The MDSNPV originated from the Moral Distress Scale Revised (MDS-R) that is checked for validity and reliability. The development of the MDS-R was based on four hypotheses: 1) nurses who had more experience score higher on moral distress, 2) physicians have lower moral distress, 3) moral distress is negatively correlated with ethical climate, and 4) nurses and physicians who are considering leaving their positions have higher levels of moral distress. All four hypotheses were supported which confirmed the construct validity of the MDS-R (Hamric, Borchers, & Epstein, 2012a). Each item on the MDS-R was reviewed and edited by the authors and other ethics specialists to test the content validity of the MDS-R (Hamric et al., 2012a). The reliability of the MDS-R was tested by calculating the Cronbach’s alpha, which was 0.88 (Hamric et al., 2012a). Based on this result, the MDS-R tool revealed
high consistency reliability. When the value of Cronbach’s alpha is close to one, the tool has high internal consistency reliability (Waltz, Strickland, & Lenz, 2010).

The items on the MDSNPV will be scored on a Likert scale from 0-4. To generate a composite score, the frequency score and intensity (named “level of disturbance”) score for each item will be multiplied while 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. The score for each item of the MDSNPV scale will range from 0 to 16. To obtain a composite score of moral distress, these individual item products will 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. Since several studies have used the MDSNPV to assess pediatric health care providers’ moral distress (Cavaliere et al., 2010; Larson et al., 2017; Sannino, Gianni, Re, & Lusignani, 2015), it is, therefore, appropriate to use the MDSNPV for the proposed study as it will help researchers assess nurses’ moral distress in a pediatric setting.

**Intention to leave.** Nurses’ intentions to leave will be measured using the last two items on the MDSNPV (Hamric et al., 2012b) that ask specifically about intention to leave related to moral distress and overall intention to leave. Several studies used the MDSNPV to determine the relationship between nurses’ moral distress and their intentions to leave their jobs (Cavaliere et al., 2010; Ghasemi et al., 2017; Sannino, 2015). The use of the MDSNPV is appropriate for the proposed study as it will help researchers determine nurses’ intentions to leave (See Appendix F for the MDSNPV).
**Burnout.** Nurses’ burnout will be measured by the Abbreviated Maslach Burnout Inventory (aMBI) (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1996). Permission to use the aMBI will be received from Mind Garden that owns the copyright. The nine items on the aMBI is derived from the 22-item Human Service Scale (MBI-HSS) (Maslach et al., 1996). The reliability and the validity of the aMBI was checked, and the results showed that the items on the MBI-HSS are highly correlated with the items on the aMBI (raw $p \ 0.87-0.94; \ p <0.001$). The results of the reliability testing also showed that the internal consistency of the items on the aMBI is very similar to the internal consistency of the items on the MBI-HSS ($\alpha=0.85-0.87$ and $\alpha=0.89-0.95$, respectively) (Riley, Mohr, & Waddimba, 2018). In addition the aMBI was used in several articles, indicating its validity and reliability (Lebares et al., 2018; McManus, Jonvik, Richards, & Paice, 2011).

The aMBI contains three-item versions of the emotional exhaustion (EE), depersonalization (DP), and personal achievement (PA) subscales. Each item is scored using a 7-point frequency scale from never = 0 to every day = 6. Each category will be scored separately and will not be combined with the others. The sum of each category is added and scored from 0-18. Therefore, each participant will have three scores. Higher scores on the emotional exhaustion category indicate high burnout, higher scores on the depersonalization category indicate high burnout, and higher scores on personal accomplishment category indicate low burnout (See Appendix G for the aMBI.)

**Plan for Data Analysis**

Data from the surveys will be entered into SPSS 20.0 for analysis. The PI will look for missing data or incorrect and random responses that appear out of range such as outliers. If outliers are detected, the researcher will either remove them or will check them against the raw
data in the instruments. The final cleaned and corrected data will be analyzed using exploratory data analysis, yielding information on descriptive statistics (measures of central tendency and dispersion) for all variables and an evaluation of underlying assumptions of the planned analysis. Internal reliability of the instruments will be assessed by determining the Alpha coefficient of the the PES-NWI (31 items), the MDSNPV (21 items), and the aMBI (9 items). The level of significance will be $p = 0.015$, using two-tailed analysis. Data will be analyzed according to the aims of the study.

**Aim #1.** The first aim of this study is to describe pediatric nurses’ level of moral distress. Overall mean scores and the variance of moral distress based on the MDSNPV survey instrument will be calculated. Next, those scores will be separated by demographic variables such as the frequency of caring for victims of child abuse. As part of the description, a series of $t$-tests will be conducted using the descriptive variables and the other variables (the practice environment and the frequency of caring for victims of child abuse) and the MDSNPV as the outcome. The $t$-test has several assumptions: the dependent variables should be normally distributed in the two populations, and the variance between the two groups should be homogenous (Polit, 2010).

**Aim #2.** The second aim is to assess the relationships between pediatric nurses’ demographics, the frequency of caring for victims of child abuse, and moral distress scores. This relationship will be measured using Pearson correlation. If necessary, based on the distribution of the data (if data is not normally distributed), the researcher may use a non-parametric test.

**Aim #3.** The third aim is to describe the relationships among pediatric nurses’ characteristics (experience, education, demographics), frequency of caring for victims of child abuse, nurses’ work environment, level of moral distress, burnout, and intentions to leave. As these are all bivariate analyses, Pearson correlation and Chi-Square will be conducted. The
relationship between moral distress scores, frequency of caring for victims of child abuse, the scores of the 5 subscales from the PES-NWI (work environment), and the scores on the three subscales of the aMBI (burnout) will be measured using Pearson correlations. Nurses’ intentions to leave their job will be determined by two items on the MDSNPV. Participants’ answers will either be “yes” or “no” (nominal dependent variable). These will be measured using the Chi-Square test. The Chi-Square test has several assumptions. The Chi-Square requires that the expected frequency of each cell be greater than zero (Polit, 2010).

**Aim #4.** The fourth aim is to examine the influence of frequency of caring for victims of child abuse and moral distress on burnout and intention to leave while controlling for nurse characteristics and work environment. Since evidence shows that a poor work environment is a reason for nurses’ burnout (Aiken et al., 2008) and that a poor work environment increases nurses’ intentions to leave (Aiken et al., 2012), and since each nurse is unique in his/her vulnerability, sensitivity, interpretation, and coping response, the two variables (work environment and nurses’ demographic characteristics), will be controlled to help the researchers make inferences about the relationship of the frequency of caring for victims of child abuse with nurses’ moral distress, burnout, and intentions to leave their jobs.

As such, two different mathematical models will be used: traditional regression and logistic regression. Regression modeling will be used to determine the influence of frequency of caring for victims of child abuse and moral distress on burnout while controlling for nurse characteristics and work environment. The frequency of caring for victims of child abuse will be coded 0 for none and 1 for the different levels of frequency of caring for victims of child abuse. The lowest category (coded 0 above) will be used as the reference group. The criterion variable will be burnout that has three subscales: emotional exhaustion, personal accomplishment, and
depersonalization. Each one of these subscales will be scored independently. Each predictor coded as 0 or 1 will be entered into the regression equation in SPSS. To more clearly examine the relationship between the frequency of caring for victims of child abuse and burnout, the other variables (nurses’ demographics and work environment) will be statistically controlled. Regression modeling has several assumptions; the variables are assumed to have a distribution that is bivariate normal, and the scores are assumed be homoscedastic (Polit, 2010).

Logistic regression will be used to examine the influence of frequency of caring for victims of child abuse and moral distress on intention to leave while controlling for nurse characteristics and work environment (because the outcome variable is dichotomous). The predictor variable will be dummy coded; code 1 will be assigned to all nurses who have cared for victims of child abuse and code 0 will be assigned to all nurses who have not cared for victims of child abuse. The outcome variable (intentions to leave jobs) will be coded in the following way: yes, I have the intention to leave as 1 and no, I don’t have the intention to leave as 2. These coded variables will be entered in SPSS, and logistic regression will be conducted to determine if the frequency of caring for victims of child abuse determines the probability of nurses’ intentions to leave their jobs. Logistic regression has several assumptions: the assumption of independent sampling and the assumption of a linear relationship between the continuous predictor variable and the dependent variable (Polit, 2010).

**Study Limitations**

The study will be conducted at Children’s Hospital of Pittsburgh of UPMC located in the city of Pittsburgh. The hospital has magnet status, and nurses have different resources than nurses working in suburban hospitals such as the child abuse team that consists of qualified physicians specialized in caring for victims of child maltreatment along with social workers and
a child life specialty team who are available around the clock any day and anytime of the week. Therefore, the results may not be generalizable to the moral distress of all nurses in the context of caring for victims of child abuse.

Since this study is cross-sectional, it is a one-time measurement, and it will be impossible to determine a causal relationship between variables. Furthermore, the prevalence of having high frequency or high intensity of moral distress, burnout, and intentions to leave may depend on the frequency of caring for victims of child abuse. Therefore, nurses who only have taken care of one victim of child abuse may show low or no moral distress and burnout. This does not necessarily mean caring for victims of child abuse does not cause moral distress or burnout to nurses. Therefore, results of this study will need to be interpreted with caution.

Using the Abbreviated Maslach Burnout Inventory is also a limitation for this study because this tool is more used with physicians and not nurses and therefore, the results may not be generalized to all the nurses.

**Potential Problems & Potential Strategies**

The first potential problem is an unequal number of participants in the groups: nurses who have cared for one or more victims of child abuse and nurses who have not cared for victims of child abuse. If the number of nurses between the groups are far apart, SPSS will be used to adjust for unequal groups.

Another anticipated problem is the various work environments between and among units. This will affect nurses’ responses because they may experience moral distress and burnout not necessarily because of providing care to victims of child abuse but for other reasons such as lack of managerial support and/or high nurse-to-patient ratios.
To address the issue of nurses’ responses not specifically related to the frequency of caring for victims of child abuse, nurses will be encouraged to take the survey away from patient care and reflect on their levels of moral distress and burnout based on their experiences of providing care to victims of child abuse.

**Conclusion**

Nurses have an important role in healthcare, especially in relation to caring for victims of child abuse, because they build strong relationships with their patients and patients’ families. However, nurses experience a wide range of fears, emotions, and doubts when involved in child maltreatment cases. Therefore, nurses need confidence and support to reduce their moral distress and provide quality care to their patients. Without confident nurses, an important link in child safety is jeopardized, putting thousands of children at risk.

The proposed cross-sectional study is beneficial in many ways. First, it will describe pediatric nurses’ moral distress. Second it will determine the potential impact of the frequency of caring for victims of abuse on nurses’ moral distress. Third it will assess nurses’ moral distress as a separate and distinct stressor from their work environment and will determine the impact of the frequency of caring for victims of child abuse on nurses’ burnout and intentions to leave. Fourth, this study may detect a new cause for pediatric nurses’ moral distress, burnout, and intentions to leave. This may help unit directors develop strategies to reduce nurses’ moral distress and minimize their burnout to retain them longer in practice.

**Protection of Research Participants**

The PI will obtain approval from the Institutional Review Board from Duquesne University and from Children’s Hospital of Pittsburgh. An initial email that contains the PI’s cover letter will be sent by administration to the nurses working in inpatient units and the
emergency department. The cover letter will inform nurses that participation is voluntary and
anonymous and that they have the right to refuse participation or withdraw from the study at any
time without any repercussions. Participants will give their consent to participate in the study by
clicking the link to start the survey. Participants will also be encouraged to contact the PI
directly to receive explanation regarding any concerns in order to ease their emotional distress.

Completing the surveys may cause distress to participants as they may remember the
cases of child abuse they have encountered. In case participants experience distress, they can
withdraw from the study without any repercussion, and, if necessary, the PI will provide
resources to assist participants with their distress.
References


Corley, M. C. (2002). Nurse moral distress: a proposed theory and research agenda. *Nursing Ethics, 9*(6), 636-650. doi:https://doi.org/10.1191/0969733002ne557oa


Appendix A (cover letter)

Dear Prospective Participant,

My name is Angela Karakachian, and I am a doctoral student at Duquesne University in Pittsburgh, Pennsylvania. In order to complete my dissertation research project at Duquesne University. The title of my research is “Pediatric Nurses’ Moral Distress, Burnout, and Intentions to Leave as They Care for Victims of Child Maltreatment”. The purpose of this study is to assess pediatric nurses’ moral distress and to determine the impact of the frequency of caring for victims of child abuse on nurses’ moral distress, burnout, and intentions to leave.

The survey is anonymous and will take approximately 12 minutes to complete. Participation is voluntary and you have the right to withdraw from the study at any time without any repercussions.

For the purpose of this study, I would like to provide a definition of moral distress and burnout. Moral distress is defined as the phenomenon in which a person knows the right action to take but is constrained from taking it (Jameton, 1984). Burnout is defined as the psychological syndrome involving depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment that occurs in professionals who work with other people during challenging situations (Maslach, 1982).

Thank you so much for your cooperation, and I hope that you find it an interesting experience. If you have any questions or concerns, please contact me at karakachiana@duq.edu. If you are interested in the results of this study, I will be glad to send you a summary.

By clicking the link below you acknowledge that you have read and understand that:
• Your participation in this survey is voluntary. You may withdraw your consent and
discontinue participation in the survey at any time. Your refusal to participate will not
result in any penalty.

• You have given consent to participate in this research.

Link to the survey: https://duq.az1.qualtrics.com/jfe/form/SV_8idMJTJZClz4e9
Contact information for the Institutional Review Board officers from Duquesne
University:

Contact information of the Institutional Review Board officers from University of
Pittsburgh:

Sincerely,

Angela Karakachian
Appendix B (first reminder email)

Dear Prospective Participant,

Title of the study: Nurses’ moral distress, burnout, and intentions to leave while caring for victims of child abuse.

Two weeks ago I sent a survey asking about your moral distress, burnout, and intentions to leave your job while caring for victims of child abuse. If you have completed the survey, thank you; if not, please complete the survey (survey link) and submit your responses by (date). Your participation is very important to me and your responses are appreciated as they will help me understand the impact of the frequency of caring for victims of child abuse.

If you have any questions, please contact the PI at karakachiana@duq.edu.

Sincerely,

Angela Karakachian

Appendix B (2nd reminder email)

Dear Prospective Participant,

Title of the study: Nurses’ moral distress, burnout, and intentions to leave while caring for victims of child abuse.

Three weeks ago I sent a survey asking about your moral distress, burnout, and intentions to leave while caring for victims of child abuse. If you have completed the survey, thank you; if not, please complete the survey (survey link) and submit your responses by (date). Your participation is very important to me and your responses are appreciated as they will help me understand the impact of the frequency of caring for victims of child abuse.

If you have any questions, please contact the PI at karakachiana@duq.edu.
Sincerely,

Angela Karakachian

Appendix B (Thank-you Letter)

Thank you for taking the time to complete the survey about the impact of the frequency of caring for victims of child abuse on pediatric nurses. Your responses are very valuable and will contribute to helping me understand the impact of the frequency of caring for victims of child abuse. If you wish to be entered into a drawing to win one of the ten $25 gift certificates, please type your email here……………..

You will be notified via email if your email address is randomly chosen.

If you have any comments or concerns, please contact the PI at karakachiana@duq.edu.

Sincerely,

Angela Karakachian
Appendix C (Demographic survey)

Please provide the following information. As with your answers to the other portions of this survey, your responses will be kept confidential.

1- Indicate your gender.
   - Male
   - Female
   - other

2- What is your ethnicity?
   - Hispanic or Latino
   - American Indian or Alaska Native
   - Asian
   - Black or African American
   - Native Hawaiian or Other Pacific Islander
   - White

3- What is your age?
   - 18-24 years
   - 25-30 years
   - 31-35 years
   - 36-40 years
   - 41-45 years
   - 46-50 years
   - > 50 years

4- Indicate your marital status.
   - Single
   - Legally married and not separated
   - Separated but still legally married
   - Divorced
   - Widowed

5- What is your highest education level in nursing?
   - Diploma in nursing
   - Associate degree in nursing
   - Bachelor’s degree in nursing
☐ Master’s degree in nursing
☐ Doctoral degree in nursing

6- Indicate the total number of years you have worked as a registered nurse.

☐ 1-5 years
☐ 6-10 years
☐ 11-15 years
☐ 16-20 years
☐ > 20 years

7- Indicate the total number of years you have worked as a pediatric nurse.

☐ 1-5 years
☐ 6-10 years
☐ 11-15 years
☐ 16-20 years
☐ >20 years

8- Indicate the average number of hours you work @ Children’s Hospital of Pittsburgh per week.

☐ 20 hours
☐ 21-39 hours
☐ 40 hours
☐ 41-50 hours
☐ 51-60 hours
☐ 61- 70 hours
☐ >71 hours

9- Indicate your primary location of employment…

10- Indicate your current position on the unit.

☐ primary nurse
☐ nurse manager
☐ unit director
☐ other (please specify)…..

11- Indicate your work pattern.

☐ Always days
☐ Always evenings
☐ Always nights
☐ Occasional night shift

12- Indicate the average number of patients you care for per shift.

☐ 1-2 patients per shift
☐ 3-4 patients per shift
☐ >4 patients per shift
Appendix D (The Practice Environment Scale of the Nursing Work Index) (PES-NWI)

The Practice Environment Scale of the Nursing Work Index

For each item, please indicate the extent to which you agree that the item is PRESENT IN YOUR CURRENT JOB. Indicate your degree of agreement by circling the appropriate number.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adequate support services allow me to spend time with my patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Physicians and nurses have good working relationships</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>A supervisory staff that is supportive of the nurses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Active staff development or continuing education programs for nurses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Career development/clinical ladder opportunity.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Opportunity for staff nurses to participate in policy decisions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Supervisors use mistakes as learning opportunities, not criticism.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Enough time and opportunity to discuss patient care problems with other nurses</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>Enough registered nurses to provide quality patient care.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>A nurse manager who is a good manager and leader.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>A chief nursing officer who is highly visible and accessible to staff</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Enough staff to get the work done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13</td>
<td>Praise and recognition for a job well done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>High standards of nursing care are expected by the administration</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15</td>
<td>A chief nursing officer equal in power and authority to other top-level hospital executives</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16</td>
<td>A lot of team work between nurses and physicians.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17</td>
<td>Opportunities for advancement.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18</td>
<td>A clear philosophy of nursing that pervades the patient care environment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>Working with nurses who are clinically competent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
20. A nurse manager who backs up the nursing staff in decision making, even if the conflict is with a physician.

21. Administration that listens and responds to employee concerns.

22. An active quality assurance program.

23. Staff nurses are involved in the internal governance of the hospital (e.g., practice and policy committees).

24. Collaboration (joint practice) between nurses and physicians.

25. A preceptor program for newly hired RNs

26. Nursing care is based on a nursing, rather than a medical, model.

27. Staff nurses have the opportunity to serve on hospital and nursing committees.

28. Nursing administrators consult with staff on daily problems and procedures

29. Written, up-to-date nursing care plans for all patients.

30. Patient care assignments that foster continuity of care, i.e., the same nurse cares for the patient from one day to the next.

31. Use of nursing diagnoses.

Appendix E: The Frequency of Caring for Victims of Child Maltreatment Tool

The purpose of this survey is to determine the frequency and type of child maltreatment (physical, sexual, and neglect) cases you saw during the past 12 months. Please read each question carefully and choose the option that suits you the best.

1- Over the past 12 months, how frequently did you provide care to victims of any kind of child maltreatment?

   a- Never
   b- A few times a year or less
   c- Once a month or less
   d- A few times a month
   e- Once a week
   f- A few times a week
   g- Every day

2- Over the past 12 months, how many victims of any type of maltreatment did you care for?

   a- 1-5
   b- 6-10
   c- 10-15
   d- 15-20
   e- >20

3- Over the past 12 months, how often did you care for victims of child maltreatment so severe it led to significant injury or death?

   a- Never
   b- A few times a year or less
   c- Once a month or less
   d- A few times a month
   e- Once a week
   f- A few times a week
   g- Every day

4- Over the past 12 months, how frequently did you provide care to victims of physical child maltreatment?

   a- Never
   b- A few times a year or less
   c- Once a month or less
   d- A few times a month
5- Over the past 12 months, how frequently did you provide care to victims of sexual child maltreatment?

a- Never
b- A few times a year or less
c- Once a month or less
d- A few times a month
e- Once a week
f- A few times a week
g- Every day

6- Over the past 12 months, how frequently did you provide care to child victims of neglect?

a- Never
b- A few times a year or less
c- Once a month or less
d- A few times a month
e- Once a week
f- A few times a week
g- Every day
Appendix F (the Moral Distress Scale Revised Pediatric version) (MDSNPV)

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**.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Level of Disturbance</th>
</tr>
</thead>
</table>
| Never              | None
| Very frequently    | Great extent         |
| 0                  | 1                    |
| 1                  | 2                    |
| 2                  | 3                    |
| 3                  | 4                    |
| 4                  | 0                    |
| 1                  | 1                    |
| 2                  | 2                    |
| 3                  | 3                    |
| 4                  | 4                    |

1. 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.

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.

10. Be required to care for patients I don’t feel qualified to care for.

11. Witness medical students perform painful procedures on patients solely to increase their skill.
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Level of Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Very frequently</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

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

© 2010, Ann Baile Hamric
All Rights Reserved
Appendix G (the Abbreviated Maslach Burnout Inventory (aMBI))

The purpose of this survey is to discover how various people in the human services or the helping professions view their job and the people with whom they work closely.

Instructions: On the following page are 9 statements of job-related feelings. Please read each statement carefully and describe how often the following statements describe the way you feel when working?

<table>
<thead>
<tr>
<th>Every day</th>
<th>A few times a week</th>
<th>Once a week</th>
<th>A few times a month</th>
<th>Once a month or less</th>
<th>A few times a year</th>
<th>Never</th>
</tr>
</thead>
</table>

I deal very effectively with the problems of my patients

I feel I treat some patients as if they were impersonal objects

I feel emotionally drained from my work.

I feel fatigued when I get up in the morning and have to face another day on the job.

I've become more callous towards people since I took this job.

I feel I'm positively influencing other people's lives through my work.
Working with people all day is really a strain for me

I don't really care what happens to some patients.

I feel exhilarated after working closely with my patients.
Chapter 4: Results

Caring for Victims of Child Maltreatment: Pediatric Nurses’ Moral Distress and Burnout

ABSTRACT

Background: Moral distress is a significant concern for nurses as it can lead to burnout and intentions to leaving the profession. Pediatric nurses encounter stressful and ethically challenging situations when they care for victims of suspected child maltreatment. Data on pediatric nurses’ moral distress in this situation are lacking, as most research in this field has been done in adult inpatient and intensive care units.

Aims: The purpose of this study was to describe pediatric nurses’ moral distress and determine the impact of caring for victims of suspected child maltreatment on nurses’ moral distress, burnout, and intention to leave.

Design and Method: This descriptive cross-sectional correlational study was conducted in a mid-Atlantic, urban area magnet pediatric level I trauma center hospital that cares for over 1,800 cases of suspected maltreatment annually. An electronic survey was sent to all the nurses working the hospital. Study participation was voluntary and anonymous.

Findings: Overall, nurses (N = 146) reported low levels of moral distress with a mean score of 59.54 ± 49.22 and a range of 0-300 on the Moral Distress Scale Neonatal-Pediatric version (MDSNPV). Although the frequency of caring for victims suspected of child maltreatment did not affect nurses’ moral distress, caring for victims with severe injuries due to abuse contributed to nurses’ intention to leave, $\chi^2 (1) = 5.35, p = 0.02$.

Conclusions: The results of this study add to the understanding of moral distress in pediatric nursing. Caring for victims of severe injuries impacts pediatric nurses’ intention to leave.
• Caring for victims of suspected child maltreatment does not change the levels of pediatric nurses’ moral distress.

• Caring for victims suspected child maltreatment with severe physical abuse and victims of sexual abuse increases nurses’ higher depersonalization scores.

• Caring for victims of suspected child maltreatment with severe physical abuse and sexual abuse impacts nurses’ intention to leave.

**Keywords**

Child maltreatment, pediatric nurses, moral distress
Pediatric nurses frequently encounter stressful situations. Evidence shows that during their first three months of employment, novice pediatric nurses encounter the first situation that leads them to experience traumatic stress (Li, Early, Mahrer, Klaristenfeld, & Gold, 2014). The American Psychiatric Association (2000) defines events that involve serious injury that affect a person’s integrity, or traumatic stress as leading nurses to high levels of burnout (Berger, Polivka, Smoot, & Owens, 2015). Burnout, defined as the psychological syndrome involving depersonalization, emotional exhaustion, and a reduced sense of personal accomplishment, happens to professionals who work with others during challenging situations (Maslach, 1982). Burnout is a significant healthcare concern affecting individuals and healthcare organizations. It frequently leads to poor quality of care and is sometimes a reason that nurses leave their jobs and even the nursing profession (Moloney, Boxall, Parsons, & Cheung, 2017; Rudman, Gustavsson, & Hultell, 2014).

In addition to stressful situations, pediatric nurses may encounter ethically challenging situations such as caring for victims of suspected child maltreatment in which they know the right thing to do, but are unable to do it because of internal constraints such as lack of confidence or fear of losing a job (Hamric, Davis, & Childress, 2006) and/or because of external constraints such as lack of administrative support (McAndrew, Leske, & Garcia, 2011). Defined by Jameton (1984) as knowing the right thing to do and not being able to do it, moral distress, is a phenomenon that: 1) leads nurses to provide minimal care to patients (Gutierrez, 2005; Henrich et al., 2017; O'Haire & Blackford, 2005); 2) contributes to nurses’ burnout (Neumann et al., 2017); and 3) increases nurses’ intentions to leave their position (Austin, Saylor, & Finley, 2017). Nurses who leave the profession are contributing to the current critical shortage of nurses in the United States. It is predicted that by the year 2022, 500,000 experienced nurses will retire,
and there will be a need for 1.1 million new nurses in the United States (American Nurses Association, 2018). In addition, nurse turnover affects quality of care leading to adverse patient outcomes (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; O’Brien-Pallas et al., 2006).

The work environment has also been shown to impact nurses’ moral distress; a healthy work environment is a work place where systems, procedures, and policies help employees meet the organizations’ objectives where they work and gain personal satisfaction (Disch, 2002), a healthy work environment leads to low levels of job dissatisfaction (Unruh & Zhang, 2013); low levels of burnout (Li et al., 2013); and fewer intentions to leave positions (Van den Heede et al., 2013). On the other hand, poor work environment is related to: high levels of nurses’ moral distress (Hiler, Hickman, Reimer, & Wilson, 2018); high levels of burnout (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Maslach, Schaufeli, & Leiter, 2001); and high turnover rates (Aiken et al., 2012; Bogaert, Clarke, Willems, & Mondelaers, 2013). Nurses who care for victims of suspected child maltreatment have important responsibilities (e.g., caring for victims, respecting perpetrators’ [often parents’] wishes) which may lead nurses to experience moral distress resulting in an unhealthy work environment.

To date, research on nurses’ moral distress, burnout, and intention to leave has focused primarily on nurses working in acute adult inpatient settings in which moral distress was shown to lead nurses to provide minimal care to patients (Gutierrez, 2005; Henrich et al., 2017; O’Haire & Blackford, 2005); 2) contribute to nurses’ burnout (Neumann et al., 2017); and 3) increase nurses’ intentions to leave their position (Austin, Saylor, & Finley, 2017). In pediatric settings, nurses’ intention to leave was related to high levels of moral distress (Sannino et al., 2019). Pediatric nurses who care for victims of child maltreatment may encounter ethical issues and experience high levels of moral distress and burnout and yet this information is missing.
Research on moral distress, burnout, and intentions to leave in pediatric nursing in the context of caring for victims of child maltreatment will increase the understanding of the role of moral distress and burnout in this specialty. This in turn may potentially help organization leaders identify effective ways to increase retention rates and improve quality of care.

Study Aims

The primary aims of this study were to describe pediatric nurses’ level of moral distress and to assess the relationships between pediatric nurses’ demographics, the frequency of caring for victims of suspected child maltreatment, and nurses’ moral distress. Secondarily, the study aimed to explore the relationships between key variables (pediatric nurses’ demographics, frequency of caring for victims of suspected child maltreatment, nurses’ work environment, and nurses’ moral distress) and outcomes (burnout and intentions to leave). Third, the study aimed to examine the influence of frequency of caring for victims of suspected child maltreatment and nurses’ moral distress on nurses’ burnout and intention to leave while controlling for nurse characteristics and work environment.

Methods

Design and Setting

This cross-sectional, correlational study explored pediatric nurses’ moral distress, burnout, and intentions to leave their jobs in the context of caring for victims of child maltreatment. The study was conducted in a mid-Atlantic, urban area, pediatric magnet hospital that, evaluates approximately 1,500 cases of suspected maltreatment (physical, sexual, and neglect) in the inpatient and outpatient setting annually (R. Berger, personal communication, May 16, 2018).
**Theoretical Framework**

The Transactional Model of Coping and Stress (Lazarus & Folkman, 1984) was used as a framework to help guide the exploration of moral distress in pediatric nurses. The Transactional Model of Coping and Stress focuses on the individual, the environment, and the person’s cognitive evaluation (i.e., the level of adjustment) which helps the individual identify options and resources available to him/her (Lazarus, 1966). This cognitive evaluation affects the person’s coping behavior (Sannon & Bazarova, 2016). Coping includes attempts of controlling emotional responses to the stressor (emotion-focused) or problem solving (problem-focused) (Lazarus & Folkman, 1984). Coping affects an individual’s short-term and long-term outcomes and has three functions to help an individual: 1) manage environmental and social demands, 2) create the motivations to meet these demands, and 3) maintain a psychological equilibrium when meeting these external demands (Mechanic, 1974).

In this study, the conceptual framework posits that the work environment and the frequency of caring for victims of suspected child maltreatment are the potential stressors. In addition, it posits that nurses’ level of moral distress may be the result of undesirable coping that leads to nurses’ burnout, which in turn may increase their intentions to leave their jobs. Specifically, the model defines the relationship between the stressors (i.e., frequency of caring for victims of child abuse, the work environment, and coping [moral distress]) and how these variables are related to nurses’ burnout and intentions to leave jobs. See Figure 1 for the conceptual framework for the study as guided by Lazarus and Folkman’s Transactional Model of Stress and Coping.
Sample

Registered nurses were eligible to participate if they worked in inpatient/outpatient units and in the emergency department on a full-time, part-time, or per-diem/casual basis. A total of 1,540 pediatric nurses were invited to participate. Power analysis conducted prior to the study estimated that a sample of 126 participants were needed to achieve a power of 0.8 with a significance level of 0.05, and an effect size of 0.05 to detect a difference in the primary analyses. A total of 224 responses were received; however, 78 surveys contained too many missing responses for a composite moral distress score to be calculated, resulting in a final sample of \( N = 146 \), with a 9.5% participation rate.
Data Collection and Procedures

Approval was obtained from the appropriate Institutional Review Boards and the vice president of operations, who is also the patient care services and the chief of nursing officer announced the study via email to all of the hospital’s nurses. This email consisted of a cover letter from the Principal Investigator (PI) addressed to the nurses inviting them to participate. Two definitions were in the initial email—moral distress and burnout—to ensure a clear understanding of these concepts. At the end of the cover letter, participants were asked to click on the link to start the survey. Clicking on the link was considered their consent to participate in the study.

The data collection period was one month (June 2019). After the initial email, nurses received two reminder emails. The first reminder was sent two weeks after the initial email, and the second reminder was sent a week later. Participants who completed the survey received a thank-you note. Nurses had the option to provide their email address for a random drawing for one of five $50 gift certificates.

In addition to the data collected at the individual level, preexisting data on nurses’ practice environment was provided at the unit level using the participant’s self-reported unit of employment. Participation in the practice environment survey (conducted separately) was voluntary and anonymous. The data collection period was from November 1 to November 30 2018. A total of 1,540 pediatric nurses were invited to enroll and 1,109 of them (72%) participated. The results of the practice environment survey were sent electronically to the Principal Investigator’s (PI) password protected email.
Instruments

Using the secure Qualtrics survey administration system, participating nurses completed four tools; 1-demographics; 2-frequency of caring for victims of child maltreatment questionnaire (tool developed by the PI); 3-the Moral Distress Scale Neonatal-Pediatric version (MDSNPV; Hamric, Borchers, & Epstein, 2012); and 4-the Abbreviated Maslach Burnout Inventory (aMBI) (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1996). To evaluate pedaitric nurses’ work environment, the researcher used the preexisting data from Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2002).

Demographics. The PI developed a demographic tool to assess participants’ characteristics. These included gender, race/ethnicity, age, experience as a pediatric nurse, total years of nursing experience, unit of employment, average nurse-to-patient ratio, nurses’ education level (Diploma in nursing, Associate degree, Bachelor’s degree, Master’s degree, Doctoral degree) and role of the nurse in the unit (primary nurse, nurse manager, unit director, or other). Nurses were also asked if they were Sexual Assault Nurse Examiner (SANE) certified and if they had received training regarding the care of victims of child maltreatment, in addition to the training they received to renew their nursing license.

Frequency of caring for victims of child maltreatment. The PI also developed a tool used to assess characteristics related to nursing care of victims of child maltreatment. These included the frequency of care (participants had to indicate the frequency of caring for victims of child maltreatment; few times a year or less, once a month or less, few times a month, once a week, a few times a week, and every day), victim age, and the type of child maltreatment (neglect, sexual abuse, physical abuse, and victims with perceived severe injury that led to the child’s death) that nurses encountered.
Moral distress. Nurses’ moral distress was measured using the Moral Distress Scale Neonatal-Pediatric version (MDSNPV; Hamric et al., 2012). Dr. Hamric provided the PI with permission to use the MDSNPV via personal email communication. The MDSNPV is a 21-item scale that measures the frequency and intensity of pediatric health care providers’ moral distress. The items on the MDSNPV are scored on a Likert scale from 0-4. To generate a composite score, the frequency score and intensity (named “level of disturbance”) score for each item was multiplied while eliminating items “never experienced” or “not distressing” from the composite score. To obtain a composite score of moral distress, these individual item products were added together. The resulting score based on 21 items had a range of 0–336, with higher numbers showing higher moral distress. The MDSNP shows strong psychometric properties evidenced by its Cronbach’s alpha for internal consistency of 0.8972, similar to Cronbach’s Alpha (0.88) of the MDS-R from which the MDSNP originated (Hamric et al., 2012).

Burnout. Nurses’ burnout was measured by the Abbreviated Maslach Burnout Inventory (aMBI; Maslach et al., 1996). The nine items on the aMBI are derived from the 22-item Human Service Scale (MBI-HSS; Maslach et al., 1996). Mind Garden, the copyright owner, provided permission to use the aMBI. The aMBI contains three-item versions of the emotional exhaustion, depersonalization, and personal achievement subscales. These subscales are assessed separately, as the relationship among them is not fully understood (Maslach, Jackson, & Leiter, 2005). Each item was scored using a 7-point frequency scale from “never” = 0 to “every day” = 6. Each category was scored separately and was not combined with the others. The sum of each category was added and scored from 0-18. Therefore, each participant had three scores. Higher scores on the emotional exhaustion category and on the depersonalization category indicated higher burnout, and higher scores on the personal accomplishment category indicated lower burnout.
(Maslach et al., 1996). The aMBI psychometric properties for this study are as follows: emotional exhaustion, 0.8341; depersonalization, 0.6429; and personal accomplishment, 0.5973. These are similar to the MBI-HSS psychometric properties: emotional exhaustion, 0.90; depersonalization, 0.79; and personal accomplishment, 0.71 (Maslash & Jackson, 1996).

**Intention to leave.** Nurses’ intentions to leave were measured using the last two items on the MDSNPV (Hamric et al., 2012). These items asked if the participant had left a position as a result of moral distress and if the participant has current intentions to leave his/her position.

**Work environment.** The nurse work environment was measured using the Practice Environment Scale of the Nursing Work Index (PES-NWI; Lake, 2002). The PES-NWI is a 31-item instrument that measures the presence of organizational features that support professional practice using a 4-point Likert scale ranging from 1 “strongly disagree” to 4 “strongly agree”. The PES-NWI has five subscales: 1) nurse participation in hospital; 2) nursing foundation for quality of care; 3) nurse manager ability, leadership, and support of nurses; 4) staffing and resource adequacy; and 5) nurse-physician relations. Higher mean scores (above 2.5) on four or five subscales indicate favorable work environment. If none or one of the subscales achieve a mean score of 2.5, the work environment is considered unfavorable (Aiken, Clarke, Sloane, Lake, & Cheney, 2008). For this study, the unit mean for each of the five subscales was used on the individual nurse depending on his/her place of employment. As data collected on the PES-NWI was provided from the unit level of a participant’s employment, it was not possible to check the reliability of the PES-NWI. However, the validity of the PES-NWI is demonstrated by its extensive use in the nursing literature (Aiken et al., 2011; McHugh & Ma, 2014). The PES-NWI was also recently used to explore the relationship among the severity of critical care nurses’ moral distress, their work environment, and patient safety (Hiler et al., 2018).
Analysis

Data were downloaded from the Qualtrics system and accessed via SAS version 9.4. Data was cleaned and statistical assumptions tested. For example, the normality of data distribution and equality of variances were checked, and all the assumptions were met. Descriptive statistics were used to summarize study measures. Based on the frequency of care, participants were divided into two groups: 1) nurses who have cared for victims of child maltreatment; and 2) nurses who have never cared for victims of child maltreatment. Subsequently, a series of t-tests were used to compare the level of moral distress in nurses who have cared for victims of child maltreatment and the ones who have not. One way-ANOVA was conducted to determine the differences of moral distress between the groups of nurses’ demographic variables (e.g., age, experience, level of education, work pattern). Pearson correlation was used to assess the association between moral distress and burnout. Logistic regression was used to determine the relationship between moral distress, burnout, and intention to leave. Linear regression was conducted to assess the relationships between pediatric nurses’ demographics, the frequency of caring for victims of child maltreatment, and moral distress scores. Two statistical analyses – linear regression and logistic regression – were used to: 1) describe the relationships between all key variables (pediatric nurses’ demographics, frequency of caring for victims of suspected child maltreatment, nurses’ work environment, and nurses’ moral distress); and 2) describe outcomes (burnout and intentions to leave). In addition, linear regression and logistic regression analyses were used to determine the influence of frequency of caring for victims of suspected child maltreatment and nurses’ moral distress on nurses’ burnout and intention to leave, while controlling for other nurse demographics and environment. Variables that showed a significant relationship with burnout and intention to leave, as indicated by bivariate analysis, were kept in
the regression model. Listwise deletion, which allows the researcher to omit the cases with missing data and analyze the remaining data, was followed to manage missing data (Kang, 2013).

Statistical analysis on the work environment was managed through the National Database of Nursing Quality Indicators (NDNQI). The unit mean for each of the five subscales of the work environment was used for the individual nurse depending on his/her place of employment.

RESULTS

Demographics

From a total of 224 responses, 146 participants responded to the moral distress scale. To assess for differences between nurses who completed the moral distress scale and those who did not, Chi-Square analysis was conducted; the results showed that 17 participants who have cared for victims of sexual maltreatment versus 24 participants who have not cared for victims of sexual abuse did not answer the moral distress scale $p=0.0091$. No other statistical significance was found among the two groups of participants (nurses who completed the moral distress scale and the ones who have not).

Although a total of 224 responses were received, 78 surveys contained too many missing responses for a composite moral distress score to be calculated and were removed, resulting in a final sample of 146. These 146 pediatric nurses worked in 25 different inpatient and outpatient units. Most participants worked in the emergency department (26%), were female (91.8%), between 25 and 30 years old (28.8%), non-Hispanic (97.2%), white (96.5%), and were married (58.2%). Most respondents of the pediatric nurse respondents were primary care nurses (71.2%), worked in non-ICU units (78.1%), and had a Bachelor’s degree in nursing (69.9%). Almost 40%
worked day shift, 34.2% had one to five years of general nursing experience, and 37.0% of them had one to five years of pediatric nursing experience.

Almost all (90%) of the nurses have cared for victims of suspected child maltreatment. The frequency of caring for different types of child maltreatment varied; 19% of the participants have cared for victims of child maltreatment few times a year or less, 85% of the participants have cared for victims of neglect, 82% for victims of physical abuse 64% for victims of sexual abuse, and 62% of them have cared for victims with perceived severe injury that lead to the child’s death. Some participants, 18% were Sexual Assault Nurse Examiner (SANE) trained, and about half (47.9%) of them received training regarding the care of victims of child maltreatment in addition to the training they received to renew their nursing license. Table 1 provides further details on participants’ demographics.

**Pediatric Nurses’ Moral Distress**

The overall mean score of pediatric nurses’ moral distress was 59.54 ± SD = 49.22 with a range of 0-300 (low moral distress). The highest score of frequency and intensity of moral distress was reported on item number 18, “witness diminished patient care quality due to poor team communication,” with a mean score of 5.49 per respondent. The situation with the lowest level of moral distress was item number 14, “Increase the dose of sedatives/opiates for an unconscious child that I believe could hasten the child’s death,” with a mean score of 0.56 per respondent.

A series of t-tests and ANOVA tests were conducted to evaluate the mean and the difference of pediatric nurses’ moral distress in relation to their demographics. The results indicated that nurses working in ICU units (CICU, NICU, and PICU) had higher moral distress with a mean of 97.25 (SD 7.65) than nurses working in non-ICU units with mean moral distress.
of 48.96 (SD 4.27), $t (144) = 5.35, p < 0.001, d = 1.09$. The mean moral distress was also higher for nurses who worked night shifts with a mean score of 68.45 (SD 10.11) than nurses working day shifts who had a mean score of 44.22 (SD 5.15), $F(3, 142) = 3.52, p = 0.0167, \eta^2 = 0.07$.

Nurses who had the intention to leave their current jobs also had higher moral distress with a mean of 95.00 (SD 8.51) compared to nurses who did not have the intention to leave who had a mean of 48.36 (SD 4.12), $t (144) = 5.33, p < 0.001, d = 0.99$.

A one-way ANOVA analysis was conducted to compare the effect of considering to leave a job on nurses’ moral distress. There was a significant effect of considering to leave or not to leave on nurses’ moral distress at the $p < 0.05$ level, $F (2, 143) = 24.08, p < 0.001, \eta^2 = 0.17$. Post-hoc analysis using $t$-tests indicated that the mean score of moral distress for nurses who have never considered leaving (as a result of moral distress) was different than the mean moral distress of nurses who have considered leaving but did not leave (difference in means = -52.65, $p < 0.001$). In addition, the mean score of moral distress for nurses who have never considered leaving their previous jobs and the mean score of moral distress for nurses who have left a position (as a result of moral distress) were different (difference in means = -35.63, $p < 0.001$). Table 1 provides further details of pediatric nurses’ levels of moral distress according to their demographics.

**Pediatric Nurses’ Burnout and Intention to Leave**

Burnout was measured using the aMBI, and scoring of the aMBI was completed by individual subscale without calculating a total burnout score, as the full relationships among the three concepts (emotional exhaustion, depersonalization, and personal accomplishment) is not fully established (Maslach et al., 2005). The overall mean scores for pediatric nurses’ were: emotional exhaustion, $M = 7.81$, (SD 4.77); depersonalization, $M = 3.21$, (SD 3.40); and
personal accomplishment, M = 14.97, (SD 2.89). These findings revealed low emotional exhaustion, low depersonalization, and high personal accomplishment, indicating low burnout. Table 2 provides a summary of the aMBI subscales scores.

Overall, 35 pediatric nurses (24%) had the intention to leave their jobs, while 111 of them (76%) had no intention to leave. Also, 52 (35.6%) of participants had considered leaving their job due to their experience of moral distress, but had not yet quit their positions, 20 (13.7%) of them had left a position because of their feelings of moral distress, and 74 (50.7%) had never considered leaving or had left their position because of moral distress. Table 1 provides the information on pediatric nurses’ intention to leave.

**Association between moral distress, burnout, and intention to leave.** Pearson correlations were conducted to assess the associations between moral distress and burnout. The results showed that nurses’ moral distress was positively related with emotional exhaustion ($r (140) = 0.49, p < 0.001$) and depersonalization ($r(140) = 0.40, p < 0.001$) and negatively associated with personal accomplishment ($r(140) = -0.31, p = 0.001$). The relationship between moral distress and intention to leave was assessed using logistic regression. The results showed that nurses’ intention to leave was significantly related to: 1) moral distress ($R^2 = 0.15$, odds ratio estimate = 1.02, $p < 0.001$); 2) emotional exhaustion ($R^2 = 0.18$, odds ratio estimate = 1.27, $p < 0.001$); 3) depersonalization ($R^2 = 0.11$, odds ratio estimate = 1.26, $p < 0.001$); and 4) personal accomplishment ($R^2 = 0.08$, odds ratio estimate = 0.80, $p < 0.001$).

**Pediatric nurses’ work environment.** Nurses’ responses on the work environment survey (PES-NWI) were aggregated to determine a unit-level mean for each of the five subscales. The overall average for the five subscales were: i) adequate staffing, 2.91; ii) manager leadership, 3.12; iii) foundation of quality of care, 3.17; iv) hospital affairs participation, 3.08;
and v) nurse-physician relationship, 3.99. These results indicate nurses’ satisfaction with their work environment. A linear regression was conducted to assess the effect of the work environment on nurses’ moral distress and burnout. The results showed that nurses’ participation in hospital affairs was negatively related to nurses’ moral distress (Estimate = -73.00, \( p = 0.0084 \)).

Logistic regression was conducted to assess the impact of the work environment on nurses’ intention to leave. The results showed that nurses’ participation in hospital affairs was related to their intention to leave, odds ratio estimate = 0.02, \( p = 0.0349 \). No other differences were found in the relationships between the subscales of the work environment and nurses’ moral distress, burnout, and intention to leave. Table 3 provides further details of the impact of the work environment on nurses’ moral distress, burnout, and intention to leave.

**Caring for Victims and Nurses’ Moral Distress, Burnout, and Intention to Leave.**

An independent sample t-test was conducted to evaluate the difference in the mean of moral distress and burnout for nurses who have and have not cared for victims of suspected child maltreatment. The mean score of moral distress for nurses who have cared for victims was 57.69, (SD 4.29) compared to a mean moral distress of 75.67, (SD 12.67) for nurses who have not cared for victims, \( t (144) = -1.37 \) which was not statistically significant, \( p = 0.18 \). Caring for specific types of maltreatment also showed no statistically significant differences in moral distress scores.

With regard to nurses’ burnout, the results of the t-test showed that nurses who have cared for victims suspected of maltreatment with perceived significant injury had higher mean depersonalization scores than those who have not: \( M = 3.7 \) (SD 0.36), \( M = 2.5 \), (SD 0.46), respectively; \( t (139) = 2.06, \ p = 0.04, \ d = 0.36 \). Furthermore, nurses who have cared for victims
of suspected sexual maltreatment had higher mean depersonalization scores than those who have not: $M = 3.67, (SD 0.35)$, $M = 2.46, (SD 0.48)$ respectively, $t (139) = 2.04, p = 0.04, d = 0.37$.

As far as nurses’ intention to leave, the results of the Chi-Square test showed that almost a third (32.22%) of pediatric nurses who have cared for victims with perceived significant injury reported an intention to leave versus 9.09% of nurses who have not cared for these victims, $p = 0.0014, \phi_c = 0.26$. In addition, 29% of nurses who have cared for victims suspected of sexual abuse reported an intention to leave versus 13% of nurses who have not cared for these victims, $p = 0.03, \phi_c = 0.18$. No other significant result was found in the frequency of care or caring for different types of child maltreatment and nurses’ moral distress, burnout, and intention to leave. Table 4 provides additional details on nurses’ moral distress, burnout and intention to leave based on the frequency of care and caring for specific types of maltreatment.

**Reasons for Pediatric Nurses’ Burnout**

A multiple regression analysis was conducted to test if caring for victims of suspected child maltreatment with perceived severe injury, caring for victims of suspected sexual maltreatment, and nurses’ moral distress have an effect on nurses’ depersonalization (burnout subscale) while controlling for other nurse demographics and the work environment. The overall predictive model was statistically significant, $R^2 = 0.48, F(21, 88) = 4, p < 0.001$ indicating the sample multiple indicating that 49% of the variance of nurses’ depersonalization was accounted for by the variables mentioned above. Individual predictors were examined further and results indicated that moral distress was a significant predictor in the model, $F (1, 88) = 29.05, t = 5.39, p < 0.0001$. Other subscales from the work environment (nurse foundation for quality of care, and nurse-physician relation) also showed statistically significant results with nurses’ burnout;
However, these variables were highly correlated and, therefore, omitted from the regression model. Table 5 provides further details on the predictors of burnout.

**Reasons for Pediatric Nurses’ Intention to Leave**

A logistic regression was conducted to determine the effect of caring for victims of suspected child maltreatment with perceived severe injury, caring for victims suspected of sexual abuse, and moral distress on nurses’ intention to leave while controlling for other nurse demographics and the work environment. The overall predictive model was statistically significant, likelihood ratio-Chi-square = 46.91, df = 21, \( R^2 = 0.34 \), \( p = 0.001 \). The individual predictors were examined further and indicated that caring for victims with significant injury, \( \chi^2(1) = 5.35 \), estimated odds ratio = 7.69, \( p = 0.0207 \), and moral distress, \( \chi^2(1) = 11.18 \), estimated odds ratio = 1.03, \( p = 0.0008 \), were statistically significant predictors. Other subscales from the work environment (nursing foundation for quality of care and nurse-physician relations) showed statistically significant results with nurses’ intention to leave; however, these variables were highly correlated and, therefore, omitted from the regression model. Table 6 provides further details on the predictors of intention to leave.

**Discussion**

This cross-sectional, correlational study aimed to assess moral distress, burnout, and intention to leave in a sample of pediatric nurses in the context of caring for victims of child maltreatment. Nurses in this study reported low levels of moral distress; the mean score was 59.54 ± 49.22, within a range of 0-300, indicating that participants did not perceive situations described in the instrument (MDSNPV) as occurring frequently or causing great distress. Moral distress is a subjective phenomenon, and different clinical contexts may elicit different levels of moral distress in nurses. Previous studies have shown that nurses working in critical care units
(ICU) have higher levels of moral distress compared to those working in non-ICU units (Fumis, Amarante, Nascimento, & Junior, 2017; Whitehead, Herbertson, Hamric, Epstein, & Fisher, 2015). In this study, 78% of nurses worked in general pediatric, non-ICU units which may be the reason for the low moral distress scores. Despite the low levels of moral distress, the mean moral distress score was higher than previously conducted research in pediatric environments in which the mean was 21.71 (Allen & Butler, 2016) and 47.3 (Trotochaud, Coleman, Krawiecki, & McCracken, 2015). On the other hand, this study showed lower levels of moral distress compared with studies conducted in adult intensive care environments where the mean moral distress was reported as 83 (Dodek et al., 2016) and 119.3 (Wilson, Goettemoeller, Bevan, & McCord, 2013).

Concerning burnout, participants reported low burnout as reflected by the low scores on depersonalization and emotional exhaustion and the high scores on personal accomplishment. These findings are different than other researchers; Pradas-Hernandez et al. (2018) conducted a systematic review on the prevalence of pediatric nurses’ burnout and concluded that pediatric nurses had high levels of burnout. Molina-Praena, Ramirez-Baena, Gomez-Urquiza, Canadas, and De la Fuente (2018), conducted a meta-analysis and found that nurses working in adult inpatient settings also experience high levels of burnout.

Despite the low mean scores of moral distress and burnout, overall 24% of pediatric nurses who responded to the survey currently have the intention to leave their positions which is a notable and concerning finding, similar to the findings of other studies conducted in a pediatric environment which showed rates of 20% (Trotochaud et al. (2015)) and 24.4% (Evans (2017)) However, studies conducted in an adult environment had higher numbers. Sasso et al. (2019) reported that 35.5% of nurses working in adult medical surgical units were intending to leave.
Research also shows that about 30% of all nurses leave their jobs and even their profession within one year of experience (Nursing Solutions, 2016). As shown in this study, moral distress impacted nurses’ intention to leave; almost 14% of them have left a position, and 35.6% of nurses have considered leaving, but did not leave because of moral distress. This finding strengthens the results of other researchers who found that 10% to 38% of nurses leave their jobs because of moral distress (Fogel, 2007; Wiegand & Funk, 2012).

The frequency of care and caring for different types of child maltreatment did not affect the scores of participants’ moral distress. This indicates that nurses do not experience discordance between what that should do and what they are able to do, which is what would create the moral distress. This suggests that they are able to provide care to victims as they believe is appropriate and warranted. This finding could be related to the fact that the study was conducted in a mid-Atlantic, urban area magnet, pediatric hospital with resources, such as qualified physicians and trained social workers specializing in caring for victims of child maltreatment. Having these resources may have helped in creating a satisfying practice environment, as evidenced by the high scores on the Practice Environment Scale of the Nursing Work Index (PES-NWI). The overall average scores on the five subscales from the PES-NWI ranged from 2.91 to 3.99 indicating participants’ satisfaction with their practice environment. Aiken et al. (2008) classified the practice environment as satisfying, when the mean scores of the four out of five subscales is above 2.5, they classified the practice environment as unsatisfying if none or only one of the mean scores on the five subscales is 2.5.

While nurses’ moral distress was not related to caring for victims, nurses’ intention to leave their position was. Almost a third (32%) of nurses who have cared for victims with significant injury and 29% of nurses who have cared for victims of sexual maltreatment had the
intention to leave their jobs. Caring for different types of maltreatment also affected nurses’
depersonalization; participants who had cared for victims of sexual maltreatment and who had
cared for victims with severe injury had higher depersonalization compared to nurses who had
not cared for these victims. Also called cynicism, depersonalization is a phenomenon that
describes nurses’ withdrawal, irritability, and their negative attitudes toward potentially
impacting the care victims of child maltreatment receive (Maslach & Leiter, 2016). Victims of
child maltreatment are at increased risk for physical and psychological consequences (Brown et
al., 2010; Heneghan et al., 2013). To keep pediatric nurses at the bedside and improve the care
victims of child maltreatment receive, it is important to address provider burnout and intention to
leave.

In this study, the work environment was considered as one of the two stressors in the
Transaction Model of Coping and Stress (Lazarus & Folkman, 1984). Lazarus and Folkman
(1984) described stress as reciprocal relationship between the person and the environment
ranging from major life events, such as death of loved ones to daily hassles, such as work
responsibilities – which is the case in this study. Although nurses in this study, showed
satisfaction with their practice environment, the results show that nurses’ participation in hospital
affairs is related to their moral distress and their intention to leave, which means that the work
environment is a stressor and should remain in the model used for this study. Therefore, unit
directors need to make every effort to include practicing nurses in decision making, which may
improve the work environment and reduce nurses’ moral distress and their intention to leave.

The frequency of caring for victims was considered as a second stressor. In the
Transactional Model of Coping and Stress, Lazarus & Folkman (1984) argued that stressors and
coping are interdependent and need to be considered collectively. Coping (problem-focused and
emotion-focused) varies depending on the type of stressor. For nurses to cope effectively with caring for victims of child maltreatment, they need to use problem-focused coping skills (seek information, manage the care of the victims and their families). They also needed to use emotion-focused coping skills (seek other’s company or discuss their feelings with others). Although caring for victims did not impact nurses’ coping (their moral distress), it impacted their burnout and intentions to leave. This shows that nurses may have had the ability to manage the care of the victim (problem-focused coping); however, they may have had trouble seeking others (emotion-focused coping), which may be the reason for their burnout and intention to leave. Therefore, caring for victims is a stressor; consequently, unit managers and unit directors need to address it and find ways to reduce its effects on nurses. Evidence shows that pediatric nurses are at high risk of experiencing high levels of burnout related to traumatic stress (Berger et. al., 2015). Therefore, adding more stress (caring for victims of maltreatment) without effective coping may lead them to experience burnout faster and may risk them to leave their jobs sooner.

**Implication for Future Study**

It may be helpful to conduct a qualitative/mixed-method study in which nurses are interviewed allowing them to express their fears, feelings, and emotions while caring for victims of maltreatment. Since this study’s population was mostly white female nurses, conducting a study with more diverse group of nurses and other health care providers may be beneficial and help researchers determine if caring for victims suspected of child maltreatment leads to moral distress, burnout and intention to leave. Finally, it may be beneficial to create a tool that captures moral distress in nurses in the context of caring for victims of violence; this may elicit some of distressing situations that nurses encounter when they care for victims of maltreatment.
Study Limitations

The study has several limitations. First, this study was conducted in a mid-Atlantic, urban area magnet level I trauma hospital, results may not be generalizable; therefore, replicating the study in suburban/rural clinics and hospitals may show different results and may increase generalizability of the findings. Second, participants in this study used self-reporting tools to express their moral distress and burnout, which may have affected the interpretation of moral distress and burnout. Interviewing participants may clarify participants’ understanding on moral distress and burnout, which may change the results. Third, the work environment data was collected at the unit level and used on the individual, based on the participant’s place of employment. It is possible that nurses who participated in this study were different than those who participated in the work environment study. Therefore, the data from the work environment survey may not directly reflect the study participants’ perception of their employment place. Fourth, participants were mostly white females, which may also have affected the results. Finally, the MDSNPV was never used in the context of caring for victims of child maltreatment and the specific clinical scenarios did not address abuse; as such, it may not have captured all of the incidents that may lead nurses to experience moral distress.

Conclusion

This study contributes significantly to nursing science as it represents an initial work on pediatric nurses’ moral distress, burnout, and intention to leave in the context of caring for suspected victims of child maltreatment. The data demonstrated that, although there was not difference in moral distress among nurses who have and have not cared for victims of maltreatment overall, nurses who have cared for victims with perceived severe injury and/or
sexual maltreatment had higher depersonalization scores. Caring for victims with perceived severe injury and caring for victims of sexual maltreatment not only impacted the scores for nurses’ depersonalization but also their intentions to leave. Nurses who leave the profession contribute to the nursing shortage the country is experiencing. Without competent pediatric nurses, victims of maltreatment may not receive the quality of care they need, which will jeopardize the safety of these children.

Caring for children is the essence of pediatric nursing, and nurses working in pediatric environments will continue to care for suspected victims of child maltreatment. Therefore, pediatric nurses need to stay confident while caring for victims and continue to manage their coping skills. This can begin by initiating a conversation among nurses providing them with the opportunity to express themselves and understand others’ perspectives. This may help these specialty nurses become stronger for the future, may decrease their burnout, and may keep them in practice longer.
Table 1. Demographics and Level of Moral Distress According to Nurses’ Characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percent</th>
<th>Mean Moral Distress ±SD</th>
<th>p value*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12</td>
<td>8.2%</td>
<td>40.92 ± 11.08</td>
<td>0.1721</td>
</tr>
<tr>
<td>Female</td>
<td>134</td>
<td>91.8%</td>
<td>61.21 ± 4.31</td>
<td></td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>4</td>
<td>2.8%</td>
<td>69.00 ± 24.70</td>
<td>0.7102</td>
</tr>
<tr>
<td>Non-Hispanic or Latino</td>
<td>141</td>
<td>97.2%</td>
<td>59.70 ± 4.15</td>
<td></td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian or Alaskan</td>
<td>1</td>
<td>0.7%</td>
<td>*</td>
<td>0.2997</td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>0.7%</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Black or African American</td>
<td>3</td>
<td>2.1%</td>
<td>10.00 ± 7.02</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>139</td>
<td>96.5%</td>
<td>60.34 ± 4.19</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24 years</td>
<td>15</td>
<td>10.3%</td>
<td>69.93 ± 13.98</td>
<td>0.1408</td>
</tr>
<tr>
<td>25-30 years</td>
<td>42</td>
<td>28.8%</td>
<td>72.30 ± 7.13</td>
<td></td>
</tr>
<tr>
<td>31-35 years</td>
<td>22</td>
<td>15.1%</td>
<td>66.81 ± 10.74</td>
<td></td>
</tr>
<tr>
<td>36-40 years</td>
<td>21</td>
<td>14.4%</td>
<td>47.57 ± 6.84</td>
<td></td>
</tr>
<tr>
<td>41-45 years</td>
<td>7</td>
<td>4.8%</td>
<td>28.57 ± 8.83</td>
<td></td>
</tr>
<tr>
<td>46-50 years</td>
<td>7</td>
<td>4.8%</td>
<td>52.57 ± 18.14</td>
<td></td>
</tr>
<tr>
<td>&gt;50 years</td>
<td>32</td>
<td>21.9%</td>
<td>49.06 ± 10.51</td>
<td></td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>50</td>
<td>34.2%</td>
<td>56.58 ± 6.11</td>
<td>0.3011</td>
</tr>
<tr>
<td>Legally married and not separated</td>
<td>85</td>
<td>58.2%</td>
<td>57.44 ± 5.06</td>
<td></td>
</tr>
<tr>
<td>Separated but still legally married</td>
<td>3</td>
<td>2.1%</td>
<td>88.33 ± 25.41</td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>7</td>
<td>4.8%</td>
<td>84.57 ± 38.14</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>0.7%</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in nursing</td>
<td>5</td>
<td>3.4%</td>
<td>73.6 ± 26.36</td>
<td>0.4101</td>
</tr>
<tr>
<td>Associate degree in nursing</td>
<td>11</td>
<td>7.5%</td>
<td>52.72 ± 27.02</td>
<td></td>
</tr>
<tr>
<td>Qualification</td>
<td>Count</td>
<td>Percentage</td>
<td>Mean ± SD</td>
<td>p-value</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------</td>
<td>------------</td>
<td>-----------------</td>
<td>----------</td>
</tr>
<tr>
<td>Bachelor’s degree in nursing</td>
<td>102</td>
<td>69.9%</td>
<td>60.97 ± 4.25</td>
<td></td>
</tr>
<tr>
<td>Master’s degree in nursing</td>
<td>25</td>
<td>17.1%</td>
<td>48.92 ± 9.38</td>
<td></td>
</tr>
<tr>
<td>Doctoral degree in nursing</td>
<td>3</td>
<td>2.1%</td>
<td>101 ± 36.72</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience as RN</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>50</td>
<td>34.2%</td>
<td>69.82 ± 6.66</td>
<td>0.081</td>
</tr>
<tr>
<td>6-10</td>
<td>31</td>
<td>21.2%</td>
<td>69.67 ± 8.65</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>15</td>
<td>10.3%</td>
<td>40.60 ± 10.35</td>
<td></td>
</tr>
<tr>
<td>16-20</td>
<td>14</td>
<td>9.6%</td>
<td>45.57 ± 8.39</td>
<td></td>
</tr>
<tr>
<td>&gt;20</td>
<td>36</td>
<td>24.7%</td>
<td>49.86 ± 9.67</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experience as Pediatric RN</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>54</td>
<td>37.0%</td>
<td>66.83 ± 6.48</td>
<td>0.1768</td>
</tr>
<tr>
<td>6</td>
<td>34</td>
<td>23.3%</td>
<td>37.43 ± 8.22</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>14</td>
<td>9.6%</td>
<td>46.81 ± 10.05</td>
<td></td>
</tr>
<tr>
<td>16-20</td>
<td>16</td>
<td>11.0%</td>
<td>67.50 ± 7.36</td>
<td></td>
</tr>
<tr>
<td>&gt;20</td>
<td>28</td>
<td>19.2%</td>
<td>54.14 ± 11.98</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work Pattern</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always Days</td>
<td>58</td>
<td>39.7%</td>
<td>44.22 ± 5.15</td>
<td>0.0167</td>
</tr>
<tr>
<td>Always Nights</td>
<td>20</td>
<td>13.7%</td>
<td>68.45 ± 10.11</td>
<td></td>
</tr>
<tr>
<td>Occasional Nights</td>
<td>31</td>
<td>21.2%</td>
<td>75.48 ± 11.40</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
<td>25.3%</td>
<td>65.37 ± 7.72</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current Position</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary nurse</td>
<td>104</td>
<td>71.2%</td>
<td>63.45 ± 5.06</td>
<td>0.1536</td>
</tr>
<tr>
<td>Nurse manager</td>
<td>8</td>
<td>5.5%</td>
<td>70.5 ± 12.54</td>
<td></td>
</tr>
<tr>
<td>Unit director</td>
<td>5</td>
<td>3.4%</td>
<td>22.4 ± 5.68</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>29</td>
<td>19.9%</td>
<td>48.89 ± 8.23</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SANE Training</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANE trained</td>
<td>25</td>
<td>18.0%</td>
<td>71.52 ± 10.12</td>
<td>0.1018</td>
</tr>
<tr>
<td>Not SANE trained</td>
<td>114</td>
<td>82.0%</td>
<td>55.11 ± 4.11</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training for Caring for Victims of Child Maltreatment</th>
<th>Count</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received training</td>
<td>70</td>
<td>47.9%</td>
<td>56.04 ± 4.93</td>
<td>0.4117</td>
</tr>
<tr>
<td>Did not receive training</td>
<td>76</td>
<td>52.1%</td>
<td>62.76 ± 6.38</td>
<td></td>
</tr>
</tbody>
</table>

| Frequency of Care                                     |       |            |                 |          |

110
<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Never cared for victims of child maltreatment</strong></td>
<td>15</td>
<td>10.3%</td>
<td>75.67 ± 21.49</td>
<td>0.1813</td>
</tr>
<tr>
<td><strong>Cared for victims of child maltreatment</strong></td>
<td>131</td>
<td>89.7%</td>
<td>57.69 ± 3.83</td>
<td></td>
</tr>
</tbody>
</table>

**Worked in ICU/Non-ICU**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working in ICU units</td>
<td>32</td>
<td>21.9%</td>
<td>97.25 ± 7.65</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Working in Non-ICU units</td>
<td>114</td>
<td>78.1%</td>
<td>48.96 ± 4.27</td>
<td></td>
</tr>
</tbody>
</table>

**Intention to Leave**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to leave jobs</td>
<td>35</td>
<td>24.0%</td>
<td>95.00 ± 8.51</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>No Intention to leave</td>
<td>111</td>
<td>76.0%</td>
<td>48.36 ± 4.12</td>
<td></td>
</tr>
</tbody>
</table>

**Considered Leaving Previous Job Because of Moral Distress**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considered leaving because of moral distress but did not leave</td>
<td>52</td>
<td>35.6%</td>
<td>88.42 ± 6.83</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Left a position because of moral distress</td>
<td>20</td>
<td>13.7%</td>
<td>72.40 ± 11.80</td>
<td></td>
</tr>
<tr>
<td>Never considered leaving or left a position because of moral distress</td>
<td>74</td>
<td>50.7%</td>
<td>35.77 ± 4.00</td>
<td>&lt; 0.001</td>
</tr>
</tbody>
</table>

**Type of Child Maltreatment**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Percentage</th>
<th>Mean ± SD</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cared for victims with severe injury</td>
<td>90</td>
<td>62.1%</td>
<td>62.33 ± 4.35</td>
<td>0.129</td>
</tr>
<tr>
<td>Did not care for victims with severe injury</td>
<td>55</td>
<td>37.9%</td>
<td>50.60 ± 6.79</td>
<td></td>
</tr>
<tr>
<td>Cared for victims of sexual maltreatment</td>
<td>93</td>
<td>64.1%</td>
<td>60.10 ± 4.43</td>
<td>0.4312</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>Mean ± SD</td>
<td>t</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----</td>
<td>-----</td>
<td>--------------</td>
<td>------</td>
</tr>
<tr>
<td>Did not care for victims of sexual maltreatment</td>
<td>52</td>
<td>35.9%</td>
<td>53.92 ± 6.84</td>
<td>0.4388</td>
</tr>
<tr>
<td>Cared for victims of physical maltreatment</td>
<td>118</td>
<td>81.9%</td>
<td>58.90 ± 4.06</td>
<td></td>
</tr>
<tr>
<td>Did not care for victims of physical maltreatment</td>
<td>26</td>
<td>18.1%</td>
<td>51.31 ± 9.70</td>
<td></td>
</tr>
<tr>
<td>Cared for victims of neglect</td>
<td>124</td>
<td>85.5%</td>
<td>56.81 ± 3.89</td>
<td>0.4903</td>
</tr>
<tr>
<td>Did not care for victims of neglect</td>
<td>21</td>
<td>14.5%</td>
<td>64.19 ± 12.08</td>
<td></td>
</tr>
</tbody>
</table>

*Mean moral distress not reported due to low number of participants.

Two-tailed t-test; $p < 0.05$, **ANOVA** test; $p < 0.05$

Moral Distress measured by the Moral Distress Scale Neonatal-Pediatric version (MDSNPV).
Table 2. The Burnout Subscales

<table>
<thead>
<tr>
<th>Descriptive Measures</th>
<th>Emotional Exhaustion</th>
<th>Depersonalization</th>
<th>Personal Accomplishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min-Max</td>
<td>(0-18)</td>
<td>(0-16)</td>
<td>(7-18)</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>7.81</td>
<td>3.21</td>
<td>14.97</td>
</tr>
<tr>
<td>SD</td>
<td>4.77</td>
<td>3.40</td>
<td>2.89</td>
</tr>
<tr>
<td>Burnout level</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 2: Pediatric nurses’ burnout in the context of caring for victims suspected of child maltreatment.

*Burnout measured by aMBI: Abbreviated Maslach Burnout Inventory measuring nurses’ emotional exhaustion, depersonalization and Personal accomplishment.
Table 3: The Work Environment and Nurses’ Moral Distress, Burnout, and Intention to Leave

<table>
<thead>
<tr>
<th>Work Environment Variable</th>
<th>Moral Distress Estimate</th>
<th>p-value</th>
<th>Emotional Burnout Estimate</th>
<th>p-value</th>
<th>Depersonalization Burnout Estimate</th>
<th>p-value</th>
<th>Personal Accomplishment Estimate</th>
<th>p-value</th>
<th>Intention to Leave Estimate (Odds Ratio)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing and resource adequacy</td>
<td>-2.9468</td>
<td>0.8491</td>
<td>-1.4514</td>
<td>0.3792</td>
<td>0.6412</td>
<td>0.5856</td>
<td>-0.0691</td>
<td>0.946</td>
<td>0.6000</td>
<td>0.5095</td>
</tr>
<tr>
<td>Nurse manager ability, leadership, and support of nurses</td>
<td>-6.9436</td>
<td>0.7112</td>
<td>-0.3093</td>
<td>0.8770</td>
<td>0.4971</td>
<td>0.7266</td>
<td>0.5171</td>
<td>0.678</td>
<td>0.3330</td>
<td>0.2625</td>
</tr>
<tr>
<td>Nursing foundation for quality of care</td>
<td>-14.1341</td>
<td>0.6153</td>
<td>-1.5978</td>
<td>0.5898</td>
<td>-3.1964</td>
<td>0.1279</td>
<td>3.4968</td>
<td>0.057</td>
<td>0.1170</td>
<td>0.1454</td>
</tr>
<tr>
<td>Nurse participation in hospital affairs</td>
<td>-73.0034</td>
<td>0.0084</td>
<td>-4.2486</td>
<td>0.1525</td>
<td>-2.8891</td>
<td>0.1719</td>
<td>2.6131</td>
<td>0.159</td>
<td>0.0240</td>
<td>0.0349</td>
</tr>
<tr>
<td>Nurse-physician relations</td>
<td>18.7320</td>
<td>0.4964</td>
<td>-2.3814</td>
<td>0.4195</td>
<td>-4.0316</td>
<td>0.0531</td>
<td>2.4978</td>
<td>0.174</td>
<td>1.3100</td>
<td>0.8419</td>
</tr>
</tbody>
</table>

Table 3: Nurses’ participation in hospital affairs lowers the scores on nurses’ moral distress and is related to their intention to leave.

* Work environment measured by the Practice Environment Scale of the Nursing Work Index (PES-NWI).
# Table 4. Levels of Moral Distress, Burnout, and Nurses’ Intentions to Leave According to Caring for Different Types of Child Maltreatment*

<table>
<thead>
<tr>
<th></th>
<th>Overall Score</th>
<th>Cared for any kind of abuse</th>
<th>Did not care for any kind of abuse</th>
<th>p</th>
<th>Cared for victim of significant injury or death</th>
<th>Did not care for victim of significant injury or death</th>
<th>p</th>
<th>Cared for victim of physical abuse</th>
<th>Did not care for victim of physical abuse</th>
<th>p</th>
<th>Cared for victim of sexual abuse</th>
<th>Did not care for victim of sexual abuse</th>
<th>p</th>
<th>Cared for victim of neglect</th>
<th>Did not care for victim of neglect</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moral distress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burnout (EE)</td>
<td>7.809</td>
<td>7.98 ± 0.42</td>
<td>6.21 ± 1.27</td>
<td>0.18</td>
<td>8.02 ± 0.51</td>
<td>7.41 ± 0.65</td>
<td>0.45</td>
<td>8.05 ± 0.45</td>
<td>6.52 ± 0.96</td>
<td>0.14</td>
<td>8.29 ± 0.5</td>
<td>6.88 ± 0.67</td>
<td>0.09</td>
<td>7.87 ± 0.44</td>
<td>7.3 ± 1.07</td>
<td>0.62</td>
</tr>
<tr>
<td>Burnout (DP)</td>
<td>3.218</td>
<td>3.38 ± 0.3</td>
<td>1.71 ± 0.9</td>
<td>0.08</td>
<td>3.7 ± 0.36</td>
<td>2.5 ± 0.46</td>
<td>0.04</td>
<td>3.47 ± 0.32</td>
<td>2.2 ± 0.68</td>
<td>0.09</td>
<td>3.67 ± 0.35</td>
<td>2.46 ± 0.48</td>
<td>0.04</td>
<td>3.4 ± 0.31</td>
<td>2.3 ± 0.76</td>
<td>0.18</td>
</tr>
<tr>
<td>Burnout (PA)</td>
<td>14.978</td>
<td>14.95 ± 0.26</td>
<td>15.21 ± 0.78</td>
<td>0.74</td>
<td>14.92 ± 0.31</td>
<td>15.13 ± 0.39</td>
<td>0.67</td>
<td>14.82 ± 0.27</td>
<td>15.84 ± 0.58</td>
<td>0.11</td>
<td>15.04 ± 0.6</td>
<td>14.92 ± 0.41</td>
<td>0.80</td>
<td>15.08 ± 0.26</td>
<td>14.5 ± 0.64</td>
<td>0.40</td>
</tr>
<tr>
<td>Intention to leave current job</td>
<td>24%</td>
<td>25.19% ± 131</td>
<td>13.33 ± 15</td>
<td>0.30</td>
<td>32.22% ± 90</td>
<td>9.09% ± 55</td>
<td>0.0014</td>
<td>24.58% ± 118</td>
<td>15.38% ± 26</td>
<td>0.31</td>
<td>29.03% ± 93</td>
<td>13.46% ± 52</td>
<td>0.03</td>
<td>25% ± 124</td>
<td>14.29% ± 21</td>
<td>0.28</td>
</tr>
</tbody>
</table>

*EE, emotional exhaustion; DP, depersonalization; PA, personal accomplishment.

Table 4: Caring for victims of significant injury and caring for victims of sexual abuse affects nurses’ depersonalization burnout and their intention to leave.
Table 5. Multivariate Linear Regression on Burnout

<table>
<thead>
<tr>
<th>Predictor</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caring for victims with significant injury or death</td>
<td>1</td>
<td>21.923578</td>
<td>21.923578</td>
<td>2.84</td>
<td>0.0953</td>
</tr>
<tr>
<td>Caring for victims of sexual abuse</td>
<td>1</td>
<td>1.928273</td>
<td>1.928273</td>
<td>0.25</td>
<td>0.6183</td>
</tr>
<tr>
<td>Staffing and resource adequacy</td>
<td>1</td>
<td>10.755242</td>
<td>10.755242</td>
<td>1.39</td>
<td>0.2408</td>
</tr>
<tr>
<td>Nurse manager ability, leadership, and support of nurses</td>
<td>1</td>
<td>10.5420193</td>
<td>10.5420193</td>
<td>1.37</td>
<td>0.2455</td>
</tr>
<tr>
<td>Nursing foundation for quality of care</td>
<td>1</td>
<td>49.8912316</td>
<td>49.8912316</td>
<td>6.47</td>
<td>0.0127</td>
</tr>
<tr>
<td>Nurse participation in hospital</td>
<td>1</td>
<td>30.8672854</td>
<td>30.8672854</td>
<td>4.00</td>
<td>0.0485</td>
</tr>
<tr>
<td>Nurse-physician relations</td>
<td>1</td>
<td>21.6379297</td>
<td>21.6379297</td>
<td>2.81</td>
<td>0.0975</td>
</tr>
<tr>
<td>Age</td>
<td>6</td>
<td>67.8697785</td>
<td>11.311628</td>
<td>1.47</td>
<td>0.1988</td>
</tr>
<tr>
<td>Total number of experience as an RN</td>
<td>4</td>
<td>44.3887475</td>
<td>11.0971869</td>
<td>1.44</td>
<td>0.2278</td>
</tr>
<tr>
<td>Work pattern</td>
<td>3</td>
<td>42.7809878</td>
<td>14.2603293</td>
<td>1.85</td>
<td>0.1441</td>
</tr>
<tr>
<td>Moral Distress</td>
<td>1</td>
<td>223.980211</td>
<td>223.980211</td>
<td>29.05</td>
<td>&lt; 0.0001</td>
</tr>
</tbody>
</table>

Table 5: Nurses’ moral distress is a significant predictor for their burnout.

Model Summary: $R^2 = 0.48$, $F(21, 88) = 4$, $p < 0.0001$
<table>
<thead>
<tr>
<th>Predictor</th>
<th>df</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caring for victims with significant injury or death</td>
<td>1</td>
<td>21.923578</td>
<td>21.9235780</td>
<td>2.84</td>
<td>0.0953</td>
</tr>
<tr>
<td>Caring for victims of sexual abuse</td>
<td>1</td>
<td>1.928273</td>
<td>1.9282730</td>
<td>0.25</td>
<td>0.6183</td>
</tr>
<tr>
<td>Staffing and resource adequacy</td>
<td>1</td>
<td>10.7552424</td>
<td>10.7552424</td>
<td>1.39</td>
<td>0.2408</td>
</tr>
<tr>
<td>Nurse manager ability, leadership, and support of nurses</td>
<td>1</td>
<td>10.5420193</td>
<td>10.5420193</td>
<td>1.37</td>
<td>0.2455</td>
</tr>
<tr>
<td>Nursing foundation for quality of care</td>
<td>1</td>
<td>49.8912316</td>
<td>49.8912316</td>
<td>6.47</td>
<td>0.0127</td>
</tr>
<tr>
<td>Nurse participation in hospital</td>
<td>1</td>
<td>30.8672854</td>
<td>30.8672854</td>
<td>4.00</td>
<td>0.0485</td>
</tr>
<tr>
<td>Nurse-physician relations</td>
<td>1</td>
<td>21.6379297</td>
<td>21.6379297</td>
<td>2.81</td>
<td>0.0975</td>
</tr>
<tr>
<td>Age</td>
<td>6</td>
<td>67.8697785</td>
<td>11.3116298</td>
<td>1.47</td>
<td>0.1988</td>
</tr>
<tr>
<td>Total number of experience as an RN</td>
<td>4</td>
<td>44.3887475</td>
<td>11.0971869</td>
<td>1.44</td>
<td>0.2278</td>
</tr>
<tr>
<td>Work pattern</td>
<td>3</td>
<td>42.7809878</td>
<td>14.2603293</td>
<td>1.85</td>
<td>0.1441</td>
</tr>
<tr>
<td>Moral Distress</td>
<td>1</td>
<td>223.980211</td>
<td>223.9802110</td>
<td>29.05</td>
<td>&lt; 0.0001</td>
</tr>
</tbody>
</table>

*Table 6:* Caring for victims with significant injury and nurses’ moral distress are significant predictors for nurses’ intention to leave.

Likelihood ratio-Chi-square = 46.91, df = 21, $R^2 = 0.34$, $p = 0.00$
REFERENCES


