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Do Neonatal Nurses Caring for Newborns With Neonatal Abstinence Syndrome (NAS) Whose Mothers Used Illicit Substances During Pregnancy Experience Moral Distress? A Pilot Study

Valarie Artigas
*University of Connecticut - Storrs, valarieartigas@gmail.com*

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Maternal substance misuse/abuse during pregnancy may lead to adverse neonatal outcomes, including neonatal abstinence syndrome (NAS). NAS is a constellation of withdrawal symptoms exhibited in newborns in response to the discontinuance of in-utero exposure to licit and illicit substances. The incidence of NAS is directly related to the increasing rates of maternal substance use/abuse. The United States has experienced a five-fold increase of newborns born with NAS. The care of the newborn with NAS is one of the most challenging conditions for the neonatal nurse. Management of newborns with NAS requires knowledge that has not been traditionally partnered within care of the neonatal intensive care unit (NICU) but rather more often in the newborn nursery. And thus, understanding addiction, addictive behaviors and the psychological needs of substance misusing/abusing parents have not been common place in all NICU settings.

Caring for the newborn with NAS and interacting with the addicted parent and parents may present ethical and moral dilemmas for the neonatal nurse. This pilot study explored the presence of moral distress among neonatal nurse caring for the newborn with NAS whose mothers used illicit substances during pregnancy. A descriptive study engaged neonatal nurses from a Level III NICU in completing the Moral Distress Scale Pediatric version. Frequency and intensity of moral distress among the sample assisted in determining the presence and levels of moral distress. Neonatal nurses caring for newborns with NAS whose mothers used illicit substances during pregnancy experienced varying degrees moral distress.
The results of this research study revealed that indeed, neonatal nurses experience moral distress to varying degrees within the NICU setting. Caring for newborns with NAS within this sample participant group produced moral distress especially when these nurses interacted with substance misusing mothers and caregivers. Although not all neonatal nurses caring for newborns with NAS and/or interacting with substance misusing care givers experienced moral distress the review of the data is imperative for identifying strategies to support nurses universally to prevent/address moral distress in the NICU.
Do Neonatal Nurses Caring for Newborns With Neonatal Abstinence Syndrome (NAS) Whose Mothers Used Illicit Substances During Pregnancy Experience Moral Distress? A Pilot Study

Valarie Ann Artigas

B.S.N., Adelphi University, [1985]
M.S.N., SUNY Stony Brook, [1998]

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Presented by
Valarie Artigas, B.S.N., M.S.N.

Major Advisor
Sandra Bellini, DNP

Associate Advisor
Jacqueline McGrath, PhD

Associate Advisor
Michael Witman, MD

University of Connecticut
This dissertation is dedicated to the memory of my father Paul Valenzano. My dad was very proud and excited that there would be a “doctor” in our family. Sadly, he was not able to see me complete my journey but was certainly here to encourage me along the way. My dad’s strength and positive outlook during his last few months here on earth gave me a new appreciation for how short life may be and to work towards fulfilling your dreams. He was a man who worked very hard his whole life to make a better life for my mother Rosemarie and his four children. I know as he looks down upon us from the heavens above he smiles each day.
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CHAPTER ONE: INTRODUCTION

In 2013, according to the survey sponsored by the Substance Abuse and Mental Health Services Administration an estimated 24.6 million Americans age 12 or older were current illicit drug users. This estimate represents 9.4% of the American population aged 12 or older. Illicit drugs include marijuana, crack/cocaine, heroin, hallucinogens, inhalants, and prescription-type grouped psychotherapeutics. Prescription type psychotherapeutics used for non-medical therapies include pain relievers, tranquilizers, stimulants, and sedatives. The current rate of illicit drug use among Americans is on the rise and has become a national health concern.

Prescription drug use and use of illicit drugs by pregnant women is reaching epidemic portions in the United States according to data collected from the National Survey on Drug Use and Health/National Institute on Drug Abuse in 2013. Substance use during pregnancy is associated with birth defects, low birth weight, premature birth, neonatal abstinence syndrome (NAS), seizures, alterations in brain organization, and neurobehavioral/cognitive deficits (Bada et al., 2005; Hudak & Tan, 2012). Cases of NAS, which is a group of problems that occur in newborns exposed to prescription pain killers or other drugs during fetal development grew by almost 300% in the United States from 2000 to 2009 (Hayes & Brown, 2012). Studies between 2000 and 2009 revealed U.S. trends identifying the annual rate of NAS diagnosis for the newborn population has increased approximately three-fold and maternal opiate use increased by almost five-fold (Patrick et al., 2012). In the United States one newborn is born every 25 minutes who will experience NAS (Patrick, Davis, Lehmann, & Cooper, 2015).

Substance Use During Pregnancy

Substance use during pregnancy with prescribed pain medications, illicit drugs and selective serotonin reuptake inhibitors (SSRI) may affect the fetus and newborn adversely.
Common categories of drugs used by pregnant women include opioids, semisynthetic opioids, synthetic narcotics, central nervous system (CNS) depressants/stimulants, SSRIs, and hallucinogens (Hudak & Tan, 2012).

The placenta is the functional unit between fetal blood and maternal blood. The function of the placenta includes nutrition, respiratory, metabolism, excretion, and endocrine activity to maintain fetal and maternal well-being. In order for a drug to produce a teratogenic or pharmacological effect on the fetus, it must cross from the maternal circulation to the fetal circulation through the placenta by diffusion. The rate of transfer depends on the chemical properties of the drug such as protein binding, pH differences, lipid solubility, and molecular weight of the drug. Only free unbound drugs cross the placenta. During pregnancy maternal plasma albumin decreases while fetal albumin increases. As a result, the concentration of free drug increases, increasing what crosses the placenta to reach the fetus.

Early in gestation, during the embryonic stage (conception to Week 10 of development), drugs may have significant teratogenic effects. However, during the fetal period (Week 10 to Week 40 of development and gestation), after major structural development is complete, drugs have more subtle effects, including abnormal growth and/or maturation, alterations in neurotransmitters and their receptors, and brain organization affecting cognitive and language function (Behnke & Smith, 2013).

Other indirect effects of drugs of abuse on the fetus include altered delivery of substrate to the fetus for nutritional purposes, either because of placental insufficiency or altered maternal health behaviors attributable to the mother’s addiction. These altered behaviors, which include poor nutrition, decreased access and compliance with prenatal health care, exposure to violence
and neglect, maternal socioeconomic conditions, as well as increased risk of mental illness and infection, may place the fetus at risk.

Many factors come into play within the clinical presentation of neonatal drug withdrawal. Newborns will exhibit symptoms of withdrawal based on the type of drug, timing and amount of the last maternal use, polysubstance use during pregnancy, and the metabolism and excretion of the drug from both maternal/neonatal systems. While NAS occurs in newborns predominantly exposed in utero in opioid dependent pregnant women, there are non-opioid drugs that may also cause withdrawal in the newborn (Kellogg, Rose, Harms, & Watson, 2010). Opioid dependence is seen with opiates, semisynthetic opiates and synthetic narcotics. Non-opioid drug classes include CNS depressants, CNS stimulants, and hallucinogens. SSRIs are commonly used for the management of depression and anxiety in pregnant women. SSRI use in the last trimester of pregnancy has been associated with symptoms in the newborn very similar to clinical signs of NAS (Alwan & Friedman, 2009; Galbally, Lewis, Lum, & Buist, 2009). “Designer” drugs commonly used by pregnant women include cocaine, marijuana, LSD, methamphetamines, and ecstasy. Depending on fetal exposure these newborns will exhibit temporary symptoms of withdrawal, which include irritability, tremor movements of their arms and legs, and short sleep patterns.

**Neonatal Abstinence Syndrome**

NAS was first identified in the late 1960s to early 1970s by Dr. Loretta Finnegan and colleagues in Philadelphia and by Dr. Phillip Lipsitz in New York. Each noted that newborns whose mothers used cocaine or illicit drugs behaved in a certain way after delivery. These newborns were noted to be “passively addicted” demonstrating physical characteristics of drug withdrawal. Both Dr. Finnegan and colleagues and Dr. Lipsitz developed withdrawal scoring
tools based on their research and observation of drug exposed newborns. These tools were developed to quantify the severity of withdrawal symptoms experienced by the newborn and would later lead to the identification of NAS (Finnegan, Kron, Connaughton, & Emich, 1975; Lipsitz, 1975).

NAS has been defined as a complex disorder, with a constellation of behavioral and physiological symptoms that are remarkably similar despite differences in properties of the substance used by the mother. NAS usually is seen with withdrawal from opioids such as heroin or methadone but other drug classes including but not limited to narcotics, benzodiazepines, barbiturates, and alcohol may also bring about symptoms of NAS. Onset is usually 2 to 3 days after birth with clinical manifestations presenting in 60 to 80% of infants exposed to heroin or methadone. Unfortunately, polydrug use among some expectant women makes it difficult for the neonatal caregiver to determine a given effect on the newborn.

The symptoms of NAS may be seen in many of the drug classes described and are often overlapping. As mentioned earlier, the clinical presentation of the newborn is influenced by many factors, which include the type or types of drugs used during pregnancy, the timing and amount of the last ingestion by the mother, and the metabolism and clearance of the drug or drugs by the newborn. Some newborns depending on fetal exposure may begin to show signs of withdrawal immediately following birth or within the first 24 hours after delivery; seen with some barbiturates, heroin, and SSRIs, while other newborns may not exhibit signs of withdrawal until the third or fourth day of life, as seen with cocaine, methadone, and buprenorphine exposure (Hudak & Tan, 2012).

Newborns exposed during fetal development to nicotine, alcohol or marijuana do not usually exhibit symptoms of NAS but rather they present with abnormal behaviors which
normalize over a period of time (D’Apolito & Hepworth, 2001; Pichini & Garcia-Algar, 2006). The normalization of behaviors is unlike newborns with NAS, where clinical symptoms of withdrawal escalate over time as the drug is metabolized and eliminated.

Clinical manifestations of NAS include CNS disturbances, including seizures, gastrointestinal and metabolic signs (loose watery stools, diarrhea, and failure to thrive), and signs of autonomic disturbances (yawning, sneezing, and perfusion mottling). Neurobehavioral symptoms of infants with prenatal opiate exposure include excessive sucking, jitteriness, hypertonia, high pitched cry, difficulty being comforted, and irritability (Bandstra, Morrow, Mansoor, & Accornero, 2010).

Care of the newborn with NAS includes nonpharmacologic and pharmacologic interventions. The nonpharmacologic therapies are used by parents, caregivers, and nursing staff to provide supportive care. Nonpharmacologic treatment includes a thorough evaluation of the newborn’s behaviors and responses to human interaction and their environment to determine the need for specific soothing techniques (Jansson & Velez, 2012). Some infants respond to supportive care measures and do not go on to require pharmacologic support. Determination for initiation of a pharmacologic agent to ameliorate symptoms of withdrawal are based on the nurse’s “scoring” of the newborn. The most widely used NAS scoring tool used in the United States is the Finnegan tool (O’Grady, Hopewell, & White, 2009; Sakar & Donn, 2006).

In 1990, Finnegan and Ehrlieh published the modified Finnegan NAS Scoring Tool (FNAST). The FNAST identifies 21 withdrawal symptoms assessed by the bedside nurse every 3 to 4 hours before feedings (Finnegan & Ehrlich, 1990). The FNAST quantifies the signs and symptoms observed in the drug exposed newborn and is used as adjunct to clinical decision making (Orlando, 2014). Not all newborns experiencing NAS will require treatment but all drug
exposed newborns require identification and frequent assessments by the bedside nurse. Threshold scores guide the clinician for initiating treatment for symptomatic newborns that are not responsive to supportive care measures. These serial assessments guide and determine efficacy of treatment for the newborns experiencing moderate to severe symptoms in relation to the disturbances of the central nervous system, vasomotor, metabolic, respiratory, and gastrointestinal systems.

Generally speaking, the FNAST scores recommend pharmacologic treatment when scores are 8 or greater after three consecutive assessments (Finnegan & Ehrlich, 1990). Scoring of the newborn is kinectic and somewhat subjective. The American Academy of Pediatrics (1998) suggested that some clinicians may view the length and complexity of the tool to be too cumbersome for routine care of all newborns identified to be at risk.

The length of stay in managing the newborn with NAS may range from several days to several weeks, even months. To be able to assess the need for starting pharmacologic therapy, for weaning therapy and subsequently for discontinuing therapy is based largely on the FNAST scores assigned by the neonatal nurse (D’Apolito, 2014). Accurate scoring guides the neonatal clinician in unnecessarily starting an agent that the newborn may not need or increasing therapy by the clinician when the newborn’s symptoms have not been captured. Because scoring by the neonatal nurse is paramount in assisting the clinician it is important that scores are accurate and reliable. Inaccurate scoring may lead to under or overtreatment of newborns affecting the length of stay in the neonatal intensive care unit (NICU) setting and the newborn’s well-being.

The total cost for caring for newborns with NAS across the United States in 2009 was estimated to be $720 million dollars (Patrick et al., 2012). Aggregate hospital charges increased to $1.5 billion with 81% attributed to state Medicaid programs in 2012 (Patrick et al., 2015).
Newborns who are scored accurately and appropriately will have their symptoms managed safely and possibly may be discharged earlier from the hospital setting (D’Apolito, 2014).

**Nursing Care of the NAS Newborn**

Many newborns with NAS are cared for by neonatal nurses. The newborn with NAS is typically full-term, or close to 40 weeks gestation, and requires management for NAS as an inpatient in the NICU. Nursing care of these newborns may be extremely complex, time-consuming, as well as frustrating and stressful to the nurse because of the severity of symptoms and neurologic disorganization exhibited by the newborn (Murphy-Oikonen, Brownlee, Motelpare, & Gerlach, 2010). Neonatal nurses provide newborn care, assess the newborn, administer nonpharmacologic and pharmacologic agents when ordered, and try to comfort these newborns during the withdrawal. NAS care for the newborn includes the provision of a quiet, soothing environment/voices, rocking, frequent feedings, promotion of sleep cycles and human contact, most often solely provided by the neonatal nurse due to lack of parent visitation or participation of care. The lack of visiting and participation in care is a frequent occurrence in these socially complex family situations in which mothers suffer from addiction.

Nursing management of NAS requires knowledge not traditionally associated with the NICU, such as addiction behaviors, social risk factors, and psychosocial needs of parents with substance abuse or addictive complexities (Maguire, 2014; Sakar & Donn, 2006). When mothers do not actively partake and visit their newborns the neonatal nurse in addition to her nursing obligations of care incorporates her role to provide the care giver responsibilities and mothers’ the newborn (Velez & Jansson, 2008). The absence of the mother, the newborn’s withdrawal symptoms and complexity of care may cause distress, frustration, and moral
dilemmas for the neonatal nurse (Fraser, Barnes, Biggs, & Kain, 2007; Murphy-Oikonen et al., 2010).

**Moral Distress in Nursing**

Research from the early to mid-1990s explored nurses’ attitudes and knowledge regarding addiction but did not explore the presence of moral distress. Critical emerging themes identified by those researchers regarding nurses’ responses included lack of knowledge regarding addiction, counterproductive attitudes when caring for addicted patients or while interacting with family members of the addicted patients and feelings of moralistic stress regarding addiction to the degree that some nurses would avoid contact with those patients (French, Pituch, Brandt, & Pohorecki, 1998; Ludwig, Marecki, Woolridge, & Sherman, 1996; Raeside, 2003).

In light of the current surge in numbers of newborns with NAS cared for in the NICU it is important for researchers to understand how neonatal nurses feel, as well as react and interact with the newborns with NAS and parents. Recent studies have indicated that there are strained relationships between the neonatal nurse and the addicted mother (Fraser et al., 2007; Maguire, Webb, Passmore, & Cline, 2012; Murphy-Oikonen et al., 2010). In all of these studies neonatal nurses expressed genuine caring towards these newborns and their desire to provide quality care to the newborns during their withdrawal, but expressed frustration and moral distress when they were not able to console or comfort the newborn. Other themes which were identified by the participants included beliefs that newborns with NAS did not need specialized care in the NICU and that the environment is too busy as well as overstimulating for those newborns. Some nurses verbalized their beliefs that newborns with NAS are not sick enough to warrant critical care as well as the frustration they felt when the babies were inconsolable with high pitched crying (Murphy-Oikonen et al., 2010).
Maguire et al. (2010) noted that nurses were concerned with the mother’s ability to cope and care for their irritable newborn after discharge as well as acknowledged feelings of negatively judging the addicted mother; as well as some of the neonatal nurses’ demonstrated anger towards the mother for causing their infant’s withdrawal. In a study by Cleveland and Bonugli in 2014, the experiences by mothers of infants in the NICU with NAS validated the neonatal nurses’ perceptions, frustration, attitudes, and lack of knowledge about addiction, which can potentially lead to moral distress in the neonatal nurse. Recurring themes for these mothers included feeling judged, not being seen as a human being because of their addiction, and not being acknowledged as the mother who wants to share in caring for her newborn.

Interestingly, another theme that surfaced was the perception of the mothers that there was variability from nurse to nurse in how their newborns were scored. Some mothers felt that if they had a good rapport with the neonatal nurse the infant had lower scores and when they perceived the negativity of the nurse their infant had higher scores. As previously mentioned, consistency among scorers guides the clinician for initiating, weaning, and the discontinuance of pharmacologic therapy.

The principal investigator for the study postulated that NICU nurses caring for newborns with NAS may experience moral distress. The study warranted investigation to ensure consistency of care of the newborn with NAS, as well as to examine and promote the mental and physical well-being of the neonatal nurse.

**Early Identification of Moral Distress in Nursing**

The term *moral distress* among nurses was first identified by the original work from the philosopher Andrew Jameton in 1984. Moral distress may be experienced when a professional nurse is aware of and recognizes the right course of action but is unable to act upon that action
that is morally correct due to perceived or actual barriers such as lack of time, lack of organizational/physician support, unrealistic patient/family preferences, and legal boundaries (Jameton, 1993). Nurses are ethically obligated to protect patients from harm, and to advocate for and provide safe and appropriate care. When nurses are unable to provide the ethical tenets of the profession, they experience moral distress (Corley, 2002).

Research has identified that moral distress is more prevalent among nurses that practice in critical care in adult, pediatric, and neonatal settings. The presence of moral distress is evident secondary to critical illness of the patient, end-of-life care decisions, and self-reflection when the nurse perceives care or a clinical situation to be morally distressing (Corley, Minick, Elswick, & Jacobs, 2005; Elpern, Covert, & Kleinpell, 2005; Epstein & Delgado, 2010). Moral distress may lead to physical, psychological, and social difficulties experienced by the professional nurse (Cavaliere, Daly, Dowling, & Montgomery, 2010). Moral distress may lead to professional burnout as well as the nurse avoiding situations or family members that are the impetus to his/her perception of moral distress. When moral distress is experienced by a nurse he/she may withdraw from engagement with the patient, or provide a lower level of care which directly effects quality of care and patient satisfaction (Gutierrez, 2005; Hamric & Blackhall, 2007; Zuzelo, 2007).

**Moral Distress Among Neonatal Nurses**

The NICU often has frequent clinical scenarios in which moral distress may develop. The NICU is an environment requiring highly skilled neonatal nurses with critical assessment knowledge that compliments the technological and specialized equipment in order to care for the critically ill neonate. At times neonates may have uncertain or poor prognoses secondary to the fragility of life or congenital conditions. Moral distress may occur in neonatal nurses when
he/she has to perform procedures they are opposed to because they are aware that the neonate will experience pain or discomfort as well as give the parents false hope for treatment success (Tiedje, 2000). Moral distress is also experienced by neonatal nurses when curative care is futile and transitions to palliative care may be considered more appropriate (Cavinder, 2014). The degree and frequency of moral distress are dependent on characteristics of the clinical scenario, feelings of powerlessness and self-reflection of the nurse’s value system. If a nurse continues to experience moral distress without effective coping strategies, professional relationships, self-esteem, and the quality of patient care may suffer (Cavaliere et al., 2010; Cavinder, 2014; Hamric & Blackhall, 2007). Caring for the newborn with NAS and interacting with the addicted maternal/paternal care giver may be perceived as a morally charged clinical scenario.

**Significance to Nursing Profession**

The increase in substance use/abuse of expectant women predisposes them to risks for the pregnancy’s well-being, as well as the fetus’ and to the newborn after delivery. The poor health status and poor pregnancy outcomes in addicted women result in higher maternal/child and neonatal admissions involving high risk care/management. Newborns experiencing NAS require specialized care and longer hospitalizations.

The FNAST is one of the most widely used scoring tools that provide a numeric value to a newborn’s withdrawal symptoms (Hudak & Tan, 2012). The challenge of using this tool or any other scoring tool is its’ subjectivity, therefore there may be difficulty in establishing consistency among the scorers (D’Apolito, 2014). Lack of consistency in scoring among the neonatal nurses may delay pharmacologic intervention or may not reflect that the newborn’s scores as diminishing versus escalating. Newborns that go on to require pharmacologic intervention to manage their withdrawal have longer hospitalizations and are separated from their mothers
which makes it difficult to establish attachment between the mother and infant dyad (Velez & Jansson, 2008).

Moral distress in neonatal nurses occurs as a result of providing care for certain clinical conditions and patients. Caring for the newborn with NAS may cause moral distress in the NICU nurse. No research to date has sought to demonstrate the moral distress of neonatal nurses caring for these newborns. However, anecdotal comments and some limited data from other studies where this question has not been the focus have identified that indeed, neonatal nurses may experience moral distress when caring for the newborn with NAS (Fraser et al., 2007; Maguire et al., 2012; Murphy-Oikonen et al., 2010). It is important for neonatal researchers to identify the presence and level of moral distress experienced by the neonatal nurse. Identification may be the first step in preserving the self-integrity of the nurse as well as insure consistency when caring for the withdrawing newborn.

Purpose of Study

Neonatal nurses caring for newborns with NAS may experience moral distress to varying degrees (Maguire et al., 2012; Murphy-Oikonen et al., 2010). Moral distress may have negative effects on patient care and the well-being of nurses because of unresolved ethical conflict (Cavaliere et al., 2010; Janvier, Nadeau, Deschenes, Coutere, & Barrington, 2007). The purpose of this study was to explore whether moral distress occurs in neonatal nurses caring for newborns with NAS.

Theoretical Framework

The majority of research on moral distress has been explored among nurses working in adult intensive care units as well as palliative care units in both adult and neonatal settings.
Emerging research as previously discussed has identified moral distress among neonatal nurses caring for NAS newborns.

Andrew Jameton (1984) was a pioneer researcher in identifying and addressing moral distress among nurses. He defined moral distress as painful feelings and/or the psychological disequilibrium that occurs when nurses are aware of the morally appropriate action required in a patient care situation, but cannot carry out the action because of institution or organizational barriers, lack of time, lack of nursing/medical leadership support, or policy or legal limitations. He later defined two types of moral distress: initial moral distress and reactive moral distress (Jameton, 1993). With initial distress, the nurse feels frustration, anger, or anxiety when faced with institutional or organizational obstacles and interpersonal conflict about values. Jameton goes on to define the occurrence of reactive distress as when a nurse cannot act upon her initial distress.

Dr. Mary Corley also researched nurses in critical care setting in the mid-1990s regarding their perceptions of moral distress. Much of Dr. Corley’s work is similar to Jameton’s research of nursing and moral distress. Corley’s research became the foundation for her proposed theory of moral distress. Corley theorized that moral distress occurs among nurses when the nurse knows what is best for the patient but his/her course of action may conflict with the organization, his/her colleagues, the family structure or society as a whole. Therefore, moral distress occurs when nurses’ values and perceived obligations are not compatible with structural views or the work environment (Corley, 2002). Stated simply, Corley identifies the presence of moral distress when a nurse either is unable or perceives he/she is unable to advocate for his/her patient. Moral distress occurs as both an internal and external context. The external context includes the work environment, lack of leadership or physician support, and facility framework limitations. The
internal context of moral distress is related to the professional nurse’s psychological responses, for example, does the nurse develop feelings of low self-esteem, powerlessness to advocate for the patient, and has stress begun to affect his/her personal/professional life. Moral distress occurs when the nurse experiences feelings or perceives that his/her personal moral integrity is being threatened. Corley recognized that moral distress can be devastating to nurses leading to burn out, leaving the profession of nursing altogether and may have a negative impact on patient care.

Corley’s theory is based on two foundations: (a) the science and art of nursing is one of a moral profession; and (b) nurses because of who they are, become moral agents (Corley, 2002). Written permission from Sage Publishing for use of the schematic representation of Corley’s theory reflective of her identified foundations is reflected in Appendix A.

Corley, Elswick, Gorman, and Clor (2001) developed the Moral Distress Scale (MDS) to measure moral concepts. The guiding framework included Jameton’s conceptualization of moral distress, House and Rizzo’s role conflict theory, and Rokeach’s value theory (Corley et al., 2001). Jameton’s conceptualization of moral distress was discussed earlier. Role conflict characterized by House and Rizzo (1972) identifies a type of stress nurses experience because they are held accountable to two different organizational authorities: their nursing manager and the medical providers who direct the provision of patient care. These authorities may impose conflicting expectations; subjecting the nurse to role conflict. Rokeach’s (1968) theoretical approach identified how a person’s values and value system may motivate an individual’s behavior Corley’s framework of moral distress guided this study addressing moral distress in the neonatal nurse caring for the newborn with NAS.
Research Question

The following research question was addressed in this study: Do neonatal nurses experience moral distress when caring for newborns with NAS whose mothers used illicit substances during pregnancy?

Definitions and Key Terms

Conceptual definitions will be offered for the following terms: addiction, maternal addiction, and NAS.

Conceptual Definitions

Addiction is defined as a primary chronic disease of brain reward, motivation, memory, and related circuitry (American Society of Addiction Medicine, 2010). Dysfunction in these circuits leads to characteristic biological, psychological, social, and spiritual manifestations. Like other chronic conditions, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death.

Maternal addiction occurs in substance dependent women. At the core of maternal addiction there is compulsive and uncontrollable drug craving, seeking and use. The mother loses the ability to control her life, rearranging her motivational priorities, and putting drug-seeking and drug-taking behavior as a life priority at the expense of the most other activities, even when faced with negative consequences, such as the loss of child custody, or continuing use when the drugs do not produce pleasure effects (Hogan, 2007).

Neonatal abstinence syndrome (NAS) is a constellation of signs and neurobehaviors experienced by the newborn that occur after abrupt discontinuation of in utero exposure to substances taken by the mother (Jansson & Velez, 2012).
Conceptual and Operational Definitions

Moral distress (conceptual definition) is defined by Corley as painful psychological disequilibrium that results from recognizing the ethically appropriate action, yet not taking it, because of such obstacles as lack of time, supervisory reluctance, an inhibiting medical power structure, institutional policy, or legal considerations (Corley, 1995).

Moral distress (operational definition) for the purposes of the study explored nurses’ level of moral distress measured by Moral Distress Scale-R (MDS-R) pediatric version. The original moral distress scales were developed by Dr. Corley and colleagues and have been revised for use in non-critical care settings as well as among all members of the healthcare professional team (Hamric, Borchers, & Epstein, 2012). The MDS-R is a Likert-type scale. This scale measures frequency and intensity of moral distress and may be considered a single scale where scores from both frequency and intensity identify a single composite score to measure moral distress.

Summary

Neonatal nurses appreciate the epidemic surfacing in the United States from substance abuse/misuse. Substance use and abuse by pregnant women jeopardizes the pregnancy and the development and growth of the fetus. Newborns born to substance abusing mothers may develop NAS due to prenatal exposure.

Newborns diagnosed with NAS may require pharmacologic therapy to manage the symptoms of withdrawal that are severe and do not respond to supportive care measures. Newborns requiring pharmacologic therapy are generally cared for in the NICU setting. Those newborns cared for in the NICU experience increased lengths of hospitalization, as well as
separation from their maternal/paternal caregivers delaying the process of attachment between caregivers and the newborn.

Neonatal nurses are highly trained in neonatal physiology and technical skills to care for the most fragile patients in the NICU. Neonatal nurses must not only assess and manage the supportive care of the NAS newborn but also must interact with the addicted mother/caregivers. There are emerging findings within the last few years identifying the concept of moral distress among neonatal nurses caring for newborns with NAS. Caring for the newborn with NAS may be emotionally, physically, and morally taxing on the neonatal nurse who generally during his/her education and nursing experience has not been exposed to working with addicted parents and families and newborns withdrawing from fetal exposure to drugs. The art and science of nursing is beset by caring and nurturing principles that may discourage real life examination of what nurses actually feel and do in the patient care settings. Caring for this vulnerable population may test the neonatal nurses’ moral integrity and values system leading to moral distress.

Moral distress if unrecognized and unresolved may have a negative impact on the neonatal nurse both personally and professionally. He/she may experience frustration, anger, and burn out with unresolved conflicts from moral distress. If we are able to identify and address moral distress among neonatal nurses we may have a positive impact on their self-esteem, their sense of empowerment and improve quality patient outcomes for the NAS newborn and addicted mother/caregivers by providing support systems to protect the neonatal nurse from experiencing moral distress’ negative effects, along with the removal of organizational barriers that impede education and workflow of the neonatal nurse in the care of the NAS newborn and caregivers.
CHAPTER TWO: LITERATURE REVIEW

The concept of moral distress has early origins within the science of nursing ethics dating back to the 1970s and 1980s. These early conceptual frameworks for moral distress promoted direct discussions of moral problems that nurses were facing (Jameton, 2013). Moral distress has been examined in many clinical settings, especially in critical care units caring for adults and neonates. The nature of the NICU is one of advanced technology, highly skilled neonatal nurses, and has frequent clinical situations in which moral distress may occur. The body of research thus far has explored moral distress in neonatal nurses caring for newborns in palliative care and/or end of life care settings. Ethical issues in the NICU are complex and sometimes heart wrenching when the neonatal nurse is torn between doing what is in the best interest for the infant, while care may be dictated by technological care provisions and parental wishes. These dilemmas lead to moral distress for the neonatal nurse.

Moral distress occurs when a nurse must perform against his/her beliefs because of organizational constraints (Corley, 2002). The literature is lacking, however, on the actual prevalence and dynamics of moral distress among neonatal nurses when caring for newborns with NAS. The emerging and indirect evidence suggests that NICU nurses through the examination of their lived experiences may be experiencing moral distress when caring for this newborn population (Maguire et al., 2012; Murphy-Oikonen et al., 2010). NAS is a constellation of behavioral and physiologic signs experienced by the newborn as a result of cessation of in-utero exposure to licit and illicit drugs.

This study explored the possibility for the presence of moral distress in the NICU nurse caring for the newborn with NAS. This research study identified the frequency and intensity of
moral distress among NICU nurses caring for newborns with NAS. Demographic variables will also be considered in relationship to moral distress scores.

**Theoretical and Empirical Literature Examination**

A systematic approach was conducted to utilize a number of databases in the process for exploring moral distress in nursing, neonatal nurses and moral distress in the neonatal nurse caring for the newborn with NAS. CINAHL, PubMed, MEDLINE, Scopus, and ProQuest databases were used in identifying literature from peer reviewed journals from 2004 to 2014 and in the English language only. Key terms included but were not limited to *neonatal nurses, moral distress, and moral distress theories/theorists, neonatal abstinence syndrome, maternal addiction, drug dependent parents, substance abuse, and perception of caregivers with the addicted patient*.

For the theories of moral distress a search date of 1980 to present captured early research published in the mid-1980s. Systematic reviews and the Cochrane database articles were reviewed for original research embodied within their reviews for applicability. Exclusion criteria included well newborn nurses due to the identified interest of moral distress among neonatal nurses by the researcher.

**Review of the Theoretical Literature**

**Framework and Scale Development**

Dr. Mary Corley’s theory of moral distress served as the theoretical framework for the study. The predominant focus of Dr. Corley’s research was moral distress among nurses. Dr. Corley’s research with nurses led to the development of the MDS. The MDS was first published in 1995 and subsequently with continued research has gone through a number of revisions as
well as a formulation of a MDS-R pediatric version. Dr. Corley’s work is a progression of the earlier published works of Andrew Jameton.

**Moral Distress**

Andrew Jameton, a philosopher, identified the phenomenon of moral distress while researching nursing ethics in the mid-1980s. Jameton (1984) perceived moral distress to be a painful experience/feelings or the psychological imbalance that occurs when nurses identify a morally appropriate action a situation requires but cannot carry out those actions due to barriers perceived or actual. As Jameton’s work with moral distress deepened he identified and defined the terms of initial and reactive moral distress. With initial distress, the person experiences feelings of frustration, anger and anxiety when faced with institutional obstacles and interpersonal conflicts regarding values or their value system. Reactive distress occurs when a person does not act upon his/her initial distress (Jameton, 1993). Moral distress may affect nurses in all health care settings. The professional nurse faces many challenges while providing patient care in making the right decisions and taking the right actions. When the nurse is unable to adhere to or do what he/she believes is morally correct he/she may experience moral distress.

**Corley’s Theory of Moral Distress**

Dr. Mary Corley’s theory of moral distress guided the study addressing moral distress in the neonatal nurse caring for the newborn with NAS. The term moral distress evolved over the years from previous research that examined ethical practices in the profession of nursing. Corley and Raines in 1993 described how nurses are caring and function as patient advocates. As advocates for their patients, nurses may face conflict between patient’s wishes and those of the patient’s family, conflict between patient care and medical provider plan of care or constraints imposed by the administration or hospital environment. Corley (1995, 2002) theorized that moral
distress occurs among nurses when the nurse recognizes what is best for the patient but his/her course of action may conflict with the organization, colleagues, the family structure or society as a whole.

Dr. Corley examined a sample of critical care nurses administering the MDS to explore similarities and differences between critical care and medical floor nurses. During the factor analysis nurses working on medical floors reported higher levels of moral distress during aggressive care to their patients versus the critical care nurses, $F = 5.8$, $p = .02$ (Corley, 1995). Also of note, of the 111 nurses in the sample population, approximately 12% had previously resigned a position related to their experience of moral distress. Corley’s theory of moral distress occurs when the internal environment of nurses (values, psychological responses and/or perceived obligations) are incompatible with the needs and philosophies of the external work environment (Corley, 2002; Corley & Selig, 1994).

Corley further theorized that nursing is a moral profession and nurses themselves act as moral agents for their patients and families. Common origins of moral distress among nurses include: continued or heroic measures in life support when it is not in the best interest of the patient or against a patient’s wishes, lack of communication and understanding between medical providers, patient and family conflict regarding end of life care, lack or inappropriate use of healthcare resources and/or technologies, inadequate staffing based on patient census/acuity or lack of skilled/trained staff to provide safe care, as well as being able to address and relieve a patient’s pain effectively (Corley, 2002). Moral distress occurs when the nurse perceives that his/her moral integrity is being threatened. If unresolved, moral distress may lead to professional burnout and may have a negative impact on patient quality outcomes and escalate health care costs.
Corley developed a 32-item MDS to measure two aspects of moral distress in nurses: frequency and intensity. The MDS was formulated based on Jameton’s theory of reactive distress distinguishing it from initial distress. This instrument was developed for use on a sample of critical care nurses. Corley identified levels of moral distress intensity (Corley, 1995; Corley et al., 2001). Corley et al. (2001) in a subsequent study revealed moderate to moderately high levels of moral distress among critical care nurses.

**Impact of Moral Distress**

While Corley appreciates that moral distress may be devastating leading to emotional suffering, burn out, resignation from the profession, and may negatively impact patient care she also notes that moral distress may have a positive impact. Identification of moral distress increases the nurses’ awareness of ethical conflict, empowers the nursing professional to seek resolution externally (work environment) or internally through self-reflection leading to seeking new knowledge or skills related to patient care and/or outcome. In 2005, Corley et al. examined the relationship between moral stress intensity, moral distress frequency, and the ethical work environment. This study included a convenience sample of 106 nurses working on medical and surgical units. Tools used for the purpose of this descriptive and correlational study included the 38-item MDS and the Ethical Environment Questionnaire. The researchers wished to examine whether the intensity of moral distress was directly related to frequency of moral distress as well as if the ethical climate correlated to the frequency and intensity of moral distress. This study identified moral distress intensity may be correlated to the degree of moral distress frequency, $r = .42, p = .01$, based on the 38-item MDS and the Ethical Environment Questionnaire identified moral distress intensity was significantly impacted by the clinical environment in which the nurse practiced in, $F = 1.65, p = .038$. In this convenience sample of the 106 registered nurses
greater than 25% of them revealed previous resignation of their position related to moral distress.

The researchers believed that rapidly changing technology, conflicting societal and cultural values, the pressure to control health care costs and reduced staff ratios of registered nurses all contributed to moral quandaries for nurses providing care and may lead to moral distress (Corley et al., 2005).

Dr. Corley through her vast research had identified a need to explore the moral component of the nurse’s work environment by developing a more specific understanding of the moral responses to conflicts that arise in the work environment that would promote effective strategies to address those complex situations. The MDS developed earlier by Dr. Corley was used in her study from 2005. Results of importance identified in analysis of the data revealed that moral intensity and frequency are concepts that are different but largely experienced by nurses working in high acute or critical care settings. An important theme emerged when speaking with the nurses, which they (the nurses in the sample setting) continued to experience moral distress when the situation was no longer existent. Interestingly enough, the impetus that prompted the perception or feelings of moral distress were not removed after the situation no longer existed. The presence of moral distress continued long after the situation ceased to exist, leaving the nurses with further complexity in their degree of moral distress.

Studies by Elpern et al. (2005) and Zuzelo (2007) support Corley’s earlier work in which the difference between MDS intensity and frequency scores may suggest that while the frequency of moral distress is low, it (moral distress) is intensely experienced.

Hamric and Blackhall (2007) explored the individual perspectives of 196 registered nurses and 29 physicians during their care of dying patients in critical care units in two separate health care facilities. Overall, the nurses experienced higher frequencies of moral distress related
to a negative ethical environment, dissatisfaction within the quality of care administered, and the perception of aggressive treatments felt not to be in the best interest of the patient, $p = < .001$, $p = < .005$, and $p = < .001$, respectively, than the physician colleagues participating in the study.

Subsequently, Sauerland, Marotta, and Peinemann (2014) used Dr. Corley’s MDS for assessing and addressing moral distress and ethical climate. Sauerland’s results support previous studies in which critical care nurses reported higher levels of moral distress in regards to intensity and frequency whereas, in the subacute patient care settings those nurses experienced moral distress with intensity but less frequently (Sauerland et al., 2014).

**Theoretical Summation**

The body of research of moral distress in nursing has occurred predominantly in critical care settings. The degree and frequency of moral distress experienced by the nurse are directly influenced by work environments and one’s personal value system. The presence of moral distress is a significant problem for the nursing profession as a whole. If moral distress is not identified and remedied there may be negative implications for both nurses and patients alike.

Research has shown that nurses readily admit that empathy is more difficult to achieve in situations where their professional ideals are strained and most participants easily described their belief that substance abuse during pregnancy and after delivery is a morally deviant behavior (Benoit et al., 2014; Shaw, Lederhos, Haberman, Fleming, & Roll, 2016; van Boekel, Brouwers, van Weeghel, & Garretsen, 2013). The primary investigator was concerned that moral distress may be occurring in the neonatal nurse caring for the newborn with NAS and if unresolved the neonatal nurse will experience burnout and avoidance in choosing not to care for this vulnerable newborn population which may affect quality of care provided by the neonatal nurse. There can be little doubt based on research findings described earlier that many nurses struggle with
sincerity to control their personal emotions and convictions while caring for patients in both the acute and subacute patient care settings.

**Review of the Empirical Literature**

The diagnosis of NAS among newborns continues to rise whether by maternal history or newborn screenings. Caring for the newborn with NAS is both physically and emotionally challenging for the neonatal nurse. Major critical themes identified by researchers while exploring addiction and their caregivers included nurses’ responses identifying counterproductive attitudes when caring for addicted patients or while interacting with family members of the addicted patients and feelings of moralistic attitudes regarding addiction to the degree that nurses would avoid contact with these patients. In light of the recent surge of NAS newborns cared for in the NICU setting, it is important for researchers to understand how neonatal nurses feel, as well as react and interact with the newborn with NAS and the substance abusing/addicted mother. Recent studies have revealed the existence of strained relationships between neonatal nurses and the addicted mother. The study explored the presence of moral distress experienced by neonatal nurses when caring for newborns with NAS.

**Neonatal Abstinence Syndrome**

Approximately 15% of women aged 15 to 44 years use drugs at some point during their pregnancy (National Institute on Drug Abuse, 2013). Prescription drug abuse occurs in greater than 20% of all pregnant women (Substance Abuse and Mental Health Services Administration, 2013). While pregnancy, generally speaking, is a period in a woman’s life when overall substance use is reduced, abuse of illicit and licit drugs continues to occur in women of child bearing age. Perinatal substance use and abuse poses both physical and psychological risks to both the mother and fetus.
The number of newborns with NAS has significantly increased over the last decade. Newborns with NAS have higher rates of neonatal complications, prolonged length of stay and consume substantial NICU resources. The incidence of NAS has increased from 1.20 to 3.39 per 1,000 live births here in the United States, almost tripling in the last decade. Maternal use and abuse of substances poses a crisis of care for affected fetuses and newborns alike (Hayes & Brown, 2012).

Recently published studies in maternal addiction suggest that in-utero exposure to nicotine, SSRIs, benzodiazepines, along with the emergence of designer drugs may influence NAS (Wachman, Byun, & Philipp, 2011). The almost epidemic proportions of newborns experiencing NAS has lead researchers to focus on the implications and challenges to assist neonatal nurses who care for these newborns. Maternal addiction and substance use has been an elusive concept not generally identified or addressed during the NICU extensive educational and training forums. Neonatal nurses caring for these newborns must possess a unique and diverse base of knowledge, clinical skills, and competencies in providing care for this population of patients.

NAS has been described as a constellation of behavioral and physiologic signs caused by cessation of exposure to licit and illicit drugs. In the neonate, gestational age affects the severity of NAS, with milder symptoms in premature infants born at less than 35 weeks gestation. This is thought to be related to the immaturity of the central nervous system, lower fat deposits of the drug, and decreased total drug exposure during fetal development (Hudak & Tan, 2012). The presentation of NAS is widely variable in timing of onset as well as the severity of exhibited symptoms. The mechanisms that underlie the timing and severity of onset are likely to be multifactorial and unique to each pregnancy.
Characteristic signs of NAS reflect dysfunction of the motor, sensory, and autonomic systems. Characteristics commonly seen in the affected newborn include: high pitched or inconsolable cry, irritability, sleep and wake disturbances with especially short sleep cycles, increased muscle tone/tremors of extremities, feeding difficulties, gastrointestinal disturbances (i.e., vomiting and loose/frequent stooling patterns), poor weight gain or failure to thrive, sweating, sneezing, mottling of skin, and nasal stuffiness or tachypnea (Jansson & Velez, 2012; Hudak & Tan, 2012). In the most severe cases of NAS neonatal seizures may occur.

NAS historically has been used to describe neonatal symptoms occurring after in-utero exposure to opioids such as heroin, methadone and buprenorphine, and the use/misuse of prescription opioid containing medications (hydrocodone and OxyContin). However, other substances may produce neurobehavioral disturbances in the newborn consistent with NAS. These include alcohol, benzodiazepines, nicotine, marijuana, and antidepressants/antipsychotics. Exposures such as cocaine, nicotine, SSRIs, and polydrug use can potentiate the newborn’s expression of NAS.

Opioid-related NAS may mimic other physiological conditions seen in the neonate. Of utmost importance is the review of maternal history, maternal use of any/all medications, and compliance for urine drug screening for both mother and newborn if self-reported use or high-risk behaviors have been identified. Clinical signs of the newborn should not be solely attributed to drug withdrawal without careful assessment to exclude other etiology. Once a newborn is identified to be at risk for NAS a thorough assessment and implementation of non-pharmacologic interventions should be considered. The assessment for need to introduce a pharmacologic agent to alleviate the severity of a newborn’s symptomatology will be discussed later in this chapter. Although studies are limited in nature and sample size, the evidence
suggests that the use of nonpharmacologic therapies may benefit the newborn with NAS by decreasing clinical symptoms.

**Management of NAS**

The goals of nonpharmacologic interventions are to promote supportive parenting behaviors and decrease external stimuli that tend to exacerbate a newborn’s withdrawal symptoms (Maguire, 2014). Velez and Jansson (2008) demonstrated that nonpharmacologic interventions lead to a comprehensive approach of care to structure and nurture maternal–infant interactions and attachment as well as provide a care environment that supports neurodevelopmental and physiologic stability for the newborn.

Some common therapies that may be utilized by all levels of caregivers include: low lighting and quiet care environments, clustering of care, swaddling and use of pacifier with newborn, slow rhythmic rocking, kangaroo care (skin-to-skin contact between mother and her newborn), and encouragement to breast feed infant if mother is HIV negative and has been compliant in a drug therapy program. Sakar and Donn (2006) published results of a national survey for the management of NAS in NICU’s across the country. Of note was variability from practices or within practices where some clinician groups used published abstinence scoring tools while others performed under inconsistent assessment and intervention strategies.

As the incidence of NAS and its impact on health care and newborn outcomes increases and becomes more apparent it is critical for neonatal clinicians and care teams to embrace a common, objective, and validated scoring tool to guide diagnosis and treatment modalities for NAS. The American Academy of Pediatrics recommends formulation of a standard guideline for caring for all newborns with NAS within health care settings caring for mothers and newborns.
The American Academy of Pediatrics also recommends the use of a standard scoring tool to identify and “quantify” severity of withdrawal symptoms demonstrated by the newborn.

Two of the most commonly used tools for scoring a newborn were formulated after research in the 1970s observing newborns with withdrawal symptoms. Those tools are the FNAST scoring tool and the Neonatal Drug Withdrawal Scoring System (Finnegan et al., 1975; Lipsitz, 1975).

Dr. Loretta Finnegan and colleagues began to observe an increase in their nurseries of newborns born to addicted mothers who exhibited a unique pattern of symptoms not recognized in the newborn of non-addicted mothers. Finnegan and colleagues along with the departments of Obstetrics, Neonatology and Psychiatry at Philadelphia General Hospital embarked on a study of maternal addiction with narcotics and what they called “passive” addiction in the neonate (Finnegan et al., 1975). Review of the literature and close clinical observation of over 200 newborns lead to the development of the most comprehensive tool used to measure NAS symptoms in the newborn (Finnegan et al., 1975). Methods for measuring narcotic abstinence had been described in animal models in 1970 and previously in the human adult population in 1942. Until the development of the Finnegan scoring tool objective scoring methods for use in the newborn was not available to researchers or clinicians.

The development of the Finnegan scoring tool was a precise method for scoring clinical manifestations for those newborns exposed to in-utero narcotic use by their addicted mothers. Scoring of these newborns would guide therapeutic decision making and was an important contribution to the science of neonatal medicine. This tool would later be used as an investigative tool to compare various pharmacological agents used in the treatment of NAS. The tool allowed for assessment before, during and after therapies to validate the presence of an increase of scores,
which would reflect treatment failure or where a decrease in scores directed researchers to explore those therapies thought to reflect a therapeutic response.

**Pharmacologic Management of NAS**

Generally speaking, serial scores of greater than 8 warrants the addition of a pharmacologic agent to already established comprehensive assessment and care. Scoring of the newborn guides the clinician in pharmacological management once initiated to establish parameters for increasing, decreasing, or discontinuing the agent in use. The goals of pharmacological management is to stabilize and minimize symptoms to ensure newborns with NAS can eat well and gain weight, establish fairly normal sleep-wake cycles, promote socialization with caregivers with successful attachment to their maternal care giver and prevent untoward outcomes, for example, neonatal seizures (Hudak & Tan, 2012).

With the steady increase of substance use and abuse among child bearing women resulting in higher incidence of NAS newborns being cared for in the NICU setting neonatal clinicians must embrace guidelines to manage the care of this at-risk population while preserving the professional well-being of the NICU nurse caring for the newborn with NAS.

**Moral Distress of Neonatal Nurses**

While the research regarding moral distress in the neonatal nurse is not bountiful published works are meaningful to the profession. Corley and colleagues over the years researched the level of moral distress in adult critical care and adult palliative care settings. Those same settings are similar to work environments for the neonatal nurse. Corley’s theory of moral distress proposes a direct relationship between moral distress, nurse satisfaction, and retention within the profession. The nature of the NICU is to preserve life, possess critical problem-solving skills, and clinical expertise in using lifesaving equipment as well as provide
education and emotional support to parents and families. The degree and frequency of moral
distress among neonatal nurses is variable and dependent on the clinical/ethical scenario,
personal beliefs and threat to the moral integrity of the neonatal nurse (Cavaliere et al., 2010;
Janvier et al., 2007; Sauerland et al., 2014; Zuzelo, 2007).

Cavaliere et al. (2010) performed a descriptive/correlational study to examine moral
distress among neonatal nurses in the NICU setting. The convenience sample of neonatal nurses
was from a large health care system in the northeast region of the United States. A data sheet to
capture demographic variables was utilized as well as Corley’s MDS Neonatal-Pediatric version.
Ninety-four of 196 eligible neonatal nurses participated yielding a 48% response rate. Responses
of the sample resonated results of previous studies regarding moral distress situations by use of a
quantitative approach. The greatest degree of moral distress occurs within these recurrent
themes: futile or aggressive care is thought to be without perceived benefits, pain and suffering
not alleviated by care or as a direct result of care, inadequate staffing and working within an
interprofessional group model where some colleagues may not be competent to perform
specialized care of newborns required in the NICU.

Caring for the newborn with NAS and interacting with the addicted mother may arouse
moral distress and may be both physically and emotionally challenging for the neonatal nurse.
Newborns with NAS may require prolonged care in the NICU.

Newborns with NAS that require medical management in the NICU secondary to their
withdrawal is reaching crisis levels in neonatal care centers throughout the United States. The
care of these newborns is challenging and may be both emotionally and physically draining to
the neonatal nurse. It is important for researchers to understand how neonatal nurses feel, as well
as react and interact with the newborn with NAS and parents. In a study of cocaine-exposed
infants and their mothers the attitudes of the nursing staff were found to be generally negative and this negativity impacted adversely on quality nursing care (Raeside, 2003). Generally speaking the researcher posits that these nurses may have been experiencing moral distress which in the early 1970s and 1980s possessed origins in nursing ethics but had not been studied in clinical settings or a variety of patient populations (Jameton, 2013).

Recent studies have indicated that there are strained relationships between the neonatal nurse and the addicted mother/parents (Maguire et al., 2012; Murphy-Oikonen et al., 2010). Maguire et al.’s (2012) study applied a phenomenological method to identify neonatal nurses’ lived experiences of ethical and moral issues when caring for newborns with NAS. Sixteen nurses were interviewed over a 2-month period involving 1-hour long interviews. The sample size was small ($N=16$), but overall the emerging themes are critical; neonatal nurses expressed genuine caring towards these newborns and their desire to provide quality care to the newborns during their withdrawal but expressed frustration and distress (possibly moral) when they were not able to console or comfort the newborn. Based on participant responses it was evident that ethical and moral distress occurred in this neonatal nurse sample while caring for these newborns and during interactions with the addicted mother or parents. Participant neonatal nurses were concerned with the mother’s ability to cope and care for their irritable newborn after discharge as well as acknowledged feelings of negatively judging the addicted mother; neonatal nurses’ demonstrated anger towards the mother for causing their infant’s withdrawal. Fraser et al. (2007) published their findings from their semi-structured, open-ended interviews among eight neonatal nurses supporting the recurrent theme that distress and moral attitudes may have a negative impact for both the neonatal nurse and her ability to promote family centered care to this vulnerable mother/infant dyad.
An additional theme identified in these studies that may lead to further progression of moral distress is the presence of role confusion as a neonatal nurse. Participants verbalized their beliefs that newborns experiencing NAS did not need specialized care in the NICU and that the environment is too busy and over stimulating for those newborns. The study participants believed newborns with NAS were not “sick” enough to warrant critical care and the expertise of the nurses’ clinical skills (Maguire et al., 2012; Murphy-Oikonen et al., 2010).

In the study conducted by Murphy-Oikonen et al. (2010), “stress, frustration and burnout” was an additional identified theme, which are all directly related to occur due to the perceived or unperceived presence of moral distress. The researchers used a qualitative design with open-ended questions via a computer-assisted interview process. The sample size included 14 neonatal nurses employed in the NICU in a regional hospital. An immersion process was the approach method for data analysis. Reflectively, while all of these studies had small sample sizes each of them identified similar and critical themes for neonatal nurses caring for newborns with NAS, which include but are not limited to: role confusion among caregivers, negative attitudes towards addiction, and the presence of moral distress among neonatal nurses caring for the NAS newborn.

In a 2014 study by Cleveland and Bonugli, mothers of infants in the NICU with NAS perceived non-supportive neonatal nurses’ attitudes and beliefs as well as a lack of knowledge related to addiction. The sample size was a convenience sample of 15 substance addicted mothers from a community-based, outpatient, addiction treatment facility in a large urban area. The research method included semi-structured, individual interviews and analysis of data used qualitative content analysis. Data were analyzed independently and discussed until themes emerged by consensus. Although the sample size was small recurring themes for these mothers
included feeling judged, not being seen as a human being because of their addiction and not being acknowledged as the mother who wants to share in caring for her newborn. Interestingly, another theme that surfaced was the perception of the mothers that there was variability from nurse to nurse in how their newborns were scored using the NAS tool. The mothers were aware that the scoring of their newborn dictated the readiness for discharge. Some mothers felt that if they had a good rapport with the neonatal nurse the infant had lower scores and when they perceived the negativity of the nurse their infant had higher scores. Another mother expressed concern during her interview that a nurse who had never cared for her daughter before had scored her too high. The mothers shared their thoughts on the use of the tools to score their newborn describing the use of these instruments as highly subjective as the nurses scored the newborns with great variability (Cleveland & Gill, 2013).

Although one of the limitations of this study was the small sample size a great deal may be gained from the maternal narratives. The narratives and recollections of these mothers occurred in varying time lengths after hospital discharge. The length of time that passed between the newborn’s discharge and the mother’s interview session ranged from 2 weeks to 2 months; therefore, a relatively short time had passed and mothers were able to vividly recall their feelings, perceptions, and interactions with the neonatal nurses engaged in their newborn’s care. Variation in scoring among care givers has been demonstrated in previous works in the literature regarding NAS scoring tools (Crocetti, Amin, & Jansson, 2007; Hudak & Tan 2012; Sakar & Donn, 2006). However, in these studies variations were attributed to subjectivity in use of tool, complexity of the tool, lack of knowledge and formal training in use of the tools, as well as an ongoing program to ensure competency in tool use.
The research regarding moral distress in the neonatal nurse has been limited and mainly explored in regards to end of life care. Given the aforementioned studies, moral distress appears to be evident among neonatal nurses caring for the newborn with NAS and possibly plays a role in how the nurse interacts with the addicted mother/parents. Yet, whether moral distress exists and in what degree and/or frequency is unknown. NAS is a complex diagnosis, with newborns, families and neonatal nurses all having individual needs that must be carefully and thoroughly recognized to assist in physical and mental well-being of all. Establishment of an evidenced based approach that acknowledges the potential interact of moral distress is important to both newborns with NAS and neonatal care givers that will improve outcomes. This research explored the presence of moral distress among neonatal nurses caring for newborns with NAS.

**Empiric Summation**

The diagnosis of NAS among newborns continues to rise, reaching epidemic proportions as reflected by researchers. In light of the recent surge of NAS newborns cared for in the NICU setting it is imperative for researchers to explore and understand how neonatal nurses feel, as well as react and interact with the NAS newborn and the substance abusing or addicted mother. Caring for the newborn with NAS is both physically and emotionally challenging for the neonatal nurse. Recent studies have revealed the existence of strained relationships between the neonatal nurse and the maternal caregiver which could be related to moral distress experiences and perceptions in the neonatal nurse caring for the newborn who is withdrawing due to substance misuse/abuse of the mother.

**Summary**

Moral distress occurs in several health care settings and may directly impact the registered nurse and patients under his/her care. The presence of moral distress may cause burn
out among nurses and precipitate a nurse leaving the profession completely. Moral distress experienced by caregivers if unresolved also impacts the quality of patient care in a negative manner. Care of the newborn with NAS may lead to moral distress among neonatal nurses. Dr. Corley’s theory of moral distress guided this research to assess for the presence and degree of moral distress. The FNAST is commonly used in most NICUs across the United States. This tool provides a standardized language and assessment parameter to quantify a newborn’s withdrawal symptoms. The tool is an accepted method to provide direction for the pharmacologic and comprehensive management of a newborn with NAS.

The primary investigator postulated that moral distress is experienced by neonatal nurses during the care of newborns with NAS. The use of Corley’s MDS-R pediatric version identified the frequency and intensity of a neonatal nurses’ moral distress. Moral distress affects the quality of patient care, outcomes and the well-being of the professional nurse.
CHAPTER 3: METHODS

The NICU environment has the potential for frequent clinical situations in which moral distress may be experienced by the neonatal nurse. The body of research thus far has explored moral distress among neonatal nurses caring for newborns requiring palliative or end of life care. Ethical issues in the NICU are often complex. Neonatal nurses may be torn between performing in the best interest of the patient while care may be dictated by technological care provisions and parental wishes. These dilemmas lead to moral distress for the neonatal nurse. Moral distress occurs when a nurse must perform against personal beliefs because of organizational constraints (Corley, 2002).

Emerging data has identified the presence of distress and frustration among neonatal nurses caring for newborns with NAS. Neonatal nurses caring for newborns with NAS may experience moral distress to varying degrees (Maguire et al., 2012; Murphy-Oikonen et al., 2010). Moral distress may have a negative impact on patient care, and the well-being of nurses due to unresolved ethical conflicts (Cavinder, 2014; Cavaliere et al., 2010; Janvier et al., 2007).

The purpose of this study was to explore the presence of moral distress among neonatal nurses caring for newborns with NAS whose mothers used illicit substances during pregnancy. This chapter describes the study design, sampling plan, instrument selection, data collection, and treatment of data to address the research question identified.

**Study Design**

The design was a pilot study using descriptive methodology to address the following research question: Do neonatal nurses experience moral distress when caring for newborns with NAS whose mothers used illicit substances during pregnancy?
The study was non-experimental and descriptive. The principal investigator did not introduce an intervention. Data collected identified the presence of moral distress among neonatal nurses caring for newborns with NAS. Therefore, the primary investigator recorded actual scores from the participant sample in the data collection process and reviewed all responses recorded by participants from the moral distress scale. The MDS-R Pediatric version measured frequency and intensity of moral distress in neonatal nurses caring for newborns with NAS. The descriptive design allowed the primary investigator to establish the exposure of moral distress with regards to frequency and intensity based on the neonatal nurses’ responses in the sample population when caring for newborns with NAS.

**Sample and Setting**

The available population included approximately 40 to 45 registered nurses working in a Level III NICU in the Northeast region of the United States was identified. This was a convenience sample due to the establishment of only one NICU within this health care system for recruitment of study participation. Inclusion criteria for participation in the study included any neonatal nurse employed part-time or full-time in the NICU because these nurses would regularly care for newborns with NAS. No exclusion criterion for study participants was established. Demographic data collection served to describe the sample of volunteer participants, and assisted in establishing or refuting homogeneity among the neonatal nurses. The setting is a Level III NICU from a 386-bed community medical center in the Northeast region of the United States.

There is limited guidance with respect to sample sizes for pilot studies. Some research experts recommend 10 participants or 10% of the final study size, while others note that sample size be guided by the constraints of the chosen population (Hertzog, 2008). Generally speaking,
accepted sample sizes for pilot studies depending on purpose of the study range between 10 and 40 participants. There are approximately 40 to 45 neonatal nurses at any given time employed within the inclusion group in the chosen setting. Due to the scant evidence within published studies on moral distress among NICU nurses caring for newborns with NAS it may be difficult to determine an effect size for the identified pilot study.

Sample recruitment for the neonatal nurses was multilayered. An informational poster (see Appendix B) in the staff lounge described the alarming rates of newborns born with NAS and the importance of the study. Group discussions regarding the research study occurred at leadership and staff meetings, as well as during pre-rounding for patient care rounds, which are held daily. Pre-rounding was incorporated into patient care rounds for both day and night shift neonatal nurses to reach as many potential participants as possible. Study results were disseminated to the all the NICU staff members using the same strategies as in recruitment.

**Protection of Human Subjects**

Prior to the participation of neonatal nurses and the initiation of data collection approval was obtained from the health care facility’s Institutional Review Board. Participants for the study were neonatal nurses from the chosen health care facility. The data collected and obtained were used solely for research purposes, including the completion of demographic questionnaire and self-reported scores by the neonatal nurses in completing the MDS.

Potential risks associated with participation in this study were unlikely and of low risk. Participation in completion of the MDS and demographic questionnaire cannot result in physical harm. Participants were asked to provide information regarding their self-reported scores from their completion of the MDS, and completion of the questionnaire containing demographic information. These questions had a small likelihood of psychological risk to the participants.
Prior to dissemination of the study, particular attention was placed on assuring ethical treatment of the human subjects. The right of the human subjects for self-determination was guaranteed through the use of voluntary and anonymous participation. Volunteer subjects had the right to freely choose to participate or to decline participation without penalty or loss. The only potential infringement of the right to self-determination that may have been construed during the study was the possible perception of coercion on the behalf of potential subjects. The principal investigator was a colleague of the volunteer subjects and possessed a position of authority as an advanced practice registered nurse in relation to that of the subjects. However, the investigator’s collegial role did not include supervisory leadership duties for the subjects, nor did her role involve any form of performance or employment appraisals. The principal investigator was employed by, and reported to a private practice physician group, while the volunteer participants were employed by the hospital.

Distribution of the MDS and the demographic questionnaire was placed in all eligible participants’ mailboxes. An introductory letter (see Appendix C) described for the potential participants that the study was completely voluntary and anonymous, identified that participation was of low risk and any question may be deferred if the question produced a psychological disturbance to the participant. The potential for perception of participant coercion was also acknowledged with a statement within the body of the letter noting that the lack of participation in no way affected their employment or evaluative process. Participants completing and returning the demographic and moral distress scale signified their desire to participate in the research study voluntarily and anonymously. Participants understood the low risks involved in participation of the study, and that the opportunity to defer to answer any question that produced a psychological disturbance was an option during completion of the instrument. Participants
were assured that all information shared with the principal investigator was kept strictly confidential. Volunteer participants were able to access the introductory letter with study packets directly from their mailboxes. No identifiers were used on the packets because the study was anonymous. Only the principal investigator had access to review the de-identified data. Demographic questionnaires and MDS were stored in separate locked file to protect the confidentiality of participants, as well as the confidentiality of participant responses in the secured files in the locked office of the principal investigator.

The participant’s right to autonomy, anonymity, and confidentiality was protected and maintained through the secure storage of completed study instruments. Access to the completed study instruments was only accessible to the principal investigator within the locked file in the key secured investigator’s office, and with additional protection through computer password recognition. Only the principal investigator had knowledge regarding the protected password entry mechanism.

The right to fair treatment was ensured by the explanation of potential benefits and risks to the subjects within the body of the introductory letter. The potential benefit of participation assisted the principal investigator to establish the degree and frequency of moral distress occurring in the neonatal nurse caring for newborns with NAS in current practice. The potential risk to participant subjects was minimal, and would be limited to the emotional distress associated with self-reflection in responding to items within the subject matter.

**Data Instruments**

The formal instrument for data collection utilized within this study was the MDS-R Pediatric version (see Appendix D). A demographic questionnaire (see Appendix E) was constructed by the principal investigator to assess demographic information such as, age,
education levels, and neonatal nurses’ perceptions regarding moral influence as it pertains to the care of newborns with NAS with the use of a few forced choice questions. Gender identification was eliminated due to the presence of one male registered nurse employed by the setting hospital. The purpose of obtaining and analyzing demographic data assisted the principal investigator to establish or refute homogeneity among the participant group of neonatal nurses for generalization of the research findings, and provided descriptive characteristics of the study participants.

**Demographic Questionnaire**

The demographic questionnaire addressed and identified variables of the sample group of volunteer participants. Descriptive analysis defined the characteristics of the sample participants. The nominal (categorical) level of measurement allowed for grouping of participants into broad categories by the principal investigator. Questions numbered one through seven identified discrete data, which included, but was not limited to, age, education levels, and number of years of employment. This data denoted nominal levels of measurement. The questions numbered 8 through 12 regarding moral influence denoted ordinal levels of measurement. Question 13 was an open-ended question to validate the participant’s response to Question 12. The principal investigator postulated that participant responses to Questions 8 through 13 preliminarily identified neonatal nurses at risk for experiencing moral distress when caring for newborns with NAS.

**Moral Distress Scale**

The original work to measure moral distress included assessment through a one-time visual analog scale. Over 80% of the nurse participants reported medium to high levels of moral distress (Corley & Selig, 1994). These discoveries regarding the high degree of moral distress
lead Corley et al. (2001) to identify the causes and severity of moral distress. Their research was based on three assumptions: (a) nurses bring their values and value systems into work with them, (b) nurses can identify ethical dilemmas in their work environment, and (c) nurses can identify the extent to which their values and ethics may cause moral distress.

The MDS was developed (Corley et al., 2001). The original MDS measured the frequency and intensity of moral distress within a 32-item 7-point Likert format; a higher score reflected higher level of moral distress. During the development of the instrument early content validity was established through content analysis of interviews from nurses in the United States. The second phase of content validity was achieved through review of two experts of moral distress (Dr. Wilkinson and Dr. Jameton) and subsequently a panel of doctoral prepared nurses with expertise in nursing ethics leading to the final creation of a 38-item scale (Corley et al., 2001). The MDS instrument has demonstrated adequate reliability, Cronbach’s $\alpha$ from .82 to .98 (Corley et al., 2005).

In 2012, Hamric et al. revised the MDS scale to create a revised and shortened version of the original 38-item scale. The revised and abbreviated scale now identified as the MDS-R contains 21 items and responses were modified from a 0-to-6 Likert scale to a 0-to-4 Likert scale. The scale for frequency ranges from 0 (never) to 4 (very frequently) and for intensity from 0 (none) to 4 (great extent). Frequency and intensity scores for each item may be scored and examined separately; in addition the MDS-R possesses the possibility for computing a composite score, which is useful in multivariate analyses (Hamric et al., 2012). Composite scores of the frequency and level of distress were also an addition in the MDS-R; calculations for scores are established through multiplication of the two scores for each item and then summation of scores across the items (Hamric et al., 2012).
In the MDS-R, each item has the ability to have a score range from 0 to 16 and a summative score range of 0 to 336. Cronbach α for the MDS-R is .89. The revised scales included six parallel versions to enhance clarity and broaden applicability beyond critical care to all inpatient settings, and to address moral distress among other providers within the health care professional team (Hamric et al., 2012). The MDS-R Pediatric version was used to identify moral distress in neonatal nurses caring for newborns with NAS. The use of the Likert scale responses allowed for numeric categories ordered from a low score to a high score. A frequency distribution table identified the measure dispersion of scores of the neonatal nurse sampling. A histogram demonstrated the frequency and intensity scores for each of the sample participants with regards to the clinical scenarios reflective of caring for newborns with NAS. Composite scores (frequency x intensity) are recommended by the developers of the instrument for use with multivariate analysis (Hamric et al., 2012). Written permission was granted by Dr. Hamric for use of the instrument as well as minor revisions to content through personal correspondence February 2015 (see Appendix F).

Procedure for Data Collection

Institutional Review Board approval through the chosen health care facility was obtained prior to any recruitment of volunteer subjects. Eligible volunteer subjects were neonatal nurses employed at least part-time in a Level III NICU in the Northeast region of the United States. Recruitment of the subject group occurred through the informational poster presentation, discussion of purpose of study at staff meetings and during pre-rounding on the day and night shifts consecutively for a 2-week period.

The principal investigator provided instructions for completing and submission of both the demographic data questionnaire and the MDS packet within the informational letter.
packets included a cover letter describing the purpose of the study, the demographic questionnaire and the MDS. Each packet was placed in every potential volunteer neonatal nurse’s mailbox within the NICU along with a small box of gourmet chocolate to thank them in advance for their interest and participation in the study. The principal investigator requested the return of completed forms no later than 72 hours from procurement or the next scheduled shift for the participant; whichever came first. The participants were provided with instructions to return the completed questionnaire and scale to the NICU locked opinion box, which is used for any confidential comments or suggestions when staff wishes to remain anonymous. This box is secured to the main wall in the common staff area. During the research time period a new lock was placed on the box by the principal investigator to secure information. At the end of the research study the investigator’s lock was removed and nursing leadership regained and was responsible for securement of the opinion box. There was no cost involved for duplication of documents by the principal investigator.

**Treatment of Data**

SPSS Version 24.0 was utilized for data entry and analysis. Completed packets from subjects were opened individually and demographic questionnaire was reviewed for completeness and results recorded into the password protected computer. The MDS scores were handled in the same manner. Scoring included intensity and frequency values determined by participant responses. All collected forms and computer files were kept in separate locked cabinet in the principal investigator’s office.

SPSS was downloaded to a portable laptop computer, which remained secured in the locked office and was password sensitive with high complexity to safeguard data. This identified
procedure occurred with every participant’s data review, collection, formulation of values, and that same data were recorded into SPSS Version 24.0.

Data recorded manually and electronically was reviewed for accuracy by comparing the data responses to the demographic questionnaires and self-reports by the neonatal nurse within the MDS-R instrument. If variables were missing data or data appeared erroneous, again a review of the original packet data. Sample characteristic recovery was performed through descriptive statistics to display the study population. Measurable outcomes explored in the study included the level of moral distress experienced by neonatal nurses caring for newborns with NAS. The MDS-R identified and measured the level of moral distress for each participant. The frequency and intensity of moral distress experienced by the neonatal nurse was analyzed through individual scoring within the moral distress instrument.

**Analysis of Data**

The research question addressed in the study was as follows: Do neonatal nurses experience moral distress when caring for newborns with NAS whose mothers used illicit substances during pregnancy?

The research question as stated above was answered using nurses’ self-reflected responses to items on the MDS-R Pediatric version. Scores identified the absence or presence of moral distress, in which the higher the score the higher the level of moral distress. Descriptive statistics including a frequency distribution reflected the existence (intensity) of moral distress and its frequency among neonatal nurse. The graphing of the moral distress intensity and frequency scores was demonstrated through the use of a histogram for the clinical scenarios.

The study design was a non-experimental pilot study with descriptive design. Descriptive studies are those that seek to describe phenomena, not necessarily formulating a statement in
regards to association or causation. Descriptive statistics were utilized to describe the characteristics of the sample population. The purpose of this study was to identify the presence of moral distress among neonatal nurses caring for newborns with NAS. This pilot study did not seek to describe if any causal relationships existed. Descriptive measures may reveal a great deal of information regarding any variable of interest, whether the data analyzed originates for clinical, administrative, and educational or research purposes.

The MDS-R instrument measured responses based on a Likert scale. Likert scales are often used to represent ordinal data. Ordinal measures have categories and magnitude, but they do not have equal intervals. A measure of central tendency; the mean identified the degree of moral distress with the greatest frequency, highest intensity and overall levels of moral distress respectively for the sample group participants reflecting responses to each of the clinical scenarios.

Descriptive statistics including the frequency distributions histogram was used to present the portion of the sample participants’ levels of moral distress: no moral distress, mild moral distress, moderate moral distress, and severe moral distress. A frequency histogram is a bar graph representing the number of participants for each score for the ordinal variable of moral distress. The frequency identified the incidence of moral distress among neonatal nurse caring for newborns with NAS in the sample population.

Formative evaluation for the study included input from major and associate advisors, experts on the identified subject matter, consistent mechanism for recruitment and protection of the human subjects, data collection/entry, and independent statistical evaluation.
Summative evaluation disclosed the sample size, as well as the presence or lack of homogeneity of the sample subjects. Final conclusions and study results were shared with the NICU staff at the identified health care facility serving as the study setting.

**Summary**

The purpose of this study was to explore for the presence of moral distress in neonatal nurses caring for newborns with NAS. The use of a descriptive design allowed the principal investigator to be able to describe the phenomena of moral distress within care of newborns with NAS. The principal investigator did not introduce an intervention. A descriptive design assists a researcher to examine and describe characteristics or groupings of a single sample in order to generalize their findings to a single population. This design is also helpful to generate new knowledge when little or no known knowledge is available through published bodies of research. The frequency and level of a nurses’ moral distress was determined from the self-reported scores from the MDS-R Pediatric version. The presence of moral distress among neonatal nurses may negatively affect the care of newborns with NAS, and jeopardize the mental well-being of the neonatal nurse.

Research thus far, while limited, has identified that indeed neonatal nurses may experience moral distress when caring for newborns with NAS. These findings highlight the importance for recognition to preserve the self-integrity of the neonatal nurse, as well as insure safe and appropriate care for the newborn exhibiting signs of substance withdrawal while supporting attachment between the maternal–infant dyad.
CHAPTER 4: STUDY RESULTS

The purpose of this study was to explore the presence of moral distress among neonatal nurses caring for newborns with NAS whose mothers used illicit substances during pregnancy. Chapter 4 identifies the research question, characteristics of the sample participants in the pilot study, and methods for data collection. The findings within this study apply to the specific population of neonatal nurses from a Level III NICU in a health care facility in the Northeast region of the United States. A descriptive, non-experimental design guided the study. The principal investigator’s primary intention was to identify the presence of moral distress among the group of sample participants. No intervention inquiry was considered during this pilot study.

A total of 44 neonatal nurse participants were identified for study eligibility. A packet containing an informational letter, demographic questionnaire, and the MDS-R instrument were placed in the mailbox for each potential volunteer participant. The data were collected from April 1, 2017 through to April 17, 2017. The total number of volunteer study participants was 27 out of 44, yielding a 61% response rate.

The principal investigator employed the use of the MDS-R Pediatric version instrument to measure the frequency, intensity, and overall level of moral distress (composite score) within the sample participants. The following clinical scenario questions were added to the instrument for measurement of frequency, intensity, and level of moral distress to specifically address reflective values of neonatal nurses caring for newborns with NAS:

Question 22: Caring for newborns with NAS is not professionally satisfying.

Question 23: Caring for newborns with NAS is time consuming and takes away time that should be afforded to critically ill preterm infants.

Question 24: My clinical skills are wasted on caring for newborns with NAS.
Question 25: Interacting with substance misusing mothers/parents is often negative in nature due to mistrust and addictive behaviors demonstrated by caregivers.

These additional clinical scenario question may identify additional root causes promoting moral distress according to the research published thus far on NAS in regards to professional caregiver and parent interactions (Fonti, Davis, & Ferguson, 2016; Maguire et al., 2012; Murphy-Oikonen et al., 2010; Raeside, 2003).

**Characteristics of Study Participants**

The study participants were a purposive sample of neonatal nurses from a Level III NICU in the Northeast region of the United States. Demographic data were obtained through the completion of the demographic questionnaire. Table 2 describes the demographic characteristics of the study participants reflecting age, years employed as a registered nurse, years employed as a neonatal nurse, educational levels, years in caring for newborns with NAS, influence of moral beliefs when providing care, and summation of the open-ended questions regarding NAS. Gender was not a requested identifier to maintain the anonymity of the one male nurse employed within the NICU.

Additionally, two questions regarding leaving or consideration of leaving his/her nursing staff position secondary to the presence of moral distress were asked exclusive of the 25-item instrument. These two questions were part of the instrument Dr. Corley and Dr. Hamric developed. Research by Dr. Corley demonstrated that nurses left a clinical nursing position primarily due to moral distress (Corley, 1995). Bodies of research have demonstrated that nurses with higher levels of moral distress significantly consider leaving their positions more frequently, contributing to the shortage of professional nursing caregivers (Cavaliere et al., 2010; Ganz & Berkovitz, 2012).
The responses for this sample of participants are represented in Table 1. Fifteen of the participants (18%) stated that they have never considered leaving a position secondary to moral distress, eight (3%) stated yes, they had considered leaving but did not, and four of the participants (6%) indicated they left a clinical position secondary to moral distress. Three of the 27 participants (9%) identified that they were considering leaving their current clinical position in the NICU.

Table 1

Considered Leaving Position

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>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?</td>
<td></td>
</tr>
<tr>
<td>No, I’ve never considered quitting</td>
<td>15</td>
</tr>
<tr>
<td>Yes, I considered quitting but did not leave</td>
<td>8</td>
</tr>
<tr>
<td>Yes, I left a position</td>
<td>4</td>
</tr>
<tr>
<td>Are you considering leaving position now?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
</tr>
</tbody>
</table>

The average age among participants was 40 to 49 years of age, 48.1% (n = 13). An associate nursing degree was held by 37% of participants (n = 10), a baccalaureate degree was held by 55.6% of participants (n = 15), and 7.4% of participants held a graduate level degree (n = 2). None of the sample participants held a diploma or doctorate level degree. The number of years employed as a registered nurse was greater than 10 years with 88.9% of participants (n = 24); in regards to years working in a NICU, the majority of participants at 74% (n = 20) had worked in a NICU for greater than 10 years. A majority of these neonatal nurses at 81.4% (n = 22) have cared for newborns with NAS for greater than 5 years; whereas, 18.5% (n = 5) of nurses have cared for these newborns less than or equal to 5 years.
Table 2

Sample Characteristics

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>n (%)</th>
<th>Professionally satisfied caring for NAS newborns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–29</td>
<td>1 (3.7)</td>
<td>Yes</td>
</tr>
<tr>
<td>30–39</td>
<td>5 (18.5)</td>
<td>No</td>
</tr>
<tr>
<td>40–49</td>
<td>13 (48.1)</td>
<td></td>
</tr>
<tr>
<td>50 years or older</td>
<td>8 (29.6)</td>
<td>Choice of assignments</td>
</tr>
<tr>
<td>Highest level education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>0 (0)</td>
<td>NAS newborn</td>
</tr>
<tr>
<td>Associate</td>
<td>10 (37.0)</td>
<td>24-week preterm infant</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>15 (55.6)</td>
<td>Care setting for</td>
</tr>
<tr>
<td>Graduate</td>
<td>2 (7.4)</td>
<td>NAS newborn</td>
</tr>
<tr>
<td>Doctoral</td>
<td>0 (0)</td>
<td>Well newbornquires</td>
</tr>
<tr>
<td>Number of years RN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>1 (3.7)</td>
<td>NICU</td>
</tr>
<tr>
<td>3–5 years</td>
<td>0 (0)</td>
<td>Specialized care units</td>
</tr>
<tr>
<td>5–10 years</td>
<td>2 (7.4)</td>
<td>for NAS</td>
</tr>
<tr>
<td>Greater than 10 years</td>
<td>24 (88.9)</td>
<td></td>
</tr>
<tr>
<td>Number of years NICU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>1 (3.7)</td>
<td></td>
</tr>
<tr>
<td>3–5 years</td>
<td>2 (7.4)</td>
<td></td>
</tr>
<tr>
<td>5–10 years</td>
<td>4 (14.8)</td>
<td></td>
</tr>
<tr>
<td>Greater than 10 years</td>
<td>20 (74.0)</td>
<td></td>
</tr>
<tr>
<td>Number Years Caring for NAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years</td>
<td>2 (7.4)</td>
<td></td>
</tr>
<tr>
<td>3–5 years</td>
<td>3 (11.1)</td>
<td></td>
</tr>
<tr>
<td>5–10 years</td>
<td>6 (22.2)</td>
<td></td>
</tr>
<tr>
<td>Greater than 10 years</td>
<td>16 (59.2)</td>
<td></td>
</tr>
<tr>
<td>Moral belief influencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>6 (22.2)</td>
<td></td>
</tr>
<tr>
<td>Minimally</td>
<td>13 (48.1)</td>
<td></td>
</tr>
<tr>
<td>Moderately</td>
<td>4 (14.8)</td>
<td></td>
</tr>
<tr>
<td>Significantly</td>
<td>4 (14.8)</td>
<td></td>
</tr>
<tr>
<td>Moral beliefs influencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>6 (22.2)</td>
<td></td>
</tr>
<tr>
<td>Minimally</td>
<td>14 (51.8)</td>
<td></td>
</tr>
<tr>
<td>Moderately</td>
<td>4 (14.8)</td>
<td></td>
</tr>
<tr>
<td>Significantly</td>
<td>3 (11.1)</td>
<td></td>
</tr>
</tbody>
</table>
When asked if moral beliefs influence their patient care 22.2% \((n = 6)\) responded \textit{not at all}, 48.1% \((n = 13)\) responded \textit{minimally}, 14.8% \((n = 4)\) responded \textit{moderately}, and 14.8% \((n = 4)\) responded \textit{significantly}. For 77.7% of the participants’ moral distress to varying degrees influenced patient care. When asked if moral beliefs influence their interactions with parents 22.2% \((n = 6)\) responded \textit{not at all}, 51.8% \((n = 14)\) responded \textit{minimally}, 14.8% \((n = 4)\) responded \textit{moderately}, and 11.1% \((n = 3)\) responded that moral distress \textit{significantly} influenced interactions between themselves and parents.

The majority of participants 70.3% \((n = 19)\) responded that they felt a professional satisfaction when caring for newborns with NAS, whereas 29.6% \((n = 8)\) responded that they did not feel professionally satisfied. Interestingly, 66.6% \((n = 18)\) preferred caring for 24-week preterm newborn rather than a newborn with NAS if given a choice in assignments, and 88.8\% \((n = 24)\) believed that newborns with NAS did not belong in the NICU for care.

\textbf{Analysis of the Research}

\textbf{Research Question}

Do neonatal nurses experience moral distress when caring for newborns with NAS (NAS) whose mothers used illicit substances during pregnancy?

The MDS-R Pediatric version was the instrument used to measure frequency and intensity of moral distress among neonatal nurses caring for the newborn with NAS within the sample population of participants. Participants had their frequency, intensity, and level of moral distress from self-reported responses to the instrument recorded and calculated for each of the 25 clinical scenarios. Within descriptive statistics, examination occurred with univariate analysis including the frequency distribution identifying the existence (intensity) of moral distress and frequency among the sample participants.
Composite Scores of Moral Distress

The composite score is obtained by summing each clinical scenario’s Frequency $\times$ Intensity Score ($f \times i$) for each participant. Each clinical scenario has a measurement range for the ($f \times i$) scores with numeric presentations from 0 to 16. This methodology of scoring identifies any scenario marked as never experienced or not distressing to the participant to be eliminated from the composite score, thus, reflecting a more accurate measurement of true moral distress.

The resulting scores based on the 25-clinical scenario instrument contained a range of 0 to 400 as demonstrated through the use of the polygon in Figure 1. The mean composite moral distress score was 58.9 among the sample participants ($n = 27$) with a standard deviation of 36.4. The composite scores are illustrated in Table 3. All sample participants experienced varying degrees of moral distress. No participants had a composite score of 0, which reflected no moral distress.

![Figure 1](image)

*Figure 1. Question 22: Caring for newborns with NAS is not professionally satisfying. F = frequency; D = intensity; M = moral distress.*
Frequency of Moral Distress

The mean frequency scores for the subjects ranged from 0.04 to 1.70. The instrument’s frequency range is identified from 0 to 4. A score of 0 identifies that the scenario never occurs, whereas a score of 2, 3, or 4 identifies that the scenario very frequently occurs.
Table 3

*All Participants Composite Scores of Moral Distress (Frequency × Intensity)*

<table>
<thead>
<tr>
<th>Groups</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–25</td>
<td>6</td>
</tr>
<tr>
<td>26–51</td>
<td>5</td>
</tr>
<tr>
<td>52–77</td>
<td>8</td>
</tr>
<tr>
<td>78–103</td>
<td>7</td>
</tr>
<tr>
<td>104–129</td>
<td>0</td>
</tr>
<tr>
<td>130–155</td>
<td>0</td>
</tr>
<tr>
<td>156–181</td>
<td>1</td>
</tr>
</tbody>
</table>

The clinical scenario with the highest mean frequency score was 1.70, Question 25: “Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.” Question 25 had a mean frequency score of 1.7 ($SD = 1.2; n = 27$).

Question 23 which ranked fifth for frequency of moral distress: “Caring for newborns with NAS is time consuming and takes away time that should be afforded to critically ill preterm infants” had a mean frequency of 1.3 ($SD = 1.4; n = 27$). Question 22: “Caring for newborns with NAS is not professionally satisfying” ranked eighth for frequency with a mean of 1.19 ($SD = 1.36; n = 27$). The clinical scenario means listed below ranged from 1.04 to 1.70 as shown in Table 4.

**Intensity of Moral Distress**

The mean intensity scores for the subjects ranged from 1.85 to 3.33. The clinical scenario with the highest mean frequency score was 3.33, Question 17: “Works with nurses or other providers who are not as competent as the child’s care requires.” The clinical scenario means listed below ranged from 2.81 to 3.33, as shown in Table 5.
Table 4

**Top-10 Clinical Scenarios: Frequency of Moral Distress**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item</th>
<th>Mean Frequency&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Question 25: Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.70</td>
</tr>
<tr>
<td>2</td>
<td>Question 3: Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the child.</td>
<td>1.63</td>
</tr>
<tr>
<td>3</td>
<td>Question 17: Work with nurses or other providers who are not as competent as the child’s care requires.</td>
<td>1.48</td>
</tr>
<tr>
<td>4</td>
<td>Question 21: Work with levels of nurses or other care provider staffing that I consider unsafe.</td>
<td>1.48</td>
</tr>
<tr>
<td>5</td>
<td>Question 23: Caring for newborns with NAS is time consuming and takes away time that should be affording to critically ill preterm infants.&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.30</td>
</tr>
<tr>
<td>6</td>
<td>Question 4: Initiative extensive life-saving actions when I think they only prolong death.</td>
<td>1.22</td>
</tr>
<tr>
<td>7</td>
<td>Question 6: Carry out the physician’s order for what I consider to be unnecessary tests and treatments.</td>
<td>1.22</td>
</tr>
<tr>
<td>8</td>
<td>Question 22: Caring for newborns with NAS is not professional satisfying.&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.19</td>
</tr>
<tr>
<td>9</td>
<td>Question 20: Watch patient care suffer because of a lack of provider continuity.</td>
<td>1.11</td>
</tr>
<tr>
<td>10</td>
<td>Question 1: Provide less than optimal care due to pressures from administrators or insurers to reduce costs. Question 2: Witness healthcare providers giving “false hope” to parents.</td>
<td>1.04</td>
</tr>
</tbody>
</table>

<sup>a</sup>Range = 0–4

<sup>b</sup>NAS clinical scenario.

Of note by the principal investigator was the identification that the sample participants frequently experienced the clinical scenarios reflective of care of the newborn with NAS, but these neonatal nurses did not score these scenarios to be highly intensive during their self-reflection process in completing the moral distress instrument. The level of disturbance (intensity) with a score of 0 identifies no disturbance occurs, whereas a score of 3 and 4 identifies that the scenario to a great extent disturbs the participant.
Table 5

*Top-10 Clinical Scenarios: Intensity of Moral Distress*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item</th>
<th>Mean Intensity&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Question 17: Work with nurses or other providers who are not as competent as the child’s care requires.</td>
<td>3.33</td>
</tr>
<tr>
<td>2</td>
<td>Question 21: Work with levels of nurses or other care provider staffing that I consider unsafe.</td>
<td>3.15</td>
</tr>
<tr>
<td>3</td>
<td>Question 1: Provide less than optimal care due to pressures from administrators or insurers to reduce costs.</td>
<td>3.11</td>
</tr>
<tr>
<td>4</td>
<td>Question 9: Assist a physician who in my opinion is providing incompetent care.</td>
<td>3.04</td>
</tr>
<tr>
<td>5</td>
<td>Question 10: Be required to care for patients I don’t feel qualified to care for.</td>
<td>3.00</td>
</tr>
<tr>
<td>6</td>
<td>Question 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.</td>
<td>3.00</td>
</tr>
<tr>
<td>7</td>
<td>Question 18: Witnesses diminished patient care quality due to poor team communication.</td>
<td>3.00</td>
</tr>
<tr>
<td>8</td>
<td>Question 11: Witness medical students perform painful procedures on patients solely to increase their skills.</td>
<td>2.93</td>
</tr>
<tr>
<td>9</td>
<td>Question 12: Providing care that does not relieve the child’s suffering because the physician fears that increasing the dose of pain medication will cause death.</td>
<td>2.89</td>
</tr>
<tr>
<td>10</td>
<td>Question 4: Initiate extensive life-saving actions when I think they only prolong death.</td>
<td>2.81</td>
</tr>
</tbody>
</table>

<sup>a</sup>Range = 0–4.

**Level of Moral Distress**

The level of moral distress scores (Frequency × Intensity) range from 0 to 16. Where the score of 0 reflects no moral distress is experienced and the score of 16 is the highest level of moral distress experienced. Clinical scenarios that have never been experienced (frequency) or are not perceived to be distressing (level of disturbance/intensity) do not contribute to the participant’s level of moral distress or to their MDS-R composite score.

The mean level of moral distress scores for the sample participants ranged from 0.07 to 5.07. The clinical scenario with the highest mean level of moral distress score of 5.07 was
Clinical Scenario Question 17: “Works with nurses of other providers who are not as competent as the child’s care requires.” The clinical scenario means for level of moral distress are listed below in Table 6. Levels of moral distress ranged from 3.15 to 5.07.

Table 6

Top-10 Clinical Scenarios: Level of Moral Distress (Frequency × Intensity)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Item</th>
<th>Mean Level of Moral Distress(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Question 17: Work with nurses or other providers who are not as competent as the child’s care requires.</td>
<td>5.07</td>
</tr>
<tr>
<td>2</td>
<td>Question 21: Work with levels of nurses or other care provider staffing that I consider unsafe.</td>
<td>4.70</td>
</tr>
<tr>
<td>3</td>
<td>Question 3: Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the child.</td>
<td>4.48</td>
</tr>
<tr>
<td>4</td>
<td>Question 25: Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.(^b)</td>
<td>4.15</td>
</tr>
<tr>
<td>5</td>
<td>Question 23: Caring for newborns with NAS is time consuming and takes away time that should be affording to critically ill preterm infants.(^b)</td>
<td>4.07</td>
</tr>
<tr>
<td>6</td>
<td>Question 4: Initiative extensive life-saving actions when I think they only prolong death.</td>
<td>3.74</td>
</tr>
<tr>
<td>7</td>
<td>Question 22: Caring for newborns with NAS is not professional satisfying.(^b)</td>
<td>3.30</td>
</tr>
<tr>
<td>8</td>
<td>Question 10: Be required to care for patients I don’t feel qualified to care for.</td>
<td>3.26</td>
</tr>
<tr>
<td>9</td>
<td>Question 1: Provide less than optimal care due to pressures from administrators or insurers to reduce costs.</td>
<td>3.22</td>
</tr>
<tr>
<td>10</td>
<td>Question 20: Watch patient care suffer because of a lack of provider continuity.</td>
<td>3.15</td>
</tr>
</tbody>
</table>

\(^a\)Range = 0–16

\(^b\)NAS clinical scenario.

Of the four clinical scenarios regarding NAS (Questions 22–25), two of the NAS scenarios—Question 25: “Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by caregivers” and Question 23: “Caring for newborns with NAS is time consuming and takes away time that
should be afforded to critically ill preterm infants”—were in the top five as causing moral
distress. For Question 25, the mean level of moral distress was 2.26 \((SD = 1.26; n = 27)\). For
Question 23, the mean level of moral distress was 1.85 \((SD = 1.68; n = 27)\). One other scenario
for NAS, Question 22: “Caring for newborns with NAS is not professionally satisfying,” was
identified within the top 10 producing moral distress in this sample group with a mean of 1.85
\((SD = 1.51; n = 27)\).

**Additional Statistical Analysis of Data**

The principal investigator wished to explore the possibility that neonatal nurses caring for
newborns with NAS whose mothers used illicit substances during pregnancy experienced moral
distress. Figures 1 through 4 illustrate the responses to the NAS Clinical Scenario Questions 22
through 25 within the instrument in a histogram. Results revealed that interacting with substance
misusing mothers and caregivers produced the highest levels of moral distress among the
identified NAS scenarios within the sample group of study participants.

![Figure 2](image.png)

*Figure 2. Question 23: Caring for a newborn with NAS is time consuming and takes away time that should be afforded to critically ill preterm infants. F = frequency; D = intensity; M = moral distress.*
Figure 3. Question 24: My critical care skills are wasted on caring for newborns with NAS. F = frequency; D = intensity; M = moral distress.

Figure 4. Question 25: Interacting with substance misusing mothers/parents is often negative in nature due to mistrust and addictive behaviors demonstrated by caregivers. F = frequency; D = intensity; M = moral distance.
Also of interest was the possibility for any correlational relationship between years caring for newborns with NAS, as well as years working in the NICU and levels of frequency, intensity, and moral distress, respectively. Tables 7 and 8 demonstrate the lack of clinical significance for the \( p \) value. The principal investigator’s testing did not reach a \( p \) value of \(< .05\) and therefore, no significant relationship was established with regards to years working in a NICU or years caring for newborns with NAS.

Table 7

Correlations Between Either Frequency, Intensity, or Moral Distress of Selected Scale Items and Subjects’ Years Caring for Newborns With NAS

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency ( r/p )</th>
<th>Intensity ( r/p )</th>
<th>Moral Distress ( r/p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 22: Caring for newborns with NAS is not professional satisfying.</td>
<td>.275/.165</td>
<td>.088/.661</td>
<td>.265/.181</td>
</tr>
<tr>
<td>Question 23: Caring for newborns with NAS is time consuming and takes away time that should be affording to critically ill preterm infants.</td>
<td>.265/.181</td>
<td>.056/.783</td>
<td>.258/.194</td>
</tr>
<tr>
<td>Question 24: My critical care skills are wasted on caring for newborns with NAS.</td>
<td>.189/.346</td>
<td>-.095/.639</td>
<td>.096/.633</td>
</tr>
<tr>
<td>Question 25: Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.</td>
<td>-.108/.592</td>
<td>-.201/.314</td>
<td>-.135/.502</td>
</tr>
</tbody>
</table>

The principal investigator included one open-ended question to allow participants to reflect upon their responses within the demographic questionnaire. Not all participants responded to this question but of those that did, the principal investigator embraced and appreciated the honesty as well as the identification of moral distress these nurses are experiencing.
Table 8

*Correlations Between Either Frequency, Intensity, or Moral Distress of Selected Scale Items and Subjects’ Years in the NICU*

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency $r/p$</th>
<th>Intensity $r/p$</th>
<th>Moral Distress $r/p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 22: Caring for newborns with NAS is not professional satisfying.</td>
<td>.285/.149</td>
<td>.108/.593</td>
<td>.202/.313</td>
</tr>
<tr>
<td>Question 23: Caring for newborns with NAS is time consuming and takes away time that should be affording to critically ill preterm infants.</td>
<td>.214/.283</td>
<td>.039/.845</td>
<td>.161/.422</td>
</tr>
<tr>
<td>Question 24: My critical care skills are wasted on caring for newborns with NAS.</td>
<td>.310/.115</td>
<td>.077/.702</td>
<td>.269/.175</td>
</tr>
<tr>
<td>Question 25: Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.</td>
<td>-.127/.527</td>
<td>-.121/.549</td>
<td>-.046/.818</td>
</tr>
</tbody>
</table>

Participant responses are included below.

Participant 1 wrote: “I prefer the quick pace of critical care. I dread going into work and seeing if I have a NAS patient (no RN satisfaction). I don’t like the monotony and repetition of NAS kids.”

Participant 16 wrote: “Sometimes I feel useless trying to comfort NAS babies. I also have trouble dealing with parents who are manipulative and/or angry.”

Participant 19 wrote the following:

A 24-weeker is usually less stressful to me, they aren’t constantly screaming. I hate putting down a baby to cry to take care of another baby in my assignment. Parents can see how sick a tiny baby is—but they do not know what is wrong with the NAS baby—it looks like we just let them cry.
Participant 21 wrote: “It is stressful to nurses to have a baby with lines, etc. . . . and, a NAS baby.”

Participant 23 wrote: “I prefer less high-tech stress. I find caring for and teaching parents about NAS rewarding.”

Participant 25 wrote the following:
As a parent of a child with drug addiction I only want to help these babies. I feel they are the victims of awful circumstances. In a perfect world there could be a special unit for these families with drug addiction but the world is not perfect so we have to do the best we can.

**Summary**

The principal investigator through the use of a pilot study explored if moral distress is experienced by neonatal nurses caring for newborns with NAS whose mothers used illicit substances during pregnancy. The use of a descriptive design allowed the principal investigator to describe the phenomena of moral distress within the care of newborns with NAS. The results of this research study revealed that indeed, neonatal nurses experience moral distress to varying degrees within the NICU setting. Caring for newborns with NAS within this sample participant group produced moral distress especially when these nurses interacted with substance misusing mothers and caregivers. Although not all neonatal nurses caring for newborns with NAS and/or interacting with substance misusing caregivers experienced moral distress the review of the data is imperative for identifying strategies to support nurses universally to prevent/address moral distress in the NICU.

Three categories of root causes for moral distress have been identified in the literature: clinical situations, factors internal to the health care professional, and external constraints in a
particular situation or health care environment (Corley, 2005; Hamric et al., 2012). Root causes originating from clinical situations generate moral distress among critical care nurses. Internal constraints refer to the personal characteristics of the nurse, where he/she may feel powerless or has not developed assertiveness communication techniques limiting their ability to vocalize their concerns/opinions in a distressing situation. External constraints are born through the health care facility whether it is a philosophy or “culture” not conducive to the nurse’s moral standing or a perception that care may be compromised due to cost/staffing constraints, as well as following family wishes for fear of retaliation/litigation when not in the best interest of the patient (Elpern et al., 2005).

While the NAS clinical scenarios produced moral distress in this sample the principal investigator would be remiss if a description of the other scenarios were not analyzed for triggering moral distress in this sample of participants. Table 9 is representative for Clinical Scenario 17: “Works with nurses or other providers who are not as competent as the child’s care requires,” was the leading scenario causing intensity of moral distress as well as the overall level of moral distress. This scenario was identified as the third most experienced within the frequency parameter. Clinical Scenario 21: “Works with levels of nurses or other care provider staffing that I feel is unsafe,” was the second highest producer of overall moral distress as well as the intensity marker. This question also ranked as the fourth top scenario experienced through frequency of moral distress. Clinical Scenario 3: “Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the child,” was the third leading cause of overall moral distress, and the second most experienced scenario but this experience was not appreciated to be intensely experienced among this sample of neonatal nurses.
Table 9

*Clinical Scenario 17*

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3 (11.1%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>1</td>
<td>15 (55.5%)</td>
<td>1 (3.7%)</td>
</tr>
<tr>
<td>2</td>
<td>3 (11.1%)</td>
<td>1 (3.7%)</td>
</tr>
<tr>
<td>3</td>
<td>5 (18.5%)</td>
<td>13 (48.1%)</td>
</tr>
<tr>
<td>4</td>
<td>1 (3.7%)</td>
<td>12 (44.4%)</td>
</tr>
</tbody>
</table>

Neonatal intensive care units are high-intensity environments where technology and a variety of patient populations may be morally and emotionally burdensome to the neonatal nurse. Caring for a diverse population of patients which now includes newborns with NAS as well as interacting with parents of addiction has not been common place to this health care setting. The limited evidence within bodies of research suggests that neonatal nurses are at risk for experiencing moral distress when caring for newborns with NAS and may benefit from increased awareness and identification of strategies to prevent and treat this phenomenon of distress.
CHAPTER FIVE: DISCUSSION

Maternal substance use/misuse during pregnancy may lead to adverse neonatal outcomes, including NAS. The incidence of NAS is directly related to the increasing rates of maternal misuse/use of both illicit and licit substances during her pregnancy. The care of the newborn with NAS is one of the most challenging conditions for the neonatal nurse. Management of these newborns requires knowledge that has not been traditionally partnered within care in the NICU. Understanding addiction, addictive behaviors, and the psychological needs of substance abusing parents has not been commonplace in the NICU setting. Caring for the newborn with NAS and interacting with addicted mothers/parents may present ethical and moral dilemmas for the neonatal nurse. Identifying neonatal nurses’ perceptions, including moral beliefs, and specific educational needs regarding addiction and chemical dependence may provide specific creation for interventions to promote the nurses’ mental well-being while providing a positive interaction between the neonatal nurse and mother.

As doctors of nursing practice, our role encompasses organizational changes to remove barriers to care and improve patient outcomes. Structural stigmata are barriers to care; no one in health care will dispute that fact. These stigmata restrict assistance options available to patients/clients that are categorized as part of a stigmatized group; the principal investigator here is addressing the vulnerable group of women who misuse/abuse substances and struggle with addiction (Fonti et al., 2016; Livingston et al., 2011). Research has demonstrated that when these mothers feel like they are not being judged and interactions are humane and kind they bond more easily with their newborns giving them confidence to strengthen the attachment process and succeed in competently caring for their newborn (Catlin, 2012; Marcellus, 2014; Muhuri & Gfoerer, 2009).
Discussion of Findings

Neonatal Nurses and Moral Distress

While moral distress has been studied in nurses for close to 20 years, emerging research in the last 5 years or so has focused on moral distress in the NICU setting including the clinical scenarios that may be triggers to the development of moral distress. Nurses who experience moral distress may lose their capacity for caring, avoid patient contact, and consider leaving the nursing profession (American Association of Critical Care Nurses, 2008). Moral distress has implications for job dissatisfaction, retention, and may negatively impact the delivery of safe/competent care to our patients/clients (Cavaliere et al., 2010; Varcoe, Pauley, Webster, & Storch, 2012; Wiegand & Funk, 2012). Moral distress has become a growing concern in the NICU setting due to the complexity and fragility of neonates; as well as the new health care dilemma regarding addiction. Maternal addiction and newborns with NAS has reached epidemic proportions in the United States and across the globe (McQueen & Murphy-Oikonen 2016; Patrick et al., 2015; Prentice, Janvier, Gillam, & Davis, 2016; Tolia, Patrick, Bennett, & Monica, 2015).

Within the sample participants there were varying levels of moral distress related to the identification of the clinical scenarios proposed within the MDS-R instrument. Moral distress is a subjective phenomenon; therefore not every nurse will experience the same degree of moral distress within every clinical scenario described within the instrument. This statement holds true for this purposive sample of participants.

NAS Clinical Scenarios and Moral Distress

The NAS clinical scenarios were in the top 10 scenarios that produced moral distress for this group of neonatal nurses when compared to all 25 of the clinical scenarios. Also of note was
the identification that interacting with substance misusing mothers happened frequently among this sample but not intensely. Neonatal nurses may experience conflict in developing rapport with mothers suffering from addiction or recovery due to the caregiver’s lack of understanding and knowledge regarding addiction (Fraser et al., 2007; Maguire et al., 2012; Shaw et al., 2016). Without the ability to understand and empathize with the addicted mother/parents, neonatal nurses may experience frustration, and anger towards the mother whose infant is suffering as a result of maternal addictive behaviors (Fraser et al., 2007). The neonatal nurse who lacks empathy may be unintentionally contributing to failure of establishment of the mother/infant bond (Fraser et al., 2007). Nurses who lack an understanding of maternal experiences with addiction and recovery may reinforce negative behaviors such as irregular visiting patterns and lack of trust (Cleveland & Bonugli 2014; Cleveland & Gill, 2013; Hill, 2013).

The NICU nurse must contend with the personal ethical obligations to provide the best care to the newborn experiencing NAS while providing support and guidance to the addicted mother/parents (Maguire et al., 2012). Absence of the mother, the severity of the newborn’s withdrawal, and complexity of care may all contribute to distress, frustration, and moral dilemmas for the neonatal nurse (Fraser et al., 2007; Murphy-Oikonen et al., 2010).

The neonatal nurse generally speaking expresses genuine empathy when caring for the medically fragile newborns and supports those caregivers. This sample population demonstrated an interest in caring for the 24-week preterm neonate over the care of the newborn with NAS when given a choice of patient assignments; the majority of these participants also believe that these newborns should not be cared for in the NICU but rather a specialized unit for newborns experiencing withdrawal. The views of these sample participants have been supported in the literature with earlier studies within the last 5 years exploring feelings, perceptions, and
interactions of neonatal nurses and addicted mothers/caregivers (Cleveland & Bonugli, 2014; Cleveland & Gill, 2013; Hill, 2013; Maguire et al., 2012; Shaw et al., 2016).

Recent studies have indicated that there are strained relationships between the neonatal nurse and the addicted mother (Fraser et al., 2007; Maguire et al., 2012; Murphy-Oikonen et al., 2010). In each of these studies, neonatal nurses expressed genuine caring towards these newborns and their desire to provide quality care to the newborns during their withdrawal, but expressed frustration and moral distress when they were not able to console or comfort the newborn. Within previous bodies of research other themes which were identified by the participants included beliefs that newborns with NAS did not require specialized care in the NICU and that the environment is too busy and overstimulating for those newborns. Some nurses verbalized their beliefs that newborns with NAS are not sick enough to warrant critical care as well as the frustration they felt when the babies were inconsolable with high pitched crying. These babies are difficult to comfort leaving the neonatal nurse with feelings of frustration and burnout when caring for the newborn with NAS (Murphy-Oikonen et al., 2010).

**Demographic Variables and Influence on Moral Distress**

Several studies during the past decade have explored specific demographic characteristics and their association to trigger feelings of moral distress. Some studies have established a relationship where nurses who are older, working with more experience, and who have been employed in a specific position for several years are frequently confronted with moral distress (Mobley, Rady, Verheijde, Patel, & Larson, 2007; Rice, Rady, Hamrick, Verheijde, & Pendergast, 2008); while other researchers did not identify a specific association or correlational relationship (Cavaliere et al., 2010; Corley et al., 2001; McAndrew, Leske, & Garcia, 2011; Pauley, Varcoe, & Storch, 2009). Within the same or similar bodies of research there were
variations regarding the association for intensity of moral distress within the previously
described demographic variables (Cavaliere et al., 2010; Kain, 2007; Sannino, Gianni, Re, &
Lusignan; Yam, Rossiter, & Cheung, 2001).

Nurses experienced moral distress more frequently when they perceived a negative
ethical climate in the unit in which they worked, when they felt obliged to perform tasks or carry
out provider orders that were perceived to not be in the best interest of the patient; especially
when care was recognized to be futile (Cavaliere et al., 2010; Corley et al., 2001; Corley et al.,
2005; Ganz & Berkovitz, 2012; Hamric & Blackhall, 2007; McAndrew et al., 2011; Pauley et al.,
2009). Nurses experienced a higher intensity of moral distress when they were exposed to
negative ethical climates such as working with incompetent staff, futile care, and uncooperative
behaviors of a patient and/or family member (Cavaliere et al., 2010; Corley et al., 2005;
McAndrew et al., 2011; Pauley et al., 2009; Rice et al., 2008). Within this sample, the neonatal
nurses’ top three clinical scenarios producing moral distress were working with incompetent
staff, inadequate staffing assignments as well as providing care perceived to be futile.

**Corley’s Theoretical Framework of Moral Distress**

The theoretical framework chosen by the principal investigator despite being created over
10 years ago remains efficacious in describing moral distress among health care professionals;
especially critical care nurses. Dr. Corley began her research on critical care nurses in the mid-
1990s. Much of Dr. Corley’s research parallels Jameton’s research on nursing and moral distress.
Corley’s research became the foundation for her proposed theory of moral distress. Corley
theorized that moral distress occurs among nurses when nurses know what is best for the patient
but his/her course of action may conflict with the organization, his/her colleagues, the family
structure or society as a whole.
Therefore, moral distress may occur when nurses’ values and perceived obligations are not compatible with structural views or the work environment (Corley, 2002). Stated simply, Corley identifies the presence of moral distress when a nurse either is unable or perceives he/she is unable to advocate for his/her patient. Moral distress occurs as both an internal and external context. The external context includes the work environment, lack of leadership or physician support and facility framework limitations. The internal context of moral distress is related to the professional nurse’s psychological responses, for example, does the nurse develop feelings of low self-esteem, powerlessness to advocate for the patient, and has stress begun to affect his/her personal/professional life.

Moral distress occurs when the nurse experiences feelings or perceives that his/her personal integrity is being threatened. Corley (2002) recognized that moral distress can be devastating to nurses leading to burn out, leaving the profession of nursing altogether and may have a negative impact on patient care. Corley’s theory is based on two foundations: (a) the science and art of nursing is one of a moral profession; and (b) nurses because of who they are, become moral agents. Corley’s framework of moral distress guided this study addressing moral distress among this sample group of neonatal nurses caring for newborns with NAS whose mothers used illicit substances during pregnancy. Maternal addition and lack of knowledge among nurses regarding addiction may limit them from behaving in accordance with their conceptual ideals and ethical moral beliefs. Corley’s framework addresses internal, external, and the subjectivity of moral distress among critical care nurses.

**Limitations of the Study**

Although the sample participants had a greater than 50% response rate with 27 of the 44 available nurses participating; the sample size is small. Due to the small sample size correlational
statistics between demographic characteristics and relationship to moral distress were not statistically meaningful. Of note, when large sample sizes were present in studies researchers noted varying results for correlational relationships for demographic characteristics and levels or presence of moral distress.

Despite that participation was anonymous and completely voluntary; the principal investigator postulated that lack of participation from some of the neonatal nurses may have been due to perception that moral distress is not important or because engaging in completing the instrument requires self-reflection. This self-reflection may validate that indeed, the participant is experiencing moral distress but he/she is not prepared to address the moral conflicts they are experiencing. Therefore, the data analyzed mirrors the views of those neonatal nurses who chose to participate only.

Characteristics reflected within the demographic findings may also have limited the study results not allowing for generalization to larger sample population. The neonatal nurses were from a single health care facility within a specific geographic area, similar in age, years working with newborns with NAS, and levels of nursing education. Within the studied setting this NICU may experience 50% of the census of patients with a diagnosis of NAS at any given time. Other NICUs regionally may not experience the high census of these newborns possibly altering participant group responses/perceptions for levels of moral distress and the clinical scenarios triggering the cascade of moral distress. Also of note the principal investigator was employed as a neonatal nurse practitioner within the healthcare facility and her presence/role may be seen as a limitation.
Parental perspectives on the negative interactions or negative societal judgements due to addiction are an important component of caring for the newborn with NAS but are beyond the scope of this study.

**Implications for Nursing Practice and Education**

Newborns with NAS are frequently cared for by neonatal nurses. Neonatal nurses may experience conflict in developing a rapport with mothers suffering from addiction or recovery due to the professional caregiver’s lack of understanding, empathy, and knowledge regarding addiction (Fraser et al., 2007; Maguire et al., 2012; Raeside, 2003; Shaw et al., 2016). Without the ability to understand and empathize with the addicted mother, nurses may experience frustration and anger toward the mother whose newborn is suffering as a result of their addictive behaviors (Fraser et al., 2007). The neonatal nurse who lacks empathy may be unintentionally contributing to the failure of establishment of the mother/infant attachment (bonding) process (Fraser et al., 2007). Nurses who lack an understanding of maternal experiences with addiction and recovery may reinforce negative behaviors such as regular visiting patterns and lack of trust (Cleveland & Bonugli, 2014; Cleveland & Gill, 2013; Hill, 2013). The NICU nurse must contend with personal ethical obligations to provide the best possible care to the newborn experiencing NAS while providing support and guidance to the addicted mother/caregivers (Maguire et al., 2012). Recent studies have identified a lack of empathy and sensitivity towards parents who are struggling with addiction (Maguire et al., 2012; Murphy-Oikonen et al., 2010). Nursing management of NAS requires knowledge not traditionally associated within the NICU, such as the physiological changes that occur as an integral part of the addiction process, social risk behaviors, and psychological needs of parents with substance misuse or addictive complexities.
Nurses who care for and interact with mothers and newborns exposed to illicit substances face complex challenges on a daily basis. Important identification of interventions for alleviating moral distress among these professional care givers is paramount. Education is warranted regarding triggers of addiction, chemical changes that occur within the addiction patients’ brain/physiology, and collaboration among the interprofessional health care team members. Ongoing education through nursing, addiction counselors, social workers, and community leaders provides for a unique opportunity to educate health care professionals and more importantly develop a comprehensive care model for childbearing women suffering from addiction.

In this health care organization newborns with NAS will continue to be cared for in the NICU. Sample participants overwhelming identified that these newborns need to be cared for in a specialized unit specifically to meet the needs of the newborns and support the addicted parent/parents. The participants also spoke to the fact that these newborns cry incessantly and cannot be soothed easily making it emotionally difficult to put the baby down while crying in their crib in order to attend to another patient within their assignment.

The principal investigator had previously suggested the formation of a “cuddle companions” service to assist in the care of these newborns. Nursing leadership within the maternal child division of the sample hospital were responsible for the formation of such a system. This program includes a specific set of volunteers who are trained to understand NAS and how to comfort and settle these complex newborns. Companions will be able to interact with this specific set of newborns with parental consent and will be available on call 24/7 when newborns with NAS are admitted to the NICU. Scheduling someone to be with the newborn that is withdrawing for most hours of the day will assist the neonatal nurse in the soothing and
comfort care aspects that have been frustrating for them because there is not enough time to sit with these newborns. Another important function of this companion system is enhancing interactions between the parents and the neonatal nurses. A daily schedule was recommended by the principal investigator to be formulated and agreed upon between staff and parents to ensure that a soothing caregiver whether parent, nurse or cuddle companion is available for the newborn with NAS.

Longitudinal studies are lacking in the literature regarding following critical care nurses after moral distress has been identified. After the cuddle companion program has been in place for a year the principal investigator would like to return to this same NICU setting after Institutional Review Board approval is granted and again through anonymous, voluntary participation have the MDS-R moral distress instrument completed again. The principal investigator postulates that the introduction to this new model of care will decrease the frequency and level of moral distress noted in the initial analysis of data. A cuddle companion would be assigned to a specific newborn to assist in the consoling while providing the identified non-pharmacologic therapies such as rocking, soft voices, swaddling, and cuddling of the newborn experiencing withdrawal.

One of the keys to addressing moral distress is to understand how time and evolving patient care populations along with technological advances alters the workplace environment for neonatal nurses. Nurses who do not alleviate or cope with their distress may indeed leave the NICU for less stressful patient care environments. Interventions related to care and removal of barriers for effective work flow to care will enhance patient care and professional satisfaction for the NICU nurse.
Implications for Nursing Leadership and Policy

Sources of moral distress may involve personal, interprofessional, and environmental conflicts for the critical care nurse. Creating a work environment that is healthy for both the nurse and patient will promote positive interactions between the nurse and patient/caregivers and improve patient outcomes. The American Association of Critical Care Nurses has a very clear call to action and policy position for addressing moral distress within a healthcare setting. This policy speaks to the self-reflection of the staff nurse, what triggers he/she feels promotes moral distress, and implementation of strategies to remove distress through education, counseling, and development of guidelines for the care of newborns with NAS and end of life care for the critically ill neonate.

Development of medical and nursing guidelines for the care of these two vulnerable/fragile populations of newborns will increase consistency in care, reinforce education in caring for these newborns and allow neonatal nurses to be a voice in developing and implementation of the new policy care guidelines. Consistency in accepted care guidelines may decrease feelings of newborns not being cared for competently.

Nursing leadership within the health care organization should recognize that neonatal nurses are experiencing moral distress and develop ongoing strategies to assist in educating, supporting, and counseling these nurses when moral distress occurs for them either individually or as a team after a distressing event occurs within the NICU. Following the AACN guidelines in regards to the implementation of employee assistance programs, debriefings, and counseling sessions may alleviate degrees of distress for the critical care nurses. The identification of moral distress and then providing ongoing support and tools to manage distress is important to prevent burnout and decreases negative interactions between nurses and patients, families, and other
health care colleagues. Promotion of a healthy work environment should be a priority within all frameworks of administrative leadership in all health care facilities.

**Implications for Future Research**

Moral distress develops when a nurse perceives their ethical standards or values are not shared with or do not align with other health care team members (Epstein & Delgado, 2010). Research has demonstrated that there are several factors within clinical scenarios that may lead to moral distress for neonatal nurses. One such clinical scenario is caring for newborns with NAS and interacting with parents suffering from addiction. Doctor of nursing practice-prepared nurses have the ability to replicate this study on a larger scale by seeking responses from the professional organizations that serve the neonatal nursing population. These organizations through their education and policy committees would be able to develop a framework with a standardized approach for care of newborns with NAS, techniques for improving communication during interactions with addicted parents as well as resources for neonatal nurses to assist them when dealing with a sensitive or morally distressing issue.

Research is also needed in regards to where to appropriately care for these newborns; clearly the NICU environment is too intensive for these newborns that need a quiet, soothing setting for care. Addressing maternal addiction and removing barriers to care will also improve health care of both the mother and her unborn child. Access to care and to addiction counseling therapies will surely help to decrease the epidemic of newborns suffering with NAS born annually in the United States and abroad.

**Summary**

Defining moral distress and developing interventions to address and treat these negative experiences is imperative to the physical and mental health of every neonatal nurse. Longitudinal
studies may provide valuable insight on clinical scenarios in regards to real-life frequency, intensity, as well as over levels of moral distress. This information provides a framework to formulate an ethical climate of care for both the neonatal nurse and the patients/families he/she may care for suffering from addiction etiologies.

**Conclusion**

The prevalence of maternal substance misuse in the United States continues to rise annually. Patterns of change due to exposure now for poly substance misuse makes it difficult to care for the newborns exposed who develop NAS when they are born. The increased incidence of NAS and the complexity of care in NICUs partners with an associated increase in health care costs mostly funded by state Medicaid programs. Innovations to care will improve access of care for mothers suffering with addiction, their newborns and our health care system.

Primary prevention strategies are needed to address this epidemic and to decrease the incidence of NAS. Creating a compassionate, caring, and non-judgmental environment for the women of childbearing age is important. A positive health care environment where mothers do not feel stigmatized and guilty because of their addiction improves health care for both her and her unborn child and fosters positive attachment to the newborn in the postpartum period (Hill, 2013; Hogan, 2007).

Caring for newborns with NAS requires an understanding of addiction, how to interact with caregivers suffering from addiction as well as time management to care for all assigned patients within the NICU. Clearly, care for newborns with NAS is an ethically charged scenario that may produce moral distress for some neonatal nurses. If the neonatal nurse is experiencing feelings of distress morally from their encounters with addicted mothers then they are
overwhelmed and frustrated because they cannot adequately care for the patients within their daily NICU assignments as evidenced within this present body of research.

Through nursing research; the identification of nurses’ perceptions, including beliefs, biases, and specific educational needs for providing effective nursing care for pregnant women and parenting women who misuse illicit substances will improve the quality of care by providing a scientific foundation for clinical practice. Scholarship through nursing research provides our profession with new knowledge relevant to developing frameworks of care for both our patients and fellow nursing colleagues.

Moral distress as described by Dr. Mary Corley occurs when personal, professional, or environmental constraints pose ethical dilemmas to the critical care nurse. Through this body of research, clinical scenarios of working with incompetent staff/colleagues, interacting with substance misusing mother and futility of end of life care have been described as triggers within this sample group of research participants. When moral distress is not addressed critical care nurses may experience moral residue related to emotional exhaustion and depersonalization both for themselves and the patients in which they care for as well as burnout (Oh & Gastmans, 2015).

The finding concerning the participants perception that colleagues were not competent to care for certain critical patients is concerning (low quality of care) as a cause of moderate to high distress has also been reported in Dr. Corley’s work (Corley, 2002; Corley et al., 2005). Several studies have demonstrated that moral distress affects nurse, leading to a decreased motivation and reduction of the ability to provide optimal patient care. Furthermore, nurses tend to escape from fostering positive relationships between patients and family members quite possibly losing their art of caring. The experiences of moral distress is accentuated when lack of resolution
occurs and burnout ensues without lack of support, mentoring/counseling because of institutional constraints, interprofessional conflicts and legal obligation towards care (Cavaliere et al., 2010; Corley et al., 2001; Corley et al., 2005; Gutierrez et al., 2005).

Although morally distressing experiences may not be frequent, they have a significant impact on the neonatal nurse when they do occur. Some nurses may experience moral distress even when the scenario has passed but their conflict is unresolved or they are again exposed to a scenario without previous resolution, as seen with moral residue or a crescendo effect (Pauley et al., 2009). Evidence-based practices and interventions to alleviate moral distress and moral residue from the work environment is imperative for a critical care nurse. Moral distress and residue may negatively impact one’s psycho-emotional responses and nursing practice by internalizing the problem. It is manifested by guilt, shame and self-blame. Nurses who experience moral distress and moral residue and continue to work tend to withdraw from patient care and become distrustful of their professional colleagues (Gutierrez et al., 2005).

Several studies have demonstrated that moral distress affects nurses, leading to a decreased motivation, and reduction of the ability to provide optimal patient care. Furthermore, nurses tend to escape from fostering positive relationships between patients and family members quite possibly losing their art of caring. The experiences of moral distress is accentuated when lack of resolution occurs and burnout ensues without lack of support, mentoring/counseling because of institutional constraints, interprofessional conflicts and legal obligation towards care (Corley et al., 2001; Corley et al., 2005; Cavaliere et al., 2010; Epstein et al., 2009; Gutierrez et al. 2005).

Reviewing the research literature and conducting this body of research uncovered the gap in both understanding moral distress for neonatal nurses as well as the lack of knowledge
regarding maternal addiction therefore hindering therapeutic interactions and/or relationships.

Neonatal nurses are the key primary caregivers not only for the newborn with NAS but play an important role in “mothering” the woman who is suffering from addiction and guilt. Empowering mothers in a non-judgmental, caring and empathetic environment will foster trust and interactions will support the promotion of attachment between mother and child.

Neonatal nurses are important voices for identification and strategies to combat moral distress, guide policies and establish evidenced based protocols for consistent care for newborns with NAS and their parents. Neonatal nurses serve as the liaison for parents and newborns preparing to transition to home and community outpatient services in order to facilitate safe, loving home environments for both the mother and newborn with NAS.
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doi:10.1080/00048670903107583


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Figure 1 Model for a theory of moral distress
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Appendix B: Informational poster

**Neonatal Abstinence**

**Study Purpose:**
Study which will explore the presence of moral distress among neonatal nurses caring for newborns with NAS in the NICU setting.

**Participation:**
- Anonymous and voluntary
- Level III NICU nurses

Every 25 minutes a baby is born with NAS.

**SIGNIFICANCE TO NEONATAL NURSING**
Understanding addiction and interacting with substance misusing parents have not been common place in the NICU setting until now. Early identification of moral distress is the first step in preserving the self-integrity of the neonatal nurse, as well as assuring safe and appropriate care for the newborn with NAS.

Valarie Artigas, NNP-BC, MSN
valarie.artigas@uconn.edu
Appendix C: Introductory Letter

Dear Neonatal Nurse Colleague,

My name is Valarie Artigas and I am a Doctor of Nursing Practice student at the University of Connecticut. In partial fulfillment for completing my degree, I am conducting a pilot study to explore if moral distress is experienced by neonatal nurses when caring for newborns with neonatal abstinence syndrome (NAS) whose mothers used illicit substances during pregnancy. The purpose of the research study is to understand the moral conflicts and moral distress that may occur during care of the newborn with NAS.

The body of research thus far has explored the presence of moral distress at end of life care and futile care measures in neonatal nursing when caring for our fragile patient population. As neonatal health care professionals we realize the epidemic proportions of maternal addiction which results in newborns being born exhibiting varying degrees of substance withdrawal.

As a neonatal nurse you are being asked to partake in this voluntary and anonymous study. Your input and self-reflection responses will contribute greatly to understanding how neonatal nurses feel when caring for the newborn with NAS. Your participation will involve completion of a demographic questionnaire and the moral distress scale. Risks of participation in the study are minimal. If during self-reflection a question is of a sensitive nature you may defer answering that question and continue on with your other responses. The attached questionnaire and moral distress scale will take approximately 25 minutes to complete. All responses will be anonymous and confidential. Please do not place your name on any of the demographic or moral distress scale forms. If you wish to participate please complete and return your survey to the secured NICU response box found in the staff mailbox room.

While there is no direct benefit to you from your voluntary participation in the study, understanding how neonatal nurses feel during care of the NAS newborn may improve identification and intervention configurations to alleviate moral distress in the Neonatal Intensive Care Unit (NICU). You may choose not to participate in the study if you so desire without penalty. Results of the study may be published in scholarly journals or be presented at professional conferences. A small box of chocolates is provided to express my appreciation for your time and support. If you have any questions please feel free to contact me at: valarie.artigas@uconn.edu.

Sincerely,
Valarie Artigas, MSN, NNP-BC
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.

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<tr>
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<th>Frequency</th>
<th>Level of Disturbance</th>
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<tr>
<td></td>
<td>Never</td>
<td>Very Frequently</td>
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<tr>
<td>1.</td>
<td>Provide less than optimal care due to pressures from administrators or insurers to reduce costs.</td>
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</tr>
<tr>
<td>2.</td>
<td>Witness healthcare providers giving “false hope” to parents.</td>
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<tr>
<td>3.</td>
<td>Follow the family’s wishes to continue life support even though I believe it is not in the best interest of the child.</td>
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<td>4.</td>
<td>Initiate extensive life-saving actions when I think they only prolong death.</td>
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<tr>
<td>5.</td>
<td>Follow the family’s request not to discuss death with a dying child who asks about dying.</td>
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<tr>
<td>6.</td>
<td>Carry out the physician’s orders for what I consider to be unnecessary tests and treatments.</td>
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<tr>
<td>7.</td>
<td>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.</td>
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<td>8.</td>
<td>Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.</td>
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<tr>
<td>9.</td>
<td>Assist a physician who in my opinion is providing incompetent care.</td>
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<td>10.</td>
<td>Be required to care for patients I don’t feel qualified to care for.</td>
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<td>11.</td>
<td>Witness medical students perform painful procedures on patients solely to increase their skill.</td>
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<td>12.</td>
<td>Provide care that does not relieve the child’s suffering because the physician fears that increasing the dose of pain medication will cause death.</td>
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<td>13.</td>
<td>Follow the physician’s request not to discuss the child’s prognosis with parents.</td>
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<td>Frequency</td>
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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.

22. Caring for newborns with NAS is not professional satisfying.

23. Caring for newborns with NAS is time consuming and takes away time that should be afforded to critically ill preterm infants.

24. My critical care skills are wasted on caring for newborns with NAS.

25. Interacting with substance misusing mothers or parents is often negative in nature due to mistrust and addictive behaviors demonstrated by the caregivers.

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

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Appendix E: Demographic Questionnaire

DEMOGRAPHIC QUESTIONNAIRE

Do neonatal nurses experience moral distress when caring for newborns with Neonatal Abstinence Syndrome (NAS) whose mothers used illicit substances during pregnancy?

Please read each question. Place a check in the corresponding response circle.

1. What is your present age?
   - 20-29 years of age
   - 30-39 years of age
   - 40-49 years of age
   - 50 years of age or older

2. What is your highest level of nursing education?
   - Diploma
   - Associate
   - Baccalaureate
   - Graduate
   - Doctoral

3. Numbers of years employed as a registered nurse?
   - Less than 2 years
   - 3-5 years
   - 5-10 years
   - Greater than 10 years

4. Number of years working in a Level III NICU
   - Less than 2 years
5. Number of years caring for newborns with NAS
   - Less than 2 years
   - 3-5 years
   - 5-10 years
   - Greater than 10 years

6. How strong would you say your moral beliefs influence your patient care?
   - Not at all
   - Minimally
   - Moderately
   - Significantly

7. How strong would you say your moral beliefs influence your interactions with parents exhibiting high risk behaviors?
   - Not at all
   - Minimally
   - Moderately
   - Significantly

8. Are you professionally satisfied when providing care for newborns with Neonatal Abstinence Syndrome (NAS)? Please circle: Yes  No
9. If you had a choice in assignments in caring for newborns with NAS or a 24 week critically ill preterm neonate; you would choose to care for?
   o Newborns with NAS
   o 24 week preterm critically ill neonates

10. Should newborns with NAS be cared for in:
   o Well newborn nurseries
   o Neonatal Intensive Care Units
   o Specialized units developed to care for the NAS newborns and parental caregivers

11. Please identify one to three reasons below for your choice of responses to questions 9 & 10:
   o __________________________________________
   o __________________________________________
   o __________________________________________

Thank you for completing the demographic portion of the study. Please proceed to the next section containing the Moral Distress Scale questions and response choices.
Appendix F: Permission to Use MDS-R

From: Ann B Hamric [mailto:abhamric@vcu.edu]
Sent: Thursday, February 19, 2015 6:30 PM
To: Artigas, Valarie
Cc: Alison Crehore
Subject: Re: Permission for Moral Distress Scale Usage

Dear Ms. Artigas,

Thank you for your interest in the Moral Distress Scale – Revised (MDS-R). There are six versions of this scale: nurse, physician and other healthcare professional versions for adult settings (including ICUs and other inpatient units), and parallel versions for healthcare providers in pediatric settings. The MDS-R shows evidence of reliability and validity, and a publication describing the instrument and its testing has been published in the American Journal of Bioethics: Primary Research:

Hamric, A.B., Borchers, C.T., & Epstein, E.G. (2012). Development and testing of an instrument to measure moral distress in healthcare professionals. AJOB Primary Research, 3(2), pp. 1-9. You should read this article before deciding whether the MDS-R will be appropriate for your project.

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

I am happy to grant permission to use any of the MDS-R scales, but require agreement to the following condition: Individuals wishing to use the MDS-R must agree to share their data with Drs. Hamric and Corley in an SPSS file in order to further the psychometric testing of the instrument.

If you agree to adhere to this condition for use, I am happy to give you permission to use the scales. I have attached the pediatric version of the MDS-R; let me know if you are interested in other versions of the instrument. NOTE that there is not a neonatal version of the instrument -- you should examine the items carefully to see if they will be appropriate for measuring moral distress in your study. If you decide to change items for particular specialty purposes or for
different settings, Dr. Corley and I request that you keep us informed of the changes you make and the results you obtain.

Best wishes for success with your research!

**********************************************

Ann B. Hamric, PhD, RN, FAAN
Associate Dean of Academic Programs
Professor, School of Nursing
Virginia Commonwealth University
1100 East Leigh Street, Room 4009b
P.O. Box 980567
Richmond, VA 23298-0567
Phone: 804.828.3968
Fax: 804.827.5334
abhamric@vcu.edu