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Enabling Occupational Competence Through Stress Reduction for Parents in the Neonatal Intensive Care Unit (NICU)

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Enabling Occupational Competence Through Stress Reduction for Parents in the
Neonatal Intensive Care Unit (NICU)

by

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A Scholarly Project
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This scholarly project, submitted by Jenna Nelson, MOTS and Rachel Trieff, MOTS in partial fulfillment of the requirement for the Degree of Master of Occupational Therapy from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

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Title: Enabling Occupational Competence Through Stress Reduction for Parents in the Neonatal Intensive Care Unit (NICU)

Department: Occupational Therapy

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ABSTRACT

Each year, thousands of infants are admitted to the Neonatal Intensive Care Unit (NICU). Research has shown evidence that parents, of babies who are admitted to the NICU, experience increased stress levels and are at an increased risk for mental health issues after discharge from the hospital. The objective of this scholarly project was to develop an occupation-based group protocol that focuses on enabling an occupational adaptive response for parents in the NICU, through the use of evidenced-based stress reduction techniques. An extensive literature review was conducted to identify research to be used to support the development of this product.

The product, Stress Reduction for Parents in the NICU: A Five Session Group Protocol, was created based off the evidence found in the literature review, Cole’s Seven Steps, and the Occupational Adaptation model. This group protocol was designed for occupational therapy professionals to use with parents who have infants admitted to the NICU. Each session incorporates individual objectives specific to the nature of the session. All sessions share the common goal of reducing stress as a barrier to fulfillment of their occupational role as a parent. The product includes a detailed outline for each session for therapists to follow during facilitation and corresponding handouts for parents. Finally, the authors included an assessment in the form of a Likert-Scale survey to determine the efficacy of the product.

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Chapter I

Introduction

The purpose of the product, *Stress Reduction for Parents in the NICU: A Five Session Group Protocol*, is to provide an evidenced-based resource for occupational therapists to use with parents who have a newborn in the NICU for reducing stress levels. The product is a group-based protocol that consists of five separate sessions, which focus on education and include hands-on activities. Each session is outlined based on Cole’s Seven Steps and provides detailed, step-by-step instructions and handouts for successful implementation (Cole, 2012).

The production of this group-based protocol was guided and designed based on the Occupational Adaptation (OA) model. The OA model is client-centered and utilizes a holistic approach. OA revolves around the process of adaptation, one which Schkade and Schultz (1992), referred to as “normative process leading to competence in occupational functioning” (p. 829). Parents in the NICU identified the inability to satisfactorily fulfill their parenting role as the most stressful factor (Baia et al., 2016; Busse, Stromgren, Thorngate, & Thomas, 2013; Gadepalli et al., 2017; Grosik, Snyder, Cleary, Breckenridge, & Tidwell, 2013). This essentially means these parents were not able to
produce an adaptive response to achieve relative mastery in relation to parenting occupations while in the NICU. Schkade and Schultz (1992) asserted when individuals are in periods of transition (such as becoming a parent to a critically ill infant), this is when they are most susceptible to experiencing issues with the process of occupational adaptation. The group protocol design is meant to facilitate the process in a natural and intrinsic way.

To ensure the product was evidence-based, a thorough literature review was conducted and is presented in Chapter II. This review of literature examined the research currently available based on the topic of parent stress in the NICU. The literature review also validated the need for interventions to effectively reduce the stress parents experience when a child is in the NICU. Key terms and concepts discussed throughout Chapter II are listed and defined below.

- **Stress**: A physical, chemical, or emotional factor that produces mental or bodily tension (Merriam-Webster, 2018).
- **Stressor**: A stimulus that induces stress (Merriam-Webster, 2018).
- **Occupation**: “The things people do that occupy their time and attention...meaningful, purposeful activity...the personal activities that individuals choose or need to engage in and the ways in which each individual actually experiences them” (Boyt-Schell, Gillen, & Scaffa, 2014, p. 1237).
• Neonatal Intensive Care Unit (NICU): A hospital nursery designed to care for ill or premature newborn infants using special medical equipment and services from a trained multidisciplinary healthcare team (Barbosa, 2013).

• Parental role: “The foundational role of support, nurturance, and guidance that parents provide for their children” (Anderson, 2013, p. 1).

• Relative mastery: The perceived efficacy of one’s occupational performance in terms of efficiency, effectiveness, and satisfaction (Schultz & Schkade, 1992).

• Adaptation: “Is a change in functional state of the person as a result of movement toward relative mastery over occupational challenges” (Schkade & Schultz, 1992, p. 831).

• Intervention: Skilled services provided to clients to facilitate engagement in occupation related to health, well-being, and participation (American Occupational Therapy Association, 2014).

The process of how the authors developed this scholarly project is outlined in the Methodology section, Chapter III. The product, Stress Reduction for Parents in the NICU: A Five Session Group Protocol, is detailed in Chapter IV and the product itself is located in Appendix A. The product includes an outline for health practitioners to follow when leading the group sessions, handouts for the parents specific to each session, and extra resources for therapists and parents to learn more about the NICU. The Appendix in the product, Stress Reduction for Parents in the NICU: A Five Session Group Protocol,
contains an assessment to evaluate the effectiveness of the sessions. Finally, Chapter V summarizes the scholarly project in its entirety and provides instructions for implementation of the product protocol. The following chapter (Chapter II) will detail the current literature relevant to the NICU, stress parents face in the NICU, and interventions.
Chapter II

Review of Literature

Introduction

The Neonatal Intensive Care Unit (NICU) is a stressful environment for parents. Not only is the physical environment overwhelming, it is emotionally taxing. Parents are grieving the loss of a normal pregnancy and are terrified for an uncertain future (Baia et al., 2016; Grosik, Snyder, Cleary, Breckenridge, & Tidwell, 2013; Swift & Scholten, 2009). Research has shown that parents who have infants in the NICU experience increased levels of stress. The elevated stress levels are a cause for concern, as studies show a negative impact on parental mental health, infant development, and communication of information in the NICU (Busse, Stromgren, Thorngate, & Thomas, 2018; Hobbs, Tschudy, Hussey-Gardner, Jennings, & Boss, 2017; Shaw et al., 2013; Snydor-Greenberg & Dokken, 2000; Treyvaud et al., 2012). The Occupational Adaptation (OA) model is used to conceptualize the stress and occupational dysfunction parents experience secondary to their NICU hospitalization. The following literature review will address general NICU information, stressful factors for parents in the NICU,
the consequences of heightened levels of stress in the NICU, and what is currently being implemented to reduce stress levels for parents in the NICU.

**Occupational Adaptation Model**

Occupational adaptation, described as a normative process, facilitates occupational functioning (Schkade & Schultz, 1992). Frequently, as supported by the literature, the NICU environment elicits demands greater than the parents’ ability to create an adaptive response, resulting in high stress levels. This means their adaptive capacity has been overwhelmed and this requires the parents to change their adaptive process (Cole & Tufano, 2008; Schkade & Schultz, 1992). Schkade and Schultz (1992) asserted, “The greater the adaptive transitional needs of the environment, the greater the importance of the occupation adaptation process, and the greater the likelihood that the process will be disrupted” (p. 830). The adaptive process is interrupted by the overwhelming demands of the occupational environment (the NICU), producing a maladaptive occupational response (stress). However, this creates an opportunity for a new adaptive response to be learned and integrated.

"Occupational adaptation focuses on the interactive process between a person and his or her occupational environment" (Cole & Tufano, 2008, p. 107). Two major components of the OA model are the person and the occupational environment (Schkade & Schultz, 1992). The person is composed of three different systems: sensorimotor,
cognitive, and psychosocial. Each system is involved in the occupational response, with varying degrees per circumstance. The occupational environment is the context in which the occupational response, or occupational functioning, occurs. The environment is classified as three separate categories: work, play/leisure, and self-care. Each category is further described by its components in terms of physical, social, and cultural characteristics (Schkade & Schultz, 1992).

The parent of the hospitalized infant qualifies as the person, and the occupational environment is defined as the NICU. The interaction between the parent and the NICU produces press for mastery resulting in an occupational response, either adaptive or maladaptive. Schkade and Schultz (1992) articulated, within the OA model, individuals have an intrinsic motivational force driving them to achieve relative mastery over their occupational environment. In the NICU, the parent's adaptive process is challenged when the demands of the occupational environment exceed the parent's adaptive capacity. This means the parent is unable to meet the challenges of the occupation and fulfill the role of parenting to reach a state of occupational adaptation and relative mastery.

NICU

The physical NICU environment is part of the occupational environment, defined by physical, social, and cultural characteristics (Schkade & Schultz, 1992). The NICU is a specialized area of the hospital, commonly referred to as the Intensive Care Nursery or
Newborn Intensive Care. There is no set amount of time for an infant to stay in the NICU, as each child has their own unique and specific medical needs (Schlittenhard, Smart, Miller, & Severtson, 2011). Length of stay can range anywhere from less than a week to several months. Infants admitted to the NICU are typically those who are born prematurely and with congenital malformations, infections, or other health challenges (Petteys & Adoumie, 2018).

The infants are admitted to one of four units dependent on the level of severity of the infant’s condition (Barbosa, 2013). A Level I nursery is the lowest tier of care; infants in this unit typically require no, or minimal, specialized care. Level II is an intermediate nursery for infants who require more intensive medical attention. This may include infants who require intravenous feedings and medication, supplemental oxygen, and phototherapy for jaundice. A Level III nursery is reserved for the most critically ill and fragile newborn infants. Infants in this nursery often require life support, advanced diagnostic services, mechanical ventilation, and surgical services. (Barbosa, 2013). A Level IV NICU has all the services of a Level III nursery. Additionally, a Level IV NICU is located within an institution able to provide surgical intervention to complex congenital or acquired conditions. A Level IV nursery also has access to pediatric medical subspecialists, pediatric surgical subspecialists, and pediatric anesthesiologists (American Academy of Pediatrics, 2012). The roles of the healthcare providers vary depending on
the level of the NICU facility and the availability of health practitioners (American Academy of Pediatrics, 2012; Barbosa, 2013).

A trained healthcare team, including neonatologists, physicians, nutritionists, nurses, developmental specialists, speech and language pathologists, social workers, occupational therapists, physical therapists, respiratory therapists, and lactation consultants, work collaboratively alongside parents to care for newborn babies that need intensive medical attention (Barbosa, 2013). Most infants are admitted to the NICU for premature birth, very low birth weight, or have a serious medical condition requiring advanced intervention (Harrison & Goodman, 2015; Petteys & Adoumie, 2018). Recent developments and advances in technology and medical equipment have resulted in increased survival rates of extremely premature and critically ill infants (Barbosa, 2013). Consequently, a need for more specialized care is created.

The health care team may use feeding tubes, respirators, incubators, and/or phototherapy lights (Bird & Forman, 2018; University of Rochester Medical Center, 2018). Many of these machines create an overstimulating environment for parents and infants (Baia et al., 2016; Busse et al., 2018; Cleveland, 2008). Occupational therapists work to provide environmental modifications in order to create a more harmonious environment for parents and infants. For example, occupational therapists can help parents create a daily routine and schedule to better organize their day in order to effectively adapt to their new parental role demands (Schlittenhard et al., 2011).
Assessment of infant car-seats and providing recommendations is another way to assist parents with adapting to life’s demands of being a new parent (Schlittenhard et al., 2011). Research has shown that implementation of environment controls reduced stress levels for parents with infants in the NICU (Grosik et al., 2013; Schlittenhard et al., 2011).

Occupational therapists focus on facilitating participation in occupations their clients find meaningful. In the NICU, occupational therapists can facilitate occupational performance for the infant and the parents. For the infant, the occupational therapist is most likely to focus intervention on basic occupational performance, such as feeding and survival (Swift & Scholten, 2009). Occupational therapists effectively reduce hospital readmission through several means of intervention, including education. Skilled intervention for parents in the NICU is primarily education-based (Rogers, Bai, Lavin, & Anderson, 2017). Occupational therapists provide education on topics such as breastfeeding, skin to skin time, infant massage, and other ways to appropriately engage with their infant (Grosik et al., 2013; Hobbs et al., 2017). Occupational therapists can help parents in the NICU fulfill their parental role by educating them on how to interact with and care for their medically fragile infant.

**Parenting Role as Stress Inducing**

The hospitalization of a child alters the parenting role as the parent is no longer the primary caregiver for their child. With a healthy delivery, parents are responsible for
feeding, changing, comforting, and protecting their infant. Parents have insufficient occupational responses as they reported feeling hopeless and found it difficult to fulfill their parental role while in the NICU (Busse et al., 2018, Miles et al., 1992). The parent often accumulates a sense of powerlessness in the NICU as they are forced to step back and allow the health professionals take over the parenting role (Busse et al., 2018; Miles, Funk, & Kasper, 1992; Seideman et al., 1997). Parents are rendered helpless as they are unable to relieve their child’s observable pain and suffering resulting in perceived failure to achieve relative mastery of parenting. This prevents parents from feeling confident in their role as a parent. Relative mastery is a phenomenological self-assessment of his or her occupational response (Boyt-Schell, Gillen, & Scaffa, 2014; Cole & Tufano, 2008). Without relative mastery of an occupation, Baia et al. (2016) found “change in parental role” was identified as the most stressful factor by both mothers and fathers in the NICU. Similarly, Busse et al. (2018) found that the “alteration in the parenting role” was a significant factor contributing to the stress parents experience in the NICU. Parents reported lack of satisfaction and fulfillment with their parenting role in the NICU. This finding was consistent for both mothers and fathers (Busse et al., 2018).

It is common for parents in the NICU to struggle with developing a bond with their infant, especially if the infant is having trouble with feeding (Swift & Scholten, 2009). The process of feeding for the infant and parent is a dynamic interaction in which a social relationship is developed. Many infants in the NICU have difficulty with feeding
as they may be unable to coordinate sucking, swallowing, and/or breathing (Swift & Scholten, 2009). To compensate for the infant’s deficits, the infant is provided with an intravenous drip or other artificial method of delivering nutrients (Swift & Scholten, 2009). Consequently, the parent is cut out of the feeding process and the bond does not develop as fully as it would if the infant was breastfeeding. This is partly due to the fact that artificial feedings minimize skin to skin time, an evidence based practice which facilitates parent to infant bonding (University of Rochester Medical Center, 2018).

Swift and Scholten (2009) identified the parent-infant feeding process as essential to developing a meaningful relationship with one another. The substitution of artificial feeding delays this relationship from developing. Cerro, Zeunert, Simmer, and Daniels (2002) found less than half of the parents who responded to a questionnaire reported enjoying feeding time with their infants. Many parents reported feelings of guilt, degradation, and failure when they were unable to properly feed their infant (Swift & Scholten, 2009). The parents’ bonding experience is also limited by the medical fragility of the infant. Parents may be afraid to even touch their infant, resulting in dramatically decreased skin to skin time, another important factor for early parent-infant bonding (Schlittenhard et al., 2011; Swift & Scholten, 2009).

The interactions parents have with infants in the NICU are supervised by staff members to ensure the infant’s safety. This has created an environment which strained the parent’s ability to form meaningful connections with their infant (Swift & Scholten,
2009). The constant supervision of the healthcare team and high stress levels create impoverished opportunities for the parent to bond intimately with the infant (Grosik et al., 2013; Swift & Scholten, 2009).

**Stressors in the NICU**

It is important for healthcare professionals to recognize and understand the factors that trigger stress for parents in the NICU in order to provide the best standard of care (Swift & Scholten, 2009). Stressors for parents who have infants in the NICU can be classified as internal (occurring within the NICU) or external (occurring outside of the NICU). Grosik et al. (2013) found internal stressors were identified by parents as being overall more stressful than external stressors. The most common factors within each category have been identified and discussed below.

**External stressors.**

The most common stressors external to the NICU include: premature discharge, financial and vocational obligations, and meeting daily needs of other children/family members (Grosik et al., 2013). Once the mother’s health has returned after delivering an infant requiring NICU attention, she is discharged, often before her infant (Grosik et al., 2013). Other times, mothers are alone with their infant in the NICU as the father has to leave to fulfill other responsibilities (other children, financial management, work, etc.) (Commaradi, 2010). Grosik et al. (2013) noted the cost of a NICU hospitalization is a
considerable source of stress, especially for those with lower socioeconomic status. Emmanuel, Rajesh and Raj (2017) described life in general as stressful and concluded when excessive stress is added to an individual’s life, it may have devastating and destructive long term effects on the individual’s psychological status.

**Internal stressors.**

The physical NICU environment can be overstimulating for infants and parents. The equipment sustaining the infant’s life is noisy and has been described as intimidating by parents (Cleveland, 2008). Typically the equipment has alarms which when on, indicate something is wrong with the infant. This auditory stimuli often triggers feelings of stress within the parent (Baia et al., 2016; Busse et al., 2018; Cleveland, 2008; Swift & Scholten, 2009). In a study by Swift and Scholten (2009), parents interpreted this stimuli as “very clinical and very foreign” and the parents described the NICU environment as “scary.”

Factors specific to the infant’s medical complications, such as physical appearance of the infant, have been highly ranked as stressful by parents in the NICU. In the NICU, the infant is often connected to multiple lines and machines sustaining its life. The sight reminds parents of the critical state of health their infant is in, triggering feelings of anxiety and heightened stress levels (Baia et al., 2016; Emmanuel et al., 2017; Grosik et al., 2013). The most stressful factor identified by parents in a study by Grosik et al. (2013), was observing their baby stop breathing.
Infants in the NICU demonstrate lower responsiveness to social interactions and require trained handling (Baia et al., 2016). The infants communicate with specific cues, and, to the untrained eye, can be confusing and/or concerning. Parents require specialized education to recognize and correctly interpret these cues, and the learning process can be frustrating and stressful. This inability to understand the infants’ actions can lead to concerns that the healthcare team is misunderstanding the child’s needs, consequently straining the relationship between the healthcare team and the parent. It is essential for healthcare practitioners to take the time to answer questions the parents may have about their infant. Many parents reported feeling they did not fully understand the infant’s diagnosis or the treatments implemented (Baia et al., 2016).

Due to the infant’s medical fragility, parents have limited access to their infant. Their interactions with their infant must be supervised by health professionals to ensure safety of the infant. The constant presence of health professionals resulted in parents feeling a lack of privacy (Baia et al., 2016). Parents described moments that were supposed to be intimate, such as the infant’s first bath, felt publicized (Thomson-Salo, Kuschel, Kamlin, & Cuzzilla, 2017). Parents are continuously reminded they are in a hospital and not at home with their infant. Many infants face mortality before parents even get the chance to bring them home (Emmanuel et al., 2017). However, even if parents reach the stage of discharge, Hobbs et al. (2017) found parents identified the process of discharge planning as stressful and anxiety provoking (Hobbs et al., 2017).
This is likely due to the fact infants are discharge based on medical stability, which often means families are discharged before parents feel confident in their ability to independently care for their infant (Aloysius et al., 2018; Hobbs et al., 2017).

**Impact of Stress in the NICU**

The human body responds to stress by releasing chemicals in the brain, known as cortisol and adrenaline (McEwen & Sapolsky, 2006). These hormones increase concentration, reaction time, blood pressure, and heart rate, which is known as the “fight or flight” response. When the release of cortisol and adrenaline into the bloodstream during stressful situations is acute (short-term), the body naturally returns back to its normal condition. However when the release of these chemicals is chronic (long-term) and higher amounts are continuously being generated, the body does not have time to properly recover. Prolonged release of stress hormones can create serious health problems, including: depression, anxiety, digestive issues, poor immune system functions, cardiovascular disease, stroke, and obesity (McEwen & Sapolsky, 2006).

Failing to address the individual needs of families who have infants in the NICU, such as stress, can lead to negative mental health outcomes for parents (Snydor-Greenberg & Dokken, 2000). The increased levels of stress parents experience in the NICU is correlated with an increased prevalence of depressive symptoms (Busse et al., 2013). The NICU environment puts parents at risk of experiencing anxiety, depression,
fatigue, sleep disruption and even post-traumatic stress disorder (PTSD) (Busse et al., 2018; Shaw et al., 2013). When parents, especially mothers, experience the life-threatening NICU admission of their neonate, it is often perceived by parents as a traumatic event. This then generates acute posttraumatic stress symptoms, which can lead to major depressive disorder, acute stress disorder, and PTSD (Doering, Moser, & Dracup, 2000; Vanderbilt, Bushley, Young, & Frank, 2009; Shalev et al., 1998). While in the NICU, parents described feelings of extreme guilt and self-blame for the condition of their infant (Baia et al., 2016). Both mothers and fathers continue to report significant mental health problems two years after the birth of their preterm infant (Treyvaud et al., 2009).

Emmanuel et al. (2017) found it is important to reduce stress of parents, most specifically mothers, during the NICU hospitalization process to ensure the best outcomes for the baby. It has been documented that maternal postpartum depression is associated with negative developmental outcomes in the infants (Doering et al., 2000). This stress can result in behavioral and socio-emotional disorders later in the child’s life (Treyvaud et al., 2012).

Stress negatively impacts the quality of communication between parents and the healthcare team. Parents report inconsistency between health professionals when learning new information (Cleveland, 2008; Gadepalli et al., 2017; Swift & Scholten, 2009). This discontinuity of communication consequently affects parents’ ability to retain and
implement the information learned in the NICU to their daily lives after discharge (Hobbs et al., 2017). Unsatisfactory communication increases stress levels (Swift & Scholten, 2009). Parents are overloaded with new learning in the NICU and are often too overwhelmed to process the information (Gadepalli et al., 2017; Hobbs et al., 2017). Hobbs et al. (2017) followed parents after discharge and found the stress in the NICU was a contributing factor which prevented the parents from retaining the information necessary for a successful discharge and transition home.

**Interventions in the NICU Involving Parents**

A variety of programs and methods of communication have been developed to teach the parents what they need to know for discharge, however, the overall outcomes remain the same: parents do not feel prepared or equipped once they leave the NICU (Hobbs et al., 2017). Other studies have shown high correlations between the new learning and stress levels: the higher the stress level an individual is experiencing, the less likely the individual will be to retain the new learning (Aloysius et al., 2018; Enke, Hausmann, Miedaner, Roth, & Woopen, 2017). With extreme stress levels in the NICU, parents have difficulty applying the information learned in the NICU.

The goal for families with infants in the NICU is to return home with their infant in a state of health sustainable outside of the NICU. Parents play a major role in the infant’s discharge as they will be the primary caregivers once they leave the hospital.
Several NICU facilities have made an effort to consciously include fathers in caring for the infant. Many fathers have reported feeling excluded during the hospitalization as the focus of healthcare professionals has historically been on the mother and infant (Lee, Wang, Lin, & Kao, 2012; Miles et al., 1992; Shahkolahhi, Abdeyazdan, Mehrabi, & Hajiheidari, 2014; Thomson-Salo et al., 2017).

It is essential for parents to be educated on all aspects of their infant’s medical condition and learn how to provide appropriate care accordingly. Many interventions involving parents incorporate some form of education. A study by Dunlop, Logue, and Thorne (2016) found education based sessions targeting mothers in the NICU following very low birth weight delivery improved health seeking behaviors of mothers. This finding is significant as a mother’s health status may impact the health of the infant as the infant is completely dependent. It is essential for the mother to remain in good health so she may focus her energy on caring for the infant.

Research has shown there are several factors that can help to reduce an infant’s length of stay in the NICU. One study by Petteys and Adoumie (2018) found that parents who utilized mindfulness-based neurodevelopmental care effectively reduced stress and length of stay in the NICU. This type of care entails NICU medical staff educating parents on mindfulness techniques such as focused breathing, personal awareness, and non-judgement of themselves and of their infant (Petteys & Adoumie, 2018). Neurodevelopmental care includes touch and non-touch interactions, observation and
recognition of infant cues and signs of organized and disorganized physiologic state, motor behaviors, state behaviors, and development of infant self-regulation (Petteys & Adoumie, 2018).

Family centered care is a critical component of health care practice in the NICU (Swift & Scholten, 2009). Occupational therapists can help parents in the NICU fulfill this role by educating them on how to interact with and care for their medically fragile infant. Shakolahi et al. (2014) found family support programs for parents were beneficial for reducing stress, especially in the areas of infant behavior and appearance, and enhancing the parent-infant relationship. Parents also reported feeling more confident in their parenting role (Shakolahi et al., 2014).

Grosik et al. (2013) found parents rated the following stress reduction techniques to be most effective: social support (friend or family), personal prayer, interacting with other parents in the NICU, and researching the infant’s medical diagnosis or condition. Social support was found to be one of the primary predicting factors of health outcomes for parents in the NICU (Peebles-Kleiger, 2000). Other effective stress reduction methods include progressive muscle relaxation and meditation (Janowiak & Hackman, 1994; Rausch, Gramling, & Auerbach, 2006). Rausch et al. (2006) uncovered evidence of reduced stress after only one session of progressive muscle relaxation. Both studies delivered the intervention in group settings.
A significant decrease in stress was observed in two studies where the intervention program combined parent education and parental emotional support. Both programs emphasized active parental involvement (Kaaresen, Ronning, Ulvund, & Dahl, 2006; Turner, Chur-Hansen, & Winefield, 2015). Educational sessions for parents have proven beneficial in terms of enhancing parent-infant interaction and improving parent mental health (Melnyk, Feinstein, & Albert-Gillis, 2007). Included in these sessions were parent-focused activities regarding common infant behavior and infant physical characteristics. This education was provided through the use of video clips and information pamphlets (Melnyk et al., 2007).

Shaw et al. (2013) conducted a level 1 study utilizing Cognitive Behavioral Therapy (CBT) paired with techniques to enhance parenting confidence and create positive parental perceptions of their newborn baby. Shaw et al. (2013) found this program was successful in reducing parent symptoms of trauma and depression.

Emmanuel et al. (2017) developed an interventional package administered to parents in the NICU with the goal of reducing stress. This interventional package, carried out by nursing staff, included a holistic bundle of information about the NICU environment, counseling for others and stress relieving techniques such as deep breathing was studied by Emmanuel et al. (2017). These researchers found this specific intervention package to be significantly effective in reducing parent stress during NICU hospitalization (Emmanuel et al., 2017).
The combined stressors in the NICU make it emotionally taxing for the parent to leave the infant’s side (Swift & Scholten, 2009). Parents are likely to experience severe occupational deprivation secondary to the stress and time their infant consumes. Mouradian, DeGrace, and Thompson (2013) conducted a study to investigate the efficacy of an art-based occupation group for reducing parental stress and anxiety in the NICU. The occupation based art group was statistically significant in reducing parental anxiety at the time of participation in the group. The study concluded that the occupation based art group was a healthy distraction, calming and relaxing, fun and enjoyable, a means to look beyond the NICU, and provided a method for social participation.

**Summary/ Intro to Product**

Through review of the literature which exists on this topic, it is evident parents are highly susceptible to a plethora of complications and triggers for stress while in the NICU. The persons’ systems, sensorimotor, cognitive, and psychosocial are overwhelmed by the occupational environment. The sensorimotor system of the parents is overwhelmed primarily by the physical aspects of the occupational environment. Parents are bombarded by an overload of auditory stimuli from machines and the physical, observable state of their infant. The medical fragility of the infant may also impact the individual’s cognitive and psychosocial systems. The parent is under immense pressure to retain an abundance of information concerning their infant’s state of health. It may also
be considered as impacting the parent’s psychosocial system as the physical state of the infant influences the interactions parents may have with the infant. The interactions are also limited by the social and cultural aspects of the environment. The constant presence of health professionals undermines the intimacy of the bonding experiences. The rules, regulations, and procedures within the NICU may also limit the parents’ ability to interact with their infant. A dysfunctional interaction between the person and the occupational environment strains the persons’ ability to generate an adaptive response.

There are no discrepancies within the literature concerning the notion parents face elevated levels of stress while in the NICU. Several interventions have been implemented to alleviate this stress. The most successful interventions for reducing stress levels include social interaction, counseling, and education based sessions. One study found using occupation as a means of intervention effectively reduced stress.

Considering the assumptions of the OA model and the existing research on elevated stress levels parents face in the NICU (evidence of a non-adaptive response), one may note a discrepancy in the interventions currently being implemented to alleviate stress of parents in the NICU. No interventions researched by the authors targeted the adaptive process of the parent or used OA as a framework for intervention. It is the intention of the authors to contribute to the existing literature through creation of a group based protocol for parents in the NICU designed to reduce stress levels in order to enable an adaptive occupational response. Currently, there is no gold standard intervention for
reducing stress of parents in the NICU. This, in addition to the magnitude of the
transitional needs parents face in the NICU, has inspired the authors to develop the
product *Stress Reduction for Parents in the NICU: A Five Session Group Protocol*. The
following chapter details the process in which this vision was conceptualized.
Chapter III

Methodology

The development of the group-based protocol, Stress Reduction for Parents in the NICU: A Five Session Group Protocol, was initiated with an extensive literature review. The purpose of the literature review was to examine current evidenced-based research to support the production of the protocol. Through this review of literature, information was found regarding: the prevalence of parent stress that occurs when having a newborn admitted to the NICU, the impact the stress has on the parent’s mental health, specific factors that contribute to this stress, programs and interventions found to be effective in reducing the parent’s stress, and the role that occupational therapy can play. Resources such as online journals, websites, and textbooks were used to conduct the literature review surrounding these topics.

The specific databases utilized to locate peer-reviewed journal articles included: CINHAL, PubMed, EBSCOhost, OT Search, and Google Scholar. Key words and phrases used when searching the databases included: “parent stress and NICU,” “stress reduction in the NICU,” “implications of parent stress in NICU,” “occupational therapy interventions,” and “stress reduction programs.”
In order to determine applicability to the researchers’ literature review and project purpose, each article was thoroughly reviewed and analyzed. The articles were then organized into like-topic categories. These categories were: “parent stress in the NICU,” “support for parents in the NICU,” “parent satisfaction,” “communication in the NICU,” “implications of stress,” “programs/interventions to reduce stress,” “occupational therapy’s role,” and “occupation-based interventions.” After organizing the information, common themes were identified, which created the foundation for the sections found in the literature review.

It was evident that there is a lack of evidenced-based, occupational therapy interventions to reduce the stress of parents who have a newborn in the NICU, although the literature strongly supports the need (Baia et al., 2016; Busse et al., 2018; Cleveland, 2008). The interdisciplinary interventions and programs described in the literature that were found to be most effective involved parent education (Kaaresen et al., 2006; Kadivar et al., 2017; Melnyk et al., 2017), hands-on learning (Petteys & Adoumie, 2018), mindfulness-training techniques (Emmanuel et al., 2017; Mouradian et al., 2013), cognitive behavioral therapy (Shaw et al., 2013), and social support (Lee et al., 2012; Turner et al., 2015). This information was used to guide the development of interventions presented in the protocol.

The authors determined the Occupational Adaptation (OA) model best fit the needs the literature detailed, as the OA model addressed the transitional needs individuals
face (Schkade & Schultz, 1992). The heightened levels of stress parents face stem from the interaction of the person and the environment, which is stimulated by the transitional needs the parents encounter when becoming a parent of a critically ill infant. The OA model views the interaction between the environment and the person as creating a demand for mastery (Schkade & Schultz, 1992). Multiple studies identified the parents’ poor perception of their parenting role fulfillment as a prevalent problem in the NICU (Busse et al., 2018, Miles et al., 1992). This indicates the parents’ relative mastery has room for improvement. The OA model presented a conceptual framework for addressing these issues parents face in the NICU through the establishment of an adaptive occupational response (Schkade & Schultz, 1992).

The OA model was used to guide the development of the product. The main concepts of this model and the themes derived from the literature review provide structure to the group-based protocol. The product addresses the demand for mastery the NICU environment creates and provides strategies for overcoming the resulting stress. The OA model was selected as it sets a framework for understanding occupational dysfunction and a means for transitioning towards relative mastery (occupational competence). Chapter IV summarizes the product and details its significance. The complete embodiment of the product is located in the appendix.
Chapter IV

Product

Having a child in the NICU creates stress for parents (Busse et al., 2013; Grosik et al., 2013). The stress often leads to occupational dysfunction in the form of role incompetency (Baia et al., 2016). This stress interrupts the occupational adaptive process, therefore disabling the parent’s ability to produce an adaptive response to the NICU’s stressful occupational environment (Grosik et al., 2013; Miles, Funk, & Kasper, 1992). To empower the parent to achieve maximal occupational functioning and fulfill their parental role, the authors have developed Stress Reduction for Parents in the NICU: A Five Session Group Protocol. The overall objectives of this product are:

1. Parents will verbalize confidence in their ability to identify stressors in the NICU.
2. Parents will verbalize decreased stress at conclusion of the sessions.
3. Parents will demonstrate an adaptive occupational response to stress through utilization of appropriate coping strategies.
4. Parents will verbalize an increased sense of relative mastery in fulfilling their role as a parent.

Stress Reduction for Parents in the NICU: A Five Session Group Protocol was developed following an extensive literature review. Each session was designed using evidence-based interventions and Cole’s Seven Steps (Cole, 2012). The goals and structure of each session correspond to the assumptions of the OA model. Schultz and
Schkade (1992) asserted occupational adaptation is a normative and natural process, which is prominent in periods of transition. It is more likely with greater transition the process will be disrupted (Schultz & Schkade, 1992). The admission of an infant to the NICU is a life likely to interrupt the adaptive process resulting in maladaptive occupational responses, such as stress (Baia, et al., 2016).

Another assumption of the OA model was individuals have a natural desire to achieve mastery over their occupational environment (Turpin & Iwama, 2011). The interaction of the two (person and environment) creates an environmental press (Turpin & Iwama, 2011). When the environmental press/occupational demands of the environment are too great, the person’s adaptive capacity is overwhelmed and a maladaptive response is produced (Schkade & Schultz, 1992). This assumption explains the stress parents face as a by-product of the interaction between the person and environment. Sessions were directed toward the person and environment to facilitate mastery over the occupational demands of the environment. This is primarily accomplished through reduction of stress, as stress presents as the most prominent barrier in the NICU to an adaptive occupational response (Grosik et al., 2013).

The session’s details were further refined through the guidance of the Adult Learning Theory (Bastable, Gramey, Jacobs, & Sopczyk, 2011). Adult Learning Theory presents a framework for maximizing the learning potential of each adult group member. The sessions were carefully articulated to fit the principles articulated by Bastable et al., 2011). The first principle is: learning is related to an immediate need, problem, or deficit (Bastable et al., 2011). Each session has an overarching goal of stress reduction, which is
an immediate need for parents in the NICU. Another principle states the role of the teacher, or instructor, is one of a facilitator, and furthermore, the learning is self-directed by the learner (Bastable et al., 2011). The following group protocol utilizes this framework as evidenced in the processing, generalizing, and application sections. Within these components, the group instructor is provided with prompting questions to ask the group to facilitate learning and discussion. Other principles integrated into the group protocol are: the learner is able to actively participate in the learning process, the learner is able to learn in a group setting, the nature of the learning activity is varied and changes frequently, and learning is reinforced by application and timely feedback (Bastable et al., 2011).

The protocol sessions each contain a facilitation outline guide for the group instructor and handouts/resources at the end of each session for the instructor and group members. As outlined by Cole’s Seven Steps, each session has an introduction with a warm-up, activity, sharing, processing, generalizing, application, and summary (Cole, 2012). The warm-up for each session is a journaling activity, which has proven to be an effective intervention for stress reduction of parents who have newborns in the NICU (Kadivar et al., 2017). Also included in the introduction is a brief overview of the OA model (Schkade & Schultz, 1992). This provides the participants with a greater understanding of the goals and a basis for understanding the structure of the model. The authors decided to create a group protocol, rather than individual one-on-one sessions, to align with the current evidence in the literature. Research has shown that parents found stress reduction techniques to be most effective when they included social support, such as family, friends, or other parents (Grosik et al., 2013; Peebles-Kleiger, 2000). The
complete product, *Stress Reduction for Parents in the NICU: A Five Session Group* Protocol, can be located in the Appendix. Outlined below is a brief description of each session and supporting evidence:

The first session presented in the product is titled “General NICU Education.” This session’s overall purpose is to increase competency and awareness of the NICU. To accomplish this, parents will have the opportunity to explore and learn more about common medical terminology and equipment used by medical professionals. This will be done through the use of informational videos and handouts, and application of learning through group discussion. Parents will be given pamphlets to take home to reinforce their education. Research has shown that interventions consisting of educational aspects and the use of videos and pamphlets were beneficial in reducing the stress of parents (Ballantyne, 2007; Kaarensen et al., 2006; Kadivar et al., 2017; Melnyk et al., 2006; Turner et al., 2015).

The second session presented in the product is titled “Understanding and Caring for Baby.” This session’s overall purpose is to increase parents understanding of newborn cues and how to use swaddling effectively. To accomplish this, parents will be given a worksheet which tests their knowledge of common infant cues and signals. Parents will also be educated on proper swaddling techniques and given the opportunity to practice. Research has shown that educating parents on how to better understand and care for their baby, as well as allowing them to practice specific techniques, increases competence in their parental role (Kadivar et al., 2017; Petteys & Adoumie, 2018; Shakolahi et al., 2014; Turner et al., 2015).
The third session presented in the product is titled “Arts and Crafts.” In this session, three separate craft activities are displayed for parents. Each parent then chooses one project to work on during the activity section of the session. Mouradian, DeGrace, and Thompson (2013) conducted a study to determine the impact of an occupation based arts and crafts session had on reducing parental stress in the NICU. Their study was successful and they found the intervention greatly reduced the parents’ stress levels (Mouradian, DeGrace, & Thompson, 2013).

The fourth session presented in the product is titled “Meditation and Progressive Muscle Relaxation.” In this session, parents are introduced to the two practices and learn about their benefits. Parents are then given the opportunity to practice both progressive muscle relaxation and meditation. They are encouraged to be mindful of the effects each practice has on their stress levels. Janowiak and Hackman (1994) and Rausch, Gramling, and Auerbach (2006) conducted rigorous studies using these two interventions. Both studies reported a significant decrease in stress for participants receiving progressive muscle relaxation and meditation interventions. Both studies were carried out in group contexts, and Rausch et al. (2006) found reduced stress levels after only one session.

The fifth session presented in the product is titled “Sensory Based Stress Relief Kits.” Brief education on the different sensory systems (auditory, visual, gustatory, vestibular, proprioceptive, olfactory, and tactile) is provided to the parents in the beginning of the session. Parents are given worksheets which provide a framework for creation of a sensory based kit. The worksheet includes a list of items for each sensory system and parents are given the opportunity to determine which items they would include in a sensory based kit for stress relief. Parents report overwhelmed sensory
systems from the environmental and contextual stimuli within the NICU (Baia et al., 2016; Busse et al., 2018; Cleveland, 2008; Swift & Scholten, 2009).

The sessions have been designed in a way that allows for implementation without a specific order. The purpose of this design is to maximize the number of participants eligible to attend each session. The NICU does not run on a schedule in the sense that families are not admitted or discharged at the same time. Each case is unique and new patients are constantly being admitted and discharged. Some parents may only be in the NICU for a single day whereas others may have infants admitted to the NICU for months (Schlittenhard, Smart, Miller, & Severtson, 2011). The design of the protocol allows parents from both circumstances to attend sessions.

Each session contributes to the overarching objective of the group protocol: reduction of stress for parents in the NICU. The group protocol is intended to be implemented within the NICU and was created to be used with parents who currently have infants admitted to the NICU. This meets the needs of the parents with infants in the NICU in a practical manner as the group is easily accessible for parents. This detail also alleviates the stress of parents feeling separated from their infant (Swift & Scholten, 2009).

This group-based protocol is designed to be implemented by occupational therapy professionals, either an occupational therapist or occupational therapy assistant. Occupational therapy professionals have a unique set of skills designed to enable occupational functioning and competence. The authors are hopeful that one day this group protocol can be expanded and modified to bring in additional content and consist of an inter-professional healthcare team.
To evaluate the efficacy of the group protocol, the authors developed a satisfaction survey, which can be found in the appendix of the product. The survey addresses key areas and objectives of the sessions. This survey’s questions utilize a Likert-type scale to rate stress levels, specifically parents are asked to consider their stress levels before and after sessions. It is intended to be distributed to parents at the end of each session. The parents are encouraged to complete the survey, based on their overall experience of the protocol group, once they have been discharged from the NICU. A stamped and addressed envelope will be provided for parents to mail the completed survey to the authors.
Chapter V

Summary

Purpose

The purpose of this scholarly project was to explore the existing literature concerning the experience of parents who have newborns admitted to the NICU. Through extensive research, it was found that parents suffer from increased levels of stress due to the traumatic event they are experiencing and other stressors in the NICU (Busse et al., 2013; Grosik et al., 2013). Research has shown that these increased stress levels can lead to further mental health issues, inadequacy in parental role, and developmental problems in their newborn infant later in life (Busse et al., 2018; Hobbs et al., 2017; Shaw et al., 2013; Snydor-Greenberg & Dokken, 2000; Treyvaud et al., 2012). Based on this evidence found in the literature, a product was developed to address stress parents’ experience in the NICU. The purpose of this product, titled Stress Reduction for Parents in the NICU: A Five Session Group Protocol, is to enable an occupational adaptive response (Schultz & Schkade, 1992; Turpin & Iwama, 2011) for parents through the use of stress reduction techniques and ultimately increase their competence in their role as a parent.

Strengths

The primary strength of this product is its strong, current, evidence basis for interventions. All five sessions compiled interventions with supporting evidence from the
literature. The evidence found was recently published (within the past ten years) and researched to determine efficacy. Another strength of the product is the inclusion of a thorough instruction guide with prompts for therapists to lead sessions. This enables flowing of the sessions, and a basis for referral. The structure of the sessions and protocol allows parents from all stages of NICU admission to participate in sessions, non-contingent on previous attendance. The group protocol is non-binding in the sense that parents are given the authority to choose sessions they want to attend. This is different than most group protocols which rely on a format where participants are required to attend all sessions to reap maximum benefits (Cole, 2012). The flexibility of the protocol design is optimal for the NICU environment as length of stay is variable per case. The other advantage of this product is the implementation is meant to be physically within the NICU. This allows for parents to remain close to their infant and provides them with the opportunity to leave the session and attend to their infant if the situation arises.

Limitations

The primary limitation of this product is that it has not been tested. Although a satisfaction survey is used to gather information on the sessions’ efficacy, the survey is not standardized or researched. It is a product-specific survey the authors developed. Limited information was found regarding occupational therapy’s role in the NICU for reducing parental stress. Another limitation is parents may not be able to attend all sessions due to the fast paced, changing environment of the NICU. Finally, the authors have minimal clinical experience in the NICU and are not yet licensed occupational therapy practitioners.
Future Practice Implications and Recommendations

Currently, there is no funding plan for implementation of this product. However, the authors intend on marketing their product to occupational therapy professionals working in NICU’s post-graduation. To test the efficacy, it is recommended that a pilot study be conducted and then beta testing of the product. Finally, a more rigorous experimental study should be conducted, and the results disseminated. Ideally, future versions of this product will include an increased number of sessions to create a more comprehensive intervention, and the content will be modified to allow other allied health professions to implement additional sessions based on expertise and scope of practice.

Conclusion

With NICU admissions continuing to rise each year and the increased stress levels that parents experience as a result of having a newborn in the NICU, it provides occupational therapists with a unique opportunity. Using their specialized set of skills and knowledge base, occupational therapists can make a positive impact on the lives of parents and their children. The stress parents experience in the NICU should not be underestimated as it has negative lasting impacts on parent mental health and role, as well as infant development. Creation of Stress Reduction for Parents in the NICU: A Five Session Group Protocol is a step towards developing a more holistic practice in the NICU and is designed to prevent further complications after discharge. The authors hope that successful implementation of this product will result in a significant decrease in parent stress in the NICU, allowing for maximized role competency and restoration of an adaptive occupational response.
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Stress Reduction for Parents in the NICU: A Five Session Group Protocol
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Introduction
OVERALL OBJECTIVES:

1. Parents will verbalize confidence in their ability to identify stressors in the NICU.
2. Parents will verbalize decreased stress at conclusion of the sessions.
3. Parents will demonstrate an adaptive occupational response to stress through utilization of appropriate coping strategies.
4. Parents will verbalize an increased sense of relative mastery in fulfilling their role as a parent.

PURPOSE:

The purpose of the following group session protocol is to facilitate an adaptive occupational response for parents in the NICU through the use of stress reduction techniques and establishment of role competency. Research shows that parents who have a newborn admitted to the NICU experience increased amounts of stress. The elevated stress levels are a cause for concern, as studies show a negative impact on parental mental health, infant development, and communication of information in the NICU (Busse, Stromgren, Thorngate, & Thomas, 2018; Hobbs, Tschudy, Hussey-Gardner, Jennings, & Boss, 2017; Shaw et al., 2013; Snydor-Greenberg & Dokken, 2000; Treyvaud et al., 2012). These increased stress levels are the result of several factors including overloaded sensory systems (elicited by the NICU environment), lack of ability to comprehend overwhelming amounts of new information, concern for infant’s well-being, inability to interact with infant, and a general sense of hopelessness (Busse et al., 2018, Miles et al., 1992).

The group protocol sessions were structured using Cole’s Seven Steps as a guide (Cole, 2012). Each session’s contents and activities were designed based on existing evidence in the
literature which supports specific intervention techniques proven to be effective in reducing parent stress, increasing NICU information retention, improving communication between parents and healthcare providers, and overall improving competence within the parental role (Busse et al., 2018, Miles et al., 1992). Reduction of stress and establishment of role competency will support an occupational adaptive response. By facilitating an occupational adaptive response, parents will be more apt to successfully fulfill their roles and occupational functioning.

MODEL OF PRACTICE:

The Occupational Adaptation (OA) model was chosen to guide the production of this group-based protocol. Each session addresses the three person components: sensorimotor, psychosocial, and cognitive. Within the OA model, each of the person components is present and active in every occupational response, to varying degrees, dependent on the specific occupational challenge (Schkade & Schultz, 1992). In the NICU, each of these systems can be overwhelmed. The OA model is therefore an appropriate model of practice to guide intervention and conceptualize occupational dysfunction parents experience in the NICU. The OA model also assumes people have an inherent drive for mastery, and in the NICU this concept is seen as parents have an inherent drive to fulfill their role as a parent (Schkade & Schultz, 1992). Role fulfillment and mastery is another element specific to the OA model. Each individual has an adaptive capacity which enables an adaptive occupational response. When this capacity is overwhelmed by external circumstances, such as delivering a preterm infant, the occupational challenge supersedes the person’s ability to produce a functional, adaptive, occupational response. In the NICU, this manifests as high stress levels. Factors contributing to these stress
levels are feelings of incompetence, hopelessness, and overwhelmed sensory systems. This protocol addresses each of these factors within the five sessions. Ideally, parents would attend each session to reap full benefits. However, this is not a plausible goal as parents and infants are constantly being admitted and discharged from the NICU. It was more practical to develop a group protocol in which parents attend sessions at their convenience rather than being bound to a strict schedule.

The sessions were carefully articulated to fit the Adult Learning Theory principles. This theory presents a framework for maximizing the learning potential of each adult group member. The sessions were carefully articulated to fit the principles. The first principle is: learning is related to an immediate need, problem, or deficit (Bastable, Gramey, Jacobs, & Sopczyk, 2011). Each session has an overarching goal of stress reduction, which is an immediate need for parents in the NICU. Another principle states the role of the teacher, or instructor, is one of a facilitator, and furthermore, the learning is self-directed by the learner (Bastable et al., 2011). The following group protocol utilizes this framework as evidenced by the processing, generalizing, and application sections. Within these components, the group instructor is provided with prompting questions to ask the group to facilitate learning and discussion. Other principles integrated into the group protocol are: the learner is able to actively participate in the learning process, the learner is able to learn in a group setting, the nature of the learning activity is varied and changes frequently, and learning is reinforced by application and timely feedback (Bastable et al., 2011).
WHO CAN USE THIS PROTOCOL:

This group-based protocol is designed to be implemented by occupational therapy professionals, either an occupational therapist or a certified occupational therapy assistant. Occupational therapy professionals have a unique set of skills designed to enable occupational functioning and competence.

MEASURE OF EFFICACY:

To evaluate the efficacy of the group protocol, the authors developed a satisfaction survey, which can be found in the appendix. The survey addresses key areas and objectives of the sessions. It is intended to be distributed to parents at the end of each session. The parents are encouraged to complete the survey, based on their overall experience of the protocol group, once they have been discharged from the NICU. A stamped and addressed envelope will be provided for parents to mail the completed survey to the authors.
Foreword:

The following product is the group series *Stress Reduction for Parents in the NICU: A Five Session Group Protocol*, is intended to be used as a guide for leading group sessions. Italicized sentences are intended to be used as a guide for the group instructor. Please tailor the session as appropriate for group members. The authors encourage the use of clinical reasoning to determine what is best for group members. Handouts for participants and group instructors have been included after each corresponding session. Copies of the handouts and resources for the therapist and group members will need to be made prior to implementation of each session.
## Overview of Product Sessions

<table>
<thead>
<tr>
<th>Session Title</th>
<th>Session Specific Objectives</th>
<th>Session Summary</th>
</tr>
</thead>
</table>
| General NICU Education        | To increase competency in the NICU,  
- Each group member will be able to identify the purpose of common equipment and terminology used in the NICU 9 out of 10 times.  
- Each group member will write down at least one question they can ask their medical provider to learn more about the NICU environment.  
- Each group member will identify three reasons it is important to be knowledgeable about the NICU.                                                                 | Parents are educated on general NICU information and complete activities to ensure competency.                                                                                                                |
| Understanding and Caring for Baby | To gain an understanding of how to interact with your baby,  
- Each group member will identify two infant cues that indicate an appropriate opportunity for swaddling.  
- Each group member will identify two infant cues that indicate the baby might be hungry or wet.                                                                                       | Parents learn how to understand and interact with their neonatal infant appropriately to facilitate safe and healthy bonding experiences.                                                                                 |
| Arts and Crafts | To facilitate a sense of hope and reduce stress,  
- Each group member will identify two thoughts they had as they were completing the project.  
- Each group member will share their plan for using the art project they created. | Parents select 1 of 3 options to create an artistic craft for their neonatal infant. |
| Mediation and Progressive Muscle Relaxation | To equip members with coping strategies for decreasing stress,  
- Each group member will verbalize whether progressive muscle relaxation or meditation produced a more calming bodily response.  
- Each group member will identify a circumstance in which either progressive muscle relaxation or meditation would be effective. | Parents are introduced to progressive muscle relaxation and guided meditation and determine which works best for them. |
| Sensory Based Stress Relief Kits | To facilitate a healthy coping response,  
- Each group member will be able to identify one sensory system that becomes overwhelmed in the NICU  
- Each group member will be able to verbalize one circumstance in which he or she envisions him or herself utilizing the sensory based kit. | Parents are educated on the sensory systems and sensory overload. Then, they select a framework for creation of a sensory based stress relief kit. |
General NICU Education
**INTRODUCTION**

Introduce self and greet participants

**Warm Up:**
- **Narrative Writing**
  - Pass out a journal and a pen/pencil to each group member, as well as the journal prompts found in this group’s parent handout section.
  - Give the group approximately 5 minutes to complete their journaling.
- Have each group member state their name and tell a little bit about themselves (if they want do), and if they have seen or experienced the NICU environment prior to their current experience/situation.

**Theoretical Background:**
- **Has anyone heard of the Occupational Adaptation theory?**
  - If yes, ask members to share what they know about the theory.
- **Stress Reduction for Parents in the NICU: A Five Session Group Protocol** was developed based on the Occupational Adaptation theory. This theory’s main goal is to create a healthy, natural response to different situations, which is called an occupational adaptive response. The goal of these sessions is to remove the barriers that are preventing this response from occurring and to give you the tools to allow this process to occur. For example, when you are dealing with an increased amount of stress or going through a major life change it is likely that this natural process is being disrupted. When you can’t produce a healthy response to these situations, it prevents your best performance in what you want to do… in this case being a parent to your newborn.

**Discuss Session Outline:**
- For this session’s activity, we will be discussing and increasing our familiarity with common medical terminology and equipment used in the NICU environment.
- The activity will last approximately 30 minutes.
- After completion of the activity we will share our thoughts and apply what we learned.
- I want to remind you that there is no expectation for having to complete any task or share any information you are not comfortable with.
- Please remember the personal thoughts and information shared amongst this group is to stay confidential between the members present here today.
Review Group Objectives:

To increase competency in the NICU,
1. Each group member will be able to identify the purpose of common equipment and terminology used in the NICU 9 out of 10 times.
2. Each group member will write down at least one question they can ask their medical provider to learn more about the NICU environment.
3. Each group member will identify three reasons it is important to be knowledgeable about the NICU.

ACTIVITY

- Hand out “Common Medical Terminology Used in the NICU” resource worksheet to each group member
  - With the group, go through each medical term and the definition one by one - discuss what each term means if there is confusion
  - Encourage the group members to interact and share their thoughts about what they think belongs in the definition’s missing blanks

- Present videos on medical equipment used in the NICU
  - Youtube:
    - Equipment by BIDMC NICU
      - Link: https://www.youtube.com/watch?v=QphHYiqRJuI
    - Terry Johnson, What Equipment is Used in the NICU by Prolacta Bioscience
      - Link: https://www.youtube.com/watch?v=yeDz634dpNM

- Hand out “NICU Medical Equipment” pamphlets to each group member for them to take home and use as a reference

- Ask group members if they have any questions

SHARING

1. What were you most unfamiliar with in regards to the information learned today?
2. Have you heard any of the medical terminology learned about today being used in the NICU?
3. What equipment have you seen being used or have already been familiar with prior to the session?
4. Is there any language or equipment you have heard and seen that we did not cover today?
PROCESSING

1. In what way(s) was the education that was provided today beneficial to you?
2. What emotions are attached to learning the new information?
3. How will the information we covered help you better understand the care being provided for your baby?
4. Is there anything you would have changed about your session experience today or have liked to learn more about?

GENERALIZING

1. Discuss general principles learned
2. What was the most common area of confusion?
3. What were some common emotions are attached to learning?

APPLICATION

1. How will you use the information discussed today after leaving this session?
   a. Examples:
      i. Group members can use the information to enhance and better understand their conversations with medical providers.
      ii. The information learned will help decrease stress levels and decrease confusion with care being provided to their newborn in the NICU.

SUMMARY

- Leader verbalizes key points from session
  - May ask members to engage
- Leader shares perception of group efficacy
- Thank group members for participation
Instructor Handouts

Content:

1. Common Medical Terminology Used in the NICU
   Instructor Key
Common Medical Terminology Used in the NICU **(Instructor Key)**

The bolded, underlined words in each definition below correspond to the blank spaces seen in the group member’s worksheets. When discussing the terms and definitions below one-by-one, encourage the group members to brainstorm together as a group what they think belongs in the blank spaces. Assist the group with the correct answer for each blank space that is not correctly identified. Terms and definitions continue onto the back page of this worksheet.

**Anemia:** Low number of red blood cells, which are the cells that carry oxygen and carbon dioxide to and from the body’s tissues.

**Antibiotics:** A medicine that kills bacteria and works to fight off or prevent infections.

**Blood Pressure:** The amount of pressure or force the blood is exerting against the blood vessel walls.

**Blood Transfusion:** The process of receiving blood from a donor with a matching blood type.

**Gestational Age:** The number of weeks the baby has been in the womb, from the time of conception to the time of birth.

**Glucose:** Sugar in the blood, which is used by the body for energy.

**Jaundice:** Increased levels of bilirubin in the blood, which can cause yellowing of the skin and the whites of the eyes.

**Intubation:** When a tube is inserted into the trachea (windpipe) in order for air to reach the lungs.

**NG Tube:** Feedings given through a tube that goes from the nose into the stomach.

**Nil Per OS (NPO):** No food or liquid by mouth.

**OG Tube:** Feedings given through a tube that goes from the mouth into the stomach.
pH: The **acidity or alkalinity** of the blood.

**Pneumonia:** When fluid collects in the **lungs** causing infection and breathing difficulties.

**Premature:** When a baby is born before **37 weeks** of pregnancy.

**Pulse:** The rate at which the **heart is beating**.

**Sepsis:** An **infection** in the blood.

**Surfactant:** A substance in the **lungs** which helps to keep the small air sacs from **collapsing**.

**Vital Signs:** These consist of the body’s **temperature, pulse, blood pressure, and rate of respiration**.

---

**Works Cited**


Parent Handouts

Content:

1. Journal Prompts
2. “Common Medical Terminology Used in the NICU” Worksheet
3. “NICU Medical Equipment” Information Booklet
Journal Prompts:

1. *Journal about your current comfortability level with the NICU environment*
2. *What do you feel stressed or confused about within the NICU setting?*
3. *What have you been satisfied with and/or found helpful within the NICU setting?*
Common Medical Terminology Used in the NICU

This worksheet gives a list of medical terms commonly used in the NICU and their corresponding definitions. Using the word bank below and with the other members in your group, brainstorm what word(s) or phrases you think belong in the blank spaces in order to complete each definition. Your instructor will assist you with identifying the correct answers. Turn to the back page to finish the worksheet.

| - Yellowing | - Nose into the stomach | - Bacteria |
| - Birth     | - Bilirubin              | - Lungs    |
| - Number of weeks | - Infection        | - Conception |
| - Mouth into the stomach | - Red blood cells | - Collapsing |
| - Food or liquid | - Heart is beating     | - Pressure |
| - Blood     | - Donor                 | - Matching |
| - Sugar     | - 37 weeks              | - Energy   |
| - Lungs     | - Oxygen                | - Trachea/Windpipe |
| - Acidity or alkalinity | - Infections     | - Carbon dioxide |
| - Temperature, Pulse, Blood Pressure, Rate of respiration |

Anemia: Low number of ________________, which are the cells that carry _________ and ________________ to and from the body’s tissues.

Antibiotics: A medicine that kills __________ and works to fight off or prevent ________________.

Blood Pressure: The amount of ___________ or force the _________ is exerting against the blood vessel walls.

Blood Transfusion: The process of receiving blood from a ________ with a ________________ blood type.

Gestational Age: The ___________________ the baby has been in the womb, from the time of ________________ to the time of ____________.

Glucose: _________ in the blood, which is used by the body for __________.
Jaundice: Increased levels of _________ in the blood, which can cause ____________ of the skin and the whites of the eyes.

Intubation: When a tube is inserted into the ______________________ in order for air to reach the lungs.

NG Tube: Feedings given through a tube that goes from the______________________________.

Nil Per OS (NPO): No ________________ by mouth.

OG Tube: Feedings given through a tube that goes from the______________________________.

pH: The _________________________ of the blood.

Pneumonia: When fluid collects in the _______ causing infection and breathing difficulties.

Premature: When a baby is born before _______________ of pregnancy.

Pulse: The rate at which the ________________________.

Sepsis: An ________________ in the blood.

Surfactant: A substance in the ________ which helps to keep the small air sacs from ________________.

Vital Signs: These consist of the body’s

______________________________________________

Works Cited

NICU Medical Equipment
Dear Parents,

This booklet has been designed for your personal use. It contains information and pictures to help you become more familiar with equipment typically found in the NICU. We hope you find this beneficial and that you will use it during your child's stay in the NICU.

Sincerely,

Nelson and Trieff

Works Cited:

[EIDMC NICU]. (2013, April 2). Equipment [Video File]. Retrieved from https://www.youtube.com/watch?v=Qo6rHYgF0f


Digital Images Cited:


Nasal Cannula
A tube with soft, plastic prongs that rest inside the baby’s nostrils. It provides a warm, continuous airflow of oxygen for the baby as opposed to using the CPAP machine.

Breast Milk Pump
A device that works to extract milk from a lactating mother’s breasts.

Incubator/Warmer Bed
This piece of equipment has a heat source which allows the baby to stay warm and maintain a necessary body temperature.

Ventilator/Respirator
A machine with a pressure control system that pumps oxygen through a tube into the baby’s lungs to help them breathe.

Oxygen Hood
A clear, plastic hood connected to an oxygen source that is placed over the baby’s head to provide supplemental oxygen support when the baby is breathing on their own.

Continuous Positive Airway Pressure (CPAP)
A machine that provides a steady flow of oxygen into the baby’s lungs through the use of a face mask or nasal canula.
Weigh Scale
A table scale which calculates a baby’s precise measurement of weight.

Warming Table
An open table that allows for easier access when assessing the baby, all the while keeping them warm.

Monitor
Used to continuously monitor the baby’s vitals, such as heart rate, oxygen level, and respiratory rate. This machine will alert medical staff if a problem or abnormality arises with the baby’s vitals.

Ultrasound Machine
This is a machine that produces pictures of internal body tissues (heart, lungs) through the use of sound waves.

Phototherapy
Gives off a blue spectrum light to help decrease bilirubin levels in the baby’s skin to treat the condition of jaundice.

Transilluminator
A device that uses ultraviolet (UV) light to assist in locating the small veins in the baby for blood draws.
Understanding and Caring for Baby
INTRODUCTION

Introduce self and greet participants

Warm Up:

- Narrative Writing:
  - Pass out a journal and a pen/pencil to each group member, as well as the journal prompts found in this group’s parent handout section.
  - Give the group approximately 5 minutes to complete their journaling.
- Have each group member state their name and tell a little bit about themselves (if they want to do), and share the gender of their newborn(s), his/her name, and how much him/her weighs.

Theoretical Background:

- Has anyone heard of the Occupational Adaptation theory?
  - If yes, ask members to share what they know about the theory.
- Stress Reduction for Parents in the NICU: A Five Session Group Protocol was developed based on the Occupational Adaptation theory. This theory’s main goal is to create a healthy, natural response to different situations, which is called an occupational adaptive response. The goal of these sessions is to remove the barriers that are preventing this response from occurring and to give you the tools to allow this process to occur. For example, when you are dealing with an increased amount of stress or going through a major life change it is likely that this natural process is being disrupted. When you can’t produce a healthy response to these situations, it prevents your best performance in what you want to do… in this case being a parent to your newborn.

Discuss Session Outline:

- For this session’s activity, we will be discussing and increasing our familiarity with common baby cues and signals, as well as practicing swaddling for your baby.
- The activity will last approximately 45 minutes
- After completion of the activity we will share our thoughts and apply what we learned.
- I want to remind you that there is no expectation for having to complete any task or share any information you are not comfortable with.
- Please remember the personal thoughts and information shared amongst this group is to stay confidential between the members present here today.
Review Group Objectives:
To gain an understanding of how to interact with your baby,
1. Each group member will identify two infant cues that indicate an appropriate opportunity for swaddling.
2. Each group member will identify two infant cues that indicate the baby might be hungry or wet.

ACTIVITY

Baby Cues and Signals:
- Hand out to each group member the “Baby’s Cues and Signals” worksheet
  - This worksheet presents a list of common baby cues and signals. I want you to match each cue/signal to its correlating emotion. Once everyone is finished with their worksheet we will review the correct answers and discuss.
- Give the “Understanding Your Baby’s Cues” handout to each group member for them to take home
- Ask the group if they have any questions

Swaddling:
- Instructor will need to provide baby dolls and blanks for parents to utilize
- Educate and demonstrate proper baby swaddling with a life-size babydoll and following the steps in the “Swaddling” handout
- Give each parent or couple a life-size babydoll (similar in weight to their newborn), and have them practice the swaddling technique
- Assist the members if needed
- Ask the group if they have any questions

SHARING

1. What was one cue/signal that we learned about today that surprised you or that you were unfamiliar with?
2. What did you find most challenging about the swaddling/positioning portion of today’s session?
PROCESSING

1. How do you think today’s session will impact your parental role?
2. In what ways will the information learned today benefit the relationship you have with your newborn?

GENERALIZING

1. What were some of the common difficulties the group shared?
2. What are the similarities in how you will use the information learned?
   a. What about the differences?

APPLICATION

1. How will you effectively use the information discussed today for your benefit after leaving this session?
   a. Examples:
      i. Group members can use this information to understand your baby’s needs and improve your care for them
      ii. Group members can use this information to create a stronger bond with your newborn

SUMMARY

- Leader verbalizes key points from session
  o May ask members to engage
- Leader shares perception of group efficacy
- Thank group members for participation
Parent Handouts

Content:

1. Journal Prompts
2. “Baby’s Cues and Signals” worksheet
3. “Understanding Your Baby’s Cues” information handout
4. “Swaddling” information handout
Journal Prompts:

1. What do you feel has been the most stressful about being a parent to either prior children or your newborn in the NICU?
Baby’s Cues and Signals

In the word bank below, you will find a list of cues and signals that babies commonly demonstrate to express their emotions. Each cue/signal in the word bank below has a corresponding emotion. Match each cue/signal to its corresponding emotion in the categories below the word bank. Turn to the back page to finish the worksheet.

| - Moves smoothly | - Smiling | - Reaching out to you |
| - Jerky movements (2) | - Arched back | - Crying |
| - Eyes staring into space | - Hiccupping | - Not interested in you/objects |
| - Makes sucking noises | - Dull looking | - Frowning |
| - Face turning red | - Opens and closes mouth | - Makes eye contact/follows |
| - Turns towards breast | - Yawning | - Sucks on fist |
| - Fussing | - Difficult to draw attention | - Eyes wide open |

I’m alert and ready to interact:

I’m hungry and want to eat:

I’m distressed and need a break:

I’m tired and ready to sleep:
“Understanding Your Baby’s Cues”

**ALERT**
- Moves smoothly (Not jumpy or startled)
- Eyes wide open
- Makes eye contact or tries to follow faces
- Smiling
- Reaching out to you

**DISTRESSED**
- Jerky movements
- Face turning red
- Frowning
- Crying
- Arched back
- Hiccupping

**TIRED**
- Eyes staring into space
- Dull looking
- Not interested in you/objects
- Yawning
- Fussing
- Jerky movements

**HUNGRY**
- Making sucking noises
- Turns towards breast
- Opens and closes mouth
- Sucks on fist
Swaddling

Swaddling is the technique of wrapping a blanket snuggly around your infant to resemble their time in the womb. Swaddling has been shown to improve infant sleep, such as increase the length of time they sleep, decrease spontaneous awakenings throughout sleep, and reduce crying.

HOW TO SWADDLE MY INFANT:
1. Spread out a blanket and fold over one corner
2. Place your infant face up with their head at the edge of the folded seam
   a. *Baby’s arms can be folded up across their chest or straight against their side*
3. Using one hand to hold your baby in place, pick up one corner of the blanket and bring it across your baby’s body
4. Tuck the blanket corner under the opposite arm
5. Loosely fold the bottom corner of the blanket up over your infant’s feet
   a. *Make sure your baby’s legs are in a slightly flexed position with extra room in the blanket for them to move. Wrapping your baby’s legs tightly in a straight position can lead to hip dislocation and dysplasia.*
6. Pick up the last corner of the blanket and fold it across your baby’s body

Extra Tips:

✓ Never place your infant on their side or stomach while being swaddled, as this can lead to smothering and inability to breathe

✓ Make sure to monitor your baby closely when swaddled to prevent them from turning onto their stomach or becoming un-swaddled

✓ To avoid over-heating, use a thin blanket or dress your baby in minimal clothing, such as a onesie or a diaper

✓ Do not keep your baby swaddled all day, as they need time to develop movement in their arms and legs
Works Cited


Digital Images Cited:


Figure 3: Chandler, L. (2015, February 19). Sleepy Baby [Shew I'm Tired!]. Retrieved February 20, 2019, from https://www.flickr.com/photos/funkyartqueen/16392468090

Figure 4: Futurestreet. (2008, November 8). Let me think about that [Digital image]. Retrieved February 20, 2019, from https://www.flickr.com/photos/futurestreet/3026962008/
Arts and Crafts
INTRODUCTION

Introduce self and greet participants

Warm Up:
- Narrative Writing:
  - Pass out a journal and a pen/pencil to each group member, as well as the journal prompts found in this group’s parent handout section.
  - Give the group approximately 5 minutes to complete their journaling.
- Have each group member state their name and tell a little bit about themselves (if they want to), and share the picture that they wrote about in their journal

Theoretical Background:
- Has anyone heard of the Occupational Adaptation theory?
  - If yes, ask members to share what they know about the theory.
- Stress Reduction for Parents in the NICU: A Five Session Group Protocol was developed based on the Occupational Adaptation theory. This theory’s main goal is to create a healthy, natural response to different situations, which is called an occupational adaptive response. The goal of these sessions is to remove the barriers that are preventing this response from occurring and to give you the tools to allow this process to occur. For example, when you are dealing with an increased amount of stress or going through a major life change it is likely that this natural process is being disrupted. When you can’t produce a healthy response to these situations, it prevents your best performance in what you want to do… in this case being a parent to your newborn.

Discuss Session Outline:
- For this session’s activity, we will be making a craft for your baby, showing what you made to the rest of the group, and discussing the session
- The activity will last approximately 30 minutes
- After completion of the activity we will share our thoughts and apply what we learned.
- I want to remind you that there is no expectation for having to complete any task or share any information you are not comfortable with.
- Please remember the personal thoughts and information shared amongst this group is to stay confidential between the members present here today.

Review Group Objectives:
- To facilitate a sense of hope and reduce stress,
  1. Each group member will identify two thoughts they had as they were completing the project.
  2. Each group member will share their plan for using the art project they created.
ACTIVITY

Display each craft to the group:
- Scrapbook Page
- Tie Blanket
- Nursery Wall Art (name sign)

Have each group member pick a craft they would like to create
- Provide each parent with craft direction packet (see Parent Handouts)

Assist each group member as needed

SHARING

1. Which of the crafts interested you?
2. Which craft did you choose to make?
3. What aspect are you most proud of?

PROCESSING

1. What thoughts did you have when choosing a project?
2. How did you choose which product to make?
   a. What factors impacted your decision?
3. Was it easier or harder than you expected?
4. What feelings did you experience during this activity? How do you feel now?
5. What impact has this activity had on your mood? Has it changed since the beginning of this activity?
6. How do you think this activity will impact your infant?
7. How do you feel when you think about presenting this project to your infant?
8. How do you think adding this project will change the environment for you?
9. How do you think this product will impact the relationship between you and your baby?
10. How would you change this activity?

GENERALIZING

1. What were the main reasons for choosing different projects?
2. What feelings were most common?
3. How were your responses similar or different?
APPLICATION

1. How do you plan to use your product?
2. What else do you need to do before using your product?

SUMMARY

- Leader verbalizes key points from session
  - May ask members to engage
- Leader shares perception of group efficacy
- Thank group members for participation
Parent Handouts

Content:

1. Journal Prompts
2. Craft Direction Packet
   a. Scrapbook Page
   b. Tie Blanket
   c. Baby Name Sign
   d. Works Cited
Journal Prompts:

1. Draw a picture of something that makes you happy.
2. What does the picture represent?
3. What makes you happy about what you drew in your picture?
Craft Direction Packet

(Scrapbook Page, Tie Blanket, Baby Name Sign)
Scrapbook Page

Materials Needed: scissors, pencils, pens, markers, miscellaneous magazines and scrapbooking paper, glue sticks, stickers, decorations

Instructions: Add meaningful information, pictures, and mementos to document your baby’s NICU experience

Ideas to include: Name, weight, length, footprints, date of birth, pictures of baby, narrative of reason for NICU stay, first feeding experience, infant’s likes and dislikes, family members, medical staff, etc.

Examples:

(Figure 1)
When you were born, you were so big that your sister processing your surge too quickly, you were whisked off to the NICU soon after you arrived. It was so hard to leave you when I was discharged! The nurses took great care of you at night, and Daddy and I stayed with you as long as we could during the day. You were one of the largest babies there! While it was hard to see you hooked up to so many machines for the first week, I was glad that they took such great care of you there at AMC.

(Figure 2)
Tie Blanket

(Figure 3)
1. Select two pieces of fabric and cut them to the same size
   ○ Example: 2 feet by 2 feet

(Figure 4)

(Figure 5)
2. Cut a square out from each of the four corners
   ○ Note: The depth of the square will be the depth of the ties
   ○ Example: 3 inches by 3 inches

(Figure 6)

(Figure 7)
3. Choose how wide you want the ties to be
   ○ Example: 1 inch
4. Cut fringes using the width and depth measurements you chose along all 4 edges
   ○ Example: (depth) 3 inches; (width) 1 inch

(Figure 9)
5. Tie the fringes together using a double knot
Baby Name Sign

Materials Needed: scissors, pencils, miscellaneous magazines and scrapbooking paper, glue sticks, letter stencils

Instructions:
1. Have participants look through materials and find desirable patterns for each letter
2. Use pencil and stencil to outline letter on top of pattern
3. Cut letter out of pattern
4. Glue letters onto sign

Examples:

(Figure 13)*
Works Cited


Figure 3. Tie blanket instructions 1. By Rachel Trieff, 2019. Copyright [2019] by Rachel Trieff.

Figure 4. Tie blanket instructions 2. By Rachel Trieff, 2019. Copyright [2019] by Rachel Trieff.

Figure 5. Tie blanket instructions 3. By Rachel Trieff, 2019. Copyright [2019] by Rachel Trieff.


Figure 7. Tie blanket instructions 5. By Rachel Trieff, 2019. Copyright [2019] by Rachel Trieff.


*If you are interested in purchasing a professionally crafted, customized nursery sign, please:

Come visit my [Shikma] etsy shops:

https://www.etsy.com/shop/ChicMango

https://www.etsy.com/shop/pomegranatree

https://www.etsy.com/shop/HowDoYouDoIt

Visit my [Shikma] blog:

{ Hebrew } www.shikmabenmelech.com

{ English } https://rock-paper-scissors.blog/

Read about my [Shikma] book:

https://sites.google.com/site/mitzmishmishbook/mitzmishmishbook
Meditation and Progressive Muscle Relaxation
INTRODUCTION

Introduce self and greet participants

Warm Up:
- Narrative Writing:
  - Pass out a journal and a pen/pencil to each group member, as well as the journal prompts found in this group’s parent handout section.
  - Give the group approximately 5 minutes to complete their journaling.
- Have each group member state their name and tell a little bit about themselves (if they want do), and if they have seen or experienced meditation/progressive muscle relaxation before.

Theoretical Background:
- Has anyone heard of the Occupational Adaptation theory?
  - If yes, ask members to share what they know about the theory.
- Stress Reduction for Parents in the NICU: A Five Session Group Protocol was developed based on the Occupational Adaptation theory. This theory’s main goal is to create a healthy, natural response to different situations, which is called an occupational adaptive response. The goal of these sessions is to remove the barriers that are preventing this response from occurring and to give you the tools to allow this process to occur. For example, when you are dealing with an increased amount of stress or going through a major life change it is likely that this natural process is being disrupted. When you can’t produce a healthy response to these situations, it prevents your best performance in what you want to do… in this case being a parent to your newborn.

Discuss Session Outline:
- For this session’s activity, we will be experiencing progressive muscle relaxation and briefly learn about ways to meditate.
- The activity will last approximately 30 minutes
- After completion of the activity we will share our thoughts and apply what we learned.
- I want to remind you that there is no expectation for having to complete any task or share any information you are not comfortable with.
- Please remember the personal thoughts and information shared amongst this group is to stay confidential between the members present here today.
- You should also be aware if you need, or want, to leave the session at any time, you are free to do so.
Review Group Objectives:
To equip members with coping strategies for decreasing stress
a. Each group member will verbalize whether progressive muscle relaxation or meditation produced a more calming bodily response.
b. Each group member will identify a circumstance in which either progressive muscle relaxation or meditation would be effective.

ACTIVITY

- See Instructor Handouts for activity outline
  - Guided meditation
  - Progressive muscle relaxation

SHARING

1. Which did you like better, progressive muscle relaxation or meditation?
2. What questions do you still have about either activity?

PROCESSING

1. What differences do you notice in the way your mind feels when comparing before and after the activity? What about your body?
2. Why do you think these processes help calm the mind? What about the body?
3. Did these practices have a greater effect on your mind or body?
4. When you feel stress rising in the NICU, do you notice it more physically or mentally?

GENERALIZING

1. What are the similarities between the two practices?
2. What are the differences between the two practices?
3. Which practice would be more effective in the NICU?
APPLICATION

1. How long do you envision yourself practicing either progressive muscle relaxation or meditation?
2. Where do you envision yourself practicing either progressive muscle relaxation or meditation?
3. What circumstances would create a good opportunity for using one of these practices?

SUMMARY

- Leader verbalizes key points from session
  - May ask members to engage
- Leader shares perception of group efficacy
- Leader hands out resources and asks if there are any. questions (see appendix)
- Thank group members for participation
Instructor Handouts

Content:

1. Instructor Activity Notes
Instructor Activity Notes

- Begin activity by handing out “Progressive Muscle Relaxation Tips” and “Meditation Tips”
- Make sure group members have a writing utensil for if they want to take notes
- Provide brief education on progressive muscle relaxation and meditation
  - Progressive muscle relaxation and meditation are both great ways to reduce stress. In progressive muscle relaxation, you will tense and then release different muscles in your body. Pay attention to the way you feel when you are tensed, and when you are relaxed. This practice helps us to recognize tension in the body. Often times, we automatically tense up when we get stressed and don’t even notice it. This practice helps reduce stress by teaching you to recognize the tension and then relax your body.
  - Meditation is a practice for the stress in your mind. This practice helps you learn to guide and control your thinking. When we are stressed, it is common for our minds to start racing, making it hard to think straight and take in important information. This practice helps reduce stress by giving you control of your thoughts.
- Answer questions if applicable
- Ask members for permission to dim or turn off lights
- If possible, close door to minimize environmental distractions
- Encourage group members to find a comfortable position
- Search on youtube.com for “Guided Relaxation: Progressive Muscle Relaxation with Ocean Visualization for Stress Relief” and play video
  - The video preview looks like this:

Guided Relaxation | Progressive Muscle Relaxation with Ocean Visualization for Stress Relief
Relax For A While • 41K views • 1 year ago
Click here to download https://sellfy.com/p/3Cif/ This 15 minute guided relaxation includes some progressive muscle relaxation to...
• Search on youtube.com for “Short Mindfulness Guided Meditation for Calmness and Deep Relaxation” and play video
  
  i. The video preview looks like this:

  ![Video Preview]

  Short mindfulness Guided meditation for calmness and deep relaxation

  23K views - 10 months ago
  YouTube - Meditation Vacation

• Proceed to “Sharing” section in session outline
Parent Handouts

Content:

1. Journal Prompts
2. Progressive Muscle Relaxation Tips
3. Meditation Tips
4. Works Cited
Journal Prompts:

1. Have you felt stressed or anxious today?
   a. If so, what triggered it?
   b. How did you overcome it?
Progressive Muscle Relaxation Tips

1. Find a comfortable position before beginning
2. Try to find a quiet environment where you will not be interrupted
3. Put on relaxing music
   a. Search on youtube.com for “peaceful sounds,” “meditation music,” “calming music,” “ambience,” “nature sounds,” etc.
4. Pay attention to the different feelings your body has when tensing and relaxing muscles
5. Close your eyes
6. Use a recording to guide your practice if needed
   a. Search on youtube.com for “Guided Relaxation: Progressive Muscle Relaxation with Ocean Visualization for Stress Relief” for the recording used during the group session
      i. The video preview looks like this:

My Notes:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Meditation Tips

1. Remember you have the power to choose which thoughts you think about
2. Have a passive attitude and accept different thoughts that come across your mind, but then bring your attention back to the focus of your meditation
3. Put on relaxing music
   a. Search on youtube.com for “peaceful sounds,” “meditation music,” “calming music,” “ambience,” “nature sounds,” etc.
4. Find a comfortable position before beginning
   a. Some common meditation positions: 

Burmese Pose
Sitting on Chair
5. Take deep breaths
6. Close your eyes
7. Use a recording to guide your practice if needed
   a. Search on youtube.com for “Short Mindfulness Guided Meditation for Calmness and Deep Relaxation” for the recording used during the group session
      i. The video preview looks like this:

My Notes:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Works Cited


*Sitting on Chair*. Rachel Trieff Sitting on Chair, by Rachel Trieff, 2019. Copyright [2019] by Rachel Trieff.
Sensory-Based Stress Relief Kits
INTRODUCTION

Introduce self and greet participants

Warm Up:
● Narrative Writing:
  ○ Pass out a journal and a pen/pencil to each group member, as well as the journal prompts found in this group’s parent handout section.
  ○ Give the group approximately 5 minutes to complete their journaling.
● Have each group member state their name and tell a little bit about themselves (if they want do), and share the stress-coping strategy they use that they feel is most successful

Theoretical Background:
● Has anyone heard of the Occupational Adaptation theory?
  ○ If yes, ask members to share what they know about the theory.
● Stress Reduction for Parents in the NICU: A Five Session Group Protocol was developed based on the Occupational Adaptation theory. This theory’s main goal is to create a healthy, natural response to different situations, which is called an occupational adaptive response. The goal of these sessions is to remove the barriers that are preventing this response from occurring and to give you the tools to allow this process to occur. For example, when you are dealing with an increased amount of stress or going through a major life change it is likely that this natural process is being disrupted. When you can’t produce a healthy response to these situations, it prevents your best performance in what you want to do… in this case being a parent to your newborn.

Discuss Session Outline:
● For this session’s activity, we will be learning about the various sensory systems and creating sensory-based stress relief kits.
● The activity will last approximately 30 minutes
● After completion of the activity we will share our thoughts and apply what we learned.
● I want to remind you that there is no expectation for having to complete any task or share any information you are not comfortable with.
● Please remember the personal thoughts and information shared amongst this group is to stay confidential between the members present here today.
● You should also be aware if you need, or want, to leave the session at any time, you are free to do so.
Review Group Objectives:
To facilitate a healthy coping response,
1. Each group member will be able to identify one sensory system that becomes overwhelmed in the NICU
2. Each group member will be able to verbalize one circumstance in which he or she envisions him or herself utilizing the sensory based kit.

ACTIVITY

- Begin with education on sensory based kits and verbalize benefits and uses
  - What are the different senses we have?
    - Allow group to brainstorm systems, add any systems they missed
  - Provide a brief definition of each sensory system
    - Auditory: hearing
    - Visual: seeing
    - Gustatory: tasting
    - Vestibular: stability and balance
    - Proprioceptive: body awareness
    - Olfactory: smelling
    - Tactile: touching
  - The NICU can be very overwhelming to our sensory systems. This causes stress levels to rise. To compensate, today we are going to choose items to put in a sensory based kit that would help with stress relief. After I show you some sensory items that could go in a kit, I will hand out worksheets so you can choose items that will be most helpful for you.
- Present a variety of sensory based items (as available)
  - Ask group to try to identify which sensory system each item belongs to
    - Ideally, have at least one item from each category
- Distribute copies of “Parent Handouts” and a highlighter for each participant
- Read instructions at top of “Parent Handouts”
- Respond to any questions
**SHARING**

1. Ask group members to share 3 of the items they highlighted
2. Were there any sensory systems you did not highlight any items?
3. Which sensory system had the most highlighted items?
4. Ask if they are able to think of any items that are not on the list

**PROCESSING**

1. Ask group members to describe a circumstance in which they envision themselves utilizing the sensory based kit and which item they would plan on using.
2. What thoughts helped you decide on which items to use?
3. What barriers exist for using the kit?
4. How will the kit help you reduce stress levels?
5. Why is it important to reduce stress levels?
6. What activities will you be able to be more engaged in with reduced stress levels?
7. Which sensory system is the first to be overwhelmed in the NICU?
   - a. Did this sensory system have the most highlighted items?

**GENERALIZING**

1. As a group, were there any sensory systems that were focused on more than others?
2. Were there any sensory systems that had no highlighted items?
3. What were the most commonly highlighted items?

**APPLICATION**

1. What steps need to be taken to complete the sensory based kit?
2. Where can you go to find the items?
3. What sort of container will you keep the items in?
4. When would be a good day or time to bring a sensory based item with you?
SUMMARY

- Leader verbalizes key points from session
  - May ask members to engage
- Leader reviews literature supporting sensory based kits briefly
- Leader shares perception of group efficacy
- Thank group members for participation
Parent Handouts

Content:

1. Journal Prompts
2. Sensory System Item List
Journal Prompts:

1. Write a list of your current strategies to relieve stress:
   a. Which strategy do you feel works best for you and why?
Sensory System Item List*

- Highlight each item you would like to include in your sensory based stress relief kit
- Add additional items not listed under “Other:”
- Add notes for where you are going to get them, prices, etc.

Auditory (Hearing)

- Rain stick
- Ear plugs
- Diverse music/sound options
  - Rhythmic
  - Island
  - Gaelic
  - Jazz
  - Drumming
  - Nature sounds- i.e. ocean, rain birds
  - White noise

Other:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Visual (Seeing)

- Kaleidoscope
- Oggz
- Homemade picture book
- Nite-lite
- Bubbles
- Pinwheel
- Glow Ring

Other:


Gustatory (Taste)

- Crunchy- carrots, celery, apples, pears
- Salty- crackers, popcorn
- Spicy- wasabi peas, banana peppers
- Sour- lemon wedges, pickles
- Chewy- raw bagels, beef jerky, dried fruit
- Gum
- Chew ‘jewelry’
- Frozen grapes, fruit wedges

Other:
Vestibular (Stability and Balance)

- Movement disc
- Head, shoulder, knees and toes
- Yoga poses
- Dancing
- Jumping jacks
- Therapy ball
- Swinging
- Balance board
- Rocking chair

Other:

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Proprioceptive (Body Awareness)

- Lap pad
- Weighted blanket, vest, or hat
- Shoulder bean bag
- Velcro ankle weights
- Body sox
- Small medicine ball
- Wall push ups

Other:

________________________________________

________________________________________

________________________________________
Olfactory (Smelling)

- Scented markers, erasers, bubbles
- Personal care items- lotions, shampoo
- Linen spray
- Candles
- Aroma diffuser
- Essential oils

Other:

________________________________________

________________________________________

________________________________________
Tactile (Touching)

- Fidget tools
- Stress balls
- Putty or slime
- Wikki sticks
- Lotion
- Textured cloth
- Bean bags

Other:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

*Adapted with permission from:

Appendix
Author Contact Information

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Satisfaction Survey

Thank you for attending one or more of the Stress Reduction for Parents in the NICU: A Five Session Group Protocol! We would love to receive your feedback. Please fill out the following survey based on your overall all experience. Once finished with the survey, use the stamped addressed envelope to return your survey by mail.

Please Note: All identifying information will be removed and your information will be kept confidential.

1. **Circle the sessions you attended:**
   a. General NICU Education
   b. Understanding and Caring for Baby
   c. Arts and Crafts
   d. Progressive Muscle Relaxation and Meditation
   e. Sensory Based Stress Relief Kit

2. **How Relevant were the session(s) to you?**
   a. Very Irrelevant
   b. Irrelevant
   c. Neutral
   d. Relevant
   e. Very Relevant

3. **How satisfied were you with the structure of the session(s)?**
   a. Very Dissatisfied
   b. Dissatisfied
   c. Neutral
   d. Satisfied
   e. Very Satisfied

4. **How did the session(s) affect your stress levels?**
   a. Increased my stress a lot
   b. Increased my stress a little
   c. My stress stayed the same
   d. Decreased my stress a little
   e. Decreased my stress a lot
5. **How did the session(s) affect your confidence?**
   a. Decreased my confidence a lot
   b. Decreased my confidence a little
   c. My confidence stayed the same
   d. Increased my confidence a little
   e. Increased my confidence a lot

6. **How often did you use the information and skills obtained from the session(s) while in the NICU?**
   a. Never
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Almost Always

7. **How often do you think you will use the information and skills obtained from the session(s) at home?**
   a. Never
   b. Rarely
   c. Sometimes
   d. Frequently
   e. Almost Always

8. **How likely would you be to recommend this session(s) to other parents who have newborns in the NICU?**
   a. Not likely at all
   b. Not likely
   c. Neutral
   d. Likely
   e. Very likely

Please write any additional comments below:

___________________________________________
___________________________________________
___________________________________________
Works Cited


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If this release is obtained from a presenter under the age of 19, then the signature of that presenter’s parent or legal guardian is also required.

Parent’s Signature ______________________ Date ______________________