Facilitating the Role of Fathers in the Neonatal Intensive Care Unit: Identifying Barriers to Paternal-Infant Bonding

Author: Hannah Kapsak

Facilitating the Role of Fathers in the Neonatal Intensive Care Unit:

Identifying Barriers to Paternal-Infant Bonding

Hannah Kapsak

Boston College

Table of Contents

Introduction……..4

Conceptual Framework……5

Method……7

Tools Utilized to Evaluate NICU Environment……...8

Parental Stress Scale: Neonatal Intensive Care Unit (PSS: NICU)…….8

Neonatal Unit Parental Stress Scale (NUPS)……..…..9

Parental Concerns……..10

Infant Fragility……...11

Infant Pain……..12

Uncertainty…….13

NICU Setting and Technology……...13

Maternal Health…….16

Additional Relationships……17

Summary of the Literature…….17

Nursing Interventions……18

Online Resources……...19

Direct Reports from Fathers in the NICU (Spring 2013)……..21

Mark……..21

Antonio……..22

John……23

Barriers to Paternal Bonding Assessment Tool…….23

Results……26

Discussion……..26

Conclusion…….27

References…….29

Introduction

The childbearing process is often overwhelming for parents even when the birth proceeds without complications or surprises. When the birth occurs before the desired due date, the experience for which the parents have been planning may suddenly disappear before their eyes; instead of meeting their newborn, parents watch as he or she is whisked away for emergent care. When a child is born prematurely, crucial first hours of parent-infant bonding are replaced with worry and anxiety over the status of the infant's health. It may be days or even months before the parents are able to take their infant home. It is the responsibility of nurses to intervene and encourage parent-infant attachment to bridge the gap created by the routines of the neonatal intensive care unit (NICU) now housing the newborn (Turan, Zumrut, & Ozbek, 2008). Often parents are unsure about how to participate in the care of their child due to the complexity of treatment in the NICU. Nurses are able to support parents postpartum during visits and provide teaching about the NICU and ways for the mother and father to bond with and care for their infant. Through their support, nurses facilitate parent-infant bonding that enables parents to interact with and get to know their new child. Most of the literature focuses on the maternal-infant bond and neglects to address the need for paternal-infant bonding. However, fathers, when present, hold a vital role in their infants lives and are in a position to facilitate bonding with mothers (Fegran, Helseth, & Fagermoen, 2008). By further examining the barriers to paternal-infant bonding, which have been frequently neglected in research, the budding relationship between a NICU infant and his parents can be better supported.

Maternal health complications can accompany the birth of a preterm newborn, so mothers may also be hospitalized for extended periods. Though hospitalization may make it easier for a mother to visit her infant in the NICU, her own unstable condition may preclude those visits. If the father is present, he may be in a better position to bond with the infant. If that bonding is

successful, the father may then communicate information about the infant's status and insights into his or her personality to the mother, thereby supporting maternal-infant bonding (Mackley, Locke, Spear, & Joseph, 2010). The hospitalization of both mother and infant can have a negative and stressful effect on the father, but with adequate support the experience can be augmented. The father can then in turn support the mother in her experience of the NICU and attachment process.

The purpose of this paper is to identify and examine the sources of paternal stress related to the NICU experience and the supports currently available. Once identified, the possible sources of stress will be incorporated into a checklist that will allow NICU staff to assess barriers to bonding and further personalize the interventions to facilitate the relationship between the parent and infant.

Conceptual Framework

Control Theory, according to Carver and Scheier (1982), enables an individual to cope with the unexpectedly changing environment around him. In order to maintain homeostasis, an individual must adapt to the external forces that may impact the environment. The individual works towards a goal. However, his environment may change and produce obstacles that prevent goal acquisition. In response, the individual must adapt to the changing environment to continue towards the goal. The process is condensed into a negative feedback loop. The normal conditions in the environment are the input function; it is the assessment by the individual. The comparator is a "point of reference" to which the input function is compared and the individual assesses for any differences between the two that would indicate an obstacle in the environment. The action the individual takes to neutralize the disturbance and neutralize the obstacle is the output function. The action impacts the environment and in turn creates a new input function by which

the individual reassesses the environment. Through reassessing the environment the negative feedback loop is complete and through the process of assessing and reassessing the environment, an individual is able to continue working towards a goal by navigating any obstacles that may arise.

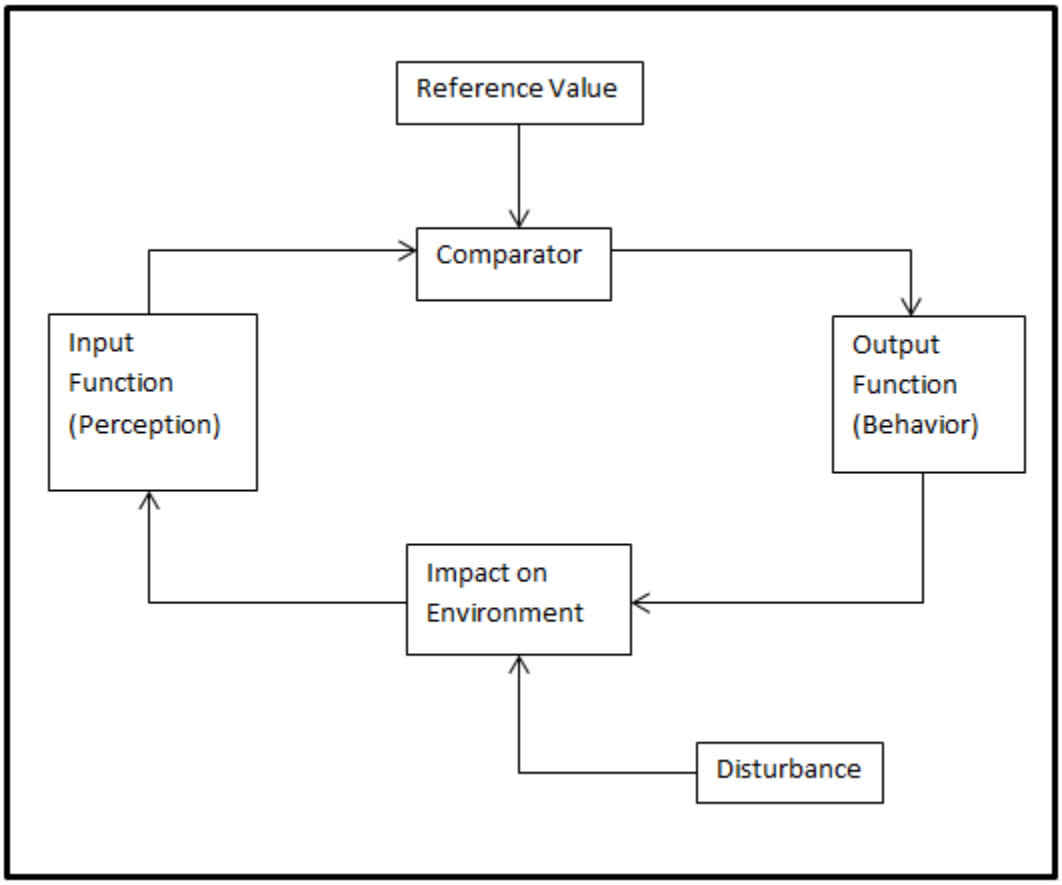

Figure 1. Carver and Scheier (1982).

In the childbirth process parents have a variety of goals. Two main goals include bonding with their infant, and taking their infant home. However, obstacles may arise that could prevent those goals from being achieved. If an infant is admitted to the NICU, his health status is not stable enough for the parents to take their infant home; an obstacle is presented to the parents. While in the NICU, the infant is placed in an isolette and an obstacle to bonding is created. Parents must then adjust their behavior in a way that also impacts the environment to counteract

the obstacles, hopefully while maintaining the additional goal of keeping their personal health. With the help of nursing interventions and support, parents are given tools that can help them achieve their goals. By assessing the individual circumstances and further personalizing the interventions to each parent in the NICU, nursing staff are better able to facilitate bonding and steps towards discharge with each infant.

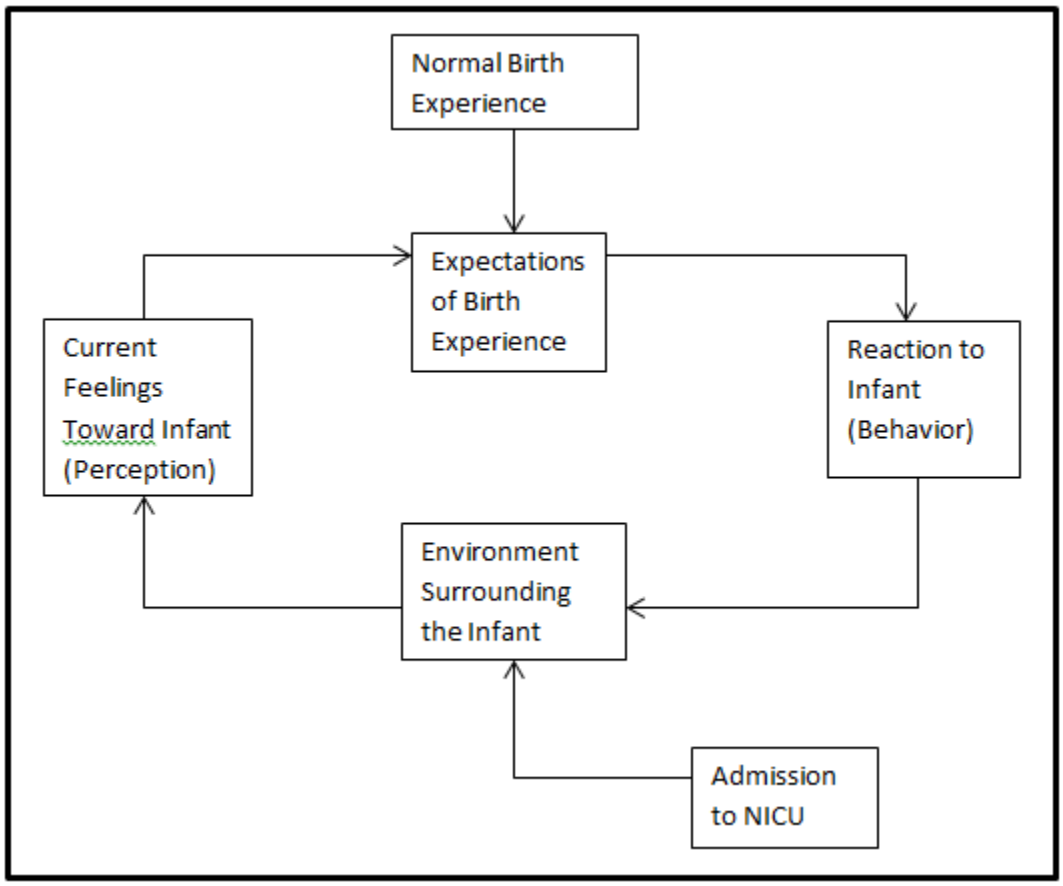

Figure 2. Adapted from Carver and Scheier (1982).

Method

A review of the current and past literature in the CINAHL, PubMed, and GoogleScholar databases was conducted to synthesize our understanding of the role of fathers in the NICU and identify factors that impair paternal-infant bonding. Findings revealed that current research is focused primarily on the role of mothers and nursing interventions to facilitate maternal-infant

bonding in the NICU. Although that bond is imperative, few studies have been conducted that add to our understanding of the role of the father in the NICU, the importance of paternal-infant bonding, and the stressors and supports available to fathers. This literature review included 13 studies of parent stress and bonding related to their experiences in the NICU setting, eight of which included fathers. Through evaluation of the research on maternal-infant bonding, insights into ways to augment the paternal role in the NICU may be identified. Internet resources available to parents were examined by searching Google for educational sites: March of Dimes and CaringBridge. Personal experiences of fathers in the NICU were discovered by reading online blogs available in the public domain on both WordPress and Tumblr. By evaluating research studies and online support services available to new fathers, gaps in education and common sources of stress were identified. Utilizing the identified sources of stress and barriers to paternal-infant bonding, a checklist was created that could be used in the NICU to identify which barriers may apply to each father. By identifying the unique barriers to bonding, nurses are better able to quickly and effectively intervene to provide the support required. Those interventions will support the father in working towards his goal of bonding.

Tools Utilized to Evaluate NICU Environment

Parental Stress Scale: Neonatal Intensive Care Unit (PSS:NICU)

The PSS: NICU was developed by Miles, Funk, and Carlson (1993) and evaluated in a study that interviewed 115 mothers and 75 fathers of stable infants in three NICUs in the United States and Canada. The average age of the infants was 2.8 days with gestational ages ranging from 24 to 37 weeks. The parents were asked to rate each of the 50 items on the scale from not stressful (1) to extremely stressful (5) or indicate if they did not experience that item (0). The items related to *Infant Behavior and Appearance* included: *sad, limp and weak, needles/tubes put*

in, breathing pattern, pain, intravenous/feed tube, unusual color, tubes/equipment, jerky/restless, wrinkled, bruises/cuts/incisions, can't cry, small size. The items related to *Parental Role Alteration* included: *can't feed, can't provide care, can't hold, not alone, helpless/protect, separation, helpless/how to help*. The items related to the *Sights and Sounds* of the NICU included: *noise monitors/equipment, sudden noise/alarms, see monitors/equipment, other such babies, respirator, large number of staff*. Miles, Funk, and Carlson (1993) found that their results supported the validity of the PSS:NICU as a tool to evaluate the stress experienced by parents in the NICU. A study by Franck, Cox, Allen and Winter (2005) evaluated the validity and reliability of the PSS: NICU in the United Kingdom using parents of NICU infants in both the United States (US) and the United Kingdom (UK). The sample included 257 parents: 184 mothers and 73 fathers. The infants' mean gestational age in the UK sample was 32 weeks, in the US sample the mean was 35 weeks. The parents were given the PSS:NICU and asked to rate their stress in relation to specific elements, as above. The Spielberger State-Trait Anxiety Inventory (SSTAI) was utilized to assess the parental stress. The SSTAI assesses both state anxiety (situational) and trait anxiety (personality). The study concluded that the stress reported by parents in the UK was higher than that reported by US parents. In the UK mothers were found to have higher state and trait anxiety while in the US there was no significant difference between mothers and fathers. The authors concluded that their findings supported the validity of the scale in both countries to support the use of the tool both inside and out of the US.

Neonatal Unit Parental Stress Scale (NUPS)

Reid et al. (2007) utilized the PSS:NICU as a base from which to create a new tool to measure parental stress in the NICU. The NUPS expanded on the PSS:NICU by including psychosocial issues to assess a variety of sources of stress that impact parents in the NICU. The

tool utilizes the same rating scale as the PSS:NICU: not stressful (1) to extremely stressful (5) or if they did not experience that item (0). The study interviewed 117 mothers and 96 fathers both two to three days postpartum and again 10 to 14 days after to determine the validity of the NUPS. The tool assessed for stress related to three areas. The first group of questions assessed social sources of stress, asking about family support, the demands of visiting the hospital, communication with family and friends, and supporting their partner. The next group of questions concerned illness of the infant, the pain control, procedures and technology surrounding the infant. The third group of questions related to the role and relationship asking about feedings, worry, feeling like a parent, and guilt. The study incorporated the Hospital Anxiety and Depression Scale (HADS), which measures depression and anxiety through a self-reporting assessment. The McMaster Family Assessment Device (General Functioning Scale) (FAD-GF) was incorporated to measure the perceived family support provided during hospitalizations. Utilizing these additional tools, there was a positive correlation for both mothers and fathers with depression and poor mood as reported via the FAD-GF , and reported NICU anxiety suggesting that a baseline anxiety or depression made the NICU environment more difficult. The incorporation of the HADS and FAD-GF tools provides additional insight into the parental experience in the NICU. If parents have a baseline that includes anxiety and depression, the stress of having their infant hospitalized and the environment of the NICU are likely to cause further psychological stress. By knowing more about the parents' psychological state, NICU staff will be better able to individualize interventions and ensure appropriate support is provided.

Parental Concerns

The NICU environment is of particular concern to fathers due to the unique stressors they experience. The studies reviewed by Shaw et al. (2009) suggests that fragility of the infant, the

machinery in the NICU and the variety of social burdens placed on the father provide increased risk for stress. In a study of 18 parents with infants in the NICU, Shaw et al. (2009) found that 10 (67%) were at increased risk of post-traumatic stress disorder (PTSD). Interviews were conducted two to four weeks after their infants were admitted to the NICU and again after four months. Gestational ages of the infants ranged from 27 to 41 weeks. The study utilized the PSS:NICU, Stanford Acute Stress Reaction Questionnaire (30 item questionnaire used to assess for acute stress disorder), and the Davidson Trauma Scale (17-item questionnaire to assess for PTSD). The results suggested that fathers may appear to handle stress better than mothers initially but are at a higher risk for stress disorders (acute stress disorder, PTSD) as a result of the stress experienced in the NICU. However, additional studies are needed to determine effective strategies for reducing paternal stress in the NICU.

In the subsequent research reviewed, many studies focus on maternal concerns, though much is applicable to paternal experiences and concerns. Some studies include paternal concerns in addition to maternal concerns but few focused solely on the role of fathers. There is a gap in the current literature in regards to paternal stress, bonding, and experiences surrounding the NICU. Maternal literature provides an initial view of barriers to bonding that may be applicable to paternal barriers as well. By addressing the obstacles in the NICU and attempting to initiate paternal infant bonding, paternal stress may be negatively impacted.

Infant Fragility

In the NICU the infants are in critical condition and exhibit a fragile appearance. They are often small in size, attached to machines and tubes, and may exhibit jerky movements. This appearance is one of the many barriers to paternal bonding. In a study to determine the validity of the Parental Stressor Scale: Neonatal Intensive Care Unit (PSS:NICU), parents of NICU

infants were interviewed in both the UK and the US (Franck, Cox, Allen, & Winter, 2005). Results revealed that the reported parental stress was higher if physical touch with the infant was not initiated within the first day of life. Fathers in the UK reported lower stress than mothers while the study did not find a significant difference in the reported stress of US mothers and fathers. Frequency of visits was significantly correlated to the reported stress of parents in both countries. The fragility of the infant may prevent fathers from interacting and bonding with their infants if nursing interventions are not able to facilitate physical contact

Infant Pain

In the NICU it is common for infants to undergo procedures that are painful, and this can cause stress for the parents. Often blood must be drawn or treatments must be administered and the parents must acknowledge that pain may be involved. The NICU can be a difficult setting for parents due to that fact; they feel that they are unable to participate in care and do not know how to comfort their infant during procedures (Axelin, Lehtonen, Pelander, & Salanterä, 2010). In their study of 23 mothers of infants with an average of three painful procedures per day in Finland, Axelin et al. (2010) encouraged parents to help reduce their infants' pain. Facilitated tucking by parents (FTP) occurs when "a parent holds the infant in a side-lying, fetal-type position, offering support and skin-to-skin contact with his or her hands during a stressful or painful situation" (Axelin, et al., 2010, p. 417). Parents were taught to use FTP with warm hands for any procedure that caused pain or stress for the infant so as to participate in pain alleviation. Both mothers and fathers were taught to utilize FTP, but in this study only the mothers were interviewed. The Clinical Interview for Parents of High-Risk Infants (CLIP) was used to interview the mothers about their experience of the NICU environment, transition to parenthood, and expectations. The study added questions to the CLIP interview that asked the mother to

describe a situation where her infant was in pain and her reaction. The intervention of educating parents on FTP reduced the reported distress experienced. Without interventions like FTP the distress of seeing the infant in pain and feeling of helplessness adds to the parents' stress and can cause the NICU to be a negative environment.

Uncertainty

Birth is a process that is expected to be "normal," involving an uncomplicated labor and delivery leading to holding and bonding with the new infant. However, when medical complications occur the expected experience is altered dramatically. With the altered experience comes uncertainty; parents know little about their infant's stability and health, their role in their infant's daily life, and their development of parenting skills. In a study of 34 mothers with infants in the NICU, Black, Holditch-Davis, and Miles (2008) conducted interviews to learn the mothers' experiences during pregnancy and postpartum. Though the focus of the study was primarily on the maternal role transition, fathers were included to a lesser degree. Fathers were the highest reported source of maternal support during the postpartum period. Parents may be uncertain that they will have the opportunity to take their child home and experience parenthood at all. This uncertainty adds stress on the parents before they can even consider the possibility that the mother's health may be compromised as well. The study also found that mothers prioritize the needs of any children at home while the NICU staff provides care for the sick newborn, since sibling care is remains the responsibility of the parents. Despite the uncertainty about the status of the NICU infant, parental responsibilities outside the hospital continue and are another source of stress.

NICU Setting and Technology

Due to the critical status of the patients in the NICU, the equipment utilized can be intimidating to the parents present. The isolettes act as a physical barrier to bonding by separating the parents from the infant in multiple manners. Technology, during pregnancy and postpartum in the care of the NICU infant, plays a role in both reassuring and confusing the parents. It also acts as a barrier to caring for their infants, causing the parents to grieve the loss of a normal birth experience (Black, Holditch-Davis, & Miles, 2008). Fegran, et al., (2008) conducted a study of twelve parents (six mothers and six fathers) with infants in a Norwegian NICU. Unscripted interviews were conducted individually with each parent regarding their experience in the NICU and the transition to parenthood. Utilizing findings by Goulet et al. (1998), the study focused on "proximity, reciprocity, and commitment" as components essential to parent-infant bonding. The parents were interviewed about their experience during the birth and subsequent NICU experience. In the NICU, the isolettes are both physical and mental barriers between the infant and parents; the parents are afraid to touch their infants due to size and lack of access (Fegran, Helseth, & Fagermoen, 2008). Fathers in particular worry about the size and fragility of their infants. Learning to interact with their infants despite the technology dividing them is a challenge, as fathers are concerned that the infants may be too unstable for physical contact. Utilizing the PSS:NICU and the The Spielberger State-Trait Anxiety Inventory, Franck et al. (2005) did not find any statistically significant differences in the stress levels between mothers (N= 184) and fathers (N=73) related to the NICU setting. Although the environment is not more stressful for fathers it is still a contributing factor to their overall experience in the NICU. As cited by Franck et al. (2005), Mc Grath and Confliffe-Torres found the technology that touches the infants causes a significant level of concern for parents. Seeing

the tubing connected to their infant, fathers are reminded of the fragility of their infants and bonding is challenged.

In a study conducted by Melnyk et al. (2006), a program called Creating Opportunities for Parents Empowerment (COPE) was implemented to educate parents on the technology and NICU environment in an effort to reduce their stress and ultimately reduce hospital stay for the infants. The sample included 245 mothers and 145 fathers or partners for a total of 247 infants in the NICU divided into a COPE group and a control group. The COPE group received additional care in four phases. The first phase included activities to encourage bonding and teaching on the individual characteristics each infant possessed. The second phase included teaching parents how to participate in the physical care, ways in which development could be encouraged, and noted the progress their infant had made. The third phase educated parents on "infant states" and ways to facilitate bonding and the transition to the home. The fourth and final stage consisted of a home visit one week post discharge and included education to encourage bonding and development. Due to the shortened hospitalization of infants (four days on average) in the COPE program, an estimate of $5,000 was saved per infant including the additional cost of the COPE program materials. In a subsequent study that utilized the data collected by Melnyk et al (2006), Turan, Basbakkal, and Ozbek (2008) found that maternal stress was reduced by the COPE program while paternal stress remained constant between the COPE participants and control group participants. Additionally, the mothers in the COPE program reported feeling more comfortable in their roles as parents. The nursing interventions implemented are effective in reducing maternal stress while paternal stress is not significantly altered. These findings show that the knowledge gap that is commonly experienced by parents can be addressed by programs

such as COPE, and nursing interventions in the hospital that can be facilitated by the checklist created from this literature review.

Maternal Health

The status of the mother's health can be a source of concern for fathers due to high risk deliveries or medical conditions. If the mother and infant both require extended hospitalization, fathers are faced with unique challenges of monitoring the status of both the mother and infant. In a study by Garten et al. (2011) parents of 127 infants in the NICU were monitored to record their visitation patterns for the first 28 days. Though the mother's hospitalization can facilitate visitation time in the NICU, it does not facilitate the visitation of the fathers. Additionally mothers who had caesarean sections and were not able to see their infants as quickly after birth as those who had vaginal deliveries reported higher stress (Franck, et al., 2005). Fathers may be required to support the mother more after a c-section, creating a barrier to paternal bonding. Fathers may require more encouragement by the NICU staff to become involved in the care of their infant. With fewer visits, paternal bonding faces an additional setback. While already at a higher risk for impaired bonding, the added stress of the mother being in the hospital is yet another barrier to paternal-infant bonding. The interactions with the infant may be difficult due to the limited capabilities of the infant. The fathers must learn the cues of their infant when normal bonding activities such as physical contact and infant response may be limited. If the father is able to learn how to interact with the infant he may be more capable of helping the mother to do the same when she visits the NICU. The common goal of learning to bond with the infant may be a positive force in the couple's relationship. Maternal health is an additional source of stress and an area that requires the fathers' attention, ultimately reducing the bonding opportunity between the fathers and infants.

Additional Relationships

The experience of having a hospitalized infant is stressful but the addition of external responsibilities adds complexity to the role of the father. If the mother is hospitalized the father may be responsible for providing communication between the hospital and friends, family and other relations. The paternal roles may include keeping a job, communicating the status of the mother and infant to others, and taking care of any additional children. The result is a requirement of fathers to juggle a variety of roles, which increase the stress they experience. The presence of older children at home resulted in decreased visitation of NICU infants according to the demographic information analyzed in the study by Garten et al. (2011). Parental visits decreased over the first four weeks. Five of the 81 fathers never visited their infants, while the visits of the fathers were shorter and fewer than those of the mothers. A history of infertility and treatment resulted in more frequent visits by both parents.

Summary of the Literature

The studies and literature reviewed supported the correlation of the many aspects of the NICU environment with parental stress. Fathers are more likely to act as a supportive participant and appear to handle the stress well, but are in fact more likely to suffer from stress and even PTSD (Shaw et al., 2009). That stress is increased due to the fragility of the infant and the lack of physical touch. Reported stress was higher for fathers if physical touch was delayed after birth (Franck, et al., 2005). To encourage physical touch and decrease the stress caused by experiencing their infants in pain, FTP is an intervention that should be taught to fathers. Though mothers were interviewed by Axelin, et at. (2010), fathers should be assessed to determine if FTP reduces their NICU related stress as it has been shown to in mothers. Through making fathers a more active participant in the care of their infants, the uncertainty may be reduced with

an increase in fulfillment of the paternal role. Actively participating in physical care maximizes the bonding and time spent during visits for the fathers. As supported by Garten et al. (2011) and Black, et al., (2008), the infant in the NICU is surrounded by caregivers while older siblings at home may not have the same support readily available. Fathers may be forced to reduce the frequency of their visits due to obligations and responsibilities outside of the hospital. By maximizing the interactions between fathers and their infants the visits that are possible may be more fully utilized.

In applying Control Theory, nursing interventions can support paternal-infant bonding and are able to facilitate the fathers' goal of bonding. Even if interventions are effective, nurses also have a responsibility to support the fathers so that the fathers' efforts are not detrimental to paternal health. While the fathers are adapting to the environment in the NICU and reacting to the barriers such as the isolettes, additional responsibilities, and uncertainty of the infant's status, their goal of maintaining their personal wellbeing is overshadowed. The impact of effective nursing interventions may reduce the fathers' load and support both bonding and the health of the fathers.

Nursing Interventions

The studies presented included nursing interventions to encourage bonding and reduce stress. Programs such as COPE are effective in reducing maternal stress in the NICU environment resulting in an increased opportunity to facilitate maternal bonding (Melnyk & Feinstein, 2009). The nursing role should be expanded to include interventions to also facilitate paternal-infant bonding. The COPE program provided fathers with information about the NICU environment in an effort to reduce the environment induced stress. However, the COPE program

was ineffective in reducing paternal stress (Turan, et al., 2008). This raises the question: if increased education is not effective in reducing paternal stress in the NICU, what will?

Online Resources

There are a variety of online resources available to parents that aim to reduce the anxiety of the NICU setting via anticipatory guidance and community support. One such example is the website created by March of Dimes (2013). The website provides educational articles, some aimed at fathers, to provide emotional support and acknowledge that feeling upset about the loss of normal father role is natural and should be addressed. It continues by encouraging fathers to support and discuss the emotional toll and challenges the new parents face. Additional advice includes encouraging fathers to reach out to their family and friends for meals, laundry, support and child care (March of Dimes, 2013). The March of Dimes website provides educational information for fathers, which may not decrease their stress but might provide information to help the families cope. Fathers then may discuss with the mothers ways to reduce the stress placed upon them. By facilitating the discussion between the mother and father it is possible to support their relationship and also the budding relationship between the parents and their new infant. Additionally, the concrete examples of ways in which fathers may be helpful to the mothers such as organizing meals, visits and laundry help from family and friends are listed. Fathers are also encouraged to discuss their emotions with the mothers to encourage their support of each other. The site also provides an online community. Parents are given an opportunity to share their experiences and discuss them with other parents of NICU infants via online blogs through the March of Dimes site. An option is given to filter blogs by gestational age to allow parents to filter for the experiences closest to their own.

A second online resource is CaringBridge, a non-for-profit organization that provides free services to everyone. The site acts as a journal that may be utilized as a way to communicate the status of a hospitalized individual. The family and friends are given a password and then are able to read and comment on updates provided by the author of that journal. In the case of the NICU, fathers and mothers, have the opportunity to blog about their experiences and write updates on both the mother and infant. CaringBridge enables fathers to communicate and bridge the gap between family and friends and the hospital environment and experiences and provides an opportunity for the parents to receive support. CaringBridge, however, does not provide the opportunity for users to interact and communicate with each other, but rather provides a bridge between the parents and their existing network of friends and family.

Some families chose to share their experiences via online blog through sites such as Word Press or Tumblr. These sites do not offer the community of the March of Dimes nor are they limited to medical experiences as is Caring Bridge. One father titled his blog "NICU Dad's Blog: My experience as the Dad of a preemie" and discusses his day to day experience in the NICU learning to care for his son. He sometimes describes a lack of psychosocial support stating that he must "pull teeth to get updates on our baby" (nicudad.wordpress.com, 2009). In another entry he states that the NICU staff reported that his son was "normal as a preemie" which was not comforting to him "because normal preemie stuff is pretty scary" (nicudad.wordpress.com, 2009). Blogs such as NICU Dad's Blog may be resources for fathers if they require anticipatory guidance related to the NICU environment and experience. The experiences may also be utilized to encourage parents to ask to be involved in the infant's care by asking for updates. NICU staff should make every effort to communicate the status of the infant to the parents to encourage their role as fathers and mothers and facilitate bonding.

Direct Reports from Fathers in the NICU (Spring 2013)

Mark

Mark is a father of a premature infant in the NICU. Born at 25 weeks, Jane has been housed in the NICU for three weeks Both Mark and his wife Nancy were hesitant to become attached to Jane due to the loss of a 25 week gestation son after 48 hours five years prior. The parents stayed in the hospital, afraid to miss any time with Jane. The parents were encouraged to participate in Jane's care by changing her diapers and participating in kangaroo care whenever possible. However, when Jane's condition started to deteriorate, Mark and Nancy were told they could no longer participate in Jane's care. The parents were encouraged to visit but unable to touch their daughter; any control or sense of parenthood was taken away. Mark reported that they were trying to visit less because they felt in the way and "useless." When asked how he was doing, Mark replied "As well as I can be, considering everything." In response to the lack of physical contact with his infant, Mark chose to visit for longer hours and "keep her company." Despite the changes in his environment, Mark found a way to continue to feel supportive of his infant; even if he was not able to ensure her health, he supported the bonding with his daughter through his visits.

Mark and Nancy lived with Nancy's parents five hours away. By sleeping in the hospital, they were able to visit their infant more and better understand the current course of care. During the weeks their infant was stable enough to be held, the parents were able to take an active role in her care. Through diaper changes, kangaroo care and changes of clothes the parents were able to bond and get to know their baby. When her condition became tenuous their roles were reduced, causing anxiety and sadness. In order to feel they had some control and to work towards the goal of taking their child home, Mark and Nancy relinquished their participation in the care of their

daughter but still visited to provide support for her. Not being allowed to participate in care was a significant obstacle for Mark and Nancy, but they were able, with nursing support, find ways to continue to support their daughter in hopes of supporting her tenuous health.

Antonio

Antonio was no stranger to the NICU; his second daughter is was the NICU for treatment of meningitis and a severe intraventricular hemorrhage in the same room his now five year old daughter was treated for meningitis after her birth. He reported that being back in the NICU brought back difficult memories. Although the five year old daughter is now healthy, their friends' baby died five years ago. Antonio tried to support his wife as much as possible and both parents visited their infant daily. After a family meeting in which the neurologist educated the parents on signs and symptoms of potential complications related to the hemorrhage, the parents were tearful and overwhelmed. Antonio stayed at the hospital while his wife took a turn picking up their daughter from school to bond with his daughter. He stated while holding her: "It's been a long day, a lot to think about. We thought if we could just take her home it would be over. It's not over though; she might still have a hard time. After days like this I just like to hang out with her; I could just sit here with her for hours." Despite the continued stress and burden, Antonio continued to bond with his infant through his visitation.

Three days later, the parents were told they should be able to take their daughter home in two days, as long as she continued to feed well. However, over the course of that shift she was unable to keep her temperature within normal limits and did not feed as well as expected. Her discharge date was pushed back, and her parents were disappointed. Antonio said that even when things seem to be going well "there's always something else coming."

Antonio felt very discouraged after each family meeting, feeling that his daughter would always have a new health issue. Although the continued bad news and ever present obstacles could have prevented Antonio from bonding with his daughter out of frustration, he reacted by spending more time with her. He felt that by holding his daughter for an hour or two he could demonstrate his support and love for her. His actions facilitated his goals of bonding and helping his daughter's health while simultaneously helping his own mental health.

John

John was brought on a medical flight helicopter with his wife and infant daughter to the NICU from out of state. His daughter was born stable but then began to demonstrate decreased respiratory effort resulting in the transfer of hospitals. While in the NICU John was anxious to discover a diagnosis for his daughter's difficulty breathing. He and his wife researched online possible causes of decreased respiratory effort in infants and became anxious upon reading the results. The care team and nurses comforted the parents stating that their daughter was learning how to coordinate her breaths and would be just fine. Though this comforted the mother, John continued to demonstrate a wish for a specific diagnosis. He felt that knowing more information about the specific cause would make him able to provide better care for her once she was discharged home.

Barriers to Paternal Bonding Assessment Tool

Utilizing the personal accounts of the online resources and review of the literature, common barriers to paternal-infant bonding may be identified. Those common barriers may not be applicable in each family (ie: older siblings will not be a barrier if the NICU infant is the only child) requiring NICU staff to assess for the relevant potential barriers to further identify the effective nursing interventions. According to Goulet et al. (1998), "proximity, reciprocity, and

commitment" are essential components of parent-infant bonding. By identifying the barriers to visitation, proximity may be increased. Through encouraging and facilitating visitation reciprocity will also benefit; through visitation fathers will bond and learn their infants' cues allowing the relationship to be increasingly two sided as the father learns the infant's reactions. Commitment requires the father to actively participate in his role as father to the infant. Increased visitation and bonding increases the father's commitment.

Barriers to visitation may differ from father to father. Assessing each father utilizing a checklist of possible barriers will allow NICU staff to individualize the interventions and resources used to encourage paternal-infant bonding. The checklist is a self-reported assessment of barriers to visitation and bonding present.

NICU Assessment Checklist

Please check all that apply:

Proximity:

— The baby was delivered via c-section

— I am currently employed

— I am employed without paid leave.

— It takes me over 30 minutes to get to the hospital.

— I have not been offered or able to sleep over at the hospital.

Reciprocity:

— I have not been able to hold my infant

— I have not been allowed to change my baby's diaper.

— I can't feed my baby yet.

Commitment:

— I have not provided any care for my infant yet.

  - Examples: changed a diaper, held during a care time, changed clothes.

— I have older children at home.

— It is hard to find childcare while I'm visiting the NICU.

— Childcare is too expensive for me.

— The mother is hospitalized as well.

— I have a history of anxiety or depression.

— I have had a negative experience in the NICU

— Being in the NICU makes me uncomfortable.

Please tally the number of checks		
0-4	5-9	10-15
Low barrier: Personalize interventions	Moderate barrier: Social Worker suggested	High barrier: Plan family meeting to ensure adequate support is provided

This checklist is to be administered to fathers after their infant has been in the NICU for three days or after they have visited at least twice, whichever is first. The delay in administering the checklist will allow the initial shock and adjustment to the NICU to reside while still implementing the necessary nursing interventions as soon as possible. allowing According to Franck et al. (2005) cesarean sections resulted in parents waiting longer to see their infants due to the increased fragility of the mothers' health. The Neonatal Unit Parental Stress Scale suggests that psychosocial issues such as employment, childcare and social support may impact the stress caused by the NICU experience (Reid et al., 2007). The needs of additional children at home

may be prioritized by the parents since the infant in the NICU is guaranteed care by the nurses (Black, Holditch-Davis, & Miles, 2008). During their time in the NICU fathers reported that spending time with their infant was calming, especially if they could participate in any care such as changing a diaper or holding their infant. Although having prior experience in the NICU gave parents some prior skills and knowledge, it also caused them distress due to the memories of difficult experiences and loss.

By utilizing the checklist above, nursing staff will be better able to individualize their interventions rendering them more effective. This, in turn, will facilitate the experiences of the fathers so that they can better work towards their goals of bonding and taking home their infant while experiencing less stress.

Results

The checklist was reviewed by four colleagues for clarity and relevance. The reviewers were seniors at Boston College in the Connell School of Nursing with experience in a NICU setting. All four stated that the items on the list were relevant to the NICU population and common issues. Control Theory as a conceptual framework was supported as the items on the checklist would enable personalization of nursing interventions to support the parents in achieving their goals of bonding and taking home a healthy infant.

Discussion

Helplessness is a common sentiment experienced by fathers in the NICU. Parents are unable to provide care for and ensure the safety of their infant; the paternal roles are unfulfilled. Nursing staff is able to and responsible for supporting parents in developing their roles as parents. The fathers interviewed in the NICU reacted to the change in role by holding onto the tasks they were still able to perform; they chose to spend their time with their infant. The action,

though seemingly simple, enabled the fathers to feel like they maintained a role in their infants' lives and care. Through the use of the checklist above, nurses could better personalize their interventions to help fathers not only spend more time in the NICU but also maximize the time they get. Some NICUs allow older siblings to visit with parental supervision, not only does the support of sibling visitation facilitate bonding as a whole but it removes the need for childcare. By offering the option of sibling visitation, nurses are able to reduce the outside stressors experienced by parents. If the nurses are able to learn that a significant commute separates a father and infant, the nurse can offer a sleep room so that the father could spend more time visiting rather than spend time driving. The sooner nursing interventions can be individualized, the sooner the family is provided with support during their NICU experience. Utilizing a checklist enables nursing staff to learn about the individual challenges presented to each family without overwhelming them with questions and allowing the family to focus on their infant. Additionally, websites such as March of Dimes and Caring Bridge should be presented to parents as sources of support and information. The combination of online resources in addition to the nursing interventions brought about by the checklist will enable parents to be adequately supported during their NICU experience.

Conclusion

Current research relating to the NICU environment focuses on maternal bonding and support. Although mothers play an integral role in the NICU, too often the role of the fathers is minimized or neglected. It is imperative that research is expanded to include paternal bonding so as to support the role of fathers and enable fathers to better support the mothers. Through individualized support, nurses in the NICU can help parents work towards their goals, such as taking their healthy infant home, despite the seemingly endless obstacles put in their path.

Control Theory describes the process through which the parents are impacted by and react to the NICU environment. Utilizing that process, it is possible to assess the changes in the parents' reactions to the NICU environment thereby assessing the effectiveness of the checklist and subsequent interventions. The goal of the parents, whether that is to bond with the infant, take the infant home, or maintain their personal health during the NICU experience, is supported by the checklist-facilitated interventions.

References

Axelin, A., Lehtonen, L., Pelander, T., & Salanterä, S. (2010). Mother's different styles of involvement in preterm infant pain care. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 39,* 415-424. doi:10.1111/j.1552-6909.2010.01150.x.

Black, B. P., Holditch-Davis, D., & Miles, M. S. (2008). Life course theory as a framework to examine becoming a mother of a medically fragile preterm infant. *Research in Nursing & Health, 32,* 38-49. doi: 10.1002/nur.20298.

CaringBridge. (2012). Retrieved, 2013, from http://www.caringbridge.org/.

Carver, C. S., & Scheier, M. F. (1982). Control theory: A useful conceptual franmework for personality-social, clinical, and health psychology. *Psychological Bulletin, 92(1),* 111-135.

Fegran, L., Helseth, S., & Fagermoen, M. S. (2008). A comparison of mothers' and fathers' experiences of the attachment process in a neonatal intensive care unit. *Journal of Clinical Nursing, 17,* 810-816. doi: 10.1111/j.1365-2702.2007.02125.x.

Franck, L. S., Cox, S., Allen, A., & Winter, I. (2005). Measuring neonatal intensive care unit-related parental stress. *Journal of Advanced Nursing, 49*(6), 608-615. doi: 10.1111/j.1365-2648.2004.03336.x

Garten, L. (2011). O father, where art thou?: Parental NICU visiting patterns during the first 28 days of life of very low-birth-weight infants. *The Journal of Perinatal Neonatal Nursing, 25*(4), 342.

Goulet, C., Bell, L., Trubble, D.S., Paul, D., & Lang, A. (1998). A concept analysis of parent-infant attachment. *Journal of Advanced Nursing, 28,* 1071-1081.

Mackley, A. B., Locke, R. G., Spear, M. L., & Joseph, R. (2010). Forgotten parent: NICU paternal emotional response. *Advances in Neonatal Care, 10*(4), 200-203. doi: 10.1079/ANC.0b013e3181e946f0.

March of dimes. (2012). Retrieved, 2013, from http://www.marchofdimes.com/.

Melnyk, B. M., Bullock, T., McGrath, J., Jacobson, D., Kelly, S., & Baba, L. (2010). Translating the evidence-based NICU COPE program for parents of premature infants into clinical practice: Impact on nurses' evidence-based practice and lessons learned. *Journal of Perinatal & Neonatal Nursing, 24*(1), 74-80. doi: 10.1097/JPN.0b013e3181ce314b

Melnyk, B. M., & Feinstein, N. F. (2009). Reducing hospital expenditures with the COPE (Creating Opportunities for Parent Empowerment) program for parents and premature infants. *Nurses Administration Quarterly 33(1), 32-37.*

Melnyk, B. M., Feinstein, N. F., & Alpert-Gillis, L. (2006). An educational-behavioural intervention for parents of preterm infants reduced parental stress in the NICU and infant length of stay. *Pediatrics, 118,* 1414-1427.

Miles, M. S., Funk, S. G., & Carlson, J. (1993). Parental stressor scale: Neonatal intensive care unit. *Nursing Research, 42*(3), 148-152.

NICU Dad's Blog: My experience as the Dad of a preemie. (2012). Retrieved, 2013, from http://nicudad.wordpress.com/.

Reid, T., Bramwell, R., Booth, N., & Weindling, A. M. (2007). A new stressor scale for parents experiencing neonatal intensive care: The NUPS (neonatal unit parental stress) scale. Journal of Reproductive & Infant Psychology, 25(1), 66-82.

Shaw, R. J., Bernard, R. S., Deblois, T., Ikuta, L. M., Ginzburg, K., & Koopman, C. (2009). The relationship between acute stress disorder and posttraumatic stress disorder in the neonatal intensive care unit. *Psychosomatics*, 50,131-137.

Turan, T., Basbakkal, Z., & Özbek, S. (2008). Effect of nursing interventions on stressors of parents of premature infants in neonatal intensive care unit. *Journal of Clinical Nursing, 17*(21), 2856-2866. doi: 10.1111/j.1365-2702.2008.02307.x