

Title:

The PREEMIE as a Measure of Parent Engagement in the NICU

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Session Title:

Rising Stars of Research and Scholarship Invited Student Posters

Keywords:

Instrument, Neonatal Intensive Care Unit and Parent Engagement

References:

1. Als, H., Gilkerson, L., Duffy, F. H., McAnulty, G. B., Buehler, D. M., Vandenberg, K. et al. (2003). A three-center, randomized, controlled trial of individualized developmental care for very low birth weight preterm infants. *Journal of Developmental and Behavioral Pediatrics*, 24(6), 399–408.
2. Baley, J. (2015). Skin-to-Skin Care for Term and Preterm Infants in the Neonatal ICU. *Pediatrics*, 596-599.
3. Benzie, K., Magill-Evans, J., Hayden, K., & Ballantyne, M. (2013). Key components of early intervention programs for preterm infants and their parents: A systematic review and meta-analysis. *BMC Pregnancy and Childbirth*, 13(1).
4. Brewer, B., & Watson, J. (2015). Evaluation of Authentic Human Caring Professional Practices. *The Journal of Nursing Administration*, 45(12), 622-627.
5. Drenkard, K. (2014). Patient Engagement. *The Journal of Nursing Administration*, 44(1), 3-4.
6. Drenkard, K., Swartwout, E., Deyo, P., & O'Neil, M. (2015). Interactive Care Model. *The Journal of Nursing Administration*, 45(10), 503-510.
7. Feldman, R., Eidelman, A. I., Sirota, L., & Weller, A. (2002). Comparison of skin-to-skin (kangaroo) and traditional care: Parenting outcomes and preterm infant development. *Pediatrics*, 110(1, Pt. 1), 16–26.
8. Franck, L.S., Oulton, K., Nderitu, S., Lim, M., Fang, S., & Kaiser, A. (2011). Parent involvement in pain management for NICU infants: A randomized controlled trial. *Pediatrics*, 128(3), 510–518.
9. Gasparini, R., Champagne, M., Stephany, A., Hudson, J., & Fuchs, M. (2015). Policy to Practice. *The Journal of Nursing Administration*, 45(1), 28-34.
10. Griffin, T. (2006). Family-centered care in the NICU. *The Journal of Perinatal & Neonatal Nursing*, 20(1), 98–102.
11. Jefferies, A. L., & Canadian Paediatric Society, Fetus and Newborn Committee. (2012). Kangaroo care for the preterm infant and family. *Paediatrics & Child Health*, 17(3), 141–143.
12. Moore, J. B., Saylor, C. F., & Boyce, G. C. (1998). Parent–child interaction and developmental outcomes in medically fragile, high-risk children. *Children's Health Care*, 27(2), 97–112.
13. Parker, S. J., Zahr, L. K., Cole, J. G., & Brecht, M. L. (1992). Outcome after developmental intervention in the neonatal intensive care unit for mothers of preterm infants with low socioeconomic status. *Journal of Pediatrics*, 120(5), 780–785.
14. Poehlmann, J., & Fiese, B. H. (2001). Parent–infant interaction as a mediator of the relation between neonatal risk status and 12-month cognitive development. *Infant Behavior and Development*, 24(2), 171–188.
15. Preterm Labor and Birth: Overview. (2013, November 6). National Institute of Child Health and Human Development. Retrieved from <<https://www.nichd.nih.gov/health/topics/preterm/Pages/default.aspx>>.
16. Provenzi, L., Barello, S., & Graffigna, G. (2016). A Comparison of Maternal and Paternal Experiences of Becoming Parents of a Very Preterm Infant. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 45, 528-541.

17. Provenzi, L., Barello, S., & Graffigna, G. (2015). Caregiver Engagement in the Neonatal Intensive Care Unit: Parental Needs, Engagement Milestones, and Action Priorities for Neonatal Healthcare of Preterm Infants. *Patient Engagement A Consumer-Centered Model to Innovate Healthcare*, 94-107.
18. Samra, H., Mcgrath, J., Fischer, S., Schumacher, B., Dutcher, J., & Hansen, J. (2015). The NICU Parent Risk Evaluation and Engagement Model and Instrument (PREEMI) for Neonates in Intensive Care Units. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 44, 114-126.
19. Strumwasser, S., & Virkstis, K. (2015). Meaningfully Incorporating Staff Input to Enhance Frontline Engagement. *The Journal of Nursing Administration*, 45(4), 179-182.
20. World Health Organization. (2015). Preterm Birth Fact Sheet. Retrieved from < <http://www.who.int/mediacentre/factsheets/fs363/en/> >.

Abstract Summary:

Parent engagement is a compelling research concept in neonatal care that examines the synchronous factors that influence preterm infant health. This research assesses levels of parent engagement (high vs low engagement) using the PREEMI assessment tool and explores possible gender differences by comparing the engagement results between mothers and fathers.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
The learner will be able to recognize risk factors for low parent engagement and interventions that can be implemented to limit these risks.	The PREEMI assessment tool includes 5 categories of possible areas of weakness, including Knowledge, Self-Efficacy, Outcome Expectations, Social Support and Perception of Risk. From these risk factors, specific interventions such as education, family and cognitive therapy can be implemented to increase parental confidence.
The learner will be able to identify possible gender differences that exist in parental engagement and understand why those differences may be present.	The results of the PREEMI assessment tool were first compared within each mother-father dyad and then the composite scores of all mothers and all fathers were compared. These scores show specifically in which "categories" mothers and fathers differed and possible explanations as to why those differences may have occurred.

Abstract Text:

Responsible for nearly 1 million deaths every year, premature birth is the most common cause of infant death and is the leading determinant of short and long-term infant health problems. There is a gradient of complications that can arise depending on how prematurely the infant is born. Compared to full term infants, premature infants are at greater risk for neurodevelopment delays, learning impairments, visual disorders, and physical diseases.

Though essential to the progression of premature infant health, the Neonatal Intensive Care Unit (NICU) can be a stressful environment for both infants and their parents. Over the past few decades, a multitude of healthcare interventions have been implemented in the NICU to decrease stress and increase positive outcomes for infants. Such interventions include enhancing parental engagement and skin- to-skin care

(SSC). Closely correlated, both methods have shown to drastically decrease infant disease symptoms and simultaneously increase infant growth rates.

Parent engagement is a compelling research concept in neonatal care that examines the synchronous factors that influence preterm infant health. It is a dynamic process focused on parent experience; specifically targeting the acquisition of skills for problem solving and provision of appropriate infant care based on the infant's needs at a particular time. Through a parent's self-motivation to set goals and to utilize informational resources about the unique care necessary for their child, they can increase their engagement while simultaneously improving the progression of their infant's health. While some research exists about how mothers become engaged with their infants, there is little research that explores the different parental needs and distinct engagement styles for mothers and fathers. This proposed research study narrowed in on the scope of parent engagement by examining those details.

The specific purpose of this research was to assess levels of parental engagement (low vs high engagement) using the Parent Risk Evaluation and Engagement Model and Instrument (PREEMI) and explore possible gender differences by comparing the results of engagement between fathers and mothers. Health assessments that develop a holistic examination of a patient's concerns, needs, and expectations are of great significance to research and in clinical practice. By addressing all factors that may influence a parent's abilities to care for their premature infant, clinicians can work closely with parents to ensure they receive support and knowledge addressing all their concerns. Through the personalization of interventions, parents can attain the confidence and skills necessary to care and manage their infant themselves. Patient care is most successful when it is authentic, reflective, and sensitive. Using the PREEMI instrument to assess engagement will promote true collaboration and communication that emphasizes a practice of care that is personal, holistic, and accurate.

The central goal was to determine engagement levels with 25 mother-father pairs of preterm infants between 30-34 6/7 weeks gestation using the Parent Risk Evaluation and Engagement Model and Instrument (PREEMI). A 45 question survey with a 7 point Likert-type response format to measure engagement (1 = never, 7 = always), it focuses on the important skills, knowledge, and readiness needed to practice the appropriate means of care for a premature infant post-discharge. There are a total of five sections in the questionnaire: (I) Self-Efficacy; which addresses the parent's ability to act accordingly in response to situational needs and distinguish between an infant's signals to eat, play or sleep, (II) Social Support; ensures the parent has a larger social circle beyond their intermediate family to help them emotionally, (III) Outcome Expectations and Intent; measures how well the parent is able to acknowledge the current situation and ensures they are realistic in their expectations of their infant's progression, (IV) Knowledge; which includes their awareness and education, how to recognize developmental milestones and where they can find reliable resources, (V) Perception of Risk; which measures how well a parent can foresee the potential risks their infant can face.

This study redefined neonatal care and relationships within the NICU. Patient care has undergone a fundamental shift; while the clinician's role has remained to be the stabilization of a patient's health by providing direct care, it has become equivalently necessary to provide care that will allow patients to accept a role that increases their accountability and independence. It is vital for clinicians to understand and assess a patient's abilities, strengths and weaknesses in order to lead them to a level of higher empowerment. Application of this research will increase parental engagement screening, encourage patient self-management, discover gender differences in engagement and implement an intervention that monitors parents' preparedness. The most effective care is practiced when clinicians, patients, and families maintain strong communication to personalize the journey to health and promote lasting improvements in the quality of life for all.