

NRN 201 AC61 – DIMENSIONS IN NURSING

RESEARCH PROPOSAL

Couplet care and quality of care

Spring 2011

RESEARCH TOPIC

The relationship between the failure of the registered nurse to provide couplet care and a decrease in the quality of nursing care received by the patient.

PROBLEM STATEMENT

The American Academy of Pediatrics (AAP, 2007) and the American College of Obstetricians and Gynecologists (ACOG, 2007) have advised that mothers and babies stay together in the postpartum period. The Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN, 2010) endorses mother-baby couplet care as the ideal. When nurses provide couplet care, they treat the mother and baby as a unit. The nurse views the mother and baby as “interdependent”, “both physiologically and psychologically” (Phillips, 1998). Rooming-in is an essential feature of couplet care in which “each postpartum room is occupied by a single family and equipped for care of the mother and baby” (AWHONN, 2010). This model of care has been adopted by many hospitals; however, some institutions have continued with traditional care: separate nurses care for postpartum women and their babies (AWHONN, 2010).

The postpartum period is a sensitive time for the mother and baby as it lays the foundation for future interactions (Bystrova et al, 2009). During this critical time, nurses and the care they provide is significant. If nurses do not provide couplet care, research may show that the mother and baby may be adversely affected.

PURPOSE OF THE STUDY

The purpose of the study is to determine the relationship between the failure of the registered nurse to provide couplet care and a decrease in the quality of care received by the patients.

LITERATURE REVIEW

Maternal newborn care has undergone many transformations throughout history. In the 1800s, childbirth was a familial experience as women birthed in the home. By the early 1900s, as childbirth moved from homes to hospitals, childbirth became more of a medical event. The laboring mother and

the infant became patients to be protected and saved. It was at this time that separate care of the mother and baby began to develop. In this way, labor, delivery, and postpartum care could be controlled, the goal being to reduce the incidence of mortality for both mothers and babies (Zwelling & Phillips, 2001).

By the 1940s, the study of psychology introduced questions relating to the proper care of mothers and infants and “rooming-in” became an interest of the field. In the following decades, conventional hospital protocol, focused on illness and infection, fell out of favor in the world of maternity care. Family-centered maternity care, FCMC, as it came to be called, slowly took hold. Research on infant attachment as well as consumer demand prompted hospitals to change (Zwelling & Phillips, 2001).

In 1981, the U.S. Department of Health and Human Services recommended hospitals “to develop operating and staffing policies, environment and design of space, and a philosophy of care that reflects the developmental and psychosocial needs of children and families”. In the 1990s, many hospitals made changes to their maternity units to address the needs and desires of families (Zwelling & Phillips, 2001). In some ways, maternal newborn care has come full circle, slowly returning to a more family-centered event.

Couplet care and rooming-in came into focus as part of the family-centered care philosophy. Phillips sought to define couplet care, so that its implementation may be consistent and complete. With couplet care, one nurse cares for the mother baby unit. The baby remains with the mother at her bedside, and there is a “respite” or “holding” nursery. Couplet care can be implemented even if the mother is tired or on bed rest, and it is assumed for all well mothers and babies. Phillips also emphasizes that couplet care is more than merely a response to consumer demand, but rather it is a meaningful strategy to focus care on the family as a unit (Phillips, 1996, as cited in Bajo, Hager, & Smith, 1998).

Infants benefit significantly from the implementation of couplet care and early bonding with the mother. Infants may cry less, sleep more quietly, and gain more weight per day when they spend time

with their mothers rather than in the nursery (Crenshaw, 2004).

Breastfeeding is another important aspect of early newborn care. Recognizing the benefits of breastfeeding, the World Health Organization as well as UNICEF announced “Ten Steps to Successful Breastfeeding” that hospitals could follow in order to promote breastfeeding by mothers in the postpartum period (Merewood et al., 2005). Mothers who spend time with their infants during the critical period after birth display an ability to sense the baby's requests for feedings or comfort. These mothers also show increased rates of breastfeeding (Crenshaw, 2004). Furthermore, rooming-in is identified as a practice that promotes not only breastfeeding initiation, but increases breastfeeding duration (Murray, Ricketts, & Dellaport, 2007).

Bystrova et al, found that in addition to early increased self-regulation, skin-to-skin contact between mother and infant may have long term effects. In their research, infants who were exposed to early skin-to-skin contact displayed increased self-regulation and decreased irritability when compared to those infants who were not placed skin-to-skin (2009). Interestingly, Bystrova and her colleagues also found that mothers, who engaged in early skin-to-skin contact with their infants, displayed increased sensitivity towards their infants one year after birth. They also found that as a pair, the mother and infant “functioned in a more mutual and reciprocal way” (2009).

While couplet care certainly promotes togetherness of mother and infant, further research is needed to understand whether mothers receiving couplet care engage in skin-to-skin contact which may have short and long-term benefits for both mothers and infants.

Other important considerations in the arena of maternal newborn care include the physical care and the attitude of the health care staff. Svensson et al. writes that infant nurseries may be a “relic” from the past related to long, exhausting labors and the notion by medical staff and women themselves that new mothers need quiet time to sleep and recover after delivery of their baby (2005).

The nurses’ perception about what encompasses proper care for mothers and babies influences the care they provide, whether consciously or not. For this reason, postpartum nurses must be aware of the important role they play for new mothers. Svensson and her colleagues found that new mothers

were in turn influenced by the nursing staff. In their research, they found that women who did not practice night rooming-in were more likely to report that the nursing staff displayed a “negative attitude” towards night rooming-in (2005).

Mercer and Walker argue that nurses play a key role in supporting what they refer to as “becoming a mother”. “Becoming a mother” and increased maternal knowledge are encouraged by “interactive nurse-client relationships” in which the nurse models infant care techniques, tailors teaching to the unique mother-baby unit, and engages the mother in learning (2006). Further research is needed to understand if couplet care is more conducive to the development of this interactive nurse-client relationship when compared to traditional postpartum care.

While there is ample research demonstrating the positive effects of couplet care, some researchers have found that it may have little significance. Others still assert that couplet care be implemented with caution.

Through the use of questionnaires, Cottrell and Grubbs sought to evaluate patient satisfaction with nursing care on one postpartum unit in a Florida hospital. The researchers found that women who received couplet care during their postpartum stay reported an equal degree of satisfaction with nursing care when compared to women who had not received couplet care (1994). The questionnaire was administered 6 months after discharge, thus the responses were retrospective. The mothers may have reported different responses had the questionnaire been answered earlier. Nevertheless, findings such as this suggest that the quality of patient care is unaffected by the provision of couplet care.

Much of the research on couplet care assumes a healthy, normal baby and a vaginal birth. Researchers in the area of couplet care have also examined nursing care of mothers and babies after cesarean section. Mahlmeister's research identifies potential risks involved with a mother receiving couplet care after a cesarean section. She focuses on mothers who are excessively tired, yet desire contact with their baby. Close monitoring is a necessity for these patients. Nurses caring for couplets have a responsibility to provide supportive, yet safe care at all times (2005).

Some postpartum units limit couplet care to mothers who gave birth vaginally. Spradlin writes

“Many times, the mother who had given birth by cesarean did not touch, hold, or breastfeed the infant for hours missing early bonding opportunities” She describes the transition to providing couplet care for these mothers and babies. Like Mahlmeister, Spradlin identifies safety as the primary concern for these patients. She also emphasizes the need for thorough education and guidance as to the unique responsibilities of the couplet care nurse. Finally, Spradlin calls for further research. Aside from beneficial effects on bonding, the provision of couplet care may or may not have positive effects on the mother's recovery (2009).

As the research demonstrates, special consideration must be given to the nursing care for postpartum mothers and their babies after a cesarean section. The rate of cesarean section has increased dramatically. In 1965, the cesarean birth rate in the United States was less than 5%. As of 2004, the cesarean rate increased to 29.1% (Lowdermilk & Perry, 2007, p. 955). More recent data from the National Center for Health Statistics, reports the cesarean rate at 32% of all births as of 2007 (2010). As the rate of cesarean birth increases, couplet care must be evaluated.

The AWHONN staffing guidelines recommend a nurse-to-patient ratio of no more than 1:3 for “normal, healthy mother-baby couplets”. AWHONN encourages the consideration of acuity and type of birth. For example, nurses caring for patients receiving magnesium sulfate should not have more than two couplets under their care. Additionally, AWHONN recommends that nurses care for no more than two women recovering from Cesarean section as part of their assignment. Women recovering from Cesarean section must be monitored closely as any patient recovering from “major abdominal surgery” (2010).

Of particular concern is the use of opioid analgesics for these patients. AWHONN's guidelines are clear on this issue: to reduce the risk of new mothers falling asleep with a baby in their arms or dropping their babies, a nurse or a support person should be present with the mother at all times when pain relief with PCAs or epidural catheters is in use (2010).

Though AWHONN's guidelines are clear, they represent the ideal. Questions remain, and may be difficult to answer. To what extent are the AWHONN guidelines followed in postpartum units

around the country? How are patient assignments affected when the unit is short-staffed? Are registered nurses properly educated about the care of women and their babies following cesarean section? What educational needs exist for registered nurses providing couplet care? More research in this area would be beneficial in improving patient outcomes—for both mother and baby.

RESEARCH QUESTIONS

1. Is there a relationship between the failure of the registered nurse to provide couplet care and a decreased quality of care received by the patient?
2. Do patients who receive couplet care display a higher incidence of breastfeeding initiation than patients that do not receive couplet care?
3. Do patients who receive couplet care report greater satisfaction than patients that do not receive couplet care?
4. Do registered nurses who implement couplet care report greater job satisfaction than nurses who do not implement couplet care?
5. Do mother/baby couples who receive couplet care engage in more skin-to-skin contact than couples who receive traditional model care?

STUDY VARIABLES

Independent Variable:

Failure of the registered nurse to provide couplet care

Dependent Variable:

Decreased quality of care

Biological Variables:

Nursing staff:

1. Age
2. Gender
3. Educational level
4. Years of employment as a registered nurse

5. Years of employment as a registered nurse on a postpartum unit
6. Years practicing couplet care
7. Possession of specialty certification related to maternal-newborn health

Patients:

1. Age
2. Parity
3. Living children
4. Support person(s) present at hospital
5. Socioeconomic status
6. Educational level
7. Knowledge of appropriate newborn care
8. Complications during or after childbirth
9. Cesarean section or vaginal delivery
10. Physician, Nurse Practitioner, or Certified Nurse Midwife attended birth
11. Childbirth education preparation class taken or method used, i.e. Bradley Method, Lamaze, Hypnobirth, etc.

OPERATIONAL DEFINITIONS OF STUDY VARIABLES

Operational definition of independent variable: failure of the registered nurse to provide couplet care

Registered nurse:

Any staff member with the title of registered nurse (RN) working on the postpartum unit, 6 East, at the Western Pennsylvania Hospital. The role of the registered nurse includes “diagnosing and treating human responses to actual or potential health problems through such services as case finding, health teaching, health counseling and provision of care supportive to or restorative of life and well-being, and executing medical regimens as prescribed by a licensed physician or dentist”. This does not “include acts of medical diagnosis or prescription of medical therapeutic or corrective measures” (Pennsylvania State Board of Nursing, 2007).

Couplet care: One registered nurse cares for the mother and her baby as a single unit (AWHONN, 2010), during her shift. This allows the nurse to provide teaching and role modeling to the mother. The nurse assesses the baby at the mother's bedside. Couplet care includes rooming-in, "which allows mothers and infants to remain together for 24 hours a day" (Merewood et al., 2005).

Failure: The registered nurse does not provide couple care. Rather, the registered nurse will provide care following the traditional model where the mother and infant are cared for by two separate registered nurses.

Operational definition of the dependent variable: decreased quality of care

Quality of care: Indicators of quality care include: "perception of being well cared for", "achievement of appropriate self-care", and "demonstration of health-promoting behaviors" (Agency for Healthcare Research and Quality, 2008), such as; responding to infant feeding cues, breastfeeding, performing newborn care; including but not limited to sponge bathing and diapering, recognizing signs of post-partum depression or signs and symptoms of illness that require immediate medical attention. A decreased quality of care means that these indicators have not been achieved.

ASSUMPTIONS ABOUT THE OUTCOMES OF THE STUDY

1. There is a relationship between the failure of the registered nurse to provide couplet care and a decreased quality of care received by the patient.
2. Patients who receive couplet care display a higher incidence of breastfeeding than patients who do not receive couplet care.
3. Patients who receive couplet care report greater satisfaction than patients who do not receive couplet care.
4. Nurses who implement couplet care report greater job satisfaction than nurses who do not implement couplet care.
5. Mother/baby couples who receive couplet care do engage in more skin-to-skin contact than those who receive traditional model care.

LIMITATIONS OF THE STUDY

- Novice researchers: As this is our first research proposal, we have limited experience and knowledge in conducting research.
- Time constraints: We have limited time to research information and complete the study.
- Limited resources: We have limited financial resources to conduct the study.
- Subject refusal: The intended subjects on the postpartum unit may refuse to participate in the study.
- Sample size: The sample size is small as we are limited to one hospital and the possibility of participants withdrawing from the study.
- Limited geographically: We are limited geographically to Pittsburgh, PA.
- Institution refusal: The intended institution may reject our proposal and refuse us permission to conduct the study in their hospital.
- Ethics committee refusal: The institution's ethics committee may refuse us permission to conduct the study.
- Reliability: unknown due to surveys being answered by human subjects, both patients and nurses.

RESEARCH DESIGN

According to Wendy Reynolds, Manager, Postpartum and Newborn Nursery, the postpartum unit at West Penn follows the AWHONN staffing guidelines. The nurse to patient ratio is 1:5 or 1:6. The patient assignments are “acuity driven”, and individual nurses should ideally care for no more than two mothers whom underwent a Cesarean section. Couplet care is currently not provided at West Penn. Ms. Reynolds explained “maybe ten years ago or so,” couplet care was provided, but due to “nursing staff dissatisfaction,” the unit returned to separate nurses for mothers and babies (personal communication, March 1, 2011).

The nurses work twelve-hour shifts on the postpartum unit, 7a to 7p and 7p to 7a. Each nurse employed on the unit is a registered nurse. Of the registered nurses, six have obtained further

certification: one in inpatient OB and five in maternal-newborn care (W. Reynolds, personal communication, March 1, 2011).

According to Sandy Porco, Coordinator, Childbirth Education and Lactation Services, there are four certified lactation consultants employed on the postpartum unit. The lactation consultants see all mothers who state that they are going to breastfeed. If mothers are having difficulty breastfeeding, they are visited more than once. The lactation consultants do not see any mothers who state in advance that they plan to bottle-feed (personal communication, February 25, 2011).

In addition, all high-risk, inpatient mothers-to-be are provided information on breastfeeding and are shown a video. These patients are typically at the hospital on bed rest and are "bored, so they usually do watch the video". When a newborn goes to the NICU, a lactation consultant visits the mother regardless of her previously stated feeding choice. Ms. Porco explained that they often have good success with these mothers as they often decide to breastfeed. In the past 18 months, 68% of mothers were breastfeeding at the time of discharge (S. Porco, February 25, 2011).

The mothers on the postpartum unit range in age from 14 to 50 years old, with most patients falling between the ages of 18 and 30 years old. They are mostly English speaking. The majority of the mothers are Caucasian and African American (W. Reynolds, personal communication, March 1, 2011).

This study will be conducted at the Western Pennsylvania Hospital, locally known as West Penn, which is part of the West Penn Allegheny Health System (WPAHS). Also part of the WPAHS are; Allegheny General Hospital, Alle-Kiski Medical Center, Canonsburg General Hospital, The Western Pennsylvania Hospital Forbes Regional Campus, and Forbes Hospice. Combined, the WPAHS hospitals serve close to 79,000 patients (WPAHS, 2011).

West Penn is located in the Bloomfield neighborhood of the city of Pittsburgh, Pennsylvania at 4800 Friendship Avenue. The population of the city of Pittsburgh as of 2009 is 311,647 people; of this 213,000 are White, 78,783 are Black or African American, 531 are American Indian and Alaska Native, 11,090 are Asian, 166 are Native Hawaiian and Other Pacific Islander, 2,713 are some other race, 6,835 are two or more races, and 6,788 are Hispanic or Latino (of any race) (U.S. Census Bureau, 2009).

West Penn is a 223-bed academic medical center with clinical services including; bone marrow cell transplantation, breast diagnostic imaging and surgical treatment of breast disease, burn care, cancer care, colorectal surgery, diabetes care, digestive diseases, foot and ankle surgery, infant apnea, maternal and fetal medicine (obstetrics), neonatal intensive care, orthopedic and joint problems, pain medicine, pelvic floor diseases, reproductive medicine and infertility, sleep disorders, and vascular surgery (WPAHS, 2011).

In 2010, there were 3,200 births at West Penn (W. Reynolds, personal communication, March 1, 2011). The Labor Delivery and Recovery (LDR) unit at West Penn has fifteen birthing suits, three operating rooms, and six triage beds (WPAHS, 2011). From the LDR unit, mothers and babies move to the postpartum unit.

This study will be conducted on the postpartum unit, located on 6 East with extra rooms available on 5 North. The postpartum unit is equipped with private rooms and a newborn nursery. The postpartum unit has a total of 68 beds: 32 beds in private rooms for mothers, and space for 36 newborns in the newborn nursery (W. Reynolds, personal communication, March 1, 2011).

Permission to conduct the study will be obtained from: Christopher T. Olivia, M.D. President and CEO of WPAHS, Gregory H. Burfitt, Hospital President and CEO of West Penn Hospital, Jacqueline Collavo, BSN, RN, NE-BC, Director of Nursing, West Penn, Wendy Reynolds, Manager, Postpartum and Newborn Nursery, and West Penn's Ethics Committee.

The researchers, Danielle Smith and Amy Jones, will administer and collect the data. There are 52 registered nurses working on the postpartum unit (Wendy Reynolds, personal communication, March 15, 2011). We will distribute our survey to all registered nurses who work any shift during the three-month data collection period; September through November 2011. We will distribute surveys to all patients on the unit on the day prior to their discharge during this time period. The postpartum unit expects approximately 300 mothers each month (W. Reynolds, personal communication, March 15, 2011).

The researchers will seek approval from the Ethics Committee prior to conducting the study.

Informed consent will be obtained from all patients and nurses before the administration of the surveys. Subjects will be assured anonymity and will be told that raw data will not be used. A summary of the finding will be shared with the subjects if they desire. Subjects will be told that there is no risk involved in the study. It will also be explained to the patients that if they choose not to participate or they decide to withdraw from the study, their care will not be affected. Likewise, nurses will be told that their decision to participate or not, or to withdraw will not affect their job status.

The research will be explained to all subjects at the time of survey distribution. They will be informed that their decision to participate is voluntary. The researchers will distribute the surveys during the first week of three consecutive months to patients on East 6. The surveys will be given to patients who are planned for discharge on the following day. The researchers will hand deliver the survey to patients prior to delivery of their breakfast tray and will be collected by the researchers prior to delivery of their dinner trays.

The researchers, Danielle Smith and Amy Jones, will analyze and sort the data. The researchers will create a summary of the findings, which will be submitted to AWHONN's monthly newsletter, *Vitals*.

Bibliography

- Agency for Healthcare Research and Quality (AHRQ). (2008). *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK2681/>
- American Academy of Pediatrics (AAP) and American College of Obstetricians and Gynecologists (ACOG). (2007). *Guidelines for perinatal care*. Washington, DC: American Academy of Pediatrics.
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). (2010). *Guidelines for professional registered nurse staffing for perinatal units*. Washington, DC: Association of Women's Health, Obstetric and Neonatal Nurses.
- Bajo, K., Hager, J., & Smith, J. (1998). Keeping moms and babies together. *Lifelines*, 2(2), 44-48
Retrieved from <http://www.awhonn.org/>
- Bystrova, K., Ivanova, V., Edhborg, M., Matthiesen, A.S., Ransjo-Arvidson, A.B., Mukhamedrakhimov, R., ... Widstrom, A.M. (2009). Early contact versus separation: Effects on mother-infant interaction one year later. *Birth*, 36(2), 97-109. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0730-7659/>
- Cottrell, B.H. & Grubbs, L.M. (1994). Women's satisfaction with couplet care nursing compared to traditional postpartum care with rooming-in. *Research in Nursing & Health*, 17(6), 401-409.
Retrieved from [http://onlinelibrary.wiley.com/journal/10.1002/\(ISSN\)1098-240X](http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1098-240X)
- Crenshaw, J. (2004). Care practices that promote normal birth. *Journal of Perinatal Education*, 13(2), 35-39. Retrieved from <http://www.lamaze.org/Default.aspx?tabid=122/>
- Lowdermilk, D.L. & S.E. Perry. (2007). *Maternity & Women's Health Care*. Missouri: Mosby-Elsevier.
- Mahlmeister, L.R. (2005). Couplet care after cesarean delivery: Creating a safe environment for mother

and baby. *Journal of Perinatal & Neonatal Nursing*, 19(3), 212-214. Retrieved from <http://journals.lww.com/jpnnjournal/pages/default.aspx/>

Mercer, R.T. & Walker, L.O. (2006). A review of nursing interventions to foster becoming a mother. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 35(5), 568-582. Retrieved from [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1552-6909/](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1552-6909/)

Merewood, A., Mehta, S.D., Chamberlain, L.B., Philipp, B., & Bauchner, H. (2005). Breastfeeding rates in US baby-friendly hospitals: Results of a national survey. *Pediatrics*, 116(3), 628-634. Retrieved from <http://pediatrics.aappublications.org/>

Murray, E.K., Ricketts, M.A., & Dellaport, J. (2007). Hospital practices that increase breastfeeding duration: Results from a population-based study. *Birth*, 34(3), 202-211. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0730-7659/>

National Center for Health Statistics (NCHS). (2010). *Recent trends in cesarean delivery in the United States*. Hyattsville, MD: U.S. Department of Health and Human Services. Retrieved from <http://www.cdc.gov/nchs/data/databriefs/db35.pdf/>

Pennsylvania State Board of Nursing. (2007). *Professional nursing law*. Harrisburg, PA: Pennsylvania State Board of Nursing. Retrieved from http://www.portal.state.pa.us/portal/server.pt/community/state_board_of_nursing/12515/

Phillips, C. R. (1998). Why mother-baby care? *Lifelines*, 2(1), 53-54. Retrieved from <http://www.awhonn.org/>

Spradlin, L.R. (2009). Implementation of a couplet care program for families after a cesarean birth. *Association of periOperative Registered Nurses (AORN) Journal*, 89(3), 553-562. Retrieved from <http://aornjournal.org/>

Svensson, K., Matthiesen, A.S., & Widstrom, A.M. (2005). Night rooming-in: Who decides? An example of staff influence on mother's attitude. *Birth*, 32(2), 99-106. Retrieved from <http://www.wiley.com/bw/journal.asp?ref=0730-7659/>

United States Census Bureau. (2009). *Pittsburgh, Pennsylvania*. Washington, DC: United States Census Bureau. Retrieved from <http://quickfacts.census.gov/qfd/states/42/4261000.html/>

West Penn Allegheny Health System (WPAHS). (2011). Pittsburgh, PA: West Penn Allegheny Health System. Retrieved from <http://www.wpahs.org/>

Zwelling, E. & Phillips, C. R. (2001). Family-centered maternity care in the new millennium: Is it real or is it imagined? *Journal of Perinatal & Neonatal Nursing*, 15(3), 1-12. Retrieved from <http://journals.lww.com/jpnnjournal/pages/default.aspx/>