

Comfort Levels of Nurses Who Provide Care to  
Patients and Families Who Experience a Perinatal Loss

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Date of Submission: April 22, 2019

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### Abstract

**Background:** When a woman experiences a perinatal loss, it is one of the most tragic events possible. Attaining the skillset to communicate with patients and their family during a perinatal loss event is crucial, as the consequences of perinatal loss are linked to depression, anxiety, and complicated grief. As nurse provide care to patients and families who experience a perinatal loss, comfort levels should be assessed in order to provide quality patient care.

**Methods:** Nurse comfort was assessed pre/post intervention utilizing The Roudinelli Modified Perinatal Bereavement Scale Nurse Comfort Survey. Participants attended an offsite perinatal bereavement session followed by scenario-based simulation training. Descriptive statistics, Wilcoxon rank-test, and Spearman's Rho test were used to analyze the data. **Results:** Based on the analysis of the data collected using the Wilcoxon signed-rank test, results revealed that there is no statistical significance on any of the items measured post-intervention. A Spearman's Rho test indicated a statistically significant, strong positive correlation between age and the grief process  $r_s(3) = .894, p < .05$ , performing holding baby  $r_s(3) = .872, p < .05$ , performing taking pictures  $r_s(3) = .872, p < .05$ , performing participating in spiritual moments  $r_s(3) = .972, p < .05$ . Age of the nurse predicated comfort in delivering perinatal bereavement care. **Conclusions:** The discussion focuses on how nurse leaders can prioritize bereavement care, to best support nurses and increase the experience and confidence of nurses who are not as comfortable.

**Keywords:** perinatal bereavement, perinatal bereavement training, fetal death, stillbirth, perinatal loss, fetal infant loss, obstetric nurses, maternity nurse, NICU nurse, healthcare professional, midwives, nurse comfort, combined with simulation.

## Comfort Level of Nurses who Provide Care to Patients who Experience a Perinatal Loss

### **Introduction**

Perinatal loss is a global issue, which impacts every hospital community. Twenty-five percent of women will experience at least one miscarriage during their reproductive years (Sur & Raine-Fenning, 2009). Perinatal loss (miscarriage, stillbirth, and neonatal death) is considered the most traumatic and devastating form of bereavement because it is often unexpected and inevitable (Chambers & Chan, 2000). Maternal-fetal attachment starts as early as the first image on ultrasound and strengthens with fetal movement. The attachment peaks during the third trimester of pregnancy, making a loss during this time even more detrimental (Scheidt et al., 2012). Between 10-25% of pregnancies result in a spontaneous loss before 20 weeks gestation with 80% occurring before 12 weeks (MacWilliams, Hughes, Aston, Field, & Moffatt, 2016).

The psychological side effects following perinatal loss include but are not limited to: feelings of despair or failure, anxiety, guilt, anger, sleep disturbances, lack of appetite, depression, and feelings of longing for the child and what could have been (MacWilliams et al., 2016). Due to the lack of memories and the establishment of a relationship with the child, the loss can lead to compounded grief, which makes coping difficult (MacWilliams et al., 2016). Research suggests that psychological distress can continue upwards to one year following the loss. However, one in five women will continue to exhibit symptoms past one year. Post-traumatic stress disorder (PTSD) and depression are reported in 20% of women who experience perinatal loss (Pruitt Johnson & Langford, 2015). Unfortunately, the lifetime risk of developing PTSD following a perinatal loss is estimated to be a staggering 29%. Perinatal loss is usually categorized as a silent loss, making the grieving process even more complex (Pruitt Johnson & Langford, 2015).

Parents who experience a perinatal loss need care and support through delicate management and therapeutic communication (Gaze, 2000). While the grieving parent interacts with multiple healthcare personnel during a perinatal loss event, the majority of the time is spent with a nurse. During this time, the care the patient and family receives can have a substantial and lasting effect on the grieving process, therefore it is vital that nurses are armed with the skill set to offer compassionate, informative, and individualized care that meets the patient and family's needs (Heazell et al., 2013).

Nurses who work in the emergency department (ED) may prioritize miscarriage as of minimal significance in the environment of higher risk patients they encounter. Nurses in the ED may be unfamiliar, and uncomfortable interacting with women experiencing early pregnancy loss and may lack the knowledge, skillset, and comfort to provide adequate support (Merrigan, 2018). Perinatal bereavement education offers ED nurses the opportunity to attain knowledge, communication skills and comfort to assist in individualizing care of an early pregnancy loss (Merrigan, 2018). The development of a perinatal bereavement-training program is essential to provide quality care, and prevent health outcomes related to ineffective coping (Smart, Glass, Smith, & Wright, 2013).

### **Background and Significance**

Until most recently the loss of a baby before birth has received little acknowledgment and focus, despite approximately 25% of all pregnancies in the United States (U.S.) ending in perinatal loss (MacDorman & Gregory, 2015). The National Survey of Family Growth, conducted by the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics, estimates that more than 1 million fetal losses occur annually in the U.S. crossing all socioeconomic, cultural, and ethnic backgrounds (MacDorman & Gregory, 2015). In 2013, the

U.S. fetal mortality rate was 5.96 fetal deaths at 20 weeks gestation or more per 1,000 live births and fetal deaths (MacDorman & Gregory, 2015). Concurrently, the State of New Jersey's fetal mortality rate for 20 weeks gestation or more was 5.68 fetal deaths per 1000 live births and fetal death (New Jersey Fetal Death database, 2018). Even though the U.S. has seen minor fluctuations in the fetal mortality rate, it has remained comparatively unchanged since 2006 (MacDorman & Gregory, 2015).

Fetal and perinatal mortality rates differ significantly by the race of the mother. The U.S. fetal mortality rate in non-Hispanic white women is 4.88 fetal deaths per 1,000 live births and fetal deaths, 10.53 fetal deaths per 1,000 live births for non-Hispanic blacks, and 5.22 fetal deaths per 1,000 live births and fetal deaths for Hispanic women (MacDorman & Gregory, 2015). In New Jersey the fetal mortality rate by race were 3.4 fetal deaths per 1000 live births in white women, more than twice the rate for black women at 8.9 fetal deaths per 1,000 live births and fetal deaths, and 5.2 fetal deaths per 1,000 live births and fetal deaths for Hispanic women (MacDorman & Gregory, 2015). Fetal mortality rates also differ by maternal age. In 2013 rates were lowest for women age 25-34 and higher for teenagers and women over 35. Advanced maternal age (35 years or older) is a significant factor for fetal death, even after considering medical conditions such as hypertension, diabetes, and multiple gestations (MacDorman & Gregory, 2015). Perinatal mortality risk factors span a wide variety of factors including, maternal obesity, and smoking during pregnancy, severe or uncontrolled hypertension, diabetes, congenital anomalies, infections, placental and cord problems, intrauterine growth retardation, previous poor pregnancy outcome or perinatal death, and previous cesarean section (MacDorman & Gregory, 2015).



A perinatal loss may cause a profound grief response in parents. The psychiatric and psychosocial consequences associated with perinatal loss include depression, anxiety disorders, poor parenting, separation of relationships and complicated grief (Säflund, Sjögren, & Wredling, 2004). Approximately 20% of women who experience a miscarriage become symptomatic for depression and/or anxiety; the majority of women affected experience symptoms that persist for 1 to 3 years that impacts their quality of life and subsequent pregnancies (Nynos, Narang, Kolikonda, & Lippman, 2015). Women at highest risk for psychiatric illness following miscarriage include those “who are younger, Hispanic, or of lower socioeconomic status and those with loss of a planned pregnancy, a history of infertility or prior miscarriages, and poor social support or coping skills” (Nynos, et al., 2015, p. 1). There are estimates that it costs \$210 billion per year to manage and treat depression in America (Kessler, Greenberg, Fournier, Sisitsky, & Pike, 2015). Concomitantly, for every dollar spent treating depression, an additional \$4.70 is spent on direct and indirect costs of related illnesses and another \$1.90 on a combination of reduced workplace productivity; also, the costs associated with suicide have a direct link to depression (Kessler et al., 2015).

### **Needs Assessment**

This project was conducted at a 600-bed level I trauma facility in Essex County New Jersey. The population it serves is predominantly comprised of ethnic and racial minorities with over half being of African American descent, and one-third Hispanic/Latino descent (Opromollo, 2014). A total of 56% of the women who reside in the project site city receive prenatal care as compared to 75.8% statewide, and 83.9% nationally (Opromollo, 2014). In Essex County, the fetal mortality rate was 6.4 fetal deaths per 1,000 live births with fetal death rates higher than the national and state rates. The fetal mortality rate by race is, 3.4 per 1,000 live births are white, 8.9

per 1,000 live births are black, and 5.2 per 1,000 live births are Hispanic (New Jersey fetal death database, 2018).

In 2014 a bill titled “The Autumn Joy Stillbirth Research and Dignity Act” was passed in New Jersey. The law is named after the daughter of Debbie Haine Vijayvergiya, a woman who experienced a stillbirth in 2011. She became an advocate encouraging hospitals and organizations to develop policies and procedures that uphold the dignity and sensitive management of patient and families who are grieving a perinatal loss (Autumn Joy Stillbirth Act N.J.2843, 215th leg., 2013).

Although this act has been passed it has not yet fully implemented. This means it is not mandatory for organizations to comply, as the law is not currently being enforced. Upon implementation, health care facilities will be expected to comply with the minimum requirements when a stillbirth occurs, to ensure the patient and family experiencing the stillbirth is provided not only with emotional and psychological support, but also with compassionate care and dignified treatment (Autumn Joy Stillbirth Act N.J.2843, 215<sup>th</sup> leg., 2013). In addition, there were no specific appropriations set aside for this act, and the state regulations were just recently published. When this act becomes mandatory, it will be imperative to monitor compliance and measure outcomes. At this time there is not a current process to measure results and compliance within the state (D. Haine personal communication, April 1, 2019).

In 2017, the project site had 1504 live births and over 200 perinatal losses with, 35 occurring at 20 weeks gestation or later and the majority occurring in first and early second trimester (O. Fofah personal communication, January 23, 2018). Although the site interacts with and provides care to women and families who experience a perinatal loss daily, it does not have a perinatal bereavement program or a standard bereavement protocol.

Perinatal bereavement care includes interventions provided to parents and other family members who experienced a fetal death in antepartum, intrapartum or postpartum periods, and includes access to community and hospital psychological support after the patient leaves the hospital (Rock, 2004). When a woman suffers a perinatal loss at 20 weeks or greater the care takes place on labor and Delivery or the post-partum unit. The staff does not currently follow a standardized protocol and often are faced with an organized method utilizing a checklist, and lack of memorabilia supplies to present to the patient and family in order to acknowledge the birth. Based on the assessment and SWOT analysis of this project site, the principal investigator (PI) identified a gap in care, this project will provide a foundation of which to fill this gap.

### **SWOT Analysis**

A strengths, weakness, opportunities, and threats (SWOT) analysis was completed and is depicted in Figure 1. The SWOT analysis is a powerful, but simple tool for identification of internal strengths and weakness; it also examines external opportunities and threats. The SWOT analysis process provided the principal investigator the ability to evaluate and consider solutions for direction of the project (Zaccagnini & White, 2017). The SWOT analysis is a powerful, but simple tool for identification of internal strengths and weakness; it also examines external opportunities and threats. The SWOT analysis process provided the principal investigator the ability to evaluate and consider solutions for direction of the project (Zaccagnini & White, 2017). Based on the assessment of the project site, gaps in care were identified and this project will provide a foundation of which to fill those gaps.

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**SWOT Analysis**


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**Strengths (Internal)**

- Support from Chief nursing officer, nursing research council, & offsite perinatal bereavement foundation.
- Established Perinatal bereavement committee
- Offsite perinatal bereavement training at no cost

**Weaknesses (internal)**

- No current standardized process or protocol for perinatal bereavement at the project site
- Limited supplies for memorabilia
- No perinatal bereavement resource nurse/ or bereavement counselor
- Inconsistent bereavement follow up for patients
- Poor engagement and buy in from staff and nurse managers

**Opportunities (external)**

- Improve and increase knowledge, skill and attitudes of staff
- Increase patient satisfaction with care
- Compliance with “Autumn Joy Stillbirth Act”
- Initiate collaboration with all areas within the project site that serve women experiencing perinatal loss
- Create protocols & checklists that guide nurses & providers of care
- Identify facilitators & barriers
- Create an interactive approach educating nurses in perinatal bereavement

**Threats (external)**

- Staff attendance at the offsite perinatal bereavement training session
  - Availability of staff to be relieved to attend the simulation session
  - Support for continuation of perinatal bereavement training
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*Figure 1. SWOT Analysis.*

### **Problem Statement**

Perinatal loss occurs in 25% of pregnancies in the U.S. (MacDorman & Gregory, 2015).

The consequences of a perinatal loss include, depression, anxiety, complicated grief and poor parenting (Säflund et al., 2004). Patients who experience a perinatal loss should experience compassionate care, dignified treatment, and access to psychological support if they desire.

(Gaze, 2000). Nurses are at the forefront during the patient’s experience, therefore it is vital that

nurses are knowledgeable and armed with the skills to provide quality care (Heazell et al., 2013). Nurses at this project site have not been formally trained in the principles of perinatal bereavement care. In addition there is no existing standardized protocol for nurses and providers to follow. Perinatal loss is not unfamiliar to healthcare providers working in obstetrics; however, many nurses feel uncomfortable and insecure when providing care to families. It may be due in part to lack of training and communication skill in difficult situations. Consequently, this may negatively impact the patient experience and grief process (Puia, Lewis, & Beck, 2013).

### **Clinical Question**

The PICOT acronym is frequently utilized to keep the elements of: (P) population, (I) intervention, (C) comparison, (O) outcome, and (T) timeframe in mind when beginning the development of a research hypothesis or project question. Utilization of these five elements indicates the project question is rooted in an evidence-based problem (Terry, 2018) and helped to concisely identify the target population for this DNP project.

- **P**= Nurses caring for patients experiencing a perinatal loss who work on, Labor and Delivery, Postpartum, Neonatal Intensive Care Unit, outpatient Obstetrics & Gynecology clinic, and Emergency Department
- **I**=Perinatal bereavement training followed by scenario-based simulation session
- **C** = Standard practice of the project site
- **O**= Increased comfort level when providing care to patient experiencing a perinatal loss
- **T**= September 2018- January 2019

Therefore the clinical question for this pilot project is:

“Does the immersion of perinatal bereavement training and scenario-based simulation increase the Labor and Delivery, Postpartum, Neonatal Intensive Care Unit, outpatient Obstetrics and Gynecology clinic; Emergency Department nurses comfort level when delivering care to patients who experience a perinatal loss”?

### **Aims and Objectives**

The overall aim of this project is to determine if the immersion of perinatal bereavement training followed by scenario-based simulation and debriefing increases the nurse’s comfort level when providing care to patients and families who experience a perinatal loss. The project objectives are to:

- Provide a simulation training experience for the participants to engage in an interactive learning exercise utilizing role-playing with scenarios based on patients that experience perinatal loss.
- Evaluate if the predetermined factors of; years of perinatal nursing experience, number of loss cases cared for, and bereavement education received to play a role in nurse comfort level when providing perinatal bereavement care.
- Evaluate open-ended comments to determine facilitators and barriers related to nursing comfort level when providing perinatal bereavement care.

### **Review of Literature**

The databases searched included: PubMed, MEDLINE, Psych INFO, Scopus, and CINAHL. A medical librarian at Rutgers University searched databases up to January 2018 to maximize and assist in obtaining scholarly journal articles relevant to the search criteria. Bibliographies were also hand-searched for eligibility. The keywords used during these searches were: perinatal bereavement, perinatal bereavement training, fetal death, Stillbirth, perinatal loss,

fetal infant loss, obstetric nurses, maternity nurse, NICU nurse, healthcare professional, midwives, nurse comfort, combined with simulation. The search was limited to articles published between 2004 and present. (see Appendix A for PRISMA diagram).

The articles were analyzed for content and limited to those on perinatal bereavement training, nurse comfort in the context of perinatal bereavement, and simulation in this population. Any articles outside of the perinatal population were excluded. The following articles are included in this review of the literature (see Appendix B for the Table of Evidence).

### **Perinatal Bereavement Training and Simulation**

Hospitals that deliver care to patients and families that experience a perinatal loss have an unequivocal responsibility to guarantee these patients receive the best care possible. One of the most effective ways to make sure this occurs is to support the wellbeing of the nurses and professionals working with this population. Many themes were identified from the literature review that suggests that experience, education, and debriefing, are part of developing the perinatal bereavement role (Chan, Chan, & Day, 2004; Chan et al., 2008; Ligeikis-Clayton, 2000; Rock, 2004; Roehrs, Masterson, Alles, Witt, & Rutt, 2008; Rondinelli, Long, Seelinger, Crawford, & Valdez, 2015; Zhang & Lane, 2013). Perinatal bereavement care requires that providers of care have the astute interpersonal skillset and adequate knowledge in perinatal loss. In order to educate nurses in perinatal bereavement care it is recommended to explore various pedagogical approaches to acquire skills to adequately care for patients who experience a perinatal loss (Eggenberger & Regan, 2010). Pedagogy is a “particular approach to education that addresses the art and science of teaching and learning” (Eggenberger & Regan, 2010, p. 550).

Simulation is an approach that is rapidly being utilized in nursing programs and is a method that has great potential to educate nurses in perinatal loss. Jeffries (2005) defined simulation as activities that reflect the reality of the clinical environment and are designed to demonstrate procedures, the appropriate organization of students in the simulation activity, decision making, and critical thinking through techniques such as role-playing (Eyikara & Baykara, 2018). Debriefing is a dialogue and breakdown of an experience, assessing and incorporating lessons learned into one's thought and awareness (Gardner, 2013). Simulation is an example of an interactive teaching-learning technique that is used in nursing education (Eyikara & Baykara, 2018). Simulation, scenarios role-playing, and debriefing provides a safe environment to develop skills, as well as an opportunity to receive critique in an effort to make improvements in the delivery of care (Armentrout & Cates, 2011; Bailey & Bishop 2017; Colwell, 2017; Forster & Donovan, 2016; Knight, Dailey, & Currie, 2015).

### **Perinatal Bereavement Training**

Chan et al. (2004) explored the relationships between nurse's attitudes towards bereavement care and their need for training. The study was conducted on an OBGYN unit in a large public hospital in Hong Kong with a sample of 110 nurses. A researcher-developed "nurse attitude toward perinatal bereavement care" survey comprised of 21 items that are considered necessary to train nurses for caring and supporting parents who experience a perinatal loss. The survey measured; (a) nurses attitudes towards perinatal bereavement support, (b) the importance of hospital policy, and (c) training on perinatal bereavement support. The content validity ranged from 0.78 to 0.89 with an overall score of 0.86. This study yielded two clusters based on four aspects of attitudes toward bereavement care (demographics variables and three attitudes scores). Cluster A was less experienced nurses overall, while Cluster B was more experienced both



education and nursing experience. There were statistically significant differences between the two clusters for most of the demographic variables and the three attitude scores, except for religious beliefs. Nurses in cluster B were more prepared with the ability and knowledge to provide care to patients who experience a perinatal loss, in comparison to cluster A were less experienced and required more training and support.

An incidental finding in the study was that nurses had positive attitudes towards grief counseling programs; however, almost all participants felt their knowledge level was insufficient, 25.5% of the nurses had taken bereavement courses. Due to the lack of official training, nurses felt unprepared to provide adequate perinatal bereavement care to patient and families (Chan et al., 2004). Limitations of the study included small sample size and use of a self-reported survey, which presents the potential for response bias. This initial research on nurse attitude toward perinatal bereavement care was pivotal in highlighting the nurse's needs for training, improved communication skills, and support from team members (Chan et al., 2004).

A larger study with a sample size of 334 nurses conducted by Chan et al. (2008) took place in Hong Kong from May-August 2006. The researchers explored factors associated with nurse's attitudes towards perinatal bereavement care utilizing the researcher designed survey "nurse attitude toward perinatal bereavement care survey." Outcome measures included attitudes towards perinatal bereavement care, importance on hospital policy and training support for bereavement care. The majority of nurses held a positive attitude towards bereavement care; however, only 39.3% of the nurses had bereavement training. Conversely, 89.8% of nurses indicated a need to be equipped with formal education, skills, and communication in the care and support of bereaved parents. Regression models indicated that age, past experiences in handling grieving parents and nurse's perceived attitudes to hospital policy and training provided for

bereavement care were important characteristics associated with nurse's attitudes towards perinatal bereavement care (Chan et al., 2008). The results of this study further emphasized the need for increased knowledge, experience, and improved communication skills for perinatal bereavement care for nurses in Hong Kong.

Resolve through Sharing® (RTS) is a national organization that assists families who have had stillborn infants and has developed a protocol for facilitating the grieving process following the death of the infant. A dissertation by Ligeikis-Clayton (2000) explored nurses' perceptions of their comfort levels, abilities as well as the importance that they placed on implementing the RTS protocols after a perinatal loss. Variables such as the nurses' age, educational preparation, gender, religion, ethnicity, experience, and training in bereavement were examined concerning perceptions of their comfort, ability and the perceived importance that they placed on interventions in the RTS protocol (Ligeikis-Clayton, 2000). The study was conducted on the Women and Children's units at a medical center in Broome, New York and consisted of 65 nurses working on L&D, Postpartum, NICU, and Women surgical services. The researcher-designed survey titled "Relationship between Comfort, Ability and Perceived Importance of Nurses in Implementing Standards of Care for Parents Who Have Had a Stillborn Infant" was utilized in the study.

The RTS protocol has built-in content and face validity grounded in the theories of "Klaus and Kennell (1970), Kennell, Slyter, and Klaus (1982), Bowlby (1980), Davidson (1977), and Kauffman-Swanson (1986) who are considered experts in the discipline of thanatology, the survey has reflected content and validity" (Ligeikis-Clayton, 2000, p.68). Section I of the survey examined the self-reported relationship between comfort, ability and perceived importance of nurses in implementing RTS standards of care for parents who experience a perinatal loss.

Section II examined the perceived importance that nurse's placed on implementing the RTS standards of care and Section III focused on the ability of nurses to perform the RTS standards of care (Ligeikis-Clayton, 2000). Each section consists of 20 items RTS indicated their comfort level, ability and perceived importance in implementing each item in the protocol. The researcher identified variables that may have an impact or relationship to the respondent's ability and comfort. These variables included age, number of years in practice, education, gender, ethnic background, marital status, number of children, number of years as a nurse and as a OB nurse, formal RTS training, hours of education in death and dying, hours of training spent with parents who had a stillborn infant, and any opportunities for debriefing after caring for patients who experience a perinatal loss.

The results indicated that nurses did believe that RTS protocols were necessary, but had lower mean scores in their ability and comfort in implementing the protocols. Nurses stated that they had difficulty-encouraging parents to bathe their baby, retrieving the baby from the morgue if needed, counseling on the autopsy of the baby, and initiating bereavement discussions with the parents (Ligeikis-Clayton, 2000). There was a significant correlation between ages, years of experience as an OB nurse, and amount of education with nurse's comfort in implementing RTS protocols. The respondents offered comments on the open-ended section that indicated the need for additional training, and 79% said they would attend debriefing if offered on their units after a perinatal loss. This study had limitations that included- a purposive sample where results may only be applied to nurse's working in this specialty and a sample of majority Caucasian female RN who self-identify as Catholic/Protestant religious backgrounds. The use of a researcher-derived survey instrument lacked prior documented reliability and validity. Although the correlations of comfort were significant with age, years of experience, and education with

implementing the RTS protocols, research conclusions drawn from this study is the need for formal educational training in perinatal bereavement, as well as the incorporation of debriefing after a perinatal loss event. (Ligeikis-Clayton, 2000).

A dissertation by Rock (2004) replicated the Ligeikis-Clayton study and explored the comfort levels of 52 obstetric nurses who cared for parents and families who have experienced a stillborn infant within a maternity unit of a New York City hospital. The researcher utilized a modified version of the Ligeikis-Clayton (2000) nurse comfort survey; Section II and III of the original survey were eliminated, as it did not pertain to the study aims and objectives. Results showed significantly higher mean comfort scores for nurses who were educationally prepared which indicates that nurses who feel adequately prepared were comfortable when caring for patients affected by stillbirth. A common theme that death education classes were necessary and desired was identified by 90% of participant comments. Study participants were asked if there were opportunities at work to participate in debriefing sessions with staff to discuss feelings associated with perinatal death, 27% answered “yes” while 73% answered “no.” Ninety-six percent (96%) stated that they would attend debriefing sessions if they had the opportunity to do so, and 4% reported they would not (Rock, 2004). Limitations of the study were small sample size and exclusion of neonatal nurses who are intricately involved with caring for parents and families who experience a loss. As correlated with the findings of Ligeikis-Clayton study the conclusions of this study, further reinforced the need for education for nurses and health care professionals who are involved in the care of patients who experience a perinatal loss (Rock, 2004).

Roehrs et al. (2008) focused on nurses who care for patients who suffer a perinatal loss. They utilized a qualitative study design to describe the support needs and comfort levels of labor

nurses who care for these patients daily. The sample consisted of 10 Labor and Delivery nurses who work on a Western American hospital-birthing unit. The participants completed online surveys and follow-up interviews.

Common themes of education, grief training, and staff debriefing were identified and correlated and support the recommendations of Kavanaugh and Paton (2001) with providing staff education about perinatal loss, how to communicate with patients and peers, and coping skills with bereavement care. The authors suggest an interdisciplinary approach and the use of debriefing.

Rondinelli et al. (2015) explored factors related to nurse comfort in fulfilling interventions during a perinatal loss event. In this study, the sample consisted of 172 nurses who care for parents and families during perinatal loss working in the areas of labor and delivery (L&D), postpartum (PP)/family-centered care (FCC), and the neonatal intensive care unit (NICU) within a large integrated health system in Southern California. A cross-sectional, online survey design was utilized for the study. The survey requested the participant's demographic information, years of experience, the number of bereavement class hours attended, and recall of the number of perinatal loss cases cared for over the years as a perinatal nurse.

Additionally, there were open-ended questions related to facilitators and barriers that may impact nurses' comfort in performing the bereavement role (Rondinelli et al., 2015). The researcher modified the Ligeikis-Clayton nurse comfort survey (Ligeikis-Clayton, 2000). The revised comfort tool consisted of 20 items, divided into two sections with the first section seeking the level of nurse comfort when discussing items with parents (e.g., time with the baby, spiritual requests, grief process, and funeral arrangements). The second section examined the level of nurse's comfort in completing bereavement care interventions during a perinatal loss

including, dressing the baby, taking photographs, and contacting social work. Each item was measured using a Likert Scale from 0 (lowest comfort) and the highest comfort at 4; therefore the highest comfort score was 80 (Rondinelli et al., 2015). Reliability of the comfort scale was acceptable ( $\alpha = .98$ ).

The results indicated the top five highest scoring individual components related to bereavement interventions were, discussing baby's gender, contacting social work, allowing time with the baby during the hospital stay, contacting pastoral care, and holding their baby with individual mean scores ranging from 3.16 to 3.06 (range = 0 to 4). The lowest individual components were, retrieving the baby from the morgue, discussing autopsy and genetic testing with parents, discussing funeral options, the grief process, and discussing with parents the option to bathe and dress their baby. Mean scores for the five lowest scale components ranged from 1.81 to 2.6 (Rondinelli et al., 2015). Significant differences in total comfort scores within specialty areas were analyzed. NICU total comfort scores were the highest (mean = 61.3 [SD = 17.48]), but not significantly different from L&D nurses ( $p = .596$ ). Conversely, PP comfort (mean = 42.6 [SD = 26.77]) was significantly lower than both L&D ( $p = .002$ ) and NICU ( $p = .001$ ) (Rondinelli et al., 2015). In regard to factors that predict comfort scores, the total sample of respondents was examined for (a) years of experience and (b) the number of perinatal loss cases cared for. Consistent with Ligeikis-Clayton (2000) and Rock (2004) a correlation matrix showed that years of experience and number of perinatal loss cases cared for were significantly related to total comfort (Rondinelli et al., 2015).

A large number of comments were entered into the open-ended portion of the survey. Themes were reflected as "organizational support" within organizational support themes were noted as educational opportunities focused on perinatal bereavement care, uninterrupted time to

be with patient and family, space for the family to spend with their baby. Bereavement care education had the most responses of any theme within the organizational support theme. Nurses also expressed a need for having bereavement care supplies available at all times on their perspective units. In spite of the majority of themes within organizational support, an equal amount of responses were related to experiential knowing.

Experiential knowing was noted as being achieved while providing bereavement care at work, or personally, from experiencing a personal loss. The comments corroborated that experience allowed the nurse to perform more efficiently in her role, therefore, providing bereavement care more comfortably and confidently. Nurses also reported that sharing the experience with co-workers and completing bereavement interventions with a buddy was a facilitator. The research findings corroborate the results from both Ligeikis-Clayton (2000) and Rock (2004) studies with significant evidence on the need for initial and continued perinatal loss education. Although education continues to be a common theme, this study presents a key factor of experiential knowing. The variables of the number of perinatal loss cases cared for and years of perinatal experience each independently predicted comfort scores for the total sample (Rondinelli et al., 2015). It substantiates and aligns with a study by Wallbank & Robertson (2013) that indicated the less experienced the nurse; the more distressed they were in the bereavement care role.

It leads to the observation that education remains a primary requirement; however, the experience is equally essential to have a high level of comfort in the perinatal bereavement role. The researchers believed that based on this evidence on experiential knowing, nursing leadership and educators must consider and develop ways to increase the knowledge of nurses who care for patients in this specialty's experience. Organizations may consider the incorporation of

simulation, scenarios, role-playing, and debriefing into perinatal loss educational programs and hospital orientation to assist with increasing the nurse's comfort levels (Rondinelli et al., 2015).

To determine if attending bereavement seminars affected the attitudes of nurses regarding the end of life and palliative care of neonates, Zhang & Lane (2013) conducted a study consisting of a convenience sample of 14 NICU nurses from a southeastern community hospital. The quantitative measure used to measure attitude was a Bereavement/End of Life Attitudes about Care of Neonatal Nurses Scale survey that utilized a pre/posttest design with an intervention and control group. Findings indicated that after the nurses attended the bereavement seminar, they had a higher level of comfort in providing end of life care than nurses in the control group ( $t=-0.214$ ;  $P=0.04$ ). This research supports and substantiates that nurse's comfort levels can be improved by bereavement training, and end of life care.

### **Emergency Department Nurses**

Nurses who work in the emergency department may not have confidence when caring for women who experience early pregnancy loss. They likely lack the knowledge and skill set to support the patient with the emotional needs she requires. Emergency department nurses will often consult with a more experienced nurse from the labor and delivery unit who may have more proficiency in perinatal loss. Emergency department nurses will often focus on the physical aspect of the pregnancy loss to avoid communicating about the perinatal loss (Merrigan, 2018). The literature has indicated that nurses in the emergency department acknowledged bereavement education as a need that can help to improve their comfort and confidence to provide quality care (Almutairi & Ludington-Hoe, 2016; Engel & Rempel, 2016).

Merrigan (2018) developed an educational approach for emergency department nurses who provide care to patients who experience a miscarriage. Merrigan (2018) conducted a 4-hour



educational interactive workshop grounded in principles outlined by the National Perinatal Association “Interdisciplinary Guidelines for Care of Women Presenting to the Emergency Department with Pregnancy Loss” and, with permission, the 2-day Resolve Through Sharing® perinatal bereavement care curriculum (Merrigan, 2018). Topics covered include medical aspects of pregnancy loss, how to assess the meaning of the miscarriage, respectful handling, disposition of the remains, communication strategies, how and when to offer keepsakes, and what to expect after discharge (Merrigan, 2018). For nurses who work in the emergency department to be efficient and effective, it is imperative that emergency department’s evaluate existing policies and procedures that are related to women who experience pregnancy loss and incorporate and coordinate policies throughout the facility to include all departments where women receive medical care. Comments from the participants in the workshop included “I had no idea we had so many in our Emergency Department,” “We wish we could do more, but we don’t have any policies or education.” “They don’t teach this in nursing school.” This article highlights the needs of emergency department nurses who provide care to patients who experience early pregnancy loss; in most organizations, they are typically not included in perinatal bereavement training, when in reality most perinatal losses occur in the emergency department. The literature has shown that emergency department nurses need and desire perinatal bereavement training to gain comfort. The author has developed an educational approach that organizations may adopt to provide quality care to the patient who experiences a perinatal loss no matter which unit the loss occurs.

### **Simulation and Debriefing**

Simulation is an example of an interactive teaching-learning technique that is used in nursing education (Eyikara & Baykara, 2018). The gold standards for professional nursing

education published by the World Health Organization (2009) recommend the use of innovative methods such as simulations in nursing schools education programs. Rall, Manser, and Howard (2009) refer to debriefing as the heart and soul of the simulation experience. Debriefing provides opportunities to discover and decipher what took place during an experience or event. It is imperative to discuss what went well and identify what could be done to improve and do things differently or better next time (Gardner, 2013). Nursing schools across the country have begun to incorporate simulation and scenario role-playing of death and dying mainly in perinatal bereavement into their university curriculum (Bailey & Bishop, 2017; Eggenberger & Regan, 2010; Forster & Donovan, 2016; Knight et al., 2015).

Bailey & Bishop (2017) introduced a fetal demise simulation as a requirement of a BSN program at a university in the U.S. The simulation involved pre simulation work, assigned roles, a simulation involving care during the immediate postpartum period, communication regarding fetal demise, and debriefing (Bailey & Bishop, 2017). The authors illustrated that fetal demise simulations could prepare nursing students for safe, effective practice in high-stress situations (Bailey & Bishop, 2017). Pre-simulation requirements included a review of previous lectures that pertained to the simulation content, as well as websites with addresses to view videos via YouTube® that focused on stillbirth from a parental perspective and family decision making when faced with the birth of an infant that will die shortly after birth. Students were assigned to groups of five per simulation with the identified role of the nurse(s), family members, and observer, and the faculty professors assumed the part of the patient (mother). The entire group received a report from an instructor who portrayed the labor and delivery nurse who is caring for the patient. The observer was given a form with actions that should be performed during the simulation and to record the activity in the room and use it during debriefing.

A faculty member who has been trained to work with families experiencing perinatal loss conducts debriefing and provided input using the Plus-Delta technique by Jeffries (2005). Each student had an opportunity to discuss the strengths and weakness noted throughout the simulation. Also, discussion of the nurse, patient and family communication, feelings, and other interactions occurred. Students also provided an opportunity to verbalize their own experience with death. Not all the students were comfortable speaking openly at the debriefing session; therefore all participants were given a printed guided reflection tool. In the Rock (2004) study, participants were asked if there were opportunities at work to participate in debriefing sessions with staff to discuss feelings associated with perinatal death and 27% answered, “yes” while 73% answered “no.” Ninety-six percent (96%) stated that they would attend debriefing sessions if they had the opportunity to do so, and 4% reported they would not (Rock, 2004). Students submitted their anonymous responses, and the faculty discussed the themes that were evident in a subsequent class. The reaction from students after the implementation of the fetal demise simulation was overwhelmingly positive. Numerous students indicated feeling gratitude for being allowed to practice a highly emotional simulation before interacting with an actual patient (Bailey & Bishop, 2017). Other students suggested that the simulation strengthened their communication skills in highly stressful patient situations. The most significant difficulty with the simulation was faculty fatigue during the simulation (Bailey & Bishop, 2017).

Knight et al. (2015) conducted a study utilizing a scenario of students being unable to find fetal heart tones on a full-term baby, diagnosis of fetal demise via ultrasound, and the news communicated to the parents. The students were able to process their own emotions and grief in a supportive environment before actual interaction with a patient. The students reported learning how to be present with the patient and family members, and how to communicate more

effectively with grieving families. As experienced nurses, the authors believed that the information achieved in a simulation could be generalizable in other specialty areas (Knight et al., 2015).

Forster & Donovan (2016) conducted a qualitative study that explored the impact of a simulated neonatal resuscitation on final year nurse and midwife student's perceptions of their preparedness to provide bereavement support. The simulation context was an Australian regional special care nursery. The simulation involved two sequential simulations developed with a team of five midwives. The researchers videotaped the simulations followed by a debriefing session with a nurse faculty. The facilitator asked broad questions to elicit reflections from the student experience, such as "How confident did you feel about managing the situation?" and "What was the most challenging part of the simulation?" (Forster & Donovan, 2016, p. 502) After the students watched the video recording, the investigator asked what their thoughts were after seeing themselves during the simulation (Forster & Donovan, 2016).

The themes that emerged from the simulation were, feeling unprepared, communication changes, the value of the simulation, and personal reactions to neonatal death. Feeling unprepared was evident as students felt unprepared to communicate with a bereaved mother following the unsuccessful resuscitation. The nurse's felt competent to manage the technical aspects during the resuscitation; students were not as confident to interact and discuss the events with the bereaved mother. Communication changes emerged as well when following the simulation, the nurse's recognized the need to be more confident interacting and discussing events with a bereaved mother. The nurses also recognized the need to decrease their use of medical terminology when communicating to avoid confusion. The value of simulation is another theme where responses indicated that the simulations were rated valuable in supporting

and acquainting and teaching students in a bereavement situation. The simulation allowed the participant's opportunity to give feedback, critique each other in the context of an unsuccessful resuscitation (Forster & Donovan, 2016). Student reactions was identified when student reflections indicated varied responses to unexpected unsuccessful neonatal resuscitation simulation including feeling shocked, confusion how to respond to the mother and increased awareness of their reactions to grief (Forster & Donovan, 2016). This study highlighted the value of simulation and debriefing in encouraging peer feedback and support among students. The responses from the students indicate a need to prepare students with strategies to manage their emotional reactions to unexpected neonatal death (Forster & Donovan, 2016).

Armentrout & Cates (2011) conducted a pre/post simulated communication-training tool for neonatal nurse practitioner students at the University of Texas Medical Branch, Galveston, Texas. The results of the pre-course survey indicated that of the 14 students, 79% had never had a communication course, 86% had never been personally responsible for communicating bad news to a family, and 29% felt comfortable discussing end of life issues with the patient and their families (Armentrout & Cates, 2011). Immediately following the scenario, video debriefing of the simulation allowed the instructors and students the opportunity to critique the scene. A discussion was encouraged regarding what went well and what parts of the simulation were challenging. After the simulation a post-survey was completed, 75% of the students felt more comfortable with discussing the death of an infant to caregivers as well as communicating bad news to families. Also, all students felt the course improved their ability to communicate difficult information to families (Armentrout & Cates, 2011). The simulated experience may be more realistic by actors who are skilled in portraying difficult emotions. The study findings support the

incorporation of simulation as a method to achieve increased skillset and comfort in communicating bad news and supporting a distressed patient (Armentrout & Cates, 2011).

Colwell (2017) examined the use of simulation, as a potential alternative and teaching method, with 16 pediatric midwifery students at a university in the Northwest of England. The structure of the session consisted of 4 discussion sections and two simulated scenarios. The evaluation utilized a Likert scale followed by open-ended questions seeking both positive and areas for improvement from the session. Results revealed 100% of the participants indicated that they did learn from the simulation training; 87% reported an increase in confidence when putting what they learned into practice, and overall students enjoyed learning about bereavement through an alternative method.

Limitations of the study were small sample size and the facilitators indicated more design is required to involve a more significant portion of the audience. It was evident by the responses from 18% of the participants who indicated they would like to have been more active during the session and 18.75% of the participants indicated that the room was too small. The facilitators reported that the simulation was overbooked, which may have contributed to the small room. In conclusion, this study adds to the evidence that simulation is a valid, and credible educational method for use in the infant and perinatal bereavement arena (Colwell, 2017).

### **Summary of Literature**

The research articles encourage and indicate that perinatal bereavement training are imperative in order to prepare nurses to provide quality and individualized care to patients who experience a perinatal loss, which in turn increases a nurse's comfort level when providing perinatal bereavement care (Chan et al., 2004; Chan et al., 2008; Ligeikis-Clayton, 2000; Rock, 2004; Roehrs et al., 2008; Rondinelli et al., 2015; Zhang et al., 2013). Perinatal loss requires the

nurse to be communicative, holistic, and knowledgeable. Perinatal bereavement training can benefit from a varied approach to learning. A simulation is an educational approach that is gaining momentum in nursing and provides an environment that is safe and allows the learner to develop their skills before interacting with a patient (Eggenberger & Regan, 2010). Nursing schools and universities across the country and the world have incorporated simulation into the curriculum when educating nurses and midwives how to communicate and interact during a perinatal loss event. Debriefing is an essential part of simulation training; it allows the student to reflect on what went well and where to make improvements. (Armentrout & Cates, 2011; Bailey & Bishop, 2017; Colwell, 2017; Forster & Donovan, 2016; Knight et al., 2015; Ligeikis-Clayton, 2000; Rock, 2004; Rondinelli et al., 2015). This review highlights education and training on bereavement care as an essential component for nurses who provide care to patients who experience a perinatal loss. Thus, there is an urgent need for culturally specific bereavement care, and educational training tailored to the needs of nurses. Both formal and informal debriefing sessions among nurses working in maternal child units and patients' experiences with perinatal death should be a common occurrence(Shorey, Lopez, & Andre, 2017). Lastly, organizational support in terms of policies and guidelines acknowledging the experiences and needs of the staff working in maternity units is of utmost importance (Shorey et al., 2017).

### **Pilot Study**

A pilot study is considered a small-scale study that helps to examine the practicality and feasibility of the methods to be used in a subsequent more extensive investigation (Viechtbauer et al., 2015). According to Baker (1994), a pilot study can be the pre-testing or trying out of a particular research instrument, and it may “provide warning about where the main research project could fail, information about the research intervention, where to make changes, or

whether proposed methods or instruments are inappropriate or too complicated” (van Teijlingen & Hundley, 2001, p. 1). The purpose of conducting this pilot study was to examine the feasibility of perinatal bereavement training followed by scenario-based simulation, and utilizing the Rondinelli et al. (2015) Modified Perinatal Bereavement Scale Nurse Comfort survey to assess for an increase in nurse comfort.

### **Theoretical Framework**

In the last decade, the medical and nursing communities have recognized the vital significance of team training as an alternative training method for health professionals (Stocker, Burmeister, & Allen, 2014). Suboptimal performance in communication, leadership and teamwork skills during complicated events has contributed to poor patient experience and outcomes (Stocker et al., 2014). The theoretical framework that guides this project is Kolb’s Experiential Learning Theory (ELT), which includes the four-part learning cycle: (1) concrete experience, (2) reflection, (3) conceptualization, and (4) experimentation (Stocker et al., 2014). Kolb defines experiential learning as a process by which knowledge is created through the transformation of experience (Stocker et al., 2014).

In this model, the four-part process represents learning in a cycle. The student learns through concrete experience, reflection, conceptualization, and experimentation (Stocker et al., 2014). Kolb’s ELT supports the underpinnings of this study as follows, the cycle begins with the nurse’s involvement in a specific experience, and this is evident with the Labor & Delivery, Postpartum, Obstetrics & Gynecology outpatient clinic, and Neonatal Intensive Care Unit nurse’s immersion in a perinatal bereavement training followed by scenario-based simulation training (concrete experience, doing, or feeling).



Debriefing addresses the reflective observation and abstract conceptualization phases of the cycle. Reflective observation describes the observation and analysis of concrete experience. It is evident through the student's comments and feedback about problems and situations that they experienced during the simulation exercise. It can be an emotional part of the cycle often compared to brainstorming (Stocker et al., 2014). After the debriefing, the nurse can reflect and begin to integrate the observations and create generalizations and draw conclusions. According to Kolb, these reflections are then blended and extracted into abstract concepts, and new inferences made (Stocker et al., 2014). These further inferences have to be verified and serve as a direction in creating new experiences. It is the fourth phase of Kolb's cycle (active experimentation), the nurse utilizes the principles learned to guide future encounters that lead to improved future experiences with patients and families experiencing a perinatal loss (see Appendix C for the conceptual framework).

### **Methodology**

The nurse comfort perinatal bereavement pilot study was conducted using a pre and post-test design utilizing a convenience sample of nurses who work with patients who experienced a perinatal loss.

### **Setting**

At this 600 bed New Jersey trauma center, nurses who provide care to patients who experience a perinatal loss work on Labor & Delivery, postpartum, Neonatal Intensive Care Unit, Outpatient obstetrics & gynecology, and Emergency Department. The targeted sample size for this project was 20, based on a possible cohort of 4 nurses from each unit. Participants attended an 8-hr offsite perinatal bereavement training session at a large hospital system in northern New

Jersey. The scenario-based simulation session was conducted at the project site in a private classroom.

### **Study Population**

Nurses who work on Labor and Delivery (L&D), post-partum (PP), Neonatal Intensive Care Unit (NICU), outpatient obstetrics & gynecology (OBGYN) clinic, and Emergency department (ED) were invited to participate. Convenience sampling was used for this pilot study due to direct access to nurses who met the inclusion criteria and volunteered to participate.

The literature consensus on appropriate pilot study sample size is variable. Hertzog (2008), Burns & Grove (2005), and Polit and Beck (2004) make no specific recommendations regarding sample size. According to Connelly (2008), pilot study sample should be 10% of the projected sample for the intended larger parent study. Hill (1998), suggested 10-30 participants for pilot studies. Isaac & Michael (1995), suggested 10-30 participants, and Julious (2005) indicated 12 participants. The targeted sample size was 20 with a total of seven nurses recruited to participate in the study however two did not attend so therefore, due to attrition the final sample size was five.

**Inclusion criteria.** Inclusion criteria included English speaking Nurses age 21-80 who work full time, part time or per diem, day, evening or night shift on Labor & Delivery, Postpartum, outpatient obstetrics & gynecology clinic, Neonatal Intensive Care Unit, and Emergency Department units. Attendance at the offsite perinatal bereavement training session was mandatory.

**Exclusion criteria.** Exclusion criteria included nurses who did not attend the perinatal bereavement training session.

### **Subject Recruitment**

Upon meeting ethical requirements and achieving IRB approval from the project site and Rutgers University, recruitment occurred from September 2018 through November 2018. Flyers were displayed in the Obstetrics & Gynecology clinic, Labor & Delivery, Postpartum, Neonatal Intensive Care Unit, and Emergency Department unit's bulletin boards, as well as staff break rooms. Efforts to recruit were made via standing item on the monthly perinatal bereavement committee agenda, in-person recruitment during huddles and staff meetings at the beginning and end of the shift. Nurse Managers were emailed twice per week to rally the staff and provide information regarding the study. Participants were offered a handout summarizing the project with contact information for the PI (email and telephone number) for any questions or concerns. (see Appendix D for recruitment flyer).

### **Consent Procedures**

The PI obtained consent on the participants nursing unit in an available private room. Participants were informed that the purpose of the study is to assess the comfort levels of nurses who provide care to patients who experience a perinatal loss and identify any barriers or facilitators to improve the comfort level of nurses. Participation required attendance at an off-site perinatal bereavement training session, completion of a nurse comfort survey before attending the training session, attendance at a one-hour simulation session at the project site, and completion of the survey post-simulation. Possible benefits to participating in this study include increased comfort when providing care to patients who experience a perinatal loss and an opportunity to rehearse possible methods of communicating with patients who suffer a loss. Participation in this study was voluntary and their decision to participate did not impact their employment. Each participant's anonymity and confidentiality was a high priority; therefore, participants were assigned a random number linking the participant to the study; this allowed the

ability for the data to be reviewed without a direct link to the participant's name. Only the research team had access to the list linking the participant's name to the assigned number associated with the data. (See Appendix E for the script and Appendix F for consent).

### **Risks/Harms**

Participants were advised that participation in this study poses a minimal risk of feeling sad or upset. The simulation content may cause a participant to think of feelings or experiences that make them sad or emotional. During the simulation session, the PI and debriefing facilitator continuously assessed each participant for signs of discomfort, and a social worker was available in the outpatient OBGYN clinic should the participants experience any physical, psychological, social or reproductive responses.

### **Subject Costs and Compensation**

There was no cost to participate in this project. The participants were compensated with a \$ 20.00 Target® gift card for taking part in the study immediately upon completion of the post-survey. Light refreshments were provided at the simulation session.

### **Study Interventions**

Upon fulfillment of recruitment procedures, participants completed the Rondinelli Modified Perinatal Bereavement Scale Nurse Comfort Survey after consent procedures were completed in a private room on their nursing unit. Participants were notified directly and by email regarding the perinatal bereavement training session and assistance with registration offered. After completion of the offsite training session, a date for the simulation session was provided. The participants were given pre-simulation information which included; two 10 minute pre-simulation YouTube® videos to watch before attending the simulation session titled

Beckett's Birth (Stillbirth) and what not to say to a grieving parent. The videos can be found at both <https://www.youtube.com/watch?v=bhWsuR6lBRQ> [and https://www.youtube.com/watch?v=hyHyGCDdbqQ](https://www.youtube.com/watch?v=hyHyGCDdbqQ)

On the day of the simulation, participants received an orientation to the session (15 minutes), which included an introduction to the standardized patient actors and the debriefing facilitator. Each participant could select an option to choose a number from 1-3, or the PI could randomly select from the following scenarios: (1) a 22-week demise diagnosed at routine ultrasound appointment, (2) a 37-week demise diagnosed on Labor & Delivery in triage, and (3) a 32-week gestation that died 45 minutes after delivery. The simulation session (30 minutes) was followed by a debriefing session (20-30 minutes) utilizing a debriefing process adapted from Johnson & Renee (2011), facilitated by the PI and the debriefing facilitator Virginia Cuce MSN, RNC-OB.

**Debriefing facilitator biography.** Ms. Cuce MSN, RNC-OB has worked in obstetrics for 43 years. She works on a labor and delivery unit as a clinical level IV unit coordinator, is an AWHONN instructor specializing in intermediate and advanced teacher/trainer. In addition she is a Lamaze certified childbirth educator. Her passion and clinical focus is perinatal bereavement as she is a Resolve Through Sharing® bereavement coordinator/trainer and serves as a resource and bereavement committee co-chair at her hospital.

Debriefing is essential after a simulation session and provides the participants with an opportunity to react, understand, and summarize what occurred during the simulation (Gardner, 2013). The PI and facilitator used the Plus (+) Delta (Δ) tool. A Plus Delta evaluation tool is a formative evaluation process that provides feedback on experience or event and collects ideas for future improvements. It is framed in "improvement" language rather than language that might be

experienced negatively (Thorpe, 2008). Upon completion of the debriefing session, the participants were handed the nurse comfort survey to complete. After the simulation session, the participants were offered light refreshments and compensated with a \$20 Target gift card (see Appendix G for debriefing process and Appendix H for Plus/Delta evaluation form).

### **Outcome to be Measured**

The tool selected to measure nurse comfort quantitatively is the Rondinelli et al. (2015) modified Perinatal Bereavement Scale Nurse Comfort Survey. This survey was modified from the Ligeikis-Clayton's (2000) researcher-designed survey titled, "Relationship between Comfort, Ability and Perceived Importance of Nurses in Implementing Standards of Care for Parents Who Have Had a Stillborn Infant." Permission was received from both Dr. Ligeikis-Clayton and Rondinelli to use the scale. The tool has 20 items divided into two sections. The first section measures the level of nurse comfort when discussing items with parents such as grief process, funeral options, spiritual request, and having time with the baby. The second section measures the level of nurse's comfort in the performance of bereavement skills such as; taking photographs, dressing baby, and providing mementos during a perinatal loss event. A Likert scale is used to score each item from 0 to 4, the lowest comfort for each item is 0, and the highest comfort for each item is 4 therefore the highest comfort score is 80. Reliability of the comfort scale was acceptable ( $\alpha = .98$ ) (see Appendix I for the survey).

### **Project Timeline**

This project timeline was performed over one year involving the following steps.  
(See Appendix J for timeline)

### **Resources Needed**

Costs included recruitment materials, the fee for standardized actors for simulation session, and participant compensation. The resources required to implement this project included the standardized patient actor fee, compensation for participants, printing of materials, and refreshment costs for the simulation session and huddles. The PI assumed the responsibility of all costs associated with this project (see Appendix K).

### **Evaluation Plan**

The PI and Doctor of Nursing Practice project team evaluated this project. SPSS version 25 was used to record and analyze all data collected during this project. Descriptive statistics were collected and analyzed, including mean and frequency tables. Wilcoxon-signed-rank test was used to determine any difference between comfort levels before the intervention. Regression was conducted utilizing Spearman's rho correlation. A p-value ( $< .05$ ) was used to determine statistical significance.

### **Data Maintenance & Security**

Data collected related to subjects was treated in strict confidence as the law requires. Participants were assigned a randomized identifier (ID) number that was used on the pre- and post-survey. The PI administered the questionnaires to the subjects. The master list linking the participants to the random ID was kept in a separate location from the actual surveys. Surveys were stored within the project site in a locked cabinet. The data was logged using the random ID number assigned and maintained in a locked cabinet. Data was transcribed onto an encrypted file. Upon completion of the project, closure of the IRB, and final writing of the manuscript all data will be destroyed in accordance with the Rutgers University Office of Information Technology guidelines. Hard copies of consents will be housed at 65 Bergen Street, Newark, New Jersey 07107; Room 1138.

## Data Analysis

Descriptive statistics were used to describe the sample of participants and to determine mean and standard deviations for continuous data with frequencies and percentages for categorical variables. Wilcoxon-signed-rank test was used to determine comfort level differences in pre and post-intervention. Regression was measured using Spearman's Rho to identify any correlations between predetermined factors.

## Results

A total of five nurses participated in this project. One nurse identified as an L&D nurse (20%), two identified as outpatient OBGYN clinic nurses (40%), one advanced practice nurse (APN) identified as outpatient OBGYN clinic (20%), and one nurse identified as a postpartum nurse (20%). As a total cohort, the mean age was 51.6 (SD = 13.1, range 31-65). All participants were female gender and African American race. The mean number of years working as a perinatal nurse for the group was 21.2 (SD=15.35, range 1-42).

The majority of the sample held a Bachelor of Science in Nursing ( $n=2$ ), the other highest educational degrees include Master of Science in Nursing ( $n=1$ ), Associates degree ( $n=1$ ) and Diploma ( $n=1$ ). Four participants identified as attending prior perinatal bereavement training ( $n=4$ ), one participant had no previous perinatal bereavement training ( $n=1$ ). The total mean of prior perinatal bereavement training hours is 10.8 hours (SD=3.90, range 0-16). The mean number of perinatal losses cared for was 44 (SD=87.35, range 8-50) (the demographics are listed in Table 1).

A Wilcoxon signed-rank test was conducted to determine if there was a difference in nurse comfort level before and after the perinatal bereavement intervention. Five participants were recruited following their attendance at an 8-hour perinatal bereavement training. Nurse



comfort was measured pre-intervention and immediately post-intervention using the Rondinelli et al. (2015) modified the perinatal bereavement survey. There was an increase in nurse comfort for 19 out of 20 items that were assessed pre and post-intervention. One question in the performing action section “social service contact” did not elicit a change in the mean pre and post-intervention ( $M= 3.8$ ,  $SD= .45$ ). The three items with the lowest means pre-intervention were, “bathing and dressing their baby” ( $M=1.8$ ), “retrieving baby from the morgue” ( $M=1.8$ ) and “performing bathing and dressing the baby” ( $M=1.6$ ). The three items with the lowest means post-intervention are, “bathing and dress their baby” ( $M=2.6$ ), “funeral options” ( $M=2.8$ ), and the “grief process” ( $M=3.0$ ). The three items with the highest means pre-intervention are, “record weight, length, and the name of baby” ( $M=2.6$ ), “time with baby” ( $M=2.6$ ), and “know baby gender” ( $M=3.0$ ). The three items with the highest means post-intervention are, spiritual moments” ( $M=3.6$ ), “name their baby” ( $M=3.6$ ), and “know their baby gender” ( $M=3.6$ ). The participants comfort scores ranged from 20-76, the lowest comfort score pretest was 20, and the lowest comfort post-test score was 47. The highest comfort pre-test survey score was 64, and the highest comfort post score was 76, the maximum comfort score possible is 80. (Refer to Table 2 for the descriptive statistics for “discussing items”). (see Table 3 for the descriptive statistics for “performing items”) (Maximum scores are listed in Table 4). Based on the analysis of the data collected using the Wilcoxon signed-rank test, results revealed that there is no statistical significance on any of the items measured post-intervention. (See Table 5 for statistics). The signed rank test is listed in Table 6.

Regression was conducted to determine if there were any correlations between age of the nurses, number of bereavement training hours, number of years working as a perinatal nurse, and number of perinatal losses in her career. A Spearman’s rank-order correlation was conducted to

assess the relationship between ages, number of bereavement hours, number of years working as a perinatal nurse, number of losses cared for on nurse comfort. There was a statistically significant, strong positive correlation between age and the grief process  $r_s(3) = .894, p < .05$ , performing holding baby  $r_s(3) = .872, p < .05$ , performing taking pictures  $r_s(3) = .872, p < .05$ , performing participating in spiritual moments  $r_s(3) = .972, p < .05$ . Refer to Table 7 for Spearman's rank order correlation.

### **Discussion**

Often nurses feel unprepared to care for patients who experience a perinatal loss, which potentially leads to differences in quality of care for patients and their families (Roehrs et al., 2008). Perinatal bereavement training provides nurses with knowledge, support, and necessary skills to provide quality care to patients who experience a loss.

The simulation session was a unique and creative method to rehearse a sensitive and complex nursing skill. Studies all substantiate support of simulation sessions combined with debriefing (Armentrout & Cates, 2011; Donovan & Forster, 2015; Eggenberger & Regan, 2010; Roehrs et al., 2008). Armentrout & Cates (2011) indicated simulation is a realistic and interactive method that provides immediate feedback for learners following the debriefing process. The learner can practice low-volume high-stake situations without posing any risk to a live patient. The use of healthcare simulation can improve outcomes in clinical cases that are difficult through typical methods of education (Armentrout & Cates, 2011). The participants were open, communicative and receptive to feedback during the debriefing session. Four participants expressed that the debriefing immediately following a perinatal loss would be helpful. According to Hanna & Romana (2007), debriefing sessions provide the opportunity for acceptance of standard responses to a distressing situation and increased mutual understanding

and empathy among co-workers. It also offers healthy coping skills to members of the group that might cope in less productive ways. Simulation followed by debriefing can help perinatal nurses move past the event by allowing them to share their experiences, thoughts, and feelings. In addition, it will enable all the members of the team to review what went well, as well as how to improve to be better prepared for future events (Roehrs et al., 2008).

Regression models did not elicit a correlation between years of experience; however, it did produce a statistically significant, strong positive relationship between age and the grief process, performing holding baby, performing taking pictures, and performing participating in spiritual moments. The relationship between age and the grief process corroborates findings from a study conducted by Chan et al. (2008), where the researchers explored factors associated with nurse's attitudes towards perinatal bereavement care. Regression indicated that age, past experiences in handling grieving parents, and nurse's perceived attitudes to hospital policy and training provided for bereavement care were essential characteristics associated with nurse attitude towards perinatal bereavement care (Chan et al., 2008).

Experiential knowing is knowledge gained through experience, with experiential knowing nurses' comfort may be increased (Rondinelli et al., 2015). Two participants commented that over the years they have learned how to communicate and what to say to patients who experience a perinatal loss. Participants expressed how they achieved the ability to communicate through comments. Participant #3 said "I had to learn on my own what to say to a mother who had a demise, and participant #2 explained, "I have been a part of many fetal loss experiences, and things I have done wrong and right have helped me." According to Rondinelli et al. (2015), experiential knowing is achieved while providing bereavement care at work personally or from experiencing a personal loss. In the study conducted by Roehrs et al. (2008)

participants commented, “I think you have to do it over and over” and “there is nothing that can take the place of experience” “You just have to do it to get comfortable with it, and experiences don't come around very often” (Roehrs et al., 2008, p. 631). These comments substantiate the theoretical framework utilized for this project. Kolb’s experiential learning theory represents learning in a cycle that is continuous using, a concrete experience, reflective observation, abstract conceptualization, and experimentation.

The staff from the project site maternal-child units were reluctant to participate in this project as they feared being labeled as the bereavement nurse and being assigned to bereavement patients at all times. Roehrs et al. (2008) indicated that volunteering to care for patients experiencing a perinatal loss was the best approach and that the most comfortable nurses should do the care. A participant in the Roehrs et al. (2008) study commented. “It is in the best interest for all involved to assign a nurse best suited with perinatal bereavement patients for quality of care” (Roehrs et al., 2008, p. 636) It is imperative for nursing leadership to create an environment that is supportive of its nursing staff and be creative in assigning bereavement patients to appropriate nurses. Nurses in the Roehrs et al. (2008) study stated that taking turns with assignments “is the only way that we are going to learn and feel comfortable.” “If the same nurses always care for the parents with perinatal loss there is a significant chance of burnout” (Roehrs et al., 2008, p. 637) In contrast, four nurses indicated that nurses who are uncomfortable should not be forced to take these assignments” (Roehrs et al., 2008, p.637)

### **Implications for Clinical Practice**

The outcomes and feedback from this project support the incorporation of perinatal bereavement training for all nurses who care for patients who experience a perinatal loss. According to Chan et al. (2008) providing care for patients whose baby has died is an emotional,

stressful and physically demanding situation. Therefore, nurses who care and support patients who experience a perinatal loss need to be trained with the relevant knowledge, skills, and understanding to acquire sufficient confidence in their ability to provide adequate and appropriate care. Merrigan's (2018) dissertation where indicated that specialty nursing education such as bereavement care offers an opportunity for comprehensive knowledge and confidence. Knowledge increases nurse's confidence and enhances nursing practice thereby influencing the patient experience.

### **Implications for Quality/Safety**

To maintain quality and safety standards the project site may refer nurses who care for patients who experience a perinatal loss to the offsite perinatal bereavement training session offered twice per year at a large hospital system in northern New Jersey. The training is at no cost to participants with an award of seven contact hours. Active participation of nurses from labor & delivery, postpartum and Neonatal Intensive Care Unit on the inpatient perinatal bereavement committee, which meets once per month, creates an environment of ownership and shared governance. The objectives and aims of the committee should include improvement in staff education, and focus on improving processes within the organization, on providing excellent individualized care for patients and families affected (Kemplin, 2013). Development of unit based, interdisciplinary protocols, initiation of a bereavement manual, management of supplies, and competency training are areas the staff may address. At a later date, incorporation of nurses from the emergency department and perioperative services should be considered, as Merrigan (2018) suggests quality care be provided to the patient who experiences a perinatal loss no matter which unit the perinatal loss occurs.

### **Implications for Healthcare Policy**

The incorporation of an interdisciplinary perinatal bereavement committee may aid in maintaining a uniform process throughout the organization regardless of where the patient is hospitalized. Kemplin (2013) recommended expanding members of a bereavement committee to include staff from labor & delivery, neonatal intensive care unit, post-partum, genetic counseling, pastoral care, and nursing leadership. The objectives and aims of the committee should include, improvement in staff education, and focus on improving processes organization-wide, on providing excellent individualized care for patients and families affected (Kemplin, 2013).

The impact of this project on New Jersey health policy is related to compliance with the Autumn Joy Stillbirth Act. The implementation of an interdisciplinary perinatal bereavement committee in conjunction with perinatal bereavement training for nurses who provide care to patients who experience a perinatal loss will create an opportunity for the organization to comply. According to the Autumn Joy Stillbirth Act (2014), training of physicians, nurses, psychologists, and social workers is imperative to ensure that information is provided to the mother and family sensitively. Also, parents should be provided with information about what to expect, the availability of grief counseling, and the opportunity to develop a plan of care that meets the family's social, religious, and cultural needs.

### **Implications for Education**

Orientation programs for new nurses may inconsistently address bereavement care unless a new nurse has an opportunity to care for a patient with a fetal loss during their orientation (Roehrs et al., 2008). Transforming nursing curricula and nursing orientation could address these deficits. Providing bereavement training and exposure during orientation, as well as reorientation during mandatory education reviewing required paperwork, standards of care, scenario-based

simulation and videos may increase nurse comfort which may lead to quality patient care (Roehrs et al., 2008).

The debriefing was successful in this project. The staff was open, communicative, and receptive to feedback. Four participants expressed that the debriefing immediately following the scenario-based simulation would be helpful immediately following a perinatal loss. Studies conducted by all substantiated support of simulation sessions combined with debriefing (Armentrout & Cates, 2011; Donovan & Forster, 2015; Eggenberger & Regan, 2010; Roehrs et al., 2008). “A benefit of debriefing is that healthy coping skills of members of the group can be shared with other members, providing examples of healthy ways of coping for those that might cope in less effective ways” (Hanna & Romana, 2007, p. 45). According to Hanna & Romana (2007), debriefing sessions provide the opportunity for acceptance of standard responses to a distressing situation and increased mutual understanding and empathy among co-workers. Debriefing can help perinatal nurses move past the event by allowing them to share their experiences, thoughts, and feelings. Also, it will enable all the members of the team to review what went well, as well as suggestions for improvement that may aid in preparation for future events.

### **Facilitators and Barriers**

The nursing research council, and the Chief Nursing Officer at the project site were in favor of this project and found its aim a necessity in supporting the nursing staff.

The perinatal bereavement foundation supported the project site with donations of supplies and resources for patients.

Some barriers were difficult to overcome with this project. Poor engagement and buy-in from charge nurse's, and nurse managers on the targeted units was evident during the

recruitment phase of this project, which in turn yielded a low sample size. Also, the emergency department nurses did not see perinatal bereavement as a priority in their arena of trauma and critical care diagnosis; therefore it was difficult to gain buy-in and recruit any participants.

According to Merrigan (2018), it is imperative that ED's evaluate existing policies and procedures that are related to women who experience pregnancy loss and incorporate and coordinate policies throughout the facility to include all departments where women receive medical care. An alternative approach for this population of nurses is an abbreviated perinatal bereavement training session, and a prepared "miscarriage kit" stocked in the ED with supplies and materials needed to efficiently provide quality care to a patient who experiences a perinatal loss.

### **Limitations**

Participant recruitment is a critical factor in the success of a research project that involves human subjects. Achieving a sufficient sample size may pose obstacles and challenges for the principal investigator (Broyles, Rodriguez, Price, Bayliss, & Sevic, 2011). As a result, recruitment of nurses into research studies may present various difficulties due to; nurses time, workload constraints, and lack of interest or uncertainty about the importance and relevance of the research (Broyles et al., 2011). This pilot project had various limitations that the PI discovered upon its completion and evaluation. The recruitment plan that the PI executed for this project included; in-person recruitment on the prospective units four days per week at 7:30 a.m. and 7:30 p.m. from September through November 2019, email reminders to the nurse managers and directors of the targeted groups, and this project was a standing agenda item of the perinatal bereavement committee from 2018-2019. Despite all efforts utilized, the sample size was small. Initially, seven nurses were interested in participating; however, with attrition, the final sample



size was 5. There are alternative methods that the PI could be implemented in an effort to recruit more participants.

Focus groups are one method that an investigator may implement with this population. According to Broyles et al. (2011), focus groups provide a chance for the investigator to gain access to robust data, due to the group setting which encourages individuals to use the ideas of others to realize their own entirely. Conducting focus groups with nurses from the same units would allow the investigator to gain insight and knowledge of unit practices, policies, as well as the unit culture that may serve as facilitator or barriers to the nurse comfort perinatal bereavement project. Incorporation of open scheduling during two weeks for each unit, and a willingness to conduct groups on evenings and weekends provides maximization of access to participants (Broyles et al., 2011). In addition to emailing nurse managers and directors, nurses should also be emailed in efforts to familiarize the nurses directly to the project and the PI, as well as maintain open the lines for direct communication to the investigator (Broyles et al., 2011).

Efforts to recruit more participants can be made with the combination of snowball sampling concomitantly with convenience sampling. Sadler, Lee, Lim & Fullerton (2010) stated that snowball methods are useful for difficult to reach populations in which individuals can recommend the study to a colleague or peer. Broyles et al. (2011) suggested utilizing a peer-to-peer strategy with nurse participants. A new alternative method that may be used to aide with recruitment is the use of social media applications such as Facebook® or Instagram®. A Facebook page dedicated to the nurse comfort perinatal bereavement project could be set up, with daily updates related to perinatal bereavement with links to directly contact the investigator with any questions.

This method may be used to invite large numbers of nurses with minimal effort on the researcher (Amerson, 2011), and attempt to improve response rates, as well as maintain engagement with interested participants (Raymond, Profetto-McGrath, Myrick, & Streat, 2018).

An additional weakness of this project was the use of a pre-post-test design. Pre post-test design assesses the outcome of interest before and after an intervention (Terry, 2018). Although it is a practical method, a significant fault is that one cannot attribute causal inferences to the intervention (Polit & Beck, 2010). Despite its weakness, the pretest-posttest design can be reinforced by employing a control group that has a pretest and a post-test, and a posttest that uses more than one pretest in both groups and using multiple time points for assessing the outcomes in both groups (Terry, 2018, p. 86).

Overall, the nursing research council at the project site, the perinatal bereavement committee, and the administration was interested and in support of this project designed to assess the comfort levels of nurses who provide care to patients who experienced a perinatal loss. With active immersion from nursing administration, nursing research council and the perinatal bereavement committee recruitment may have been more successful. The inclusion and engagement of nurse stakeholders such as charge nurses, nurse educators, and nurse champions from each unit were lacking. According to Broyles et al. (2011), to build and sustain a genuine research partnership, it is imperative to inform, involve and engage all levels of nurse stakeholders which requires a vast amount of time and effort.

A crucial misstep was consideration for all key stakeholders associated with the project site. The nurses at this project site are members of a bargaining unit. It may have been perceived as extra work to participate in this study instead of a method to improve their practice. According to Broyles et al. (2011), the perspective of all potential stakeholders: clinical, administrative,

staff and others such as collective bargaining unit should be considered. Upon collaboration with the groups mentioned above, it may aid in the establishment of the necessary access, acceptance and priority from various gatekeepers who may assist in rallying the staff.

In conclusion, the inclusion of project champions may have positively impacted this project. The intentional and informal use of champions provides a level of power with existing relationships with potential participants that can facilitate recruitment, and assist with gaining further strength when combined with a personalized follow-up call by the researcher (MacDougall & Fudge, 2001).

### **Dissemination**

On the collegiate level, this project will be shared with Rutgers University School of Nursing during a final presentation before graduation. Locally these findings will be shared and discussed with the project site's nursing research committee, and staff on labor and delivery, postpartum care, neonatal intensive care unit, and outpatient obstetrics and gynecology clinic nursing staff; followed by submission of a poster at the project site's nursing week celebration in May 2019.

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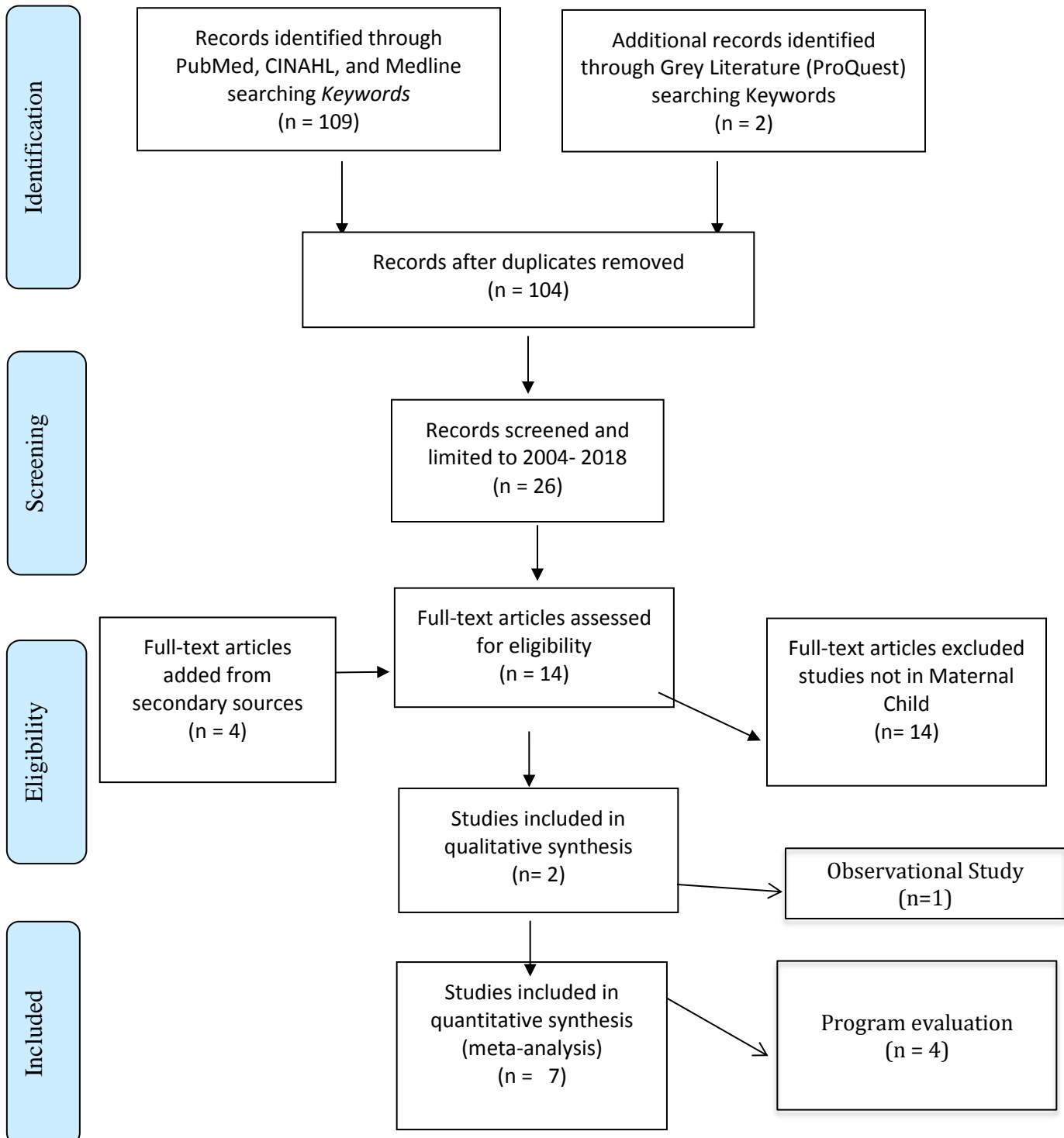
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## Appendix A

### PRISMA Diagram

Prisma Diagram of Literature search criteria for comfort levels of nurses. Adapted from Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med. The PRISMA Group, 6(7).



## Appendix B

Table of Evidence

Article #	Author & Date	Evidence Type	Sample, sample size & setting	Study finding that helps to answer the EBP question	Limitations	Evidence level & Quality
1.	Chan, Chan, & Day <i>Nurse Education Today</i> (2004)	Non-Experimental Pilot study-cluster analysis	<b>Study aim:</b> To identify profiles of nurses based on their demographic variables and their attitudes toward perinatal bereavement support. To explore any differences among nurses attitudes towards bereavement support in terms of demographics , practical experience and training factors. To explore the relationships between nurse's attitudes towards bereavement support,	Two-step cluster analysis yielded two clusters. Cluster A consisted of 55.5% (n =61) and cluster B consisted of 44.5% (n = 49) of nurses. Cluster A nurses were younger, had less OBGYN experience , more junior ranking and less education than cluster B nurses. Cluster B nurses had additional midwifery and	Self-report questionnaire was used, which may cause response bias. Sample sizes were relatively small and responses were restricted to one hospital. Respondents honesty due to self-report survey. Perceived pressure from management to respond and respond positively.	Level III/B

			<p>their need for bereavement training and hospital policy.</p> <p><b>Intervention</b> *Survey</p> <p><b>Sample</b> * Nurses and student nurses/midwives who work in Department of OBGYN in large hospital in Hong Kong.</p> <p><b>Sample size</b> *n=110</p> <p><b>Setting</b> Department of OBGYN in large hospital in Hong Kong.</p>	<p>bereavement care training, personal grieving experience and experience handling grieving clients. The majority held positive bereavement care attitudes. Significant differences towards perinatal bereavement support were found. Only 25.5% (n = 28) had bereavement related training. Attitudes towards bereavement care were positively correlated with training needs (rs = 0.59) and hospital policy</p>		
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				support (rs =0:60)		
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Article #	Author & Date	Evidence Type	Sample, sample size, Setting	Study findings that help to answer the EBQ Question	Limitations	Evidence level & Quality
2.	Chan, M.F., Lou, F.I., Arthur, D.G, Cao, F.L., Wu, L.H., Li, P., Sagara-Rosemeyer, M., Chung, L.Y., & Lui, L. <i>Journal of Clinical Nursing</i> (2008)	Non-Research Structured Questionnaire	<b>Study aim</b> To explore the factors associated with nurse's attitudes towards perinatal bereavement care. <b>Intervention</b> Questionnaire <b>Sample</b> Nurses who work in OBGYN. <b>Sample size</b> n=334 <b>Setting</b> OBGYN units in Five hospitals in Hong Kong.	Majority of nurses in this study held a positive attitude towards bereavement care. Results showed that only 39.3% (n = 130) of nurses had bereavement related training. By contrast, about 89.8% of nurses (n = 300) showed they need to be equipped with relevant knowledge, skills and understanding in the care and support of bereaved parents. Regression model showed that age, past experience in handling grieving	data for this study used a self-report questionnaire, which may cause possible response bias from each responder. This study focused on quantitative data, qualitative study to explore common feelings via focus group interview to collect their feelings towards such care is recommended.	III/B

				parents and nurses' perceived attitudes to hospital policy and training provided for bereavement care were factors associate with nurses' attitudes towards perinatal bereavement care.		
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Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study finding that help answer EBP Question	Limitations	Evidence level and Quality
3.	Ligeikis-Clayton <i>Doctoral Dissertation</i> (2000)	Non-experimental (descriptive correlational study).	<b>Study aim:</b> examined nurses' perceptions of their own comfort levels, abilities and importance that they place on the implementation of RTS protocols following the death of a stillborn infant, as well as the relationships between selected	*Nurses who had participated in the Expanded RTS training had higher mean scores in the areas of comfort, ability and perceived importance than nurses who had not participated in the training.(see below)  Expanded RTS <b>Ability:</b> Yes n=4 mean=97.50 No n=56 mean=88.23 <b>Comfort</b>	*The study utilized a purposive convenience sample, results may not be generalizable to other nurses. *A second limitation existed due to the homogeneity of the sample. The majority of the subjects were Caucasian, female, Registered	Level II Quality B



			<p>demographics and the nurses' perceptions.</p> <p><b>Tool used:</b> Researcher designed survey entitled "relationship between comfort, ability and perceived importance of nurses in implementing standards of care for parents who have had a stillborn infant"</p> <p><b>Sample, size, setting.</b> *RN's and LPN's working on L&amp;D, Post-Partum, NICU, and Women's surgical units at a Medical center in Broome, NY. *(n=65)</p>	<p>Yes n=4 mean=96.25 No n=55 mean=86.24</p> <p><b>Importance</b> Yes n=4 mean=98.00 No n=55 mean=89.31</p> <p>* (79%) of respondents identified that they would appreciate the opportunity to attend debriefing sessions to discuss feelings associated with stillborn deaths.</p> <p>* (71%) discussed the need for additional training and education in the area of bereavement and working with families who have experienced fetal demise.</p> <p>Comments Offered by Nurses at End of the Survey</p> <ul style="list-style-type: none"> <li>• - appreciate training to feel more comfortable.</li> <li>• -Have not been specifically trained on grief counseling.</li> <li>• -</li> </ul>	<p>Nurses and from Catholic/Prot estant religious backgrounds.</p> <p>* Researcher-derived survey instrument was utilized which lacked prior documented reliability and validity.</p> <p>*The survey also utilized a self-perception format and the meaning of comfort levels, each respondent may interpret ability and perceived importance in dealing with these issues differently.</p> <p>*Several limitations of the demographic instrument were evident as some respondents showed a tendency not to complete</p>	
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				<p>There should be regular classes for nurses who work in this area.</p> <ul style="list-style-type: none"> <li>• -I wish the hospital would offer classes.</li> <li>• -I would definitely like to attend training if provided.</li> <li>• - Offer a workshop dealing with this topic.</li> <li>• -Staff nurses need more education to increase comfort level.</li> <li>• -Would like training. I feel this is a very important part of my job when needed.</li> </ul> <p>In summary, all 17 of the nurses who chose to comment, included responses, which related to the need for additional education and training regarding perinatal death. Responses also indicate the need for specific training.</p>	<p>certain questions. These questions had to do with education and training in bereavement.</p>	
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Article #	Author & date	Evidence type	Sample, sample size & setting	Study findings that answer EBP question.	Limitations	Evidence level and quality
4.	Rock, J.V. <i>Doctoral Dissertation</i> (2004).	Non-experimental (descriptive correlational design)	<p><b>Study Aim:</b> To investigate the comfort levels of obstetric nurses caring for parents who had experienced a stillborn infant within the maternity unit of a NY city hospital.</p> <p><b>Intervention</b> Survey-modified Ligeikis-Clayton comfort survey</p> <p><b>Sample, size &amp; setting.</b> Obstetric nurses working in a large two-campus</p>	<p>Nurses who feel adequately prepared were comfortable when caring for patients affected by stillbirth.</p> <p>Nurses indicated a need for death education classes.</p> <p>Findings reinforce the need for education for nurses and health care professionals involved in this population.</p>	<p>Small sample size</p> <p>Quantitative study</p>	III/B

			teaching hospital within the Kings county area of New York. (n=52)			
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Article #	Author & Date	Evidence type	Sample, Sample size, Setting	Study finding that helps answer EBP	Limitations	Evidence level & Quality
5.	Roehrs, C., Masterson, A, Alles, R., Witt, C., & Rutt, P. <i>JOGNN</i> (2008)	Non-Experimental (Qualitative descriptive)	<b>Study goal:</b> *Describing the perspectives of one group of labor nurses about providing perinatal bereavement care.  *Identify gap in literature, and the results will guide the development of methods and strategies for staff development and peer support. <b>Intervention</b> *Qualitative survey <b>Sample, size, setting</b> *10 labor nurses in a western hospital.	*Developing clinical expertise is necessary to gain the comfort level and skills necessary to care for patients who experience perinatal loss.  *Orientation experiences and nursing staff debriefing would help.  *Needed education includes: grief training, communication techniques, and paperwork experience.	*Limited variability of the sample.  *Six of the nurses worked nights, possibly nurses less experienced, less exposure.	III/B

Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study finding that help answer EBP Question	Limitations	Evidence level and quality
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6.	Rondinelli, J., Long, K., Seelinger, C., Crawford, C.L, & Valdez, R. <i>Journal for Nurses in Professional Development</i> (2015)	Non-Experimental (cross-sectional survey)	<p><b>Study aim:</b> Examine factors related to the nurse's comfort in fulfilling interventions during perinatal loss.</p> <p><b>Tool used:</b> Online survey using modified Ligeikis-Clayton comfort scale.</p> <p><b>Sample, size, setting.</b> *large integrated healthcare system in southern California, *nurses from L&amp;D, Postpartum, and NICU n=172</p>	<p>*notable evidence on need for initial and or continued perinatal loss education.</p> <p>* Open-ended comments supported quantitative results that “education” was one of the categories when striving for comfort in bereavement role.</p> <p>*Nurses had higher comfort levels consistent with experiential knowledge</p> <p>* Findings indicate a need for consideration for incorporating simulation scenarios, role-playing, and debriefing.</p>	<p>*Study results may not be generalizable to other specialty areas.</p> <p>*The investigators modified an existing comfort survey, this gives an opportunity for further development with validity and reliability testing.</p>	Level III Quality: B
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Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study finding that help	Limitations	Evidence level and quality
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				answer EBP Question		
7.	Zhang <i>Nursing Research and Practice</i> (2013)	Quasi-Experimental	<p><b>Study aim:</b> Evaluate the effect of a bereavement seminar on the attitude and comfort of nurses regarding bereavement care.</p> <p><b>Tool used:</b> Bereavement/End of life attitudes about care of neonatal nurses scale (BEACONNS).</p> <p><b>Sample, size, setting.</b> *Control and Intervention group of NICU nurses,  *(n=63), community hospital in southeastern United States.</p>	<p>*Nurses that attended the bereavement workshop were less satisfied with previous end of life educational training (t=-2.21, P=0.03).</p> <p>*The Intervention groups comfort level increased at two months after intervention (posttest). (t= -3.37, P=0.001).</p> <p>*The results of the study support the use of a bereavement seminar to increase nurse comfort levels in providing end of life/bereavement care to families who experience perinatal loss.</p>	<p>*A lack of statistical difference between the control and intervention group may have been due to the small sample size.</p> <p>*Many nurses found the involvement scale confusing, which may have affected the reliability of this scale.</p>	Level II Quality: B

Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study Findings that help answer EBP question	Limitations	Evidence Level and Quality
8.	Merrigan <i>American Journal of Maternal Child Nursing</i> (2018).	Organizational experience (Program Evaluation)	<p><b>Aim:</b> discuss an educational process for ED nurses that was designed to help (a) identify current practice in all departments where women with perinatal loss receive care, (b) review and align perinatal bereavement policies across units and disciplines, and (c) include current evidence-based practice to create a standard of care for women experiencing miscarriage in the ED that focuses on RN education.</p> <p>A 4-hour didactic and interactive workshop was developed based on the RTS standards and protocols,</p>	<p>There should be a standard practice for care for all women experiencing pregnancy loss.</p> <p>Systematically extending perinatal bereavement care education to every nurse and in every setting where women experiencing pregnancy loss receive care is the foundation for excellent care</p>	None noted	Level V/B



			<p>topics covered included:</p> <p>medical aspects of pregnancy loss, how to assess the meaning of the miscarriage, respectful handling, and disposition of the remains, and communication strategies, how and when to offer keepsakes, what to expect after discharge.</p>			
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Article #	Author & Date	Evidence Type	Sample, Sample Size & Setting	Study findings that help answer the EBP Question	Limitations	Evidence level and quality
9.	Bailey & Bishop (2008)	Organizational Experience: (Program evaluation)	Students enrolled in a BSN program at a University in the United States.	<p>Overwhelmingly positive response from students.</p> <p>Students were grateful to practice this skill prior to implementing with patients.</p> <p>Strengthened communication skills during</p>	Faculty fatigue when role is prolonged.	V/B

				stressful situations.		
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Article #	Author & Date	Evidence type	Sample, Sample size & Setting	Study findings that help answer the EBP question	Limitations	Evidence level and quality
10.	Knight, C.C, Dailey, K.D, & Currie, E. <i>Nursing Education Perspective</i> (2015)	Non-Research (Organizational Experience: program evaluation)	Open to 108 nursing students; 85 students completed an evaluation form.	Overwhelmingly positive response from the students that the experience was helpful and would benefit future care of patients.  Students indicated that the simulation enhanced skills to manage grief in the clinical setting.  Students indicated that the simulation helped them to be present with a grieving parent and family. Students had an increase in comfort when communicating with grieving parents and families.	The evaluation of the activity was limited in scope.	Level: V Quality: B

Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study finding that help answer EBP Question	Limitations	Evidence level and quality
11.	Donovan, H., & Forster, E. <i>Clinical Simulation in Nursing</i> (2015).	Non-experimental (Observational study).	<p><b>Study aim:</b> Examine the use of language and discourse when managing a sequential simulation of neonatal resuscitation and bereavement support.</p> <p><b>Intervention:</b> Simulation</p> <p><b>Sample, size, setting.</b> * 4<sup>th</sup> year dual degree midwife students, *n=10 *Australian regional SCN center (SCN's in Australia provide low-to medium level care to newborn babies, who do not require a neonatologist)</p>	* The simulation emphasized the benefit of providing students the opportunity to develop their skills before working with patients who experience a perinatal loss.	<p>*Small sample size.</p> <p>*Difficulty with the mannequin used for resuscitation simulation.</p> <p>*The role of the bereaved mother being played by one of the faculty staff, may have undermined the realistic nature of the simulation.</p>	Level III Quality: B

Article #	Author & date	Evidence type	Sample, size, & setting	Study findings that help to answer EBP	Limitations	Evidence level & Quality
12.	Armentrout, D., & Cates, L.A. <i>The Journal of Perinatal &amp; Neonatal Nursing</i> (2011)	Organizational experience: (program evaluation). Pre-course survey, simulation, video debriefing, followed by post-course survey and course evaluation.	Simulated communication-training tool for neonatal nurse practitioner students at the University of Texas medical branch, Galveston, Texas.  Simulation scenario a neonatal death (n=14)	After the simulation, 75% of the students felt less uncomfortable with discussing the death of an infant to care givers as well as communicating bad news to families.  *100% of the students felt that this course improved their abilities to communicate difficult information to families  Students comments: “ both lecture and this simulation are needed to put it into practice”	Simulation actors were not specifically trained in this content.	V/B

				“very valuable, helped to reinforce what was learned”, “hands on always best”		
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Article #	Author & Date	Evidence Type	Sample, Sample Size, Setting	Study finding that help answer EBP Question	Limitations	Evidence level and quality
13.	Colwell <i>Journal of Neonatal Nursing</i> (2017)	Non-Experimental (Qualitative)	<p><b>Study aim:</b> to examine the use of simulation, as a potential alternative and novel teaching method, in the subject matter of infant bereavement, to complement and enhance existing learning materials and formats that are available.</p> <p><b>Intervention:</b> Simulation</p> <p><b>Sample</b> *student neonatal nurses and midwives.</p> <p><b>Sample size</b> *n=16</p> <p><b>Setting</b> Northwest of England.</p>	<p>* 100 % of the students indicated that they did learn from the simulation training.</p> <p>*87% of students indicated an increase in confidence when putting what was learnt in the simulation into practice.</p> <p>*students enjoyed learning about bereavement through an alternative method; 81% of students found the simulation training to be the “best” part of the session.</p>	<p>* More design is required to involve a greater portion of the audience.</p> <p>* Small sample size.</p>	Level III Quality: B

## Appendix C

### Theoretical Framework



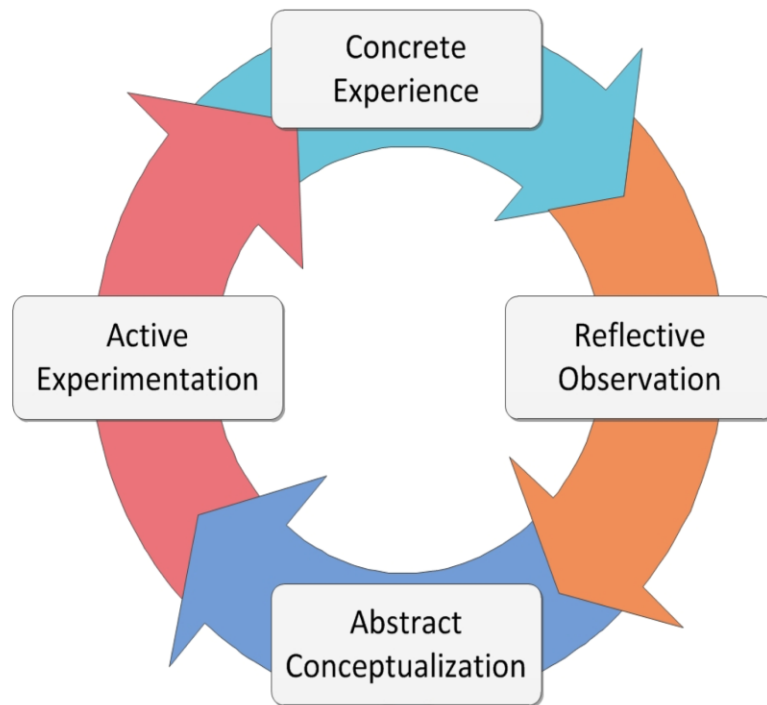
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#### Intervention (Feeling)

Participation in  
Perinatal  
Bereavement  
Scenario  
simulation

#### Implementation (Doing)

Application of  
new knowledge  
into practice,  
when providing  
care to patients &  
families who  
experience a  
perinatal loss.



**Debriefing  
(Watching)**  
Post  
Intervention  
(Plus/Delta)

#### Thinking

Administration of  
Modified Ligeikis-  
Clayton "nurse  
comfort survey

#### Appendix C

Adapted from McLeod, S.A./

(2017). Kolb-learning styles.

Retrieved from [www.simplypsychology.org/learning-kolb.h](http://www.simplypsychology.org/learning-kolb.h)

## Appendix D

### Recruitment Flyer



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#### ***Comfort Levels of Nurses Who Provide Care to Patients who Experience a Perinatal Loss.***

*Be part of an important perinatal bereavement study*

- *Do you work on L&D, Postpartum, NICU, OBGYN Clinic, or the Emergency Department?*

*If you answered YES to these questions, you may be eligible to participate in a perinatal bereavement study.*

*The purpose of this research study is to measure your comfort level when you provide care to patients during a perinatal loss event. Benefits include perinatal bereavement training at no cost, and scenario based simulation session. Participants will receive a gift card and refreshments at the scenario based simulation.*

*Nurses who work on L&D, Postpartum, NICU, OBGYN Clinic, or the Emergency Department are eligible to participate.*

*This study is being conducted at University Hospital, 150 Bergen St, Newark NJ, USA*

*Date: December 2018*

#### ***Requirements***

- *Participants must attend the offsite perinatal bereavement session at Hackensack Meridian (7.0 Contact hours awarded)*
- *View (2) 10 minute YouTube® video's on a parent's stillbirth experience prior to attending the simulation session.*
- *Participation in a simulation session and completion of a 10-minute perinatal bereavement nurse comfort survey.*
- *Participants will be compensated with a \$20 Target gift card upon completion of above requirements.*

*Please call Michelle Troope Principal Investigator at (973) 972-2727 or (973) 760-7156 or email: [mtroope@sn.rutgers.edu](mailto:mtroope@sn.rutgers.edu) for more in*



Version 2:8/17/18



## Appendix E

### Script



Hello, my name is Michelle Troope. I am a DNP student at Rutgers University School of Nursing. I am conducting research on comfort levels of nurses who provide care to patients who experience a perinatal loss, and I am inviting you to participate because you work on a nursing unit that provides care to these patients.

Participation in this research includes:

- *Attending the offsite perinatal bereavement session at Hackensack Meridian (7.0 contact hours)*
- *View (2) 10 minute YouTube® video's on a parent's stillbirth experience prior to attending the simulation session.*
- *Participation in a 90-minute simulation session, which includes completion of a 10-minute perinatal bereavement nurse comfort survey.*

If you agree to participate in this study you will be compensated with a \$20 Target gift card. If you participate in this study, your total time commitment will be 8 hours for the perinatal bereavement session, and will be between 90-110 minutes for the You Tube ® videos and the simulation session.

If you have any questions or would like to participate in study, I can be reached at 973-760-7156 or [mtroope@sn.Rutgers.edu](mailto:mtroope@sn.Rutgers.edu)

**Appendix F****Informed Consent****CONSENT TO TAKE PART IN A RESEARCH STUDY**

**TITLE OF STUDY:** Comfort Levels of Nurses That Provide Care to Patients who Experience a Perinatal Loss.

**Principal Investigator:** Michelle Troope

This informed consent form provides information about a research study and what will be asked of you if you choose to take part in it. If you have any questions now or during the study, if you choose to take part in it, you should feel free to ask them and should expect to be given answers you completely understand. It is your choice whether to take part in the research. Your alternative to taking part is not to take part in the research.

After all of your questions have been answered and you wish to take part in the research study, you will be asked to sign this informed consent form. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form.

**Who is conducting this research study?**

Michelle Troope is the Principal Investigator of this research study. A Principal Investigator has the overall responsibility for the conduct of the research. However, there are often other individuals who are part of the research team.

Michelle Troope may be reached at 140 Bergen Street Floor C (973) 972-2727 or (973) 760-7156. *Michelle Troope* or another member of the study team will also be asked to sign this informed consent. You will be given a copy of the signed consent form to keep.

**Why is this study being done?**

*To assess the comfort levels of nurses that provides care to patients who experience a perinatal loss; and identify any barriers or facilitators to improve the comfort level of nurses.*

**Who may take part in this study and who may not?**

**Inclusion criteria.** Nurses who work full time, part time or per diem, day, evening or night shift on Labor and Delivery, Postpartum, OBGYN clinic, Neonatal ICU, and Emergency Department units. **Exclusion criteria:** Perioperative nurses.

**Why have I been asked to take part in this study?**

*You work on one the nursing units listed above.*

**How long will the study take and how many subjects will take part?**

*Participants from the project site will be recruited until 20 participants have been achieved. Each participant will be asked to complete a survey and attend a one-hour simulation session. The overall study will take approximately three months.*

**What will I be asked to do if I take part in this study?**

- 1. Completion of a nurse comfort survey administered prior to attending the department mandatory perinatal bereavement training.*
- 2. Attendance at the one-hour simulation training session.*
- 3. Completion of nurse comfort survey post training session.*

**What are the risks and/or discomforts I might experience if I take part in this study?**

Participation in this study poses minimal risk. Any personal information pertaining to the participant will be assigned a number. This will allow for the data to be reviewed without direct link to the participant's name. Only the research team will have access to the list linking the participant's name to the number associated with the data. Participant may experience minimal discomfort from the bereavement simulation.

The simulation content may cause participant to think of feelings or experiences that make them sad or upset. Participant will be informed of any new findings that may affect their decision to remain in the study.

**Are there any benefits to me if I choose to take part in this study?**

The benefits of taking part in this study may be:

Increased comfort level when providing care to patients who experience a perinatal loss.

**What are my alternatives if I do not want to take part in this study?**

Your alternative is not to take part in this study.

**How will I know if new information is learned that may affect whether I am willing to stay in the study?**

During the course of the study, you will be updated about any new information that may affect whether you are willing to continue taking part in the study. If new information is learned that may affect you after the study or your follow-up is completed, you will be contacted.

**Will there be any cost to me to take part in this study?**

*There is no cost to participate in this study.*

**Will I be paid to take part in this study?**

You will receive a \$ 20.00 Target gift card for taking part in this study upon completion of the simulation training and comfort survey.

**How will information about me be kept private or confidential?**

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed.

The PI will provide the participants with a randomized identifier (ID) number to be used on the survey. The master list linking the patient to the random ID will be kept in a separate location from the actual surveys. Surveys will be stored within the project site, in a locked cabinet. The data will be logged using the random ID number assigned and will also be kept in a locked cabinet. Data will be transcribed onto an encrypted file. Upon completion of the project closure of the IRB, and final writing of the manuscript all data will be destroyed in accordance with Rutgers University Office of Information Technology guidelines. Hard copies of consents will be housed in Patricia Hindin's office at 65 Bergen Ave Newark NJ 07107 Room 1138.

**What will happen if I do not wish to take part in the study or if I later decide not to stay in the study?**

It is your choice whether to take part in the research. You may choose to take part, not to take part or you may change your mind and withdraw from the study at any time.

If you do not want to enter the study or decide to stop taking part, your relationship with the study staff will not change, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to *Michelle Troope 140 Bergen Street Newark NJ 07107*

**Who can I call if I have questions?**

If you have questions about taking part in this study or if you feel you may have suffered a research related injury, you can call the study doctor: *Michelle Troope, OBGYN 140 Bergen Street Newark NJ 07107 (973) 972-2727 or (973) 760-7156*

If you have questions about your rights as a research subject, you can call the IRB Director at:

Newark HealthSci (973)-972-3608 or the Rutgers Human Subjects Protection Program at (973)972-1149 in Newark.

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## **AGREEMENT TO PARTICIPATE**

### **1. Subject consent:**

I have read this entire consent form, or it has been read to me, and I believe that I understand what has been discussed. All of my questions about this form and this study have been answered. I agree to take part in this study.

Subject Name: \_\_\_\_\_

Subject Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### **2. Signature of Investigator/Individual Obtaining Consent:**

To the best of my ability, I have explained and discussed all the important details about the study including all of the information contained in this consent form.

Investigator/Person Obtaining Consent (printed name): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix G

### Debriefing Process



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#### **Debriefing After Simulation:**

- Debriefing is defined as an activity that follows a simulation experience led by a facilitator wherein feedback is provided on the simulation participants' performance while positive aspects of the completed simulation are discussed and reflective thinking encouraged (SIRC glossary -NLN online, 4/7/11).
- Debriefing reinforces the positive aspects of the experience and encourages reflective learning, which allows the participant to link theory to practice and research, think critically, and discuss how to intervene professionally in very complex situations (Pamela Jeffries, 2010).
- Debriefing is where the learning occurs during a simulation. Students should reflect on the experience. The goal is for the student to understand what happened in the scenario and what their role should be in the future.
- The literature indicates that it is important to begin the debriefing by giving students an opportunity to express their feelings. The focus should be first on the positive aspects of the experience and what the students did well. Participants should discuss how they would do things differently, and generalize how this would transfer to the clinical setting.
- Debriefing is also a time to correct any mistakes in thinking or intervening, by helping them explore alternatives. We do not want them to leave with incorrect information.

#### **Improving the debriefing experience:**

1. Debriefing environment
  - a. Create a positive, non-threatening, respectful, and confidential atmosphere
  - b. Utilize a circle formation with all participants and facilitator at same eye level
  - c. Videotape session if desired and refer to during debriefing
  - d. Encourage participants to talk and discuss feelings, events, and transfer of knowledge
  - e. Conduct in a different area than the simulation where students are out of the role, which they played for simulation
2. Timing of debriefing
  - a. Conduct right after simulation so participants' thoughts and emotions are present with debriefing lasting double or triple time of simulation
  - b. Utilize the majority of time in debriefing for discussion and analysis of events
  - c. Explore feelings and reactions of the event for the first 5-10 minutes, and summarize with transfer of information to the clinical setting in the last 5-10 minutes
3. Facilitator's role

- a. Establishes and maintains an engaging learning environment
  - b. Structures debriefing in an organized way
  - c. provokes engaging discussions
  - d. Identifies and explores performance gaps
  - e. Helps participants achieve and maintain good future performance
  - f. Guides the conversation without lecturing
  - g. Clarifies information
  - h. Provides constructive feedback
  - i. Actively listens
  - j. Portrays a trustworthy, respectful, and positive demeanor
4. Student's role –
- a. Actively participates in all phases of simulation and debriefing
  - b. Discuss, analyze, and summary

(Adapted from Johnson, P., Renee, C. "Debriefing after Simulation: Guidelines for Faculty and Students" (2011). Master of Arts in Nursing Theses. Paper 14

## Appendix H

### Plus/Delta Evaluation Form

(Adapted from ACPS Quality Tools)



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**Purpose:** This quality tool provides a simple method for individuals or teams to engage in reflection as an approach to continuous improvement. The +/- evaluation can help inform the changes needed to achieve higher levels of performance.

#### Pluses

- ✓ Identify the things that are working, first
- ✓ Pluses are the items that the individual or team wants to maintain and build upon

#### Deltas (*opportunities for improvement*)

- ✓ Identify the opportunities for improvement. These are the things that can be changed so that the individual or team may be more effective
- ✓ Deltas should be action oriented and begin with a verb
- ✓ Deltas should be specific
- ✓ Deltas should be within the realm of possibility
- ✓ Deltas should be reviewed and acted upon



**Appendix I****Plus Delta**

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<b>Plus (+)</b>	<b>Delta (Δ )</b>

## Appendix J

## Rondinelli Modified Perinatal Bereavement Scale Nurse Comfort Survey



**RUTGERS**  
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**Comfort is defined as feeling at ease and/or confident. The perinatal loss event(s) to reference as you complete this section includes fetal demise cases or live births that have expired within the first week of life. The type of event depends on your inpatient work unit within perinatal services.**

Please mark the space, which indicates your personal comfort, level with respect to **discussing item options with parents and families**

	Not applicable	Not comfortable		Comfortable		Very comfortable
See their baby	0	0	1	2	3	4
Hold their baby	0	0	1	2	3	4
Name their baby	0	0	1	2	3	4
Know their baby's gender	0	0	1	2	3	4
Bathe and dress their baby	0	0	1	2	3	4
Have time with their baby during the hospital stay	0	0	1	2	3	4
Take their own pictures	0	0	1	2	3	4
Spiritual moments that include blessings, prayers, or rituals as desired	0	0	1	2	3	4
The grief process	0	0	1	2	3	4
Funeral options	0	0	1	2	3	4
Autopsy and genetic testing	0	0	1	2	3	4

Please mark the number, which indicates your comfort with respect to **You're performing** the following actions during a perinatal loss event.

	Not applicable	Not comfortable		comfortable		Very comfortable
Holding the baby	0	0	1	2	3	4
Recording weight, length, name of baby	0	0	1	2	3	4
Bathing and dressing the baby	0	0	1	2	3	4
Providing keepsakes: foot print, handprint, hat, blanket, etc.	0	0	1	2	3	4

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Taking photographs	0	0	1	2	3	4
Participating in spiritual moments	0	0	1	2	3	4
Contacting social services	0	0	1	2	3	4
Contacting spiritual advisor if desired	0	0	1	2	3	4
Retrieving baby from the morgue	0	0	1	2	3	4

---

### 1. Please mark your gender

Male/female

### 2. What is your age? \_\_\_\_\_

### 3. Please mark your race/ethnicity:

American Indian/Native American

Asian

Black or African American

Caucasian

Hispanic, Latino or Spanish origin

Native Hawaiian/Pacific Islander

Two or more races

Other, please specify \_\_\_\_\_

### 4. Please mark your present setting within the organization in which the majority of your staff nurse role is performed:

Labor and Delivery

Post-Partum/Family Centered Care

Neonatal Intensive Care Unit

### 5. Please mark the highest degree that you hold:

- Associate Degree
- Diploma
- BS/BA: Nursing
- BS/BA: in another discipline other than nursing
- Master's Degree: Nursing
- Master's Degree: Other than nursing
- Joint Master's (MSN & other)
- Doctorate if nursing practice (DNP)
- PhD Nursing
- PhD Other
- Doctorate in another discipline other than nursing

### 6. Please state the number of years worked as a perinatal staff nurse \_\_\_\_\_

**7. Have you attended/completed a perinatal bereavement class or in-service during your career as a perinatal staff nurse? Yes/no**

**8. Please state, with your best estimate, the number of perinatal bereavement class hours or in-services hours you have completed during your career as a perinatal nurse. (For example, a full day class would be 8 hours)**

\_\_\_\_\_

10. Please state, with your best estimate, the number of perinatal loss cases you have cared for during your career as a staff nurse. The perinatal loss event(s) to reference as you complete this section includes fetal demise cases or live births that have expired within the first week of life. The type of event depends on your inpatient work unit within perinatal services. \_\_\_\_\_

11. Please list the barriers that you believe affect your comfort in performing the perinatal bereavement role. \_\_\_\_\_

12. Please list the things that you believe increase your comfort in performing the perinatal bereavement role \_\_\_\_\_

13. Please provide any comments or suggestions on how to improve your comfort in performing bereavement care \_\_\_\_\_

## **Appendix K**

### **Project Timeline**

#### **April 30, 2018**

- Submit proposal

#### **May 7, 2018**

Proposal Hearing

- Team Members: Dr. P. Hindin & Dr. T. Vitale

#### **May 30-June 2018**

IRB Submission (pending approval of proposal by Faculty)

- Submit project to Rutgers University eIRB for approval

#### **August- September 2018**

Submission for consideration University Hospital

- Submit project to University Hospital department of Education and Professional development.

#### **September 2018- November 2018**

- Participant Recruitment

#### **November 2018**

- Perinatal bereavement training session at HUMC

#### **January 14, 2019**

- Project Implementation
- Scenario based simulation and debriefing session

#### **January 2019**

- Data Collection

#### **February 2019**

- Analysis of Data

#### **February-March 2019**

- Evaluation/Writing

#### **April 12, 2019**

- Presentation of Final Project

#### **May 2019**

- Graduation

**Appendix L****Project Budget**

Budgetary Cost: Comfort level of Nurses who Provide Care to Patients who Experience a Perinatal Loss.

<b>Resource</b>	<b>Number Needed</b>	<b>Cost</b>	<b>Total Cost</b>
Standardized Patient Actor Fee	4 hour	\$50/hour	\$225
Subject compensation	5	\$20	\$100
Refreshments for scenario based simulation		\$30	\$30
Recruitment Fliers	20@	\$0.15	\$3
Dissemination Posters		\$75	\$75
Educational materials for simulation		\$15	\$15
Binding final project	5	\$50	\$250
Total cost of project			\$698

## Tables

**Table 1*****Demographics of pre/post survey participants***

<b>Age [years: mean (SD)]</b>	51.6 (+/- 13.1)
<b>Gender, <i>n</i> (%)</b>	
Male	0 (0)
Female	5 (100)
<b>Education <i>n</i> (%)</b>	
ADN	1 (20)
Diploma	1 (20)
BSN	2 (40)
MSN	1 (20)
<b>Experience as a nurse [years: mean (SD)]</b>	21.2 (+/-15.4)
<b>Unit worked, <i>n</i> (%)</b>	
Labor and Delivery	1 (20)
Post-Partum	1 (20)
Outpatient OBGYN clinic	3 (60)

**Table 2*****Section I: Discussing item options with parents and families***

	<b>Pre-Intervention (n = 5)</b>	<b>Post-Intervention (n = 5)</b>	<b>P-value</b>
<i>See their baby</i> [mean (SD)]	2.2 (+/- 0.84)	3.4 (+/- 0.89)	.1
<i>Hold their baby</i> [mean (SD)]	2.4 (+/- 1.14)	3.4 (+/- 0.89)	.1
<i>Name their baby</i> [mean (SD)]	2.4 (+/- 1.14)	3.6 (+/- 0.55)	.1
<i>Know their baby's gender</i> [mean (SD)]	3 (+/- 1)	3.6 (+/- 0.55)	.34
<i>Have time with their baby during the hospital stay</i> [mean (SD)]	2.6 (+/- 1.52)	3.4 (+/- 0.55)	.19
<i>Take their own pictures</i> [mean (SD)]	2.4 (+/- 1.34)	3.4 (+/- 0.89)	.06
<i>Spiritual moments that include blessings, prayers, or rituals as desired</i> [mean (SD)]	2.8 (+/- 1.3)	3.6 (+/- 0.55)	.1
<i>The grief process</i> [mean (SD)]	2.4 (+/- .89)	3 (+/- 0.71)	.18
<i>Funeral options</i> [mean (SD)]	2 (+/- 1.41)	2.8 (+/- 1.3)	.1
<i>Autopsy and genetic options</i> [mean (SD)]	2.4 (+/- 1.34)	3.4 (+/- 0.89)	.06
<i>Bathe and dress their baby</i> [mean (SD)]	1.8 (+/- 1.1)	2.6 (+/- 1.14)	.19



**Table 3*****Section II: Performing the following actions during a perinatal loss event***

	<b>Pre-Intervention (n = 5)</b>	<b>Post-Intervention (n = 5)</b>	<b>P-value</b>
<b><i>Holding the baby [mean (SD)]</i></b>	2.2 (+/- 1.3)	3.4 (+/- 0.89)	.06
<b><i>Recording weight, length, name of baby [mean (SD)]</i></b>	2.6 (+/- 1.52)	3.2 (+/- 1.3)	.41
<b><i>Bathing and dressing the baby [mean (SD)]</i></b>	1.6 (+/- 0.89)	3 (+/- 1.63)	.07
<b><i>Providing keepsakes: foot print, handprint, hat, blanket, etc. [mean (SD)]</i></b>	2.6 (+/- 1.52)	3.6 (+/- 0.89)	.1
<b><i>Taking photographs [mean (SD)]</i></b>	2.2 (+/- 1.3)	3.4 (+/- 0.55)	.07
<b><i>Participating in spiritual moments [mean (SD)]</i></b>	3.4 (+/- 1.34)	3.8 (+/- 0.45)	.1
<b><i>Contacting social services [mean (SD)]</i></b>	3.8 (+/- 0.45)	3.8 (+/- 0.45)	.1
<b><i>Contacting spiritual advisor if desired [mean (SD)]</i></b>	3.4 (+/- 1.34)	3.8 (+/- 0.45)	.66
<b><i>Retrieving baby from the morgue [mean (SD)]</i></b>	1.8 (+/- 1.3)	2.8 (+/- 1.1)	.09

**Table 4**  
*Survey scores*

	<b>Pretest scores</b>	<b>Post test scores</b>
<b>Participant 1</b>	20	72
<b>Participant 2</b>	22	47
<b>Participant 3</b>	63	75
<b>Participant 4</b>	<b>64*</b>	64
<b>Participant 5</b>	56	<b>76*</b>

\*Highest score pre/post test  
*Max score = 80*

**Table 5**

<i>Ranks</i>		<i>N</i>	<i>Mean Rank</i>	<i>Sum of Rank</i>	
POST See their baby – PRE See their baby	Negative Ranks	1 <sup>a</sup>	1.5	1.5	
	Positive Ranks	4 <sup>b</sup>	3.38	13.5	
	Ties	0 <sup>c</sup>			
	Total	5			
POST Hold their baby – PRE Hold their baby	Negative Ranks	1 <sup>d</sup>	1.5	1.5	
	Positive Ranks	4 <sup>e</sup>	3.38	13.5	
	Ties	0 <sup>f</sup>			
	Total	5			
POST Bathe and dress their baby - Bathe and PRE dress their baby	Negative Ranks	1 <sup>j</sup>	1.5	1.5	
	Positive Ranks	3 <sup>k</sup>	2.83	8.5	
	Ties	1 <sup>l</sup>			
	Total	5			
POST Time with Baby – PRE Time with Baby	Negative Ranks	1 <sup>m</sup>	1.5	1.5	
	Positive Ranks	3 <sup>n</sup>	2.83	8.5	
	Ties	1 <sup>o</sup>			
	Total	5			
POST Take their own pictures - PRE Take their own pictures	Negative Ranks	0 <sup>p</sup>	0	0	
	Positive Ranks	4 <sup>q</sup>	2.5	10	
	Ties	1 <sup>r</sup>			
	Total	5			
POST Spiritual moments that include blessings, prayers, etc. – PRE Spiritual moments that include blessings, prayers, etc.	Negative Ranks	0 <sup>s</sup>	0	0	
	Positive Ranks	3 <sup>t</sup>	2	6	
	Ties	2 <sup>u</sup>			
	Total	5			
POST Grief Process – PRE Grief Process	Negative Ranks	0 <sup>v</sup>	0	0	
	Positive Ranks	2 <sup>w</sup>	1.5	3	
	Ties	3 <sup>x</sup>			
	Total	5			
POST Funeral options – PRE Funeral options	Negative Ranks	0 <sup>y</sup>	.00	.00	
	Positive Ranks	3 <sup>z</sup>	2.00	6.00	
	Ties	2 <sup>aa</sup>			
	Total	5			

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POST Autopsy and genetic testing -	Negative Ranks	0 <sup>ab</sup>	0	0
PRE Autopsy and genetic testing	Positive Ranks	4 <sup>ac</sup>	2.5	10
	Ties	1 <sup>ad</sup>		
	Total	5		
POST Performing holding baby –	Negative Ranks	0 <sup>ae</sup>	0	0
PRE Performing holding baby	Positive Ranks	4 <sup>af</sup>	2.5	10
	Ties	1 <sup>ag</sup>		
	Total	5		
POST Performing recording	Negative Ranks	1 <sup>ah</sup>	1.5	1.5
weight, length, name of baby –	Positive Ranks	2 <sup>ai</sup>	2.25	4.5
PRE Performing recording weight,	Ties	2 <sup>aj</sup>		
length, name of baby	Total	5		
POST Performing bathing and	Negative Ranks	0 <sup>ak</sup>	0	0
dressing the baby – PRE	Positive Ranks	4 <sup>al</sup>	2.5	10
Performing bathing and dressing	Ties	1 <sup>am</sup>		
the baby	Total	5		
POST Performing providing	Negative Ranks	0 <sup>an</sup>	0	0
keepsakes – PRE Performing	Positive Ranks	3 <sup>ao</sup>	2	6
providing keepsakes	Ties	2 <sup>ap</sup>		
	Total	5		
POST Performing taking pictures –	Negative Ranks	0 <sup>aq</sup>	0	0
PRE Performing taking pictures	Positive Ranks	4 <sup>ar</sup>	2.5	10
	Ties	1 <sup>as</sup>		
	Total	5		
POST Performing participating in	Negative Ranks	0 <sup>at</sup>	0	0
spiritual moments - Performing	Positive Ranks	3 <sup>au</sup>	2	6
participating in spiritual moments	Ties	2 <sup>av</sup>		
	Total	5		
POST Know their baby Gender –	Negative Ranks	2 <sup>aw</sup>	2	4
PRE Know their baby Gender	Positive Ranks	3 <sup>ax</sup>	3.67	11
	Ties	0 <sup>ay</sup>		
	Total	5		
POST Performing Social Services –	Negative Ranks	1 <sup>az</sup>	1.5	1.5
PRE Performing Social Services	Positive Ranks	1 <sup>ba</sup>	1.5	1.5
	Ties	3 <sup>bb</sup>		
	Total	5		
	Negative Ranks	1 <sup>bc</sup>	1	1

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POST Contacting spiritual advisor – PRE Contacting spiritual advisor	Positive Ranks	1 <sup>bd</sup>	2	2
	Ties	3 <sup>be</sup>		
	Total	5		
POST Retrieving baby from morgue – PRE Retrieving baby from morgue	Negative Ranks	0 <sup>bf</sup>	0	0
	Positive Ranks	3 <sup>bg</sup>	2	6
	Ties	2 <sup>bh</sup>		
	Total	5		

**Table 6*****Test Statistics***

	Post See their baby-See baby	Post Hold their baby-Hold their baby	Post Name their baby-Name baby	Post know baby's gender-Know baby's gender
<b>Z</b>	-1.656b	-1.656b	-1.656b	-.966b
<b>Asymp. Sig. 2-tailed</b>	.098	.098	.098	.344
	Post Bathe and dress baby-Bathe baby	Post Have time with baby-Time with baby	Post Take own pictures-Take pictures	Post Spiritual moments-Spiritual moments
<b>Z</b>	-1.300b	-1.300b	-1.890b	-1.633b
<b>Asymp. Sig 2 tailed</b>	.194	.194	.059	.102
	Post The grief process-Grief process	Post Funeral options-Funeral options	Post Autopsy & genetic testing	Post Retrieve baby from morgue-Morgue
<b>Z</b>	-1.342b	-1.633b	-1.890b	-1.633b
<b>Asymp. Sig 2 tailed</b>	.180	.102	.059	.102
	Post Perform: Hold baby-Hold baby	Post Perform Recording weight, length, name baby-Record weight, length	Post Perform Bathing & dressing-Bathing & dressing	Post Provide keepsakes-Keepsakes
<b>Z</b>	-1.890b	-.816b	-1.841b	-1.633b
<b>Asymp. Sig 2 tailed</b>	.059	.414	.066	.102
	Post Taking photos-Taking photos	Post Participating in spiritual moments-Spiritual moments	Post Contacting social service-Contact social service	Post Contacting Spiritual advisor-Spiritual advisor
<b>Z</b>	-1.841b	-1.633b	.000c	-.447b
<b>Asymp. Sig 2 tailed</b>	.066	.102	1.000	.655

**Note.** \*  $Z \leq 05$

**Table 7***Correlation between age and response to survey questions pre-intervention*

	<b>Correlation Coefficient</b>	<b>P-value</b>
<i>See baby</i>	0.58	.31
<i>Hold baby</i>	0.46	.43
<i>Bathe and dress baby</i>	0.58	.31
<i>Time with baby</i>	0.63	.25
<i>Take own pictures</i>	0.63	.25
<i>Spiritual moments that include blessing, prayer, etc.</i>	0.82	.09
<i>Grief process</i>	0.89	.04 *
<i>Funeral options</i>	0.45	.45
<i>Autopsy and genetic testing</i>	0.53	.93
<i>Performing holding baby</i>	0.63	.05 *
<i>Performing providing keepsakes</i>	0.63	.25
<i>Performing taking pictures</i>	0.87	.05*
<i>Performing participating in spiritual moments</i>	0.95	.01*
<i>Performing know their baby gender</i>	0	1
<i>Performing social services</i>	0.71	.18
<i>Contacting spiritual advisor</i>	0.71	.18
<i>Retrieving baby from morgue</i>	0.78	.12

**Note. \* $p \leq .05$**

## NURSING COMFORT

To Michelle Troope,  
[mtroope@sn.rutgers.edu](mailto:mtroope@sn.rutgers.edu)

Hi Michelle,

Yes, definitely you have permission to use for your prospective study the perinatal loss tool we used for ours on nurse comfort with perinatal bereavement care. I do ask that you reference in your presentations or publications that it was adapted from Dr Ligeikis-Clayton's original work since I received permission from her to modify.

The investigators here at Kaiser Permanente, Southern California are glad to see this being applied in clinical practice. It is so important to assist families through such grief events. Please keep in touch about your findings and how the evidence may impact your local bereavement program.

All the best, June

June Rondinelli, RN, PhD, CNS | Nurse Scientist  
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**Participant Master List**

**Study: Comfort Levels of Nurses That Provide Care to Patients and Families Who Experience a Perinatal Loss**

**Principal Investigator: Michelle Troope**

Identification Number	Nursing Unit	Email



**Compensation Log**

**Study: Comfort Levels of Nurses That Provide Care to Patients and Families Who Experience a Perinatal Loss.**

**Principal Investigator: Michelle Troope**

Identification Number	\$20 Target Gift Card Received: YES or NO	Date