5-2022

Relationships of Secondary Traumatic Stress and Self-efficacy Among Obstetric Nurses Caring for Patients and Families with Perinatal Loss

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PhD in Nursing Program

RELATIONSHIPS OF SECONDARY TRAUMATIC STRESS AND SELF-EFFICACY

AMONG OBSTETRIC NURSES CARING FOR PATIENTS AND FAMILIES WITH

PERINATAL LOSS

A dissertation

By

JENNIFER BAIERLEIN

Submitted in partial fulfillment of the requirements

For the degree of

Doctor of Philosophy

May 2022

Molloy College
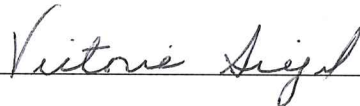
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for Patients and Families with Perinatal Loss
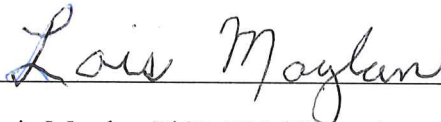
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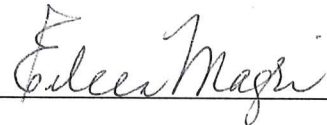
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Abstract

Background

The labor and delivery unit is a place where new life begins, and families are made. Perinatal loss is a traumatic event for families and those that provide care to expectant families. In providing care to patients and families experiencing perinatal loss, nurses are at risk for secondary traumatic stress, which could be harmful to their physical and emotional state leading to compassion fatigue and burnout. Perinatal loss represents a stressful and emotionally demanding event for healthcare professionals, as they must deal with the additional burden of managing their own emotions while caring for the patients. Self-efficacy is a factor that can help to ease secondary traumatic symptoms. Limited research has been done to explore relationships on secondary traumatic stress, the ability to cope and quality of life of obstetric nurses caring for patients, and families experiencing perinatal loss.

Purpose

The purpose of this study was to explore relationships between Secondary Traumatic Stress (STS), Secondary Trauma Self-Efficacy (STSE), and Professional Quality of Life (ProQOL) of obstetric nurses in caring for patients and families with perinatal loss. This study also describes what nurses state help them cope and feel supported when caring for patients experiencing perinatal loss. The relationship between obstetric nurses' descriptive characteristics, secondary traumatic stress, self-efficacy and quality of life were explored to correlate any definitive characteristic to decreasing secondary traumatic stress symptoms, increased secondary trauma self-efficacy, decreasing compassion fatigue and increasing compassion satisfaction.

Methods

This study employed a quantitative descriptive correlational design with an additional qualitative component. The Secondary Traumatic Stress Scale (STSS), Secondary Trauma Self-Efficacy Scale (STSE), Professional Quality of Life Scale (ProQOL) were used to measure secondary traumatic stress, the ability to cope, compassion satisfaction, and burnout among obstetric nurses caring for patients and families experiencing perinatal loss. Inferential statistics were used to show relationships between obstetric nurses' demographic characteristics, secondary traumatic stress, secondary trauma self-efficacy and professional quality of life. Concurrent qualitative and quantitative data collection were conducted by incorporating three open-ended questions at the end of the three instrument scales. The qualitative data were analyzed to explore the content and identify what in the participants words provided information to support and expand the quantitative findings.

Results

Study participants included a national sample of registered nurses who identified as obstetric nurses with experience in caring for patients and families who have had a perinatal loss. There were 1178 participants in this study of which more than half responded to each open-ended question. The results for this population of obstetric nurses in this study demonstrated positive findings such as higher percentages having less STS (on either the STSS or ProQOL STS), less Burnout, higher ability to cope and higher Compassion Satisfaction when exploring relationships with some demographic variables of age, having taken a perinatal bereavement course, being a parent, religious or spiritual beliefs, and the ability to share work related perinatal loss experiences. A negative correlation was shown between the ability to cope and secondary traumatic stress (r=-.484, n=1104, p <.001), the ability to cope and burnout (r = -.485, n = 1092,

p < .001), and a positive correlation was shown between the ability to cope and the compassion satisfaction (r = .467, n = 1083, p < .001). The qualitative portion of this study was analyzed to provide some contextualization relating to the quantitative findings when examining the concepts of stress, coping, support and the experiences of obstetric nurses caring for patients and families with perinatal loss.

Summary and Recommendations

Through this research, identification of what affects nurses' ability to cope with perinatal loss as well as what supports are impactful can inform policy and practice recommendations to best support care practices for obstetric nurses. Implications for nursing practice include supporting protocols, formal perinatal bereavement programs, certification in an obstetric specialty, religious or spiritual coping mechanisms, creating safe areas for debriefing and mentoring newer obstetric nurses caring for patients and families experiencing a perinatal loss. Further research is recommended to assist in policy development or changes to provide operational support for obstetric nurses. Further investigation on debriefs and other interventions need to be developed to help obstetric nurses deal with the effects of secondary traumatic stress during perinatal loss to further support what helps nurses cope during these events.

Dedication

This dissertation is dedicated to my nephew Jack Raymond Monaghan. You may have never drawn your first breath, but I know the impact you had on the day you entered this world. You are forever in our hearts, our beautiful angel baby.

Acknowledgments

A dissertation journey is not taken alone, and the unwavering support of many is greatly appreciated. I would like to thank my esteemed committee, including Dr. Victoria Siegel, my chair, whose encouragement, and oversight was steadfast, along with Dr. Lois Moylan and Dr. Eileen Magri. This team of scholarly professionals provided insight and supported my development throughout this journey. To my amazing cohort—Tricia Nadraus, Renee Buonaguro, Susan Chin, and Heather Reens—I could not have imagined this journey without any of you, and I am so grateful for the family we have created. Thank you to Bernadette Weldon who guided the semesters and gave heartfelt words of encouragement along the way and to Theresa Rienzo for assisting with answers to library reference questions. To Dr. Veronica Feeg who has the ability to have one think outside the box and challenge one to heights unimaginable; you are a true gift to the science of nursing.

A special thank you to my husband Tom Baierlein—your support, patience, ability to listen, and encouragement have been a solid foundation to the completion of this study. To my amazing children—Amanda, Caragh, Thomas, Michael, and Joseph Baierlein—who have taken the ride on this journey with me and have developed an appreciation for lifelong learning and share in the passion of attaining goals. My parents, Paul and Betty Monaghan: from the very beginning, you have believed in me and encouraged me to pursue my passion of nursing. I am forever grateful for the lessons you taught me, the example you both have been, and your support through this journey of life. To my extended family of nurses both in relation to me and in my professional life, you have all influenced me along the way. A special thank you to my grandmother Anne Ruane—your legacy lives on.

Thank you to all the participants of this study who took the time to participate in this important study and share their experiences.

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Chapter 1 INTRODUCTION

The labor and delivery suite, in most circumstances, is the happiest unit to work in a hospital. It is a place where new life begins, and families are made. Therefore, perinatal loss is a traumatic event for families and those who provide care to expectant families. When perinatal loss occurs, it not only takes a toll on the families involved but also the nurses who provide care throughout the process. This toll can lead to secondary traumatic stress on the caregiver. Self-efficacy, a trauma-related cognition, is a modifiable factor that can mitigate secondary traumatic symptoms (Cieslak et al., 2013; Ehlers & Clark, 2000). In providing care to patients and families experiencing perinatal loss, nurses are at risk for secondary traumatic stress that could be harmful to their physical and emotional state, leading to compassion fatigue and burnout.

Studies have examined secondary traumatic stress in many specialties of nursing, including labor and delivery, emergency room, oncology, intensive care, pediatrics, and behavioral health. Nursing is a dynamic humanistic profession that can invoke stress-related symptoms on caregivers in the caring process. Concepts that can lessen the effects of secondary traumatic stress on nurses providing care to families experiencing perinatal loss can assist nurses in coping during this stress and enable them to provide care in future situations with better focus and self-preservation. The concepts explored in this study that assist nurses in providing care during these stressful situations are as follows: *secondary traumatic stress* (STS), *compassion fatigue* (CF), *burnout* (BO), *compassion satisfaction* (CS), and any mitigating effects of *secondary trauma self-efficacy* (STSE).

Background

There are certain catastrophic events that occur in the obstetric setting that have both a direct and indirect impact on labor and delivery nurses. These events can be either expected or

unexpected, depending on the situation and clinical picture. The event of a perinatal loss is defined as the interruption of a pregnancy, leading to loss of the fetus prior to delivery at any gestational age or loss of life of a neonate shortly after birth up to 28 days (MacDorman & Gregory, 2015; Puia et al., 2013). This can be due to premature delivery, traumatic birth, or intrauterine demise. Healthcare providers in obstetrics who care for patients and families who have experienced perinatal loss can experience STS with subsequent outcomes of CF or BO. STS is an occupational hazard for healthcare providers who care for traumatized patients (Beck & Gable, 2012). According to The Joint Commission (2018), secondary victims may face "difficulty sleeping, reduced job satisfaction, guilt and anxiety" that linger in association to a traumatic event.

Globally in 2015, 2.6 million third-trimester stillbirths occurred, showing the slower reduction of stillbirths than that of maternal mortality or mortality in children younger than 5 years old (Lawn et al., 2016). The 2020 National Vital Statistic Report reported 41,788 fetal deaths at ≥ 20 weeks reported in the United States during 2015–2017, which was not significantly different from earlier reports (Hoyert & Gregory, 2020). The difference in this report from 2020 as opposed to the 2015 report is there were 35 areas of the United States opposed to 50 in 2015 due to the 35 areas implementing the 2003 revision of the U.S. Standard report form of fetal death on or before January 1, 2015. This represented 60% of areas in the United States for fetal deaths at or beyond the 20th week of gestation. Subnational areas may not be generalizable to the entire United States due to geographical characteristics.

The lack of a significant decline in perinatal loss increases the risk of STS for obstetric nurses. Nurses who experience the death of a fetus—particularly those patients who suffered violence—are at risk of developing an STS disorder (Gates & Gillespie, 2008). Perinatal death

can raise maladaptive reactions among obstetric nurses where coping strategies may play a role in managing such events (Hamama-Raz et al., 2016). Limited support and barriers to coping in perinatal loss can have profound negative sequela for obstetric nurses who have more direct contact with patients and families (Melvin, 2015).

Perinatal loss represents a stressful and emotionally demanding event for healthcare professionals, as they must deal with the additional burden of managing their own emotions while caring for patients (Gandino et al., 2019). The emotional stress of both caring for patients and their families experiencing perinatal loss and managing emotions can foster physical and emotional conflicts. These conflicts can cause negative symptoms when an obstetric nurse finds it difficult to cope with perinatal loss or does not have the ability to cope due to barriers that can be personal or organizational (Gandino et al., 2019).

Statement of the Problem

Perinatal loss has devastating effects on patients, families, and those caring for them. Nurses in the perinatal areas provide direct care for expectant families and those experiencing perinatal loss. Initial and repetitive exposure to perinatal loss can have profound negative effects on caregivers: "Nurses face the challenge of meeting the physical and emotional needs of women and their families who have had a perinatal loss while maintaining healthy professional boundaries and dealing with their own emotional reaction" (Willis, 2019, p. 46). Nurses' grief experience can be reserved due to professional boundaries and expectations (Anderson et al., 2010) when providing care. Therefore, nurses may suppress their feelings and continue to provide care in a dehumanizing fashion. Most research on perinatal loss is focused on the viewpoint of women or their family's experiences of loss (Willis, 2019).

The exposure to perinatal loss can lead to negative sequela for healthcare professionals who provide care to families experiencing this loss. Studies have shown that 33% to 95% of health professionals state that stillbirth has a powerful psychological effect on them (Beck & Gable 2012; Gold et al., 2008; Heazell et al., 2016; Sheen et al., 2015). STS is an occupational hazard for persons who provide direct patient care to traumatized victims that can lead to untoward physical and psychological stress (Beck & Gable, 2012). Health systems can contribute to the resilience and long-term retention of the workforce by providing appropriate care after a perinatal death and access to debriefing and professional support for healthcare providers (Homer et al., 2016). There are unmet needs of healthcare professionals for them to support bereaved parents (Shorey et al., 2016) and to meet their own needs to limit the psychological effects that perinatal loss may have on them.

Limited research has been conducted to evaluate the effect that caring for women after a perinatal loss has on nurses. Beck and Gable (2012) studied STS in labor and delivery nurses using the Secondary Traumatic Stress Scale (STSS), while asking nurses to describe their experiences being present at a traumatic birth. Puia et al. (2013) performed a qualitative study of obstetric nurses who were present for perinatal loss. This study identified being present for a traumatic delivery of a perinatal loss, which may have long-term consequences for some nurses (Puia et al., 2013, p. 330). This limited research on the effects of STS on labor room nurses who care for patients experiencing traumatic birth and perinatal loss should be further explored to identify mitigating factors that can reduce or eliminate both short-term and long-term consequences from the experience.

Purpose of the Study

The purpose of this study was to explore relationships between STS, STSE, and Quality of Life of obstetric nurses in caring for patients and families with perinatal loss. This study also describes what nurses state help them cope and feel supported when caring for patients experiencing perinatal loss. The relationship between obstetric nurses' descriptive characteristics, STS, self-efficacy, and quality of life were explored to correlate any definitive characteristic to decreasing STS symptoms, increased STSE, decreasing CF, and increasing CS. To this author's knowledge, these three scales have not been studied together in a population of obstetric nurses. The Professional Quality of Life Scale (ProQOL) version 5 (Stamm, 2010) was used to study the concepts of CF/STS, BO, and CS, and their relationship to STS and STSE. To this author's knowledge, these concepts and relationships have not been studied together in a population of obstetric nurses.

Research Questions

1. What is the incidence and severity of STS in obstetric nurses due to perinatal loss?

2. Is there a relationship between the scores on the STSE scale and STSS among obstetric nurses?

3. What is the relationship between obstetric nurses who care for patients and families experiencing a perinatal loss regarding their ability to deal with thoughts or feelings that occur with this traumatic event?

4. What are the relationships among nurses' experience, education, and ability to share with STS and STSE?

5. Is there a relationship between CF, BO, STS, CS, and STSE scores?

6. Is there a relationship between obstetric nurses' demographic characteristics and STS, STSE, CF, BO, and CS?

7. What do you want to share about your experience in caring for patients and families with perinatal loss?

8. Describe the support you received (if any) while caring for a patient and family experiencing a perinatal loss. Was the support from the organization, peers, or outside of work?

9. Describe what helps you cope during or after caring for a patient experiencing a perinatal loss.

Significance

Nursing, including the dynamics of caring for populations and the emotional demand it can take in certain circumstances, can be very stressful in its basic nature of nursing in providing care to others. The investment one gives of themselves to care for another can take a toll on an individual in relation to the stress involved. According to the National Vital Statistic Reports, 2015–2017 data reported 41,788 fetal deaths at 20 weeks gestation or more in the United States (Hoyert & Gregory, 2020). A vivid analogy to understand the travesty of perinatal loss annually was described at a conference by the Star Legacy Foundation (2018) in two ways:

> A large airplane typically carries 393 passengers and 9 crew. The number of stillbirths in the US alone is equal to one 747 crash approximately every 8-10 days. A standard school bus carries 72 children. The number of stillbirths in the US is equal to a completely full school bus crashing and killing all on board every other day.

Obstetrical nurses are exposed to this trauma at these catastrophic rates. The exposure can lead to secondary stress symptoms that can interfere with the nurses' physical and emotional well-being.

Caring for families experiencing perinatal loss can cause the caretaker to endure a tremendous amount of stress. This stress can be physical, emotional, and spiritual. These stressors can affect the mind, body, and soul of nurses who provide care to families experiencing perinatal loss. It is important for the nursing field to study these effects and identify ways to support and care for nurses who suffer from the side effects of experiencing this secondary trauma. The significance to nursing of studying the effects of STS in relation to self-efficacy, quality of life, and coping was to identify the relationship and develop processes to decrease the negative effects of BO, CF, and turnover. Healthcare institutions need to have a better understanding of the supports they need to have in place to lessen the negative side effects of STS to nurses caring for patients experiencing perinatal loss and learn from the concepts that provide strength during these situations.

Definition of Terms

The following terms are defined as conceptual definitions as well as operational definitions for this study:

Obstetric nurse

An *obstetric nurse* is defined as a nurse who is licensed as a registered nurse and provides care for women during pregnancy, labor, and childbirth (Johnson & Johnson, 2021). This includes but is not limited to areas such as labor and delivery, antepartum, postpartum, maternity, and nursery. For this study, *obstetric nurse* is defined as a nurse primarily working in the labor

and delivery setting and has provided obstetric care to patients and families experiencing a perinatal loss.

Perinatal Loss

The more inclusive definition of *perinatal loss* or *mortality*, as defined by the National Vital Statistics Reports, includes infant deaths under 28 days and fetal deaths at 20 weeks or more (MacDorman & Gregory, 2015). *Perinatal loss*, as defined by Puia et al. (2013, p. 321), include fetal deaths and the death of an infant fewer than 28 days old. For this study, perinatal loss refers to a perinatal loss experience taking place in the labor and delivery room where a patient and family receive care by an obstetric nurse for labor, delivery, and immediate recovery.

Fetal Demise

Fetal demise (mortality) refers to the intrauterine death of a fetus prior to delivery and is generally divided into three periods: early, less than 20 completed weeks of gestation; intermediate, 20-27 weeks of gestation; and late, 28 weeks of gestation or more (MacDorman & Gregory, 2015).

Stillbirth

In 2016, the Lancet compiled definitions for an understanding of the term *stillbirth*. Intrapartum stillbirth occurs after the onset of labor but before birth. In this instance, it is confirmation of the presence of a fetal heart rate at the onset of labor. An antepartum stillbirth occurs before the onset of labor and a fetal heart rate would not have been present (Lawn et al., 2016).

Certification Status

Certification is a process to validate, based on predetermined standards, a professional's knowledge for safe and effective practice in a specialty or defined subspecialty. A certification

status in nursing is an accreditation received by a nurse when successfully passing a specialty

exam from a professional organization. An example is obtaining the specialty certification as an

Inpatient Obstetric Nurse through the National Certification Corporation (2019).

Secondary Traumatic Stress

STS is defined as the "the natural, consequent behaviors and emotions resulting from

knowledge about a traumatizing event experienced by a significant other. It is the stress resulting

from helping or wanting to help a traumatized suffering person" (Figely, 1995, p. 10). Figley

further defined STS as a syndrome of symptoms nearly identical to those of posttraumatic stress

disorder (PTSD), including symptoms of intrusion, avoidance, and arousal. STS for this research

is defined as reactions resembling posttraumatic stress, such as intrusive re-experiencing of the

traumatic material, avoidance of trauma triggers, and emotions and increased arousal, which all

result from indirect exposure to trauma (Bride et al., 2004). Beck (2011) stated, "the person with

secondary traumatic stress acquires symptoms by exposure to a traumatized individual and not

from exposure to the traumatic event itself. Empathy and exposure are two central concepts in

secondary traumatic stress" (p. 3). This implies the stress deriving from caring for the patient and

family through the loss as opposed to the actual loss. How patients and families respond to

catastrophic events in the delivery room has a direct effect on the caregiver witnessing their

distress. Stamm (2010) defined STS as an element of CF and referred to work-related secondary

exposure to people who have experienced extreme or traumatic stressful events. For this study,

STS is defined as the effects of the experience on an obstetric nurse by the nature of the obstetric

nurse providing nursing care to patients and families suffering from a perinatal loss.

Self-Efficacy

Self-efficacy mirrors a sense of control over one's environment and refers to the perceived ability to master challenging demands by means of adaptive actions (Bandura, 1997). Self-efficacy for this study reflected the obstetrical nurse's ability to care for patients experiencing a perinatal loss by means of adapting actions that both care for the patient and themselves. These situations are difficult for obstetric nurses and require them to be able to both provide care to patients and care for themselves to limit the negative stress symptoms that can arise from caring for this patient population.

Secondary Trauma Self-Efficacy

Secondary trauma self-efficacy (STSE) is defined by Cieslak et al. (2013) as the perceived ability to cope with the challenging demands resulting from work with traumatized clients and the perceived ability to deal with the STS symptoms. For this study, STSE explored the ability of obstetric nurses to cope with the challenging demands of working with patients experiencing a perinatal loss. For this study, STSE is defined as the obstetric nurses' perceived ability to cope with their work in providing care to patients and families experiencing perinatal loss and their ability to deal with the secondary traumatic symptoms.

Compassion Fatigue/Compassion Satisfaction

CF is the progressive and cumulative outcome of prolonged, continuous, and intense contact with patients, self-utilization, and exposure to multi-dimensional stress leading to a compassion discomfort that exceeds nurses' endurance levels (Zhang et al., 2018, p. 1). The term *compassion fatigue* was introduced by Joinson (1992) in reference to nurses who were experiencing burnout due to the everyday rigors of the caring work they perform. Figley (1995, pp. 17-20), through his own research, found "the terms compassion fatigue/compassion stress are

favored by nurses who experience STS and Secondary Traumatic Stress Disorder (STSD) in the line of duty and these terms can be used interchangeably by those who feel uncomfortable with STS and STSD." Stamm (2010) defined CF as encompassing both a positive and negative aspect. The positive aspect is noted as CS, which is the pleasure derived from one doing their work well. This may include feelings of pleasure helping others with one's work, feeling positive about colleagues, and positive feelings regarding one's contributions to the work setting and the greater good of society. CF, defined by Stamm (2010), is the negative aspect, which is broken down into two parts. The first concerns things affiliated with BO, including exhaustion, frustration, depression, and anger. The second part is that of STS, which is driven by fear and work-related trauma. Stamm (2010) noted that work-related trauma can be both primary and secondary. For this study, CF is defined similarly to STS and describes the negative effects an obstetric nurse may suffer when caring for patients and families experiencing perinatal loss. For this study, CS is the positive effects or feelings of pleasure derived from doing work that an obstetric nurse has when caring for patients and families experiencing a perinatal loss.

Burnout

Stamm (2010) defined *burnout* (BO) as an element of the negative effects of caring known as CF. Stamm further defined BO from the research perspective as being associated with feelings of hopelessness and difficulties dealing with work or doing one's job effectively. BO is a prolonged response to physical or emotional stressors that result in exhaustion, being overwhelmed, having self-doubt, anxiety, bitterness, cynicism, and ineffectiveness (Henry, 2014; Maslach & Leiter, 2005). According to Manzano-Garcia and Ayala (2017), "nursing staff have certain professional expectations and inclinations that make them susceptible to suffering burnout" (p. 2). These feelings are gradual in onset and can be associated with a high workload

or a non-supportive work environment. For this study, BO are the hopeless feelings and difficulties performing work when an obstetric nurse cares for a patient and family experiencing perinatal loss.

Summary

Caring for patients experiencing perinatal loss can have profound negative effects on obstetric nurses. The STSS and STSE Scale are validated tools that can be utilized in this population to explore relationships. Exploring positive or negative relationships of obstetrical nurses and how they cope with perinatal loss can assist healthcare organizations to provide necessary supports that are relevant in assisting obstetric nurses to care for bereaved patients and themselves through the traumatic event of perinatal loss. The findings from this dissertation can add to the limited work that has been done to explore coping and self-efficacy behaviors of obstetric nurses in caring for traumatized patients and families experiencing perinatal loss.

Chapter 2 LITERATURE REVIEW

Limited research had been conducted to evaluate the effects on nurses in caring for women after a fetal loss. There has been some quantitative and qualitative research on the effects of STS on labor room nurses who care for patients experiencing perinatal loss (Beck & Gamble, 2012; Puia et al., 2013). STSE has been studied in healthcare workers by Cieslak et al. (2013). To date, there has not been a study identified that includes obstetrical nurses who care for patients experiencing a perinatal loss and the relationships of STS, STSE, and quality of life. Using the STSS, STSE scales, and the ProQOL Scale with obstetrical nurses who care for traumatized victims of perinatal loss can identify positive and negative responses and the coping and support these groups perceive in providing care to others and being able to care for themselves. The Roy Adaptation Model (RAM) provided the framework for this dissertation.

The purpose of this review is to present and synthesize the literature related to STSE, STSS, CF, BO, and CS of nurses who care for persons traumatized by an event or situation. The chapter is divided into sections that discuss RAM and how it guides the research. This is followed by sections on perinatal loss, STS, self-efficacy, and STSE to explore previous work in the area. A literature search was conducted using the Molloy College library integrated database search engine, including but not limited to CINAHL, EBSCO, PUBMED, Medline, ProQuest, and Cochrane Library. Peer-reviewed scholarly journals, including but not limited to medicine, nursing, and the social sciences were searched for relevant up-to-date findings to validate the use of the STSS and STSE scales for this dissertation in studying obstetric nurses caring for patients experiencing a perinatal loss.

Theoretical Framework

The RAM provided the theoretical framework for this dissertation (Roy, 2009). Within this model, the nurse is understood as a holistic system in constant interaction with the environment. The RAM defines *nursing* as the science and practice that expands adaptive abilities and enhances personal and environmental transformation. Roy (2009) defined a person as an adaptive system and human systems as having thinking and feeling capacities, which are rooted in consciousness and meaning, and they can adjust effectively to changes in the environment and, in turn, affect the environment. The impact of perinatal loss in the obstetric environment is influenced by one's ability to cope with the stressors of the events and caring for traumatized patients. Therefore, nurses' level of adaptation to their practice environment ultimately affects the quality of care provided to patients and families experiencing perinatal loss.

The goal of nursing, according to RAM, is enhancing life processes to promote adaptation (Roy, 2009). Systems theory and adaptation-level theory serve as the scientific foundation for RAM. Human beings as individuals and groups are viewed as holistic and adaptive systems that are in continuous interaction with their environment (Roy, 2009). Adaptation is the process and outcomes where, by thinking and feeling, people as individuals or groups encompasses overall health and create human and environmental integration. Health, defined by Roy (2009), is the process of becoming an integrated and whole human being. Health is attained not just by being limited to the absence of disease but is achieved when a person functions at an optimal adaptation level in relation to the environment. RAM is a reliable framework to study broad ranges of human phenomena and processes, the patterning of human behavior, and coping in health and illness (Dobratz, 2008).

Roy (2009) viewed human adaptive systems as functioning with interdependent parts for a purpose. The ability to respond positively to changes is a function of the human system's adaptation level. Inputs are stimuli that form from the environment that affect controls such as coping processes that can be observed responses or outputs. Roy described three classes of stimuli as focal, contextual, or residual. Focal stimuli are defined as either internal or external and the stimuli that an individual or group is most immediately aware of. Contextual stimuli are all other stimuli in a situation that contribute to the effect of the focal stimulus. Residual stimuli are environmental factors within or outside human systems that are unclear in the current situation and are not clear to the observer that they are having an effect. Input or stimuli can be positive or negative stressors that provoke a coping response from the human system, whether individual or group. Stress-influencing factors can be categorized as personal or situational, and these factors influence the perception of stressful conditions and the demand for coping responses (Alkrisat & Dee, 2014) that assist working toward adaption, whether physical or emotional wholeness is dependent on the effect of the input stimuli.

The condition of life processes is represented at the adaption level that are affected by three levels of adaptation: integrated, compensatory, and compromised. Behaviors of individuals are a function of the input stimuli. People are always in a process of change with the environment. Experiences or stimuli cause a reaction that achieves equilibrium if at the integrated level. Integration is the optimum functioning of human systems. When integration is challenged, compensatory adaptation occurs, and a person is required to make adjustments to reintegrate. Compromised adaptation involves ineffective coping mechanisms that occur in response to environmental stimuli. Reactions that require a compensatory behavioral response move toward integrated or compromised reactions, depending on the positive or negative coping

mechanisms that are stimulated. Coping behaviors will lead to the individual's adaptation at all different levels, including integrated, compensatory, and compromised, and if the adaptation level does not meet the goal, then another cycle of the coping process will continue (Yeh, 2003). Adaptation is a complex life process that is regulated by a person's coping processes, or subsystems. The coping processes are the way in which individuals respond to the changing environment (Roy, 2009).

Individuals are in a continuous process of adaptation as they respond to ever-changing environmental stimuli. Coping in RAM is a major mechanism in which humans regulate environmental stimuli and migrate toward a person's adaptation level. The regulator and cognator subsystems are the coping processes that work to maintain integration. The cognator and regulator subsystems act to maintain an integrated life process to assist individuals and groups to adapt to the environment. The regulator subsystem pertains to a person's physiologic responses to stimuli and responds through neural, chemical, and endocrine coping channels. The inputs or stimuli to the regulator subsystem forms perceptions (Roy, 2009). The cognator subsystem responds through four cognitive-emotional channels: perceptual and information processing, learning, judgment, and emotion. Perceptual and information processing includes activities of selective attention, coding, and memory. Learning involves imitation, reinforcement, and insight. Judgment envelops problem solving and decision making. An individual's emotions provoke defenses to seek relief from anxiety and to make effective decisions and attachments.

The processes of the regulator and cognator subsystems allow for the responses or outputs created to be observed. RAM provides a global perspective for observing or assessing individual adaptation in four modes: physiologic-physical, self-concept-group identity, role function, and interdependence (Yeh, 2003). This dissertation focused on nurses' regulator and

cognator subsystem coping responses and their perceived ability to cope with self-efficacy. How one copes from the input stimuli can be observed by the output behavior. The regulator and cognator subsystems are the coping processes that directly affect physical and emotional adaptation to situations. Behaviors are the observable manifestations of how individuals respond to environmental input stimuli and are observed in relation to the four adaptive modes (Roy, 2009). Nurses can use the understanding of how individuals cope through trait-based preferences or changes in situations to strengthen individuals' preferred coping abilities and help with changes in coping strategies to handle complex changes in their lives (Roy, 2013).

Application of Framework to the Study

The purpose of this study was to explore relationships between STS and STSE of obstetric nurses in caring for patients with perinatal loss. Within the RAM framework, nurses are human systems that are in continuous interactions with perinatal patients and their families. Events occurring within the nurse's work setting are the environmental stimuli or inputs to which the nurse adaptively responds. The focal stimulus is the most immediately pressing situation that faces an individual. The response of nurses caring for traumatized patients experiencing perinatal loss is the focal environmental stimuli that the nurse encounters in the obstetric setting. The contextual stimuli of what is surrounding the event includes the process of caring for bereaved parents and care of the demised infant, which can profoundly affect the focal stimulus. The residual stimuli in perinatal loss include other family members being present, the severity of the situation, and other healthcare provider interactions.

The regulator and cognator subsystems can greatly affect the ability of the nurse to cope either positively or negatively by caring for patients who are experiencing perinatal loss. This can be attributed to past experiences or a current event in caring for patients experiencing

perinatal loss. A nurse's self-efficacy behaviors can affect the positive or negative output response from the experience of caring for these bereaved patients and families. The stressors of secondary trauma in caring for perinatal loss can directly affect the physical and psychological well-being of nurses. How a nurse thinks, feels, and copes during these stressful events can have a direct negative or positive adaptive response. The output response of obstetric nurses on their perceptions of physical or emotional positive or negative coping responses and their perception of self-efficacy behaviors were studied to identify relationships to assist other obstetric nurses to cope when caring for patients and families experiencing a perinatal loss.

Perinatal Loss

Perinatal loss is the loss of a fetus/newborn at 20 weeks or more of gestation through 28 days of life (MacDorman & Gregory, 2015). A systematic review was conducted by Gandino et al. (2019) to review healthcare professionals' experiences of perinatal loss. The research was conducted in 2016 and included studies published from January 1985 through December 2015. A query of online databases utilizing keywords to identify eligible studies for review resulted in over 31,000 articles. Eligibility criteria included publication within the time interval, publication in English, publication in peer-reviewed journals, and focus on healthcare professionals' inner experience. The eligibility criteria for this study were independently assessed by two of the authors, and of the 627 that were compatible, 213 were removed for duplication, 193 were excluded based on full-text evaluation, which resulted in 20 studies included in this study. The quantitative studies used scales and questionnaires assessing PTSD, emotional distress, depression symptoms, BO, and subjective perceptions of well-being, coping strategies, and death imagery. The qualitative studies used surveys, focus groups, and semi-structured interviews to look at healthcare professionals' experiences connected to perinatal loss in terms of needs and

meanings. Emotional features, psychopathological features, and themes and meanings were derived from the authors' systematic review. These synthesized findings highlighted many negative feelings associated with perinatal loss of healthcare professionals, including self-blaming, feelings of uselessness, sustained state of tension, higher levels of PTSD, depressive and psychosomatic symptoms of nurses, and symptoms of BO. Two studies in their review showed a strong correlation between the seniority of nurses and positive/empathetic attitude showing as a facilitating factor for parental bereaving, instilling a sense of self-efficacy and self-assurance. Emerging themes from the qualitative studies were acknowledgment of the loss, recognition of the empathetic relationship between neonatal nurses and the family, and inclusion in grieving rituals. Moral conflict in the relationship to caring was a theme regarding the practice of encouraging parents to touch and hold the corpse in the bereavement process and nurses experiencing a sense of failure when parents refuse to do so. The findings by these authors "suggested a correlation between the sense of inadequacy and helplessness and lack of specific information and knowledge about stillbirth" (Gandino et al., 2019, p. 73). The authors concluded that it would be good for future research to focus on the monitoring and preventing of risk factors for BO syndrome, stress-related syndromes, and symptoms connected to vicarious traumatization.

Heazell et al. (2016) researched the economic and psychosocial consequences of stillbirth. The Series paper in *The Lancet* studied both the direct and indirect costs as well as the outcomes of psychosocial and social effects of stillbirth on bereaved parents and healthcare professionals. Their systematic review for the Series paper included 20 studies on the effect of healthcare professionals and documented a substantial personal and professional burden for staff involved in caring for families experiencing stillbirth. The four themes that emerged from the

data included psychological effects (trauma, guilt, anger, fear, stress, anxiety), professional effects (litigation, discipline), need for support (education, peer support, institutional support), and positive effects (benefit of the experience, sense of honor, privilege). These authors suggested, "the negative effects could be addressed by education, training and provision for formal and informal support during and after stillbirth and encouraging positive experiences of caring for parents after stillbirth" (Heazell et al., 2016, p. 610).

Puai et al. (2013) conducted a secondary analysis of qualitative data from a previous study (Beck & Gable, 2012) to describe the impact of perinatal loss on obstetric nurses. Their study was a qualitative exploration of the traumatic experiences of obstetric nurses present at a perinatal loss. A sample size of 91 responses from the previous study of 464 cases were eligible for qualitative analysis due to their rich description. The overarching themes identified by the authors for both fetal or infant death included "getting through the shift, symptoms of pain and loss, frustrations with inadequate care, showing genuine care, recovering from traumatic experience and never forget" (p. 326). These results supported prior research such as physical symptoms, emotional connection, and need for emotional support. They found the results of this study provide a more comprehensive view of the impact of perinatal loss on nurses and being present for the traumatic delivery of a perinatal loss may have long-term consequences for some nurses. Their findings indicated that continued support is needed in helping nurses deal with the consequences of the trauma.

A qualitative study conducted by Hutti et al. (2016) examined the experiences of, meaning for, and personal consequences of obstetric, emergency, and surgical nurses caring for women after fetal death and to determine how these nurses use Swanson's caring processes in providing such care. Wojnar (2006) described the Swanson theory of caring as the "nurse-client

relationships that promote wholeness and healing" (p. 770). Hutti et al. (2016) described the theory of caring as "a set of caring processes that are formed through nurses' interactions with patients and from the nurses' own principles" (p. 19). Four focus groups with 24 registered nurses were audio-taped and the data were analyzed using a continuously emergent process of data collection, data reduction, data display, and interpretation. Nurses had both positive and negative feelings of caring for women after fetal loss. Many nurses described the difficulty witnessing the emotional pain and suffering of women, and all nurses approached caring with caution to avoid adding to their burdens. Negative feelings of the nurses included anger, intense sorrow, feeling incompetent, overwhelmed, exhausted, inconsolable, and a desire to avoid patient care. In the study, the negative descriptions mirrored the symptoms of CF. Nurses reported deriving strength from three sources: their faith, relationships with fellow nurses, and their own families. The obstetrical nurses used strategies through providing support to their pregnant colleagues by volunteering to care for patients experiencing loss and sharing responsibilities of care among nurses. The authors concluded that nurses were vulnerable to stress and need formal and informal opportunities to debrief with colleagues, perinatal bereavement education, and mentoring. They recommended further research for nurses at risk for CF and identified strategies and interventions to help nurses to continue to give the best care possible to vulnerable families without detriment to themselves (Hutti et al., p. 26).

Wallbank and Robertson (2013) conducted a retrospective, cross-sectional survey across five hospitals in the United Kingdom to explore the extent of staff distress and its predictive factors in a sample size of 350 doctors, nurses, and midwives. Along with sociodemographic data obtained, the questionnaires to assess staff distress and coping included the Impact of Events Scale, Positive and Negative Affect Scale, Brief COPE, and the Work Environment Scale. The

Impact of Events score showed that 55% of participants reported subjective distress levels indicating a high level of clinical concern. A work environment with lack of supervisor support was significantly correlated with negative coping strategies. Significant predictors of distress included negative affect experienced at the time of care, negative appraisal of care given to the family, cumulative number of losses experienced, maladaptive ways of coping, and staff perceptions of support outside of work. The authors concluded that a majority of professionals appear to report distress at clinically significant levels and suggested there are predictive factors relating to the distress. Negative coping styles appear to make staff more vulnerable to the impact of loss. The authors proposed that to normalize emotional reactions, enhance staff well-being, and optimize quality of care, self-compassion rather than blame should be encouraged and mutually supportive strategies within teams should be considered (Wallbank & Robertson, 2013, p. 1096).

Shorey et al. (2017) conducted a scoping review to examine available literature on the needs and experiences of healthcare professionals working on maternity units who have experienced perinatal death. Both published and unpublished data from 1996–2016 were examined. The inclusion criteria yielded 1,519 articles, both quantitative and qualitative, that were screened, resulting in 30 papers included for the review. Of the 30 papers, the majority were conducted in the United Kingdom and the United States, followed by Asia, Ireland, Australia, Africa, and Spain. Thematic analysis was used to categorize the results into themes. Two major themes emerged, including the experiences and needs of healthcare professionals. Under the theme of experiences, five subthemes emerged, including psychological impact, physical impact, positive feelings, coping strategies, and factors influencing experiences of perinatal death. Under the theme of "needs of healthcare professionals," support, training,

education, and counseling were identified. The authors found that "many professionals working in maternity units who deal with perinatal death had negative impacts on their psychological wellbeing as they felt depressed and burned out" (p. 36). Positive feelings included being able to provide the best care to bereaved parents. The authors found that healthcare professionals used various coping strategies to combat physical and psychological stress. The factors found to influence experiences included clinical experiences, position, age, and previous experiences to death. The healthcare professionals in this review verbalized the need for formal and informal social support. The authors concluded,

> …like that of other disciplines of oncology and critical care, healthcare professionals from maternity units experienced psychological and physical impacts on their wellbeing while supporting bereaved parents and coping strategies, formal and informal social support were crucial in supporting these professionals. (p. 37)

Willis (2019) conducted a purposive study with nine labor and delivery nurses with experience in caring for women with perinatal loss from two acute care hospitals. The participants described the experience of caring for women with perinatal loss, which determined the extent to which the response to perinatal loss reflects a process. Five major overarching themes were identified: (a) struggling with emotions, (b) carrying on in the moment, (c) being present for the patient, (d) expressing conflict, and (e) taking care of the self. The nurses' process of moving through the perinatal loss experience was described in five phases: recognizing the loss and its emotional impact (phase 1), connecting with the mother (phase 2), dealing with emotions and acting professional (phase 3), preparing to return to work (phase 4), and never forgetting (phase 5). The impact of perinatal loss on nurses' personal and professional lives was described as being unable to detach from the experience. Nurses voiced their need for support

from both colleagues and management. Nurses also discussed the lack of formal education in caring for women with a perinatal loss. The authors concluded, "improved education and organizational support may help safeguard nurses' emotional and physical wellbeing" (p. 50).

Secondary Traumatic Stress

Having experienced caring for a patient experiencing perinatal loss was one of the inclusion criteria for this study. Having this experience can expose the nurse to STS. For this research, STS is defined as reactions resembling posttraumatic stress, such as intrusive re-experiencing of the traumatic material, avoidance of trauma triggers, and emotions and increased arousal, which all result from indirect exposure to trauma (Bride et al., 2004). Beck (2011) stated, "the person with secondary traumatic stress acquires symptoms by exposure to a traumatized individual and not from exposure to the traumatic event itself. Empathy and exposure are two central concepts in secondary traumatic stress" (p. 3).

Secondary traumatic stress disorder (STSD) has been defined as "the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person" (Figley, 1995, p. 10). Health professionals are vulnerable to STS due to the intimate caring relationship between caregiver and patient. Some other concepts similar to STS include BO, compassion stress, compassion fatigue, and vicarious traumatization. This research focused on STS as it directly relates to caretakers caring for traumatized victims and becoming traumatized by their caring (Figley, 1995).

Bride et al. (2004) developed and validated the STSS. This instrument was specifically developed to measure secondary trauma symptoms of social workers and other helping professionals. For purpose of the instrument design, STSS was operationalized as intrusion,

avoidance, and arousal symptoms resulting from the indirect exposure to traumatic events by means of professional helping (Bride et al., 2004, p. 28). The original version of the STSS had 65 items that further development and validation reduced to 50 and then 17, respectively, after further investigation and analysis. The purpose of the study was to investigate the psychometric properties of the STSS. Bride et al. (2004) had three primary research questions: (a) to what extent are the STSS and its subscales internally consistent? (b) to what extent do the STSS and its subscales correlate with measures of related and unrelated variables? and (c) to what extent do individual items of the STSS represent the factors of intrusion, avoidance, and arousal? The sample for this validation consisted of 600 master's-level licensed social workers receiving a mailed packet, of which 294 were completed and returned. For the first research question of reliability, the coefficient alpha for the full STSS was 0.93, intrusion = 0.80, avoidance = 0.87, and arousal = 0.83. The second research question of convergent and discriminant validity revealed that significant correlations were obtained between STSS and its subscales and each of the convergent variables. The third research question concerning factorial validity was addressed with confirmatory factor analysis using structural equation modeling techniques. The analysis showed that each STSS item loads on its intended factor, the factor loadings are statistically significant and of sufficient size, and the squared multiple correlations are reasonable and thus supporting the factor structure of STSS (Bride et al., 2004, pp. 31-32). Although the STSS was designed to develop empirical knowledge regarding STS on social workers, it is a tool that can be used to measure the negative effects of exposure to traumatic events through clinical workers with traumatized populations (p. 33).

Beck (2011) conducted a systematic review of STS in nurses to answer two questions: What studies have been conducted on STS in nurses in all clinical specialties? What instruments

were used to measure STS in nurses, and what psychometric properties were reported? Beck searched CINAHL, PubMed, and PsycINFO from 1981 to 2009; the inclusion criteria of the sample included nurses, the measurement of STS symptoms, and English language use. Seven studies were identified that examined STS in nurses, but only five reported findings specifically for the subgroup of nurses. The groups of nurses identified in the seven studies were sexual assault nurse examiners, emergency department nurses, oncology nurses, hospice nurses, nurses who work with chronically ill children, and nurses at critical care units and at a children's hospital. The study with chronically ill children was a qualitative study consisting of an interview guide of 11 open-ended questions. The six other studies utilized the CS and Fatigue Test, Compassion Fatigue Questionnaire, STSS, or the Compassion Fatigue Test. The STSS was noted by Beck (2011) to achieve high levels of internal consistency reliability in published studies and is the only instrument designed to assess only STS. Beck further described two other instruments used to assess for STS (CF) that also included BO and CS. The Compassion Fatigue Self-Test (for helpers) measured CF, CS, and job BO; this has consistently shown acceptable reliability levels. The Compassion Fatigue Scale–Revised measured STS and job BO, and both the long and short scales correlated significantly. Beck discussed how nurses need to be educated about their vulnerability when working with traumatized patients. Nurses need to be aware of the signs and symptoms of STS and risk factors. Beck concluded that there is a presence of STS in nurses in a number of different clinical specialties, but due to the small sample and use of different instruments, it hindered the ability to make comparisons across study findings. Beck (2011) further suggested that "qualitative research needs to be conducted to complement the results of the quantitative instruments assessing the experience of secondary traumatic stress in nurses" (p. 8).

Beck and Gable (2012) conducted a mixed-method study to determine the prevalence and severity of STS in labor and delivery nurses and to explore nurses' descriptions of their experiences attending traumatic births. A random sample of 3,000 labor and delivery nurses who were members of the Association of Women's Health, Obstetric and Neonatal Nursing (AWHONN) were mailed a packet that included a demographic information sheet, the STSS, and were asked to describe their experiences being present at traumatic births. Of the random sample, a low response rate of 15% or 464 labor and delivery nurses completed the packet. The quantitative analysis of the demographic data and the STSS results showed that 35% of the nurses scored 38 or higher on the STSS, which is indicative of moderate to severe STS. Of the 464 returned surveys, 322 of the nurses participated in the qualitative portion. The top three descriptions of traumatic birth experiences included infant/fetal demise, maternal death, and shoulder dystocia. The content analysis revealed six themes: (a) magnifying the exposure to traumatic births, (b) struggling to maintain a professional role while with patients who are traumatized, (c) agonizing over what should have been, (d) mitigating the aftermath of exposure to traumatic birth, (e) haunted by STS symptoms, and (f) considering foregoing careers in labor and delivery to survive. Beck and Gable (2012) concluded that attention needs to be paid to protecting labor and delivery nurses from STS and research needs to develop and test interventions to help nurses deal with STS (p. 759).

Beck et al. (2017) conducted a mixed-methods study on STS in neonatal intensive care unit (NICU) nurses. The purpose was to determine the prevalence and severity of STS in NICU nurses and to explore those quantitative findings in more depth through nurses' qualitative descriptions of their traumatic experiences caring for critically ill infants in the NICU. The authors used a convergent parallel design where both quantitative and qualitative data were

collected at the same time and analyzed. The STSS scale was used to assess STS symptoms of the NICU nurses and a statement was asked of participants to describe their traumatic experience. Content analysis was used to analyze the data and provide context for the STSS scores. There were three research questions asked: (a) what are the prevalence and severity of STS in nurses who care for critically ill infants in the NICU? (b) what are the traumatic experiences of nurses who care for critically ill infants in the NICU? and (c) how do the quantitative and qualitative sets of results develop a more complete picture of STS in NICU nurses? The quantitative instrument used was the STSS showing a total coefficient alpha of .94, intrusion subscale = .80, avoidance subscale = .84, and arousal subscale = .87. The 7,500 members of the National Association of Neonatal Nurses were sent an email through the organization for participation with three reminders sent at 3-week intervals. A return rate of 190 was obtained, with a final sample of 175 NICU nurses. SPSS was used to analyze the quantitative data and Krippendorff's content analysis method was used to analyze the qualitative data. Sixty-two nurses (35%) screened positive for meeting all the DSM-IV diagnostic criteria for PTSD due to working with critically ill infants. There were no statistically significant findings correlating to the demographic variables. Five themes emerged from the qualitative analysis that included what intensified NICU nurses' traumatic experiences: A) What Intensified NICU Nurses' Traumatic Experiences: Multiple Scenarios, B) Parents Insisting on Aggressive Treatment: so distressing, C) Baby Torture: Performing Painful Procedures, D) Questioning Their Skills: Did I Do Enough, and E) The Grief of the Family: It Is Contagious. The qualitative strand showed the moral distress NICU nurses experience, while the quantitative findings compared two other maternal child nurses' findings using the same instrument for screening positive for PTSD. The authors concluded that the neonatal nurses in this study provided insight

into what helped or hindered their PTSD and the nurses' perceived support from colleagues, family, and the organization as "helpful" (p. 487). Furthermore, the authors stated, "caring for caregivers is an essential part of maintaining an effective nursing workforce" (p. 487).

Kellogg et al. (2018) studied STS in pediatric nurses by examining the statistical relationships between STS, age of the nurse, and years of nursing experience and coping responses. A convenience random sample of 6,000 certified pediatric nurses were surveyed using the STSS, the Brief COPE, the Marlow-Crowne Social Desirability–Short Form, and a demographics form. Of the 6,000 nurses, 350 completed the survey. The STSS Cronbach's alpha in this study was 0.92. The results of the STSS analysis showed that moderate, high, or severe STS affected more than half of the pediatric nurses. The analysis further showed that neither age, years of nursing experience, nor years of pediatric nursing experience were significant predictors of pediatric nurses' STS levels. Pediatric nurses with higher emotional support scores showed higher STS scores, which the authors noted to be contradictory to previous factors and attributed to the uniqueness of pediatric nurses or the work environment of these nurses. Both denial and behavioral disengagement were positive predictors of STS. Low correlations occurred between the Marlowe-Crowne Social Desirability–Short Form and STSS. In this study, social desirability was a negative predictor of STS, because as social desirability went up, STS decreased. The authors concluded that "secondary traumatic stress impacts many pediatric nurses and further research is needed to determine which factors predispose pediatric nurses to secondary traumatic stress and which specific coping responses help pediatric nurses best manage their stress" (p. 102).

Self-Efficacy

Self-efficacy mirrors a sense of control over the environment and refers to the perceived ability to master challenging demands by means of adaptive actions. Bandura's (1997) social cognitive theory discussed the three bidirectional factors that include behavior, individual personal factors, and the external environment that influence self-efficacy behaviors. It is called the triadic reciprocal determinism. These three factors and how individuals react or grow from situations or experiences further develop their self-efficacy behaviors. Bandura further elaborated on human adaptation and change rooted in social systems. This framework emphasized self-regulation as a key mechanism for human adaptation (Bandura, 1997; Shoji et al., 2014). The three factors were influenced by each other, with one being more dominant dependent on experience. Efficacious people are quick to take advantage of opportunity structures and influence their ability to have positive outcomes, even under negative situations (Bandura, 1997). Individuals' belief about their ability to cope with trauma is influenced by the triadic reciprocal determinism (Bandura, 1997). As behaviors are reinforced, subsequent behavior emerges as past experiences affect one's appraisal of current situations and how to respond to them.

Benight and Bandura (2004) presented an article that integrates findings from multiple studies on the generalized role of perceived coping self-efficacy in recovering from traumatic events. The authors defined the belief of perceived self-efficacy as the "self-belief to perceived capability to manage one's personal functioning and the myriad of environmental demands of the aftermath occasioned by a traumatic event" (p. 1130). They further looked at the self-efficacy foundation of human agency as a sense of personal efficacy, as one has the power to produce desired effects by one's actions. Transformative actions of perceived self-efficacy by these authors utilize coping mechanisms that one chooses that manage different levels of phobic

stressors with minimal physiological activation. The behavioral response fosters the management of the external witnessed trauma to be more therapeutic and produce more responses that are positive. These encounters and responses can positively enhance one's control over what they think and how they react. The authors' result yielded "consistent support for perceived coping self-efficacy as a focal mediator for those recovering from a traumatic event" (p. 1144).

Secondary Trauma Self-Efficacy

STSE is defined by Cieslak et al. (2013) as the "perceived ability to cope with the challenging demands resulting from work with traumatized clients and perceived ability to deal with the secondary traumatic stress symptoms" (p. 918). Cieslak et al. (2013) studied the concept and measurement of STSE "due to the lack of knowledge known about the relationship between self-efficacy and outcomes of secondary trauma exposure among clinical service providers as there has been no known existing measure of self-efficacy available to assess the relationship" (p. 918). The authors found other studies that examined self-efficacy and health outcomes but sought to explore the role of self-efficacy beliefs by evaluating the capability to cope with thoughts and feelings related to secondary trauma. Within this concept and measurement, the authors examined two study samples to construct and validate the STSE tool. Study 1 examined 247 mental healthcare providers working with returning soldiers in the United States. The STSE tool was derived from three experimenters conducting structured interviews with 30 behavioral health providers exposed to STS. They independently selected up to 12 items, reflected on self-efficacy statements of which 7 items were selected by the three experimenters and included in the STSE scale. The preliminary version consisted of nine items with responses given on a 7-point Likert-type scale ranging from 1 (*very incapable*) to 7 (*very capable*).

The STSE scale was used with five others scales in Study 1, including secondary trauma exposure, secondary traumatic stress, perceived social support, negative cognitions, and secondary traumatic growth. The results noted a high correlation among the nine items. The Pearson's correlations revealed a high correlation between Items 1 and 2, so Item 2 was dropped from the tool. After Item 2 was dropped, Item 6 had a high correlation to 4, 5, and 7, resulting in the drop of Item 6. The corrected item total correlations for the seven-item version ranged from .53 to .79. Factor loadings of the items ranged between .71 and .83, with results of exploratory and confirmatory analysis indicating that the seven-item STSE Scale consisted of one component. The internal consistency of the seven-item STSE Scale suggested good reliability a = .87. As the authors expected, STSE was negatively correlated with STS and positively correlated with social support (Cieslak et al., 2013).

In contrast to Study 1, Study 2 was designed to longitudinally evaluate the psychometric properties of the STSE Scale among workers providing services to traumatized civilian populations within a different cultural context (Cieslak et al., 2013). Participants included 306 health care and social workers providing services for civilian survivors of traumatic events with either a bachelor's or master's degree, unlike Study 1 that focused on clinical psychologists with doctorate degrees. The analysis of this study also showed the correlation of Items 2 and 6 and these were removed. The results of Study 2 showed the STSE Scale consisted of one primary component. The internal consistency of the STSE Scale was a = .89 for Time 1 and .88 at Time 2 when demographic data were included, resulting in good internal consistency. STSE was negatively correlated with STS and positively correlated with social support as they expected (Cieslak et al., 2013).

The studies by these authors "evaluated the characteristics of the STSE Scale as a measure designed to capture beliefs about the ability to deal with barriers associated with secondary exposure to trauma" (p. 925). The STSE Scale is specific to challenges posed by the indirect exposure to trauma but also includes both the environmental and individual demands. The authors stated the scale matches both stressful demands and stressful outcomes and thus may offer the best approach to investigate self-efficacy related to secondary exposure. Furthermore, the STSE Scale "showed a potential to help explain the psychological distress process among workers exposed to secondary trauma" (p. 926). They recommended future research to account for other occupational groups, different types of self-efficacy, and other stressful outcomes such as job BO or diminished quality of life.

Compassion Fatigue/Burnout and Compassion Satisfaction

Figley (1995) conducted an overview of CF as STS disorder. He noted that those who have an enormous capacity for feeling and expressing empathy tend to be more at risk of compassion stress. Figley spent over 10 years studying the phenomena of STSD among therapists and others who care for victims. Figley suggested that compassion stress and CF are appropriate substitutes for STS. The ProQOL Manual 2005 and updated version in 2010 defined the similarities of CF and STS. The 2005 ProQOL version was used in this study to measure CF/STS, CS, and BO among obstetrical nurses in caring for patients and families experiencing perinatal loss. The 2005 manual described CF/STS to one's work-related secondary exposure to extremely stressful events. Melvin (2015) discussed a historical review in understanding BO and professional CF from a hospice and palliative nursing perspective. The author noted how nurses spend more time in direct contact with patients than any other healthcare discipline and are at risk for developing emotional and physical distress. Her recommendations include educating

nurses about their vulnerabilities and the signs and symptoms of CF and STSD. She also found that if nurses were not supported emotionally, they are more likely to develop negative effects of CF/STSD. The author concluded that strategies for addressing BO, CF, and STSD are essential in solidifying the nursing workforce to have the healthcare needs of the future (p. 71). Caring for families experiencing perinatal loss can be stressful for nurses and lead to increased CF/STS and BO. Studies with the focus on CF/STS, BO, and CS are discussed in relation to this study.

Meadors et al. (2009) studied secondary traumatization in pediatric healthcare providers. They explored the concepts of CF, BO, and STS. They defined two aims for their research. The first aim was to explore the overlap and differences between the concepts related to secondary traumatization, PTSD, STS, CF, and BO. The secondary aim was to examine the impact of secondary traumatization and some of the personal and professional elements that affect how these providers experience these concepts. Their study included 167 participants located nationwide and employed by a pediatric intensive care unit, pediatric unit, or NICU, who were recruited via email posted to a national and professional listserv. A correlation design was used to represent the relationships between the terms. The quantitative measure included a demographic component, Bride's STSS, the ProQOL Scale (derived from Stamm, 2002), and the Impact of Event Scale. The findings for the primary aim showed a strong relationship between all of the trauma-related terms, but BO was the weakest relationship. They found "the CF subscale of the ProQOL and STSS to capture two different concepts despite the overlap within items in each measure even though most authors in the field use the term STS and CF interchangeably" (p. 122). Their findings suggested that CS has a significantly strong negative relationship with STS and BO and a trend toward a negative relationship with CF and PTSD.

The second aim examined the impact of secondary traumatization and some personal and

professional elements that affect pediatric healthcare providers with the concepts of CF, STS, PTSD, and CS. Hierarchical regression analysis was conducted to measure the concept's significant contribution to CF. It showed that STS provided the greatest predictive factor for CF and BO was the least predictive on CF in comparison to PTSD and STS. CS accounted for the least variance in CF. The risk for CF was substantially lower for the pediatric intensive care unit, NICU, and pediatric unit providers in this study. Had the sample size been larger, the authors inferred a trend that some professionals experience where trauma could have a significant effect on CF, STS, and BO. The authors recommend further research focusing on understanding the etiological process of STS and CF and should center attention on the experiences that providers have with traumatized patients or clients and the impact those experiences have on the risk of CF, BO, and STS.

A cross-sectional study of NICU nurses by Sano et al. (2018) examined a model of negative consequences of providing nursing care, including the concepts of CF, STS, and BO. The study consisted of 174 registered nurses in Level III or IV NICUs in a Midwestern state. The measures to collect data consisted of self-report questionnaires for all variables, including demographic and clinical data to describe the sample, work environment, and exemplar infant characteristics. The predictor variables were the strength of the nurse-infant/family relationship and nurse–physician collegiality, along with the mediator variables, including self-compassion and negative consequences (CF, BO, and STS). The data analysis found that mediation was moderated by the nurse–physician collegiality levels. Also, as the strength of the nurse–infant/family relationship increased, self-compassion increased, which further reduced the negative consequences when the nurse–physician collegiality was high (p. 581). The results from this study identified protective factors to incorporate in developing interventions to prevent

negative consequences (p. 582). The findings can help nursing administrators support staff nurses as they care for vulnerable infants and provide further understanding of the negative consequences in providing nursing care.

Hinderer et al. (2014) studied 128 trauma nurses and the relationship of BO, CF, CS, and STS to personal/environmental characteristics, coping mechanisms, and exposure to traumatic events. Dutton and Rubinstein's theory of STS guided the theoretical framework to the study. This theory was originally used to describe social workers' psychological responses to caring for trauma victims and adapted for nurses in this study. The authors proposed that the development of STS in nurses is a function of four key elements, including personal/environmental characteristics, the coping strategies of the nurse, exposure to traumatic events, and the reaction of the nurse to the stress of trauma (BO, CF, and CS). A cross-sectional descriptive design was conducted at a large urban trauma center located in the Eastern United States. Three instruments were used for this study. The first instrument was the demographic/behavioral instrument that assessed demographics, personal/environmental characteristics, coping strategies, and exposure to traumatic events. The second instrument was the ProQOL Scale, which is a 30-item tool to assess BO, CF, and CS. The third instrument was the Penn Inventory, which is a 26-item multiple-choice survey originally designed to measure PTSD but measured STS in this sample of trauma nurses. The ProQOL and Penn Inventory scores resulted in 35.9% of the sample having BO scores greater than 22, suggesting BO or high risk of BO; the CF subscale reported 27.3% of the sample scoring 17 or higher at risk for CF and an above-average CS score in the majority of 78.9% of participants. Nine nurses had a Penn score greater than 35, which is consistent with STS. The study findings showed relationships among BO, CF, CS, and STS, with that of BO and CF having the strongest correlation. The authors inferred this to be related to the strain and fast

pace related to caring for trauma patients. Higher BO scores predicted higher STS, but high CS score was the strongest predictor of STS, meaning that nurses with higher CS scores were less likely to develop STS. The authors found that an important finding was the high prevalence of CS in this sample of nurses in that greater age and lower education correlated with CS. Further research is recommended to explore coping strategies and interventions to reduce BO, CF, and STS, and to maximize CS. Longitudinal studies that include nurses from trauma centers and studies comparing trauma nurses to non-trauma nurses may better define the effects of caring and their uniqueness to trauma nurses or nurses in general.

Yu et al. (2016) conducted a study to describe and explore the prevalence and predictors of the ProQOL among 650 Chinese oncology nurses. The authors noted that there is an increase in the incidence of cancer and growing nursing staff shortages that may contribute to the vulnerability of Chinese oncology nurses and work-related stress (p. 29). Two theoretical models guide their study, including the Multi-factor Model of Compassion Fatigue developed by Figley in 2002 and the System-Based Model of Stress proposed by Jiang in 2010. With the two theoretical models as the framework, the authors hypothesized the demographic and work-related factors, psychological variables, and social support may be associated with ProQOL (p. 30). Convenience and cluster sampling were used to conduct a cross-sectional survey analyzing six instruments. The instruments used in this study were a self-designed questionnaire collecting demographic and work-related details, Chinese version of the ProQOL Scale for Nurses, Chinese version of the Jefferson Scale of Empathy, Chinese Big Five Personality Inventory brief version, Simplified Coping Style Questionnaire, and the Perceived Social Support Scale. Multiple linear regression of the predictors of CS, CF, and BO showed that nurses with more years of clinical nursing experience, those working in secondary hospitals, and those with passive coping styles

displayed higher levels of CF. Neuroticism was the strongest predictor of CF. The oncology nurse who received more support from their significant others reported less BO. Open and conscientious nurses reported higher CS than those with neuroticism: "Cognitive empathy, support and training from organizations acted as protective predictors while passive coping and neuroticism put nurses at higher risk for CF and BO" (p. 37). The authors concluded that these research findings can help nurse administrators identify nurses who are vulnerable to emotional burdens and develop strategies to assist them. Further research should be conducted on other specialties and regions to promote generalizability and explore other possible predictors.

Shoji (2015) conducted two longitudinal research examining the directions of the relationships between job BO and STS. In total, 294 mental healthcare providers, working with U.S. military personnel suffering from trauma, met the inclusion criteria and completed the online survey at Time 1 (T1) of which at 6 months post-T1, 135 of those providers completed Time 2 (T2). This resulted in 135 participants ultimately participating in the first study (Study 1). The participants completed a set of questionnaires, including the Oldenburg Burnout Inventory, which is a 16-item questionnaire used to assess exhaustion and disengagement. The second measure used was the STSS, which is a 17-item measure of the frequency of STS symptoms in the previous month. The third tool used was the Secondary Trauma Exposure Scale, consisting of a list of 10 events designed to measure indirect exposure to traumatic stress among behavioral healthcare providers. Participants also completed demographic background questions such as gender, age, work experience in years, education, type of profession, and relationship status. A cross-lagged panel analysis was conducted to test the relationships between job BO and STS. The analysis concluded that high job BO at T1 predicted higher STS measured six months later.

In Study 2, the participants included Polish healthcare and social workers providing services for civilians who had experienced traumatic events. A total of 304 professionals met the inclusion criteria and competed the online survey at T1, of which 194 participants provided their data six months later at T2. Participants completed the same measures as the Study 1 participants, and the same longitudinal cross-lagged panel analysis was conducted. The findings of Study 2 were consistent with Study 1 in that a higher level of job BO at T1 led to a higher level of STS at T2. These studies provided new insights into the nature of the relationship of job BO and STS in that job BO may increase the risk of developing STS but STS symptoms are unrelated to job BO at follow-ups.

A meta-analysis was conducted to examine the associations of job BO and self-efficacy (Shoji et al., 2016). This study aimed at systematically reviewing and meta-analyzing the strength of associations between self-efficacy and job BO. Moderating factors included the type of measurement of BO and self-efficacy, the type of occupation, the number of years of work experience, age, and culture. The review consisted of 57 studies, with sample sizes varying from 39 to 2,267 participants. Data were collected from various professional groups, including teachers, healthcare providers, and other service workers such as call center workers and information technology specialists. They study added to the existing literature by indicating the coexistence of high levels of self-efficacy and low levels of job BO among professionals of various occupations (p. 14). The findings suggested that compared with other BO components, personal accomplishments form the strongest associations with self-efficacy (p. 15). BO and self-efficacy associations were similar regardless of the type of self-efficacy measured. Associations were stronger for teachers than healthcare providers in the associations between self-efficacy and BO, especially among older individuals or those with more work experience.

A systematic review was conducted by Van Mol et al. (2015) on the prevalence of CF and BO among healthcare professionals in intensive care units (ICU). Working in an ICU can be very stressful, emotionally challenging, and draining. The purpose of this review was to evaluate the literature related to emotional distress among healthcare workers in the ICU with an emphasis on BO and CF. Forty of the 1,623 publications met the selection criteria and were included in their review. The research questions in the study included what is the prevalence of CF and BO among healthcare professionals in the ICU and which preventative strategies have been successfully applied to reduce emotional distress among ICU professionals. The studies on the prevalence of CF and STSD/PSTD in the ICU were less frequent than studies on BO. The included studies reported a broad range of variables related to emotional distress that showed work environment, professional role, and conflicts were significantly and positively related to the measured phenomenon (p. 11). Ten studies measured the effect of an intervention and seven studies suggested preventive strategies. The authors in their discussion identified three possible reasons that the true magnitude of the explored phenomenon remains unclear. First, the definitions of the types of distress have been used interchangeably across studies; mainly, CF has been measured in the same subscale in the ProQOL as STS. Second, the reported prevalence of emotional distress differed based on the applied measurement instruments. Third, the outcome scales or cut-off points used to indicate the prevalence of BO measured with the Maslach Burnout Inventory have a wide range. With these three points, it remains open as to what the gold standard would be to use in future research. The authors concluded the ICU is an emotionally charged challenge and the caring might become burdensome for professionals. They suggested that policy makers should introduce interventions to prevent negative consequences of emotional distress and that a longitudinal experimental study should be conducted to examine emotional distress among ICU

professionals in relation to their communications skills, educational sessions on stress management, and mindfulness (pp. 17-18).

Mottaghi et al. (2020) in the city of Kerman, Iran, studied the concepts of empathy, CF, guilt, and STS in nurses. This descriptive-correlation study investigated the relationship between empathy and CF in nurses due to the mediating role of feeling guilt and STS. The participants included a convenience sample of 300 nurses in the areas of the emergency department, ICU, NICU, oncology and medical-surgical units from five hospitals in Kerman. Three instruments were used to investigate the identified variables and correlated to the set of demographic questions. The first tool was the professional quality of life scale consisting of 30 items that measure CF/STS, BO, and CS. The second tool was the interpersonal reactivity index to measure empathy. It included 28 items and four components, including perspective taking, fantasy, empathetic concern, and personal distress. The interpersonal guilt scale was the third tool used, consisting of 67 articles that measure four components that include survivor guilt, separation guilt, omnipotent guilt, and self-hate guilt. For this study, the authors used only two components, including survivor guilt and omnipotent guilt, totaling 36 items. After conducting the analyses, a positive and significant relationship between all the variables was noted. STS was shown to be the strongest mediator variable in the relationship between empathy and CF for nurses. The direct effect of empathy on CF was zero, meaning the mediating role of the mediator variables was perfect. The authors discussed how nurses who are exposed to events that constantly require empathy may lead to CF. The mediating role of omnipotent guilt between empathy and CF is explained that by increasing empathy in nurses, there is increased omnipotent guilt that in turn reduces CF in nurses. This variable was considered in this study as it relates to the feelings and susceptibility of the Iranian society group and the sample of nurses were from hospitals in Iran.

This study found that given the nature of their work, nurses are particularly exposed to situations that constantly recruit their empathetic abilities, increasing their risk of CF. These results can lead to exhausted nurses in the long term and result in CF (p. 502). The authors concluded that further research should be conducted, as this was the first study focusing on the concept of guilt and STS as the factors affecting CF in the Iranian society. A larger sample size using longitudinal and experimental projects are encouraged to better replicate these results.

Conclusion

As shown in previous studies using the STSS, the detrimental secondary traumatic effects for obstetrical nurses need to be further explored, correlating findings to the STSE Scale and demographic data to examine what may assist nurses in coping with STS. Exposure to higher levels of stress may negatively affect one's self-efficacy (Ortlepp & Friedman, 2002), thereby warranting further examination of STS among obstetric nurses in relation to their level of self-efficacy. The review of the literature identified the gap of studying obstetrical nurses and how the relationship of self-efficacy affects nurses' severity of STS. Multiple studies concluded that further research should be done to investigate what concepts can mitigate STSS. Beck and Gable (2012), in their conclusion, advocated for researchers to develop and test interventions to help nurses deal with STS. Beck et al. (2017) concluded that further development of autonomous/collaborative practice models, encouraging nurses to seek assistance and find outlets for their feelings, can provide balance in nurses' lives, and maintain an effective nursing workforce. Studying the concept of self-efficacy and its potential positive effects on nurses who work in highly stressed areas such as obstetric nurses caring for families experiencing perinatal loss can further the understanding of what can mitigate STS and develop interventions that can sustain the obstetric workforce.

Chapter 3 RESEARCH METHODS

Obstetric nurses provide direct patient care for patients and families experiencing perinatal loss. The care provided during this traumatic event can have profound effects on direct care obstetrical nurses. Data retrieved provided insights to STS responses and perceived ability to cope among obstetric nurses caring for patients experiencing perinatal loss. This chapter describes the purpose of the study, proposed research design, population, sample size and power estimation, instruments, data collection and analysis, data management, and the protection of human subjects for this study.

Purpose of the Study

It is not known whether STSE, STS, and the ProQOL have ever been used to study relationships among obstetric nurses. The purpose of this study was to explore relationships between STS and self-efficacy of obstetric nurses in caring for patients and families with perinatal loss. The relationship between obstetric nurses' descriptive demographic characteristics, STS, and self-efficacy were explored to correlate any definitive characteristic or characteristics to decreasing STS symptoms and increased STSE.

Design

The questions of this study guided the design to explore associations among the variables. This design was framed in a post-positivist worldview to explain the relationship among variables posed in terms of the selected questions (Creswell, 2014). Relationship correlations were investigated for this study to identify what associations existed among the independent and dependent variables. The study used a quantitative, descriptive correlational design with an additional qualitative component. The rationale for this approach is that the qualitative data can add depth to the quantitative findings and thus provide a more comprehensive understanding of

the impact of obstetrical nurses caring for patients experiencing a perinatal loss rather than using either approach alone (Creswell, 2014). Concurrent qualitative and quantitative data collection was conducted by incorporating three open-ended questions at the end of the three instrument scales. The qualitative data were analyzed by content analysis to see what recommendations are identified from the small narratives to expand and elaborate on the quantitative data (Beck & Gable, 2012). Relationships were explored among the descriptive characteristics of obstetric nurses, STS, STSE, ProQOL, CF, CS, and BO. Three open-ended questions sought descriptions from obstetric nurses about their experience caring for patient and families with perinatal loss, the support they received while caring for patients experiencing perinatal loss, and what helps them cope when caring for patients with perinatal loss. Content analysis was conducted on the written narratives to explore correlations to the quantitative findings. This research design approach allowed the researcher to explain further the quantitative findings with the qualitative data analysis.

Population

The participants for this study were a sample of obstetric nurses who have had experience in caring for patients or families experiencing perinatal loss who are members of the AWHONN. The intent of engaging this population for recruitment in this study was to obtain a nationwide sampling of obstetric nurses to have a wider range of generalizability as opposed to a convenience sample. AWHONN provided permission for the use of their membership directory database and emailed members the survey who identified as obstetric nurses to recruit participants. AWHONN currently has 22,000 members. Their membership includes nurses who work in women's health, obstetrics, or neonatal nursing in areas such as labor and delivery, maternity, antepartum, nursery, and outpatient settings, to name a few. For this study, AWHONN

was asked to limit the email distribution to those members who identified as an obstetric nurse working in the labor and delivery setting. AWHONN charged a nominal fee per 1,000 members that they emailed the research study to for participation. AWHONN sent the research study to 8,000 of their members, so the researcher did not know who the participants were. AWHONN noted that there is a typical 3% return rate of email responses from their members and recommended an incentive for participating (J. Rychonvsky, personal communication, September 8, 2020). For participation in the study, participants had the ability to submit their email address separate from their survey responses to be included in a raffle for five Amazon gift cards at the value of $100 each.

Sample Size and Power Estimation

Sample size and power estimation was determined to yield a large-enough sample size for a medium- to large-effect size. To conduct an exploratory factor analysis, a best estimate minimum sample size of 200 participants was needed. A power analysis determines the sample size. Based on the five variables studied and the number of groups to choose from, a sample size of 200 participants was desirable. Some questions were dichotomous, while others had a range of five groups. A G*Power a priori analysis suggested for the chi-square analysis of 2 to 4 groups sample size reflects 145 to 191 participants for a .3 effect size. ANOVA analysis using the ANOVA omnibus one-way recommended a .30 medium-effect size for a sample size of 148 (two groups), 177 (three groups), 196 (four groups), and 225 (five groups).

Instruments

Obstetrical Nurses' Demographic Questionnaire

The obstetrical nurses' demographic questionnaire (Appendix B) elicited responses from participants on descriptive demographic data to explore relationships with STS and STSE. The

inclusion criteria were the first three questions: participant over the age of 18, a registered nurse, and having experience caring for a patient or family with perinatal loss. Other demographic criteria included age, gender, race/ethnicity, religious/spiritual feelings, years of experience, and how many experiences caring for perinatal loss the participant has had, just to name a few. The demographic data were studied with the variables of STS, STSE, and CS/CF/BO to explore correlations.

Secondary Traumatic Stress Scale

The STSS (Appendix C) is a 17-item self-report, Likert-type scale that measures symptoms related to health care providers' exposure to working with traumatized populations (Bride et al., 2004). Respondents indicated how frequently on a 5-point scale from *never* to *very often* each item was true for them (Bride et al., 2004). The scale is composed of three subscales, including intrusion, avoidance, and arousal. The American Psychiatric Association (APA, 2013) described intrusion symptoms as recurrent, involuntary, and intrusive and distressing memories of a traumatic event, which can lead to intense psychological distress or physiological reactivity. The APA (2013) described avoidance symptoms as involving the avoidance of stimuli associated with trauma or a numbing of responsiveness, and inability to remember aspects of the traumatic event, which can lead to loss of interest and detachment. Arousal symptoms include anxiety, an increased arousal state, exaggerated startle response, problems with concentration, and sleep disturbance, which can lead to clinically significant distress (APA, 2013). Of the 17 questions included in the STSS, five questions measure Intrusion, seven questions measure Avoidance, and five questions measure Arousal. Reliability for this scale was determined using the coefficient alpha to measure internal consistency, noting that values between .80 and .90 should be considered very good. Means, standard deviations, and alpha levels for the STSS and its

subscales were scored as follows: Full STSS, *a* = .93; Intrusion, *a* = .80; Avoidance, *a* = .87; and

Arousal, *a* = .83. Beck and Gable (2012) noted that STSS data have repeatedly demonstrated

evidence if there are high levels of internal consistency. Beck and Gable (2012), in their study of

STS in labor and delivery nurses with traumatic birth experiences, showed an alpha coefficient

for the total STSS of .94 (p. 751). Significant correlations were obtained between the STSS, its

subscales, and each of the convergent variables, which support the claim for the convergent and

discriminant validity of the STSS (Bride et al., 2004).

Secondary Trauma Self-Efficacy Scale

STSE is defined by Cieslak et al. (2013) as the perceived ability to cope with the

challenging demands resulting from work with traumatized clients and perceived ability to deal

with the STS symptoms. The STSE scale (Appendix D) created by Cieslak et al. (2013), consists

of a 7-point Likert-type scale ranging from 1 (*very incapable*) to 7 (*very capable*). The original

scale consisted of 9 points, but after their preliminary analysis, two items were dropped due to

measuring the same aspects. The exploratory and confirmatory analysis results indicated the

seven-item STSE Scale that consisted of one component (Cieslak et al., 2013). In Study 1, the

reliability analyses showed that an internal consistency of the seven-item STSE Scale was a

= .87. Validity was examined by computing a Pearson's correlations among STSE and

theoretically relevant constructs. This showed that the associations between STSE and the other

study variables remained significant and similar in size. Discriminant validity of the STSE scale

was performed by a principal component's analysis with the seven items that identified two

components, giving an eigenvalue of 7.81. One component had factor loadings ranging from .69

to .80, while the second component had factor loadings ranging from .51 to .84. In Study 2, the

internal consistency was assessed at two points. Cronbach's alpha values were .89 at Time 1

and .88 at Time 2, indicating good internal consistency. Results of partial correlations indicated that associations between STSE and the other study variables remained significant and similar in size. The authors concluded the STSE scale showed potential to help explain the psychological distress process among workers exposed to secondary trauma (Cieslak et al., 2013, p. 926).

Professional Quality of Life Scale

The ProQOL (Appendix E) was updated by Stamm (2010) to the Version 5 (2009). In 2005, Stamm revised Figley's (1995) Compassion Fatigue Self-Test to focus on and support positive system change on the positive effects of providing care (Stamm, 2005). The ProQOL is composed of three discrete subscales of CS, BO, and CF/STS. CS is the first subscale and is defined by the pleasure derived from being able to do one's work helping others (Stamm, 2010). Higher scores on this scale represents greater satisfaction with being able to be a caregiver. The second subscale measures BO, which is associated with feelings of hopelessness and difficulties in dealing with work or in doing one's job effectively (Stamm, 2010). BO effects are usually gradual in onset and can reflect the feeling that one's efforts make no difference, very high workload, or a non-supportive work environment. Higher scores in this subscale mean that one is at higher risk for BO. The third subscale measures CF—also known as STS—which is about one's work-related secondary exposure to extremely stressful events (Stamm, 2010). Symptoms of CF/STS are usually rapid in onset; associated with a particular event; and include being afraid, having difficulty sleeping, having images of the upsetting event pop into one's mind, or avoiding things that remind one of the event.

The ProQOL (Stamm, 2010) is a 30-item self-report measure in which respondents are instructed to indicate how frequently each item was experienced. Each item is measured using a 6-point Likert-type scale ranging from 0 = *never* to 5 = *very often*. Scoring requires summing the

item responses for each 10-item subscale. The subscale scores cannot be combined to compute a total score, as each subscale measures separate constructs (Stamm, 2010). Calculating the scores on the ProQOL involves three steps. The first step is to reverse some items, the second step is to sum the items by subscale, and the third step is to convert the raw score (z score) into a t score. The average score for each subscale is 50 with a standard deviation of 10. For CS, Stamm (2010) noted that 25% of people score above 57 and 25% score below 43. Those in the higher range derive a good deal of professional satisfaction from their position while those scoring lower may find problems with their job. Stamm (2010) noted that for BO, 25% of people score above 57 and 25% below 43. Those with scores below 18 reflect positive feelings about being effective in their work while those with consistent scores above 57 may be cause for concern. STS scores are also noted to fall in the same percentages, with 25% of people scoring above 57 and 25% scoring below 43 (Stamm, 2010). If the score is above 57, one should take time to think about what at work may be frightening. The alpha reliability for CS = .88, BO = .75, and CF/STS = .81, demonstrating internal consistency. Scores are slightly lower than the original 1995 version that consisted of more items, but the updated 2005 ProQOL is shortened in half with these scores being more reliable than the longer form, as this measure has considerable improvement on the item-to-scale statistics due to increased specificity and reduced collinearity (Stamm, 2005). Stamm also stated that the standard errors of the measure are quite small so that the test typically has less error interference, improving the potential measurable size effect (p. 9).

Study Hypotheses and Research Questions

Research Question 1: What is the incidence and severity of STS in obstetric nurses due to perinatal loss? (Descriptive and correlational statistics were used to analyze Question 1.)

Research Question 2: Is there a relationship between the scores on the STSE scale and the STSS among obstetric nurses?

H0- There is no relationship between the scores on the STSE scale and the STSS among obstetric nurses.

H1- There is a relationship between the scores on the STSE scale and the STSS among obstetric nurses.

(Inferential analysis, including ANOVA and correlational statistics, were used to analyze Question 2.)

Research Question 3: What is the relationship between obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal with thoughts or feelings that occur with this traumatic event?

HO- There is no relationship among obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal with thoughts or feelings that occur.

H1- There is a positive relationship among obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal with thoughts and feelings that occur.

(Inter-item correlations were used to analyze relationships among obstetric nurses and the STSE Scale items for Question 3.)

Research Question 4: What are the relationships among nurses' experience, education, and ability to share with secondary traumatic stress and STSE?

H0- There is no relationship among nurses with more experience, education, and the ability to share with STSS and higher STSE.

H1- There is a positive relationship among nurses' experience, education, and ability to share with STSS and STSE.

(Inferential analysis, including ANOVA and correlational statistics, were used to analyze Question 4.)

Research Question 5: Is there a relationship between CF, BO, STS, CS, and STSE?

H0- There is no relationship between CF, BO, STS, CF, and STSE.

H1- There is a relationship between CF, BO, STS, CF, and STSE.

(Correlational analyses were used to analyze Question 5.)

Research Question 6: What is the relationship between obstetric nurses' demographic characteristics and STS, STSE, CF, BO, and CS?

H0- There is no relationship between obstetric nurses' demographic characteristics and STS, STSE, CF, BO, and CS.

H1- There is a relationship between obstetric nurses' demographic characteristics and STS, STSE, CF, BO, and CS.

(Inferential analysis, including ANOVA and correlational statistics, was used to analyze question 4.)

Qualitative Questions

1. What do you want to share about your experience caring for patients and families with perinatal loss?

2. Describe the support you received (if any) while caring for a patient and their family when they are experiencing a perinatal loss. Was the support from the organization, peers, or outside of work?

3. Describe what helps you cope during or after caring for a patient and their family experiencing a perinatal loss.

Data Collection

Data were collected via web survey through the AWHONN that included responses to demographic characteristics, the STSS, the STSE Scale, and the ProQOL 5 scale. AWHONN has a diverse membership of obstetrical, women's health, and neonatal nurses, but for this study, they were asked to distribute to members who identified as obstetrical nurses working in labor and delivery. The survey link and QR code (Appendix F) were sent through the organization to the members who identified as obstetric labor and delivery room nurses. The researcher did not have access to the mail distribution list, which fostered the confidentiality of participating.

Quantitative Analysis

The test for measurement for this study included both descriptive and inferential statistics. The descriptive analysis included both frequency distribution and central tendencies. The descriptive analysis indicated the means, standard deviations, and range of scores (Creswell, 2014). Inferential statistics were used to show relationships between obstetrical nurses' demographic characteristics, STS, and STSE. ANOVA and correlations such as Pearson's *r* were used to look at relationships. This study explored relationships among obstetrical nurses' demographic characteristics, STS, STSE, and CF/ BO and CS.

Qualitative Analysis

The qualitative section of the study consisted of three open-ended questions at the end of the survey. A comment box followed each qualitative question for participants to provide their thoughts regarding what they would like to share about their experiences caring for patients and families with perinatal loss, what support they receive when caring for patients and families

experiencing a perinatal loss (organization, peers, or outside of work), and what helps them cope during these experiences. The responses were downloaded from SurveyMonkey into Excel and analyzed to explore the content and identify what in the participants' words provided information to support and expand the quantitative findings.

Data Management

Data were collected using an anonymous web design using SurveyMonkey. Data were secured in a password-protected electronic file accessible only to the researcher for five years. Results will be used to present at professional conferences or published in professional journals.

Protection of Human Subjects

Approval to conduct this study was obtained through the Molloy College Institutional Review Board (Appendix A). Exempt status was requested and obtained, as the recruitment and data collection were gathered using an anonymous web survey and demographic tool. A cover letter was provided, which included all of the information necessary to meet the required criteria for ethical consent. Consent to participate in this study was implied based on the participants' choice to submit a completed survey electronically. The cover letter described the risks of participating in this research study, which were considered minimal, and the benefit being the ability to contribute to the profession of nursing by adding to the scientific knowledge of the discipline.

Conclusion

This research study explored relationships between STS, STSE, and Quality of Life of obstetric nurses in caring for patients and families with perinatal loss. The study explored the relationships between nursing characteristics, study variables (including STS, BO, CS, and the ability to cope), and the prevalence and severity of STS on study participants, to determine the

influence of these factors on obstetric nurses' ability to cope with STS, CS, and BO. Appropriate

statistical testing was performed on the quantitative data. The open-ended questions were

analyzed to identify and triangulate content to strengthen the quantitative findings.

Chapter 4 RESULTS

The purpose of this descriptive study was to explore relationships between STS, Self-Efficacy, and the ProQOL of obstetric nurses caring for patients and families with perinatal loss. The RAM framework guided the concepts of STS, STSE, BO, and CS, focusing on the obstetric nurses' response of caring for patients and families experiencing perinatal loss. The relationship of obstetric nurses' characteristics, STS, STSE, BO, and CS were explored to determine the influence these factors had on obstetric nurses' ability to cope as well as severity and incidence when caring for patients and families experiencing a perinatal loss. At the end of the survey, three open-ended questions were asked related to obstetric nurses' experience, support received, and what helps them cope when caring for patients and families experiencing perinatal loss. The questions yielded a wealth of information that was reviewed to determine if they supported the quantitative findings. There were 1,178 participants in this study, of which more than half responded to each open-ended question: there were 630 responses for Question 1, 851 responses for Question 2, and 852 responses for Question 3. The abundance and magnitude of the responses are beyond the scope of a deep qualitative analysis and will be further explored with an in-depth scholarly analysis in a future study.

Study participants included a national sample of registered nurses who identified as obstetric nurses with experience in caring for patients and families who have had a perinatal loss. The participants were recruited through the AWHONN. A total of 1,214 nurses consented to participate in this study. The findings in this chapter are organized according to the description of the participant characteristics and the following research questions:

Quantitative Questions:

- What is the incidence and severity of STS in obstetric nurses due to perinatal loss?

- Is there a relationship between the scores on the STSE scale and STSS among obstetric nurses?

- What is the relationship between obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal with thoughts or feelings that occur with this traumatic event?

- What are the relationships among nurses' experience, education, and ability to share with STS and STSE?

- Is there a relationship between CF, BO, STS, CS, and STSE scores?

- Is there a relationship between obstetric nurses' demographic characteristics and STS, STSE, CF, BO, and CS?

Open-Ended Questions:

- What do you want to share about your experience in caring for patients and families with perinatal loss?

- Describe the support you received (if any) while caring for a patient and family experiencing a perinatal loss. Was the support from the organization, peers, or outside of work?

- Describe what helps you cope during or after caring for a patient experiencing a perinatal loss.

Description of Participants

Subjects were recruited from AWHONN, a national professional nursing organization, with an email invitation to participate in the study. The enrollment period was March 1, 2021, through March 25, 2021. Approval was obtained by AWHONN, and the email invitation was distributed to 8,000 nurses who identified as nurses with experience in labor and delivery on March 1, 2021. An additional reminder email was sent on March 15, 2021, and the survey was closed to responses on March 25, 2021. A total of 1,214 AWHONN members responded to the survey invitation, of which 1,200 members met the inclusion criteria. Of the 1,200 members that met the inclusion criteria, 22 did not complete any survey questions past the inclusion criteria, leaving 1,178 participants included in the statistical analysis. The response of 1,214 subjects out of 8,000 members emailed yielded a response rate of 15.1%, which is five times the average response rate of 3% as reported from AWHONN (J. Rychonvsky, personal communication, September 8, 2020).

Survey data were exported from SurveyMonkey and uploaded into IBM SPSS Version 27 for analysis. The data were inspected for outliers and, through listwise deletions in SPSS, items with missing data were automatically omitted for calculations in total and individual scores for the STSS, STSE, and ProQOL scales. This resulted in a range of sufficient sample size data for inference ($n = 1,088$ to $1,150$) from analysis performed to answer each research question using statistical testing.

Characteristics and Demographics

The details of the demographic findings in this chapter are based on the data sample of 1,178 participants. The demographic data collected in the survey was by participants who met the inclusion criteria of being a registered nurse, over age 18, and had experience in caring for

patients and families with perinatal loss. Demographic data in this survey included gender, age, geographic location of work, race, marital status, highest level of nursing degree, years of experience as a registered nurse, years of experience as an obstetric nurse, estimated number of experiences in caring for patients and families experiencing a perinatal loss, religiosity, spirituality, support of religious or spiritual beliefs, nursing certification in an obstetrical specialty, worked in obstetrics at a Magnet facility, if they are a parent, if they personally experienced a perinatal loss, formal perinatal loss bereavement course, follow protocol in their institution for perinatal loss, and if they are able to share work-related experiences of perinatal loss with others.

Personal Characteristics

The gender analysis for this study revealed that 99% (n = 1166) were female, 0.6% (n = 7) were male, 0.2% (n = 2) were gender variant nonconforming, and 0.2% (n = 2) preferred not to say. According to the National Council of State Boards of Nursing (2020), it was reported that 9.1% of the U.S. registered nurses are men. In the maternal child area, this number is estimated to be much lower (Cude, 2004). (Table 4.1).

Table 4.1
Gender of Participants

	N	%
Male	7	0.6%
Female	1,166	99.0%
Gender variant nonconforming	2	0.2%
Prefer not to say	2	0.2%
Missing system	1	0.1%

To encourage a response rate for age reporting, the survey requested information in age ranges as opposed to an exact age in number. Age groups were categorized as follows: 18-30 (n = 116, 9.8%), 31-40 (n = 327, 27.8%), 41-50 (n = 297, 25.2%), 51 and over (n = 468, 37.2%).

These findings on age were consistent with the National Council of State Boards of Nursing

(2020) findings of 51 as the average age of nurses in the current workforce. (Table 4.2).

Table 4.2
Age of Participants

	N	%
18-30	116	9.8%
31-40	327	27.8%
41-50	297	25.2%
51 and over	438	37.2%

The sample in this study were found to be somewhat homogenous in the characteristic of

race when compared to the current U.S. workforce as stated by the U.S. Department of Health

and Human Services (2019). Their distribution of the RN workforce was slightly more diverse,

showing 73.3% White/non-Hispanic, 7.8% Black/non-Hispanic, 5.2% Asian/non-Hispanic, and

10.2% Hispanic/Latino/Spanish (Table 4.3).

Table 4.3
Race of Participants

	N	%
White or Caucasian	991	84.1%
Black or African American	60	5.1%
Hispanic or Latino	63	5.3%
Asian or Asian American	19	1.6%
American Indian or Alaska Native	4	0.3%
Native Hawaiian/Pacific Islander	1	0.1%
Multiple Race	30	2.5%
Other	8	0.7%
Missing system	2	0.2%

The geographical region of the South made up the largest area of those participating in

this study at 35.7% (*n* = 421), followed by the West at 25.6% (*n* = 302), the Northeast at 20.5%

($n = 241$), Midwest at 17.2% ($n = 203$), and Other Region outside of the US at 0.8% ($n = 10$).

There was one missing point of data for geographical region.

Marital status for this sample was reported with 71.9% ($n = 847$) responding married,

followed by 13.1% ($n = 154$) reporting single, 11.7% ($n = 138$) divorced, 2% ($n = 24$) widowed,

and 1.2% ($n = 14$) preferring not to say.

Regarding the characteristic of how religious participants felt they were, 50.6% ($n = 596$)

reported they were somewhat religious, 24.7% ($n = 291$) very religious, 21.1% ($n = 249$) not at

all religious, and 3.6% ($n = 42$) prefer not to say. Participants were also asked how spiritual they

felt they were, and the findings were as follows: 49% ($n = 577$) somewhat spiritual, 45% ($n =$

528) very spiritual, 4.8% ($n = 57$), not at all spiritual, and 1.4% ($n = 16$) prefer not to say. When

asked if they found their religious or spiritual beliefs to be supportive, 89.3% ($n = 1,052$) stated

yes.

The sample studied reported that 81.2% ($n = 957$) reported being a parent and 33.2% ($n=$

391), or one third, reported having personally experienced a perinatal loss (Figure 4.1).

Figure 4.1

Participants who have experienced a perinatal loss

Have you, yourself, personally experienced a perinatal loss?
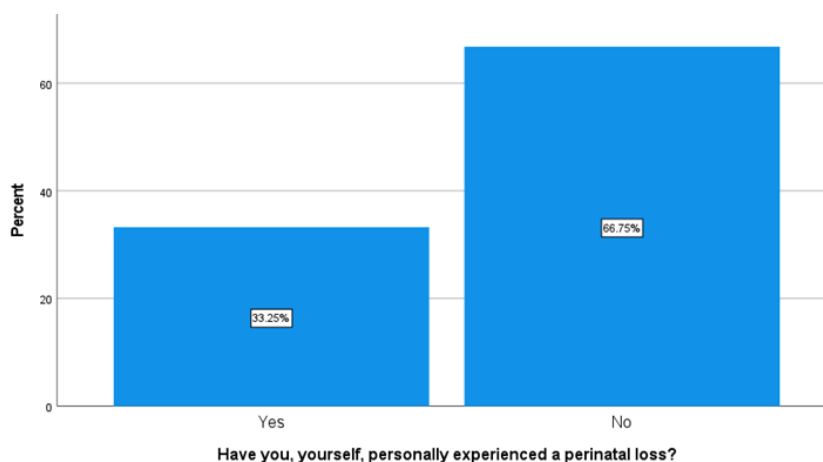
Work Experience and Educational Characteristics

The educational degree distribution of participants was as follows: Diploma (2%, *n* = 23), Associate's (9.2%, *n* = 108), Bachelor's (54.2%, *n* = 636), Master's (30.9%, *n* = 363), and Doctoral (3.7%, *n* = 44) (Figure 4.2). There was a higher educational preparation noted in this sample as compared to the U.S. Department of Health and Human Services (2019) report, which was as follows: Diploma, 6.4%; Associate's, 29.6%; Bachelor's, 44.6%; Master's, 17.5%; and Doctoral, 1.9%.

Figure 4.2

Highest Nursing Degree
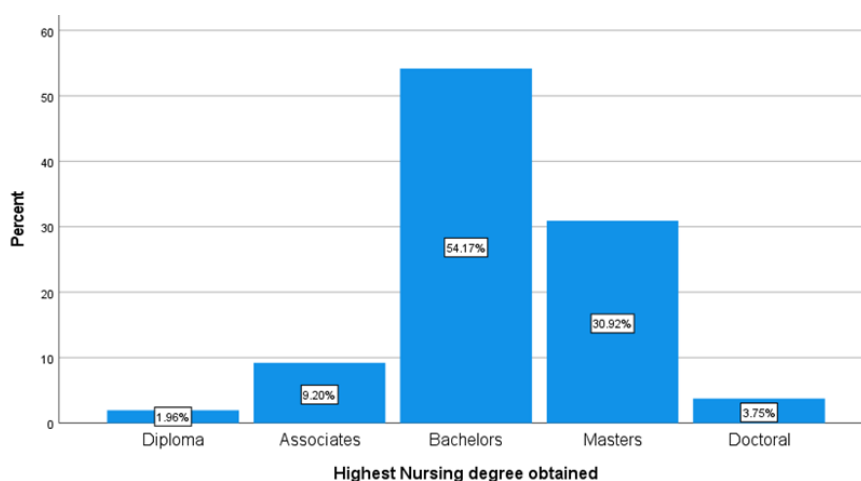
The majority of the sample reported having experience as an obstetrical nurse (99.4%, *n* = 1,171). Participants were asked to report on years of experience practicing as a registered nurse and years of experience practicing as an obstetric nurse both in ranges as opposed to exact numbers. The findings were similar for both questions (Table 4.4 and 4.5). The sample of nurses reporting certification in an obstetrical specialty was 75.9% (*n* = 894).

Table 4.4

Year of Experience Practicing as a Registered Nurse

	N	%
1-5 years	131	11.1%
6-10 years	200	17.0%
11-20 years	332	28.2%
21-30 years	221	18.8%
>30 years	291	24.7%
Missing system	3	0.3%

Table 4.5

Years Practicing as an Obstetric Nurse

	N	%
1-5 years	184	15.6%
6-10 years	206	17.5%
11-20 years	341	28.9%
21-30 years	214	18.2%
>30 years	232	19.7%
Missing system	1	0.1%

Participants were asked to report an estimate of the number of experiences they had caring for patients and families experiencing perinatal loss. The majority reported 16 to 30 experiences for 26% of the total sample, followed by 6-15 or greater than 50 (Figure 4.3). A little more than half the participants, 54.4% (*n* = 641) reported not having taken a formal perinatal bereavement course. The majority of participants, 91.9% (*n* = 1,082), reported having a protocol to follow at their institution when caring for patients and families experiencing perinatal loss.

Figure 4.3

Estimated number of experiences caring for perinatal loss
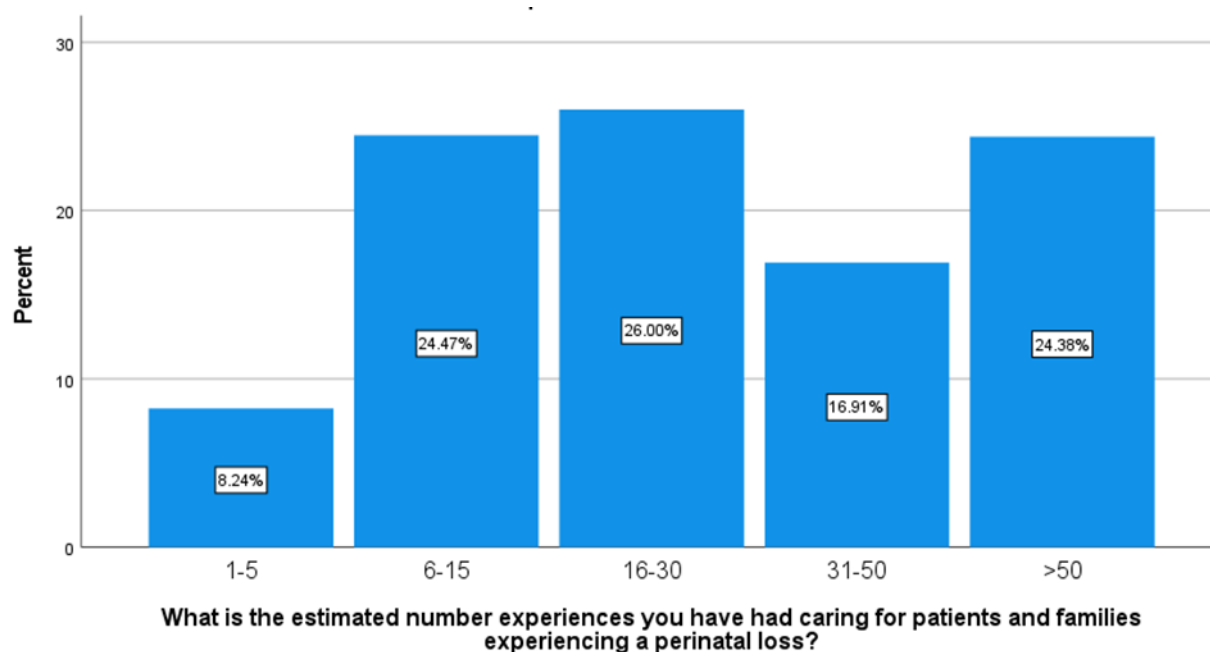
Overall, 85.8% (*n* = 1,011) of participants reported being able to share work-related experiences of perinatal loss with others. Slightly more than half, 51.1% of the sample studied, reported working in obstetrics at a Magnet-recognized hospital.

Questionnaire Psychometrics

For the purpose of this study, each scale used for the study was measured for their reliability of internal consistency with a Cronbach's alpha coefficient. Levels of .7 and above are generally considered acceptable with pilot testing and subscale values, whereas coefficient values of .8 or above are considered acceptable for existing instruments (Pallant, 2016). An alpha coefficient of ≥ 0.70 was considered an acceptable value of instrument reliability for this study. In this sample of individuals who completed all questions on each survey to provide a total score, the Cronbach's alpha coefficients for continuous scales and subscales were reported as follows: STSS total (*n* = 1,128), .923; STSS subscale Intrusion (*n* = 1,150), .769; STSS subscale

Avoidance (*n* = 1,140), .823; STSS subscale Arousal (*n* = 1,145), .835; Secondary Trauma Self-

Efficacy scale (*n* = 1,130), .828; ProQOL CS (*n* = 1,085), .912; ProQOL BO (*n* = 1,098), .823;

and ProQOL STS (or CF) (*n* = 1,094), .834 (Table 4.6). All scales were evaluated for reliability

and were deemed acceptable to use in this sample of obstetric nurses who care for patients and

families experiencing perinatal loss.

Table 4.6

Instrument Reliability in the AWHONN Sample Using the Cronbach's Test

Outcomes	Statistical Findings	Sample
STSS	.923	1,128
STSS Intrusion	.769	1,150
STSS Avoidance	.823	1,140
STSS Arousal	.835	1,145
STSE	.828	1,130
ProQOL CS	.912	1,085
ProQOL BO	.823	1,098
ProQOL STS (CF)	.834	1,094

Relationship Analysis and Prediction

For exploring relationships, one-way analysis of variance (ANOVA) was used to

determine categorical variables of interest, continuous outcome variables, and Pearson's

correlation for relationships between continuous variables.

Research Question 1: What is the incidence and severity of STS in obstetric nurses due to perinatal loss?

The nationwide sample of 1,178 obstetric nurses had a $M = 34.27$ measured by the STSS total score. According to Bride (2007), this $M = 34.27$ is categorized as mild STS. (Table 4.7)

Table 4.7

Scale Statistics: Total STSS

Mean	Variance	*SD*	*N*
34.27	108.07	10.39	17

Bride (2007) recommended that scores be used to classify individuals into categories based on percentiles. The recommended interpretation of scores less than 28 are interpreted as little or no STS, scores 28-37 as mild, scores 38-43 as moderate, scores 44-48 as high, and scores 49 and above as severe (pp. 67-68). Based on Bride's interpretation of scores, the majority of participants have either little to no STS or mild STS, while 35% of participants fall between moderate to severe STS. (Figure 4.4).

Figure 4.4

Secondary Traumatic Stress Levels
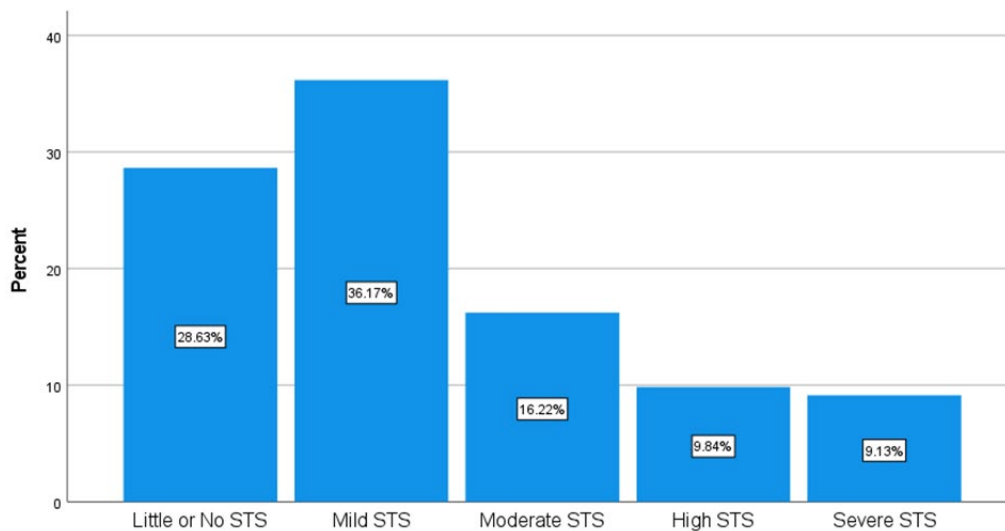
Two questions with higher item statistic *M* include Question 10 (*M* = 2.7697): "I thought about work with my patients when I didn't intend to" and Question 1 (*M* = 2.4892): "I felt emotionally numb." Participants chose from *never*, *rarely*, *occasionally*, *often*, and *very often*. The percentages of the participants' responses can be found in Table 4.8 and Table 4.9.

Table 4.8

STSS Q10: "I thought about my work with patients when I didn't intend to"

	N	%
Never	120	10.2%
Rarely	315	26.7%
Occasionally	474	40.2%
Often	203	17.2%
Very often	43	3.7%
Missing system	23	2.0%

Table 4.9

STSS Q1: "I felt emotionally numb"

	N	%
Never	199	16.9%
Rarely	375	31.8%
Occasionally	421	35.7%
Often	132	11.2%
Very often	26	2.2%
Missing system	25	2.1%

Two questions with lower item statistic *M* included Question 12 (*M* = 1.5338): "I avoided people, places, or things that reminded me of my work and patients" and Question 8 (*M* = 1.5425): "I felt jumpy." The percentages of participants who responded are in Table 4.10 and Table 4.11.

Table 4.10

STSS Q12: "I avoided people, places or things that reminded me of my work with patients"

	N	%
Never	701	59.5%
Rarely	331	28.1%
Occasionally	89	7.6%
Often	25	2.1%
Very often	8	0.7%
Missing system	24	2.0%

Table 4.11

STSS Q8: "I felt jumpy"

	N	%
Never	696	59.1%
Rarely	321	27.2%
Occasionally	105	8.9%
Often	26	2.2%
Very often	4	0.3%
Missing system	26	2.2%

Further analysis of the STSS subscales of Intrusion, Avoidance, and Arousal were conducted to evaluate which subscale, if any, was higher in incidence and severity by evaluating their overall mean scores. The mean score for Intrusion was 11.23 with the minimum score being 5 and the maximum score being 24. The mean score for Arousal was 10.13, with the minimum score being 5 and the maximum score being 23. The highest mean was the subscale that measures Avoidance with $M = 12.92$. The minimum score for Avoidance was 7 and a maximum score of 32. (Table 4.12)

Table 4.12

STSS Subscale Statistics

Intrusion

Mean	Variance	Std. Deviation	N
11.26	11.849	3.44221	5

Avoidance

Mean	Variance	Std. Deviation	N
12.92	18.581	4.31057	7

Arousal

Mean	Variance	Std. Deviation	N
10.13	12.813	3.57958	5

Research Question 2: Is there a relationship between the scores on the STSE scale and the STSS among obstetric nurses?

Question 1 reviewed the findings of the population of obstetric nurses and STSS. The STSE (ability to cope) mean score of the obstetrical nurses was 41.48 out of a total score of 49. The median score of 42.00 was noted for 132 participants.

The relationship between the scores on the STSE scale and the STSS among obstetric nurses was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a strong negative correlation between the two variables, $r = -.484$, $n = 1,104$, $p < .001$, with high levels of the ability to cope associated with lower levels of STS. (Tabel 4.13).

Table 4.13

Correlations Secondary Trauma Self-Efficacy Scores and Secondary Traumatic Stress Scale Scores

		STSE Total Score	STSS Total Score
STSE Total Score	Pearson Correlation	1	-.484[**]
	Sig. (2-tailed)		.000
	N	1,130	1,104
STSS Total Score	Pearson Correlation	-.484[**]	1
	Sig. (2-tailed)	.000	
	N	1,104	1,128

**Correlation is significant at the .01 level (2-tailed).

Figure 4.5 shows a visual description of the inverse relationship between the STSE scale and the STSS. The higher the STSE, the lower the STSS of participants.

Figure 4.5

Scatterplot of Secondary Trauma Self-Efficacy Scores and Secondary Traumatic Stress Scale

Scores
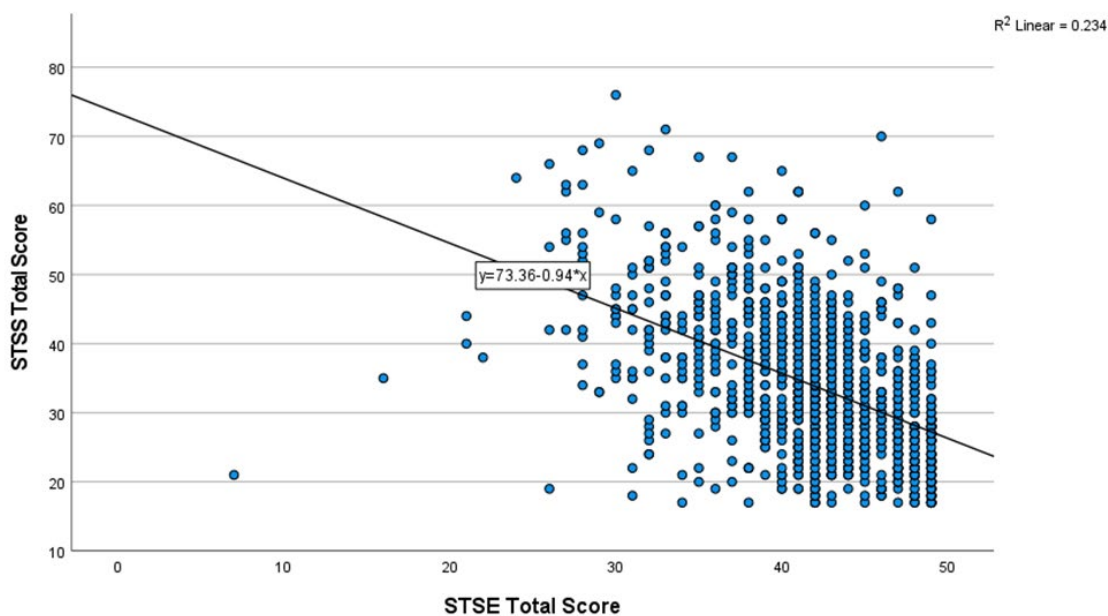
Research Question 3: What is the relationship between obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal (cope) with thoughts or feelings (STSS Intrusion) that occur with this traumatic event?

The relationship between the ability to cope (as measured by the STSE) and thoughts and feelings (as measured by STSS Intrusion subscale) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a strong negative correlation between the two variables, $r = -.444$, $n = 1,125$, $p < .001$, with high levels of coping associated with lower levels of the STSS subscale of Intrusion. (Table 4.14) (Figure 4.6)

Table 4.14

Correlations Secondary Trauma Self-Efficacy Scores and Secondary

Traumatic Stress Subscale-Intrusion Scores

		STSE Total Score	STSS Intrusion
STSE Total Score	Pearson Correlation	1	-.444**
	Sig. (2-tailed)		< .001
	N	1,130	1,125
STSS Intrusion	Pearson Correlation	-.444**	1
	Sig. (2-tailed)	<.001	
	N	1,125	1,150

**Correlation is significant at the .01 level (2-tailed).

Figure 4.6

Scatterplot of Secondary Trauma Self-Efficacy Scores and Secondary Traumatic Stress Subscale

Intrusion Scores
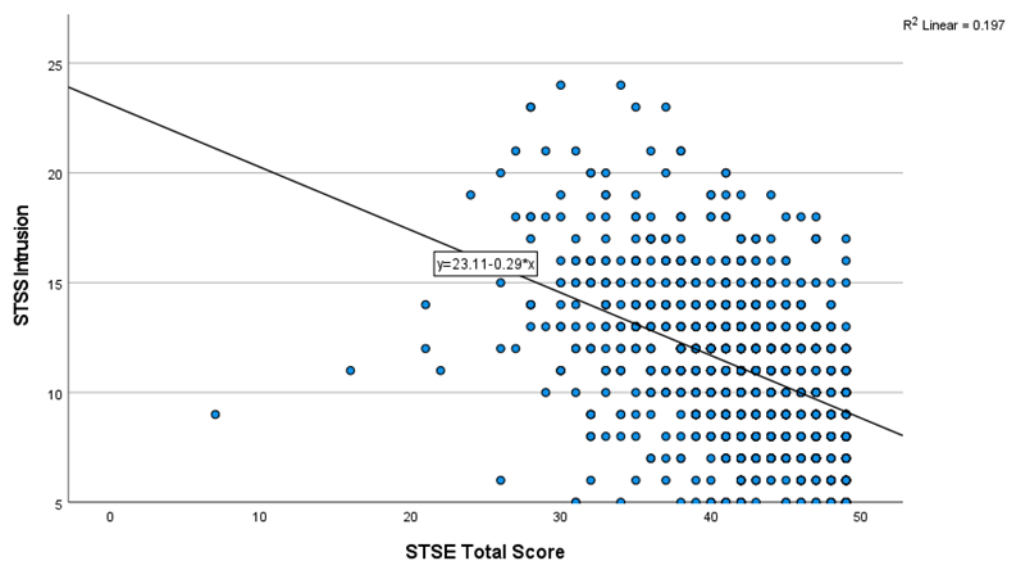
Research Question 4: What are the relationships among nurses' experience, education, and ability to share with secondary traumatic stress and STSE?

Nurses' Experience–STSS

A one-way between-groups ANOVA was conducted to explore the impact of nurses' years of experience on STS, as measured by the STSS. Participants were divided into five groups according to their experience (Group 1: 1-5 yrs.; Group 2: 6-10 yrs.; Group 3: 11-20 yrs.; Group 4: 21-30 yrs.; Group 5: 31 yrs. and greater). There was a statistically significant difference at $p < .05$ in STSS scores between age groups $F (4, 1122) = 8.0, p = .001$. The effect size, calculated using eta squared, was .03. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 5 ($M = 31.26, SD = 8.96$) was significantly different from Group 1 ($M = 35.65, SD = 10.68$), Group 2 ($M = 35.99, SD = 9.93$), and Group 3 ($M = 35.18, SD = 11.21$). Group 4 ($M = 33.29, SD = 10.02$) did not differ significantly from any other group. (Figure 4.7) (Table 4.15)

Figure 4.7

Means Plot of Secondary Traumatic Stress Scores and Years in Practice as an Obstetric Nurse
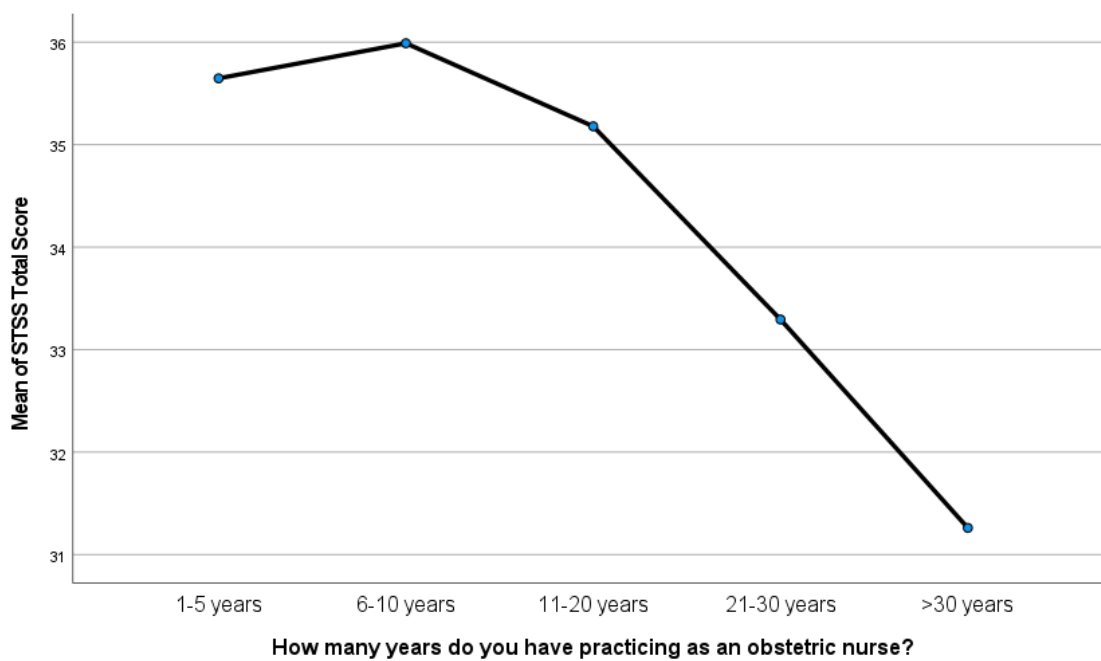
Table 4.15

ANOVA- Years of Experience as an Obstetric Nurse and Secondary Traumatic Stress Scale

Total Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3396.476	4	849.119	8.049	.001
Within Groups	118365.595	1122	105.495		
Total	121762.071	1126			

      Examining the experience of practicing as an obstetric nurse and the mean scores of the STSS, the more years of experience a nurse had, the lower the mean score of STS was found when caring for patients and families experiencing a perinatal loss. This finding was similar to that of experience as a registered nurse.

Nurses' Experience—STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses' years of experience on perceived ability to cope with challenging demands and perceived ability to deal with the STS symptoms, as measured by the STSE Scale. Participants were divided into five groups according to their experience: Group 1: 1-5 yrs.; Group 2: 6-10 yrs.; Group 3: 11-20 yrs.; Group 4: 21-30 yrs.; Group 5: 31 yrs. and greater). There was a statistically significant difference at $p < .05$ in STSE scores between age groups: $F (4, 1124) = 21.6$, $p < .001$. The actual difference in mean scores between the groups had a medium effect size and eta squared was 0.07. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 5 ($M = 43.40$, $SD = 4.51$) was significantly different from three other groups: Group 1 ($M = 39.10$, $SD = 6.14$), Group 2 ($M = 40.27$, $SD = 5.32$), and Group 3 ($M = 41.42$, $SD = 5.15$). Group 4 ($M = 42.64$, $SD = 5.23$) was significantly different from Group 2 and Group 1. Group 3 was significantly different from Group 1. Group 4 did not differ significantly from Group 5 or Group 3. (Figure 4.8) (Table 4.16)

Figure 4.8

Means Plot of Secondary Trauma Self-Efficacy and Years of Practice as an Obstetric
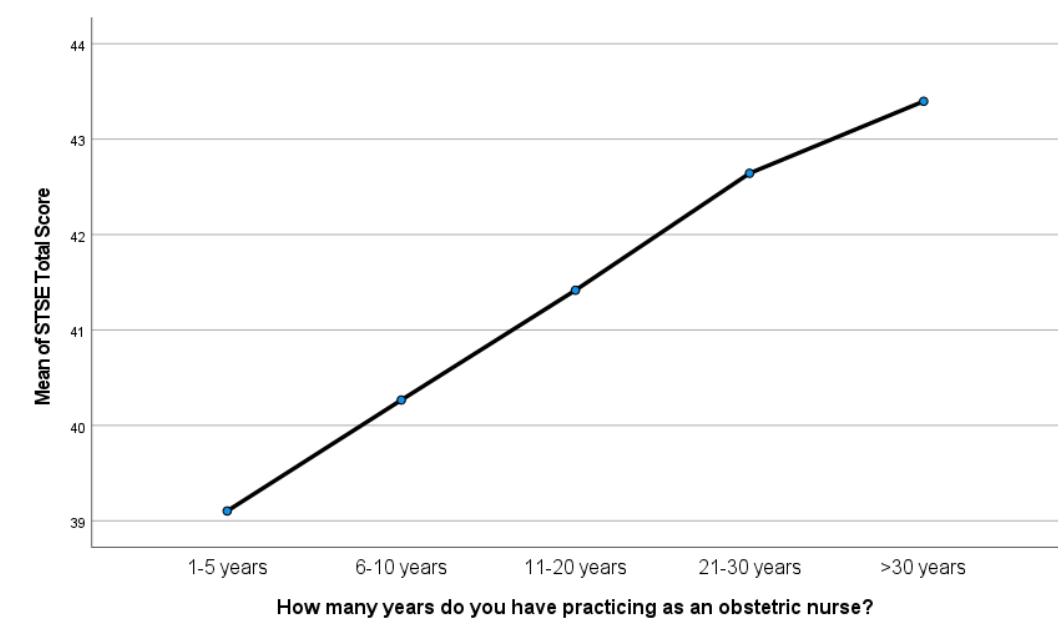
Nurse

Table 4.16

ANOVA—Years of Experience as an Obstetric Nurse and Secondary Trauma Self-Efficacy

Scores

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	2378.525	4	594.631	21.632	.001
Within Groups	30897.388	1124	27.489		
Total	33275.913	1128			

Examining the experience of practicing as an obstetric nurse and the mean scores of the STSE, the more years of experience increases the ability to cope when dealing with patients and families experiencing a perinatal loss. Experience as an obstetric nurse over time increased the ability to cope in these situations for obstetric nurses.

Education-STSS

A one-way between-groups ANOVA was conducted to explore the impact of education on STS, as measured by the STSS. Participants were divided into five groups according to level of degree (Group 1: Diploma; Group 2: Associate's; Group 3: Bachelor's; Group 4: Master's; Group 5: Doctoral). There was no statistically significant difference at the $p < .05$ level in STSS scores for the five education groups: $F (4, 1119) = .43$, $p = .78$. The effect size, calculated using the eta squared, was .00.

Education–STSE

A one-way between-groups ANOVA was conducted to explore the impact of education on perceived ability to cope with challenging demands and perceived ability to deal with the STS symptoms, as measured by STSE. Participants were divided into five groups according to level of degree (Group 1: Diploma; Group 2: Associate's; Group 3: Bachelor's; Group 4: Master's; Group 5: Doctoral). There was a significant difference at the $p < .05$ level in STSE scores for the five educational groups: $F (4, 1121) = 2.39$, $p = .049$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .01. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 2 ($M = 40.29$, $SD = 6.98$), was significantly different from Group 4 ($M = 41.96$, $SD = 5.65$). Group 1 ($M = 41.05$, $SD = 5.02$), Group 3 ($M = 41.35$, $SD = 5.07$), and Group 5 ($M = 42.43$, $SD = 3.95$) did not differ significantly from any other group. (Table 4.17)

Table 4.17

ANOVA–Level of Education and Secondary Trauma Self-Efficacy Scores

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	281.011	4	70.253	2.390	.049
Within Groups	32947.742	1121	29.391		
Total	33228.753	1125			

The *N* of diploma degree nurses was 23 and therefore may not be large enough to contribute to statistical findings, as the associates degree with an *N* of 108 had statistical significance when analyzed with the master's group of 363.

Ability to Share and STSS

A one-way between groups ANOVA was conducted to explore the impact of the ability to share on STS, as measured by the STSS. Participants were divided into two groups according to their ability to share (Group 1: yes, Group 2: no). There was no significance difference at the *p* < .05 level in STSS scores and the ability to share: $F(1, 1124) = .72$, $p = .395$. The effect size, calculated using eta squared, was .00.

Ability to Share and STSE

A one-way between-groups ANOVA was conducted exploring the impact of the ability to share related to the perceived ability to cope with challenging demands and perceived ability to deal with STS symptoms, as measured by STSE. Participants were divided into two groups according to their ability to share (Group 1: yes, Group 2: no). There was a statistically significant difference at the *p* < .05 level in STSE scores for the two groups: $F(1, 1126) = 8.22$, $p = .004$. Despite reaching statistical significance, the actual difference in mean scores between

groups was quite small. The effect size, calculated using the eta squared, was .01 (Group 1 $M =$ 41.67, Group 2 $M =$ 40.34). (Table 4.18) (Figure 4.9)

Table 4.18

ANOVA–Ability to Share and Secondary Trauma Self-Efficacy Scores

	Sum of Squares	*df*	Mean Square	*F*	Sig.
Between Groups	240.836	1	240.836	8.219	.004
Within Groups	32994.964	1126	29.303		
Total	33235.801	1127			

Figure 4.9

Means Plot of Secondary Trauma Self-Efficacy and Ability to Share Work-Related Experiences
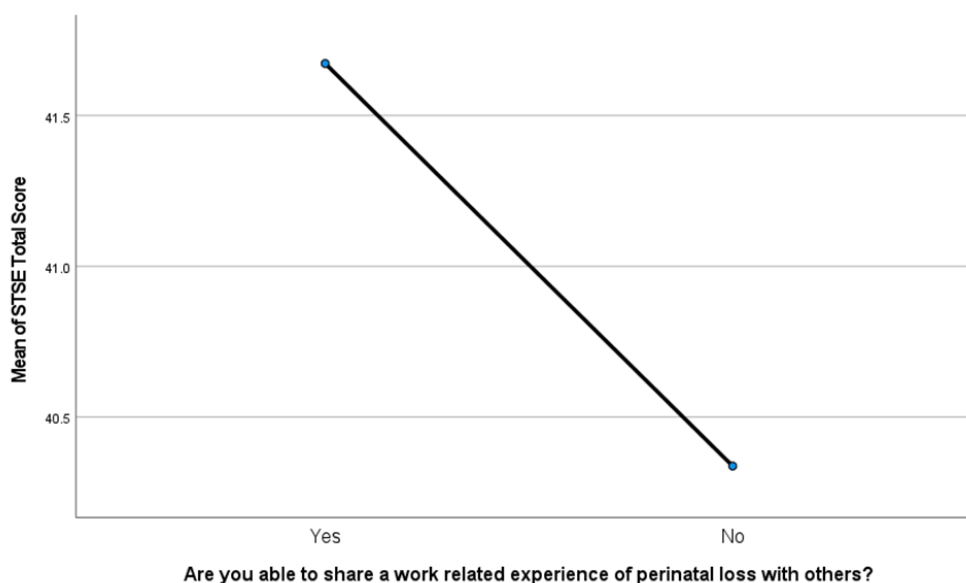
of Perinatal Loss with Others

Research Question 5: Is there a relationship between BO (CF), secondary traumatic stress, CS, and how one copes with secondary trauma as measured by the STSE?

This research question analyzed the three subscales from the ProQOL scale and what relationship BO, STS, or CS has with how one copes as measured by the STSE scale.

BO and STSE

The relationship between BO (as measured by the ProQOL scale) and how one copes (as measured by the STSE) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violations of the assumptions of normality, linearity, and homoscedasticity. There was a strong, negative correlation between the two variables, $r = -.485$, $n = 1,092$, $p < .001$, with high levels of coping associated with lower levels of BO. (Table 4.19)

Table 4.19

Correlations Burnout Scores and Secondary Trauma Self-Efficacy Scores

		STSE Total Score	Tscore ProQOL BO
STSE Total Score	Pearson Correlation	1	$-.485^{**}$
	Sig. (2-tailed)		$< .001$
	N	1,130	1,092
Tscore ProQOL BO	Pearson Correlation	$-.485^{**}$	1
	Sig. (2-tailed)	$< .001$	
	N	1,092	1,098

**Correlation is significant at the .01 level (2-tailed).

STS and STSE

The relationship between STS (as measured by the ProQOL scale) and the ability cope (as measured by the STSE) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violations of the assumptions of normality, linearity, and homoscedasticity. There was a strong, negative correlation between the two variables, $r = -.485$, $n = 1,088$, $p < .001$, with high levels of coping associated with lower levels of STS. (Table 4.20)

Table 4.20

Correlations Secondary Traumatic Stress Scores and Secondary Trauma Self-

Efficacy Scores

		STSE Total Score	Tscore ProQOL STS
STSE Total Score	Pearson Correlation	1	−.485[**]
	Sig. (2-tailed)		.000
	N	1,130	1,088
Tscore ProQOL STS	Pearson Correlation	−.485[**]	1
	Sig. (2-tailed)	.000	
	N	1,088	1,094

**Correlation is significant at the .01 level (2-tailed).

CS and STSE

The relationship between CS (as measured by the ProQOL scale) and how one copes (as measured by the STSE) was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violations of the assumptions of normality, linearity, and homoscedasticity. There was a strong, positive correlation between the two variables, $r = .467$, $n = 1,083$, $p < .001$, with high levels of CS associated with high levels of coping. (Table 4.21)

Table 4.21

Correlations Compassion Satisfaction Scores and Secondary Trauma Self-Efficacy Scores

		Tscore ProQOL CS	STSE Total Score
Tscore ProQOL CS	Pearson Correlation	1	.467**
	Sig. (2-tailed)		< .001
	Sum of Squares and Cross-products	108700.000	27674.814
	Covariance	100.000	25.577
	N	1,088	1,083
STSE Total Score	Pearson Correlation	.467**	1
	Sig. (2-tailed)	< .001	
	Sum of Squares and Cross-products	27674.814	33278.110
	Covariance	25.577	29.476
	N	1,083	1,130

**Correlation is significant at the .01 level (2-tailed).

Research Question 6: Is there a relationship between obstetric nurse's demographic characteristics and secondary traumatic stress, STSE, BO, and CS?

This research question analyzes relationships between STSS, STSE (ability to cope), and ProQOL, including STS, BO, and CO and some of the demographic characteristics of the participants in the study (e.g., age, certification, magnet hospital, bereavement course, level of education, protocol, personal loss, being a parent, how religious, how spiritual, finding religious or spiritual beliefs supportive, and ability to share loss experiences).

The descriptive frequencies for the ProQOL subscales of this study showed a mean of 50.00 for each subscale, which correlates to Stamm (2010) scale scores for interpretation after converting raw scores to z-scores then *t* scores. The *t* scores were used in SPSS for data output when examining relationships to the demographic data. The subscales were analyzed

categorically to evaluate the percentages of the *t* scores of participants as low (43 or less), average (44-56), or high (57 and above).

According to Stamm (2010), the average score on the subscale of STS should be 50 (*SD* = 10; alpha scale reliability = .81). The participants in this study did have an average score of 50 (*SD* = 10; alpha scale reliability = .83). It also stated that 25% of people score below 43 and about 25% of people score above 57. The findings in this study for obstetric nurses caring for patients and families experiencing a perinatal loss demonstrated 32.72% in the low category, 42.14% in the average category, and 25.14% in the high category. Seventy-five percent of participants are categorized with low to average amount of STS. (Figure 4.10)

Figure 4.10

Secondary Traumatic Stress Subscale Levels as Measured by the ProQOL Scale
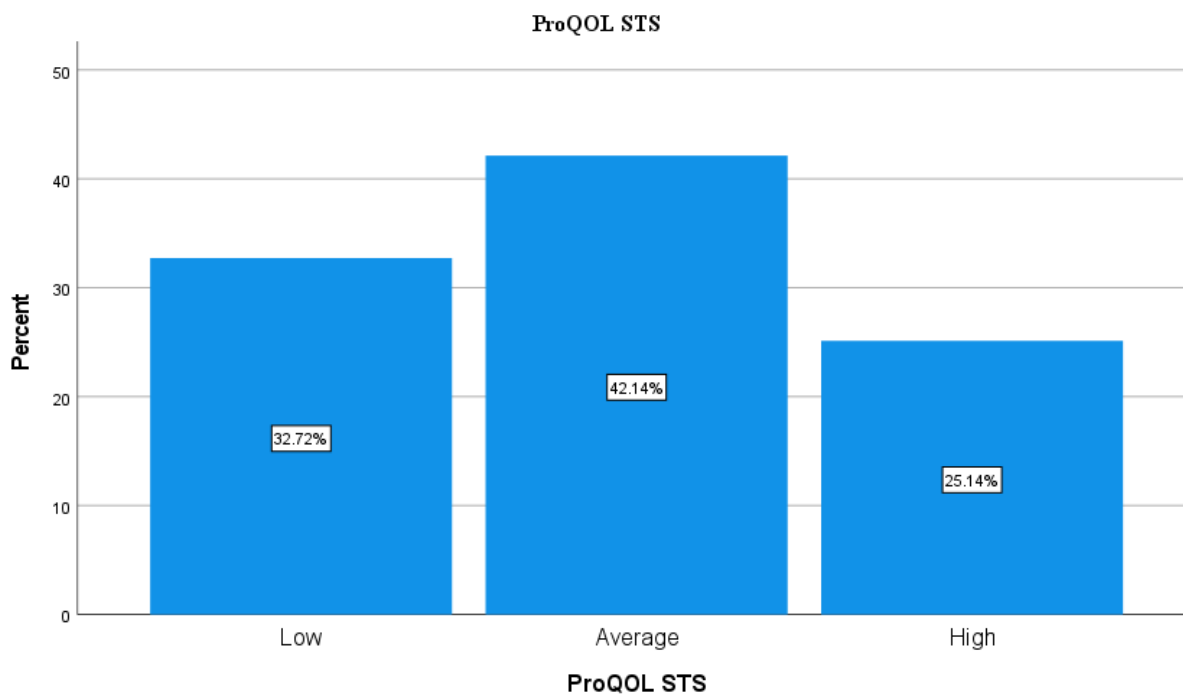
According to Stamm (2010), the average score on the subscale of BO should be 50 ($SD =$ 10; alpha scale reliability = .75). The participants in this study did have an average score of 50 ($SD =$ 10; alpha scale reliability = .82). It also stated that 25% of people score below 43 and about 25% of people score above 57. The findings in this study for obstetric nurses caring for patients and families experiencing a perinatal loss demonstrated 27.65% in the low category, 49.75% in the average category, and 22.60% in the high category. Seventy-seven percent of participants are categorized with low to average amount of BO. (Figure 4.11)

Figure 4.11

Burnout Subscale Levels as Measured by the ProQOL Scale
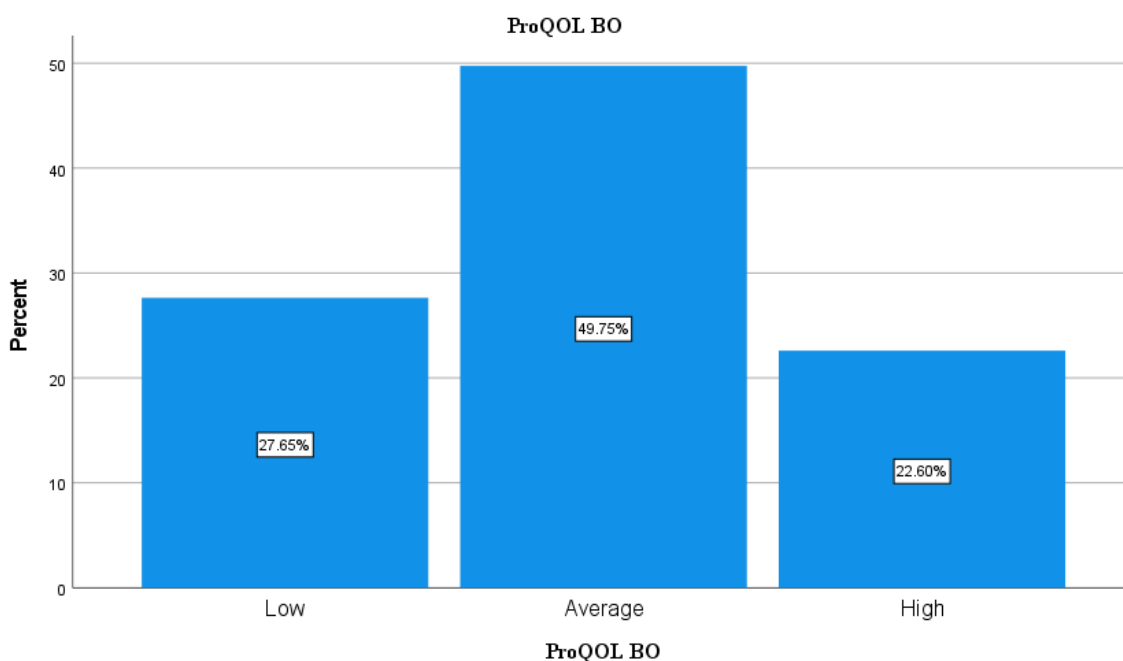
According to Stamm (2010), the average score on the subscale of CS should be 50 ($SD =$ 10; alpha scale reliability = .88). The participants in this study did have an average score of 50 ($SD =$ 10; alpha scale reliability = .91). It also stated that 25% of people score below 43 and

about 25% of people score above 57. The findings in this study for obstetric nurses caring for patients and families experiencing a perinatal loss demonstrated 28.40% in the low category (43 or less), 44.03% in the average category (44-56), and 27.57% in the high category (57 and above). Seventy-two percent of participants are categorized with average to high scores of CS. (Figure 4.12)

Figure 4.12

Compassion Satisfaction Subscale Levels as Measured by the ProQOL Scale
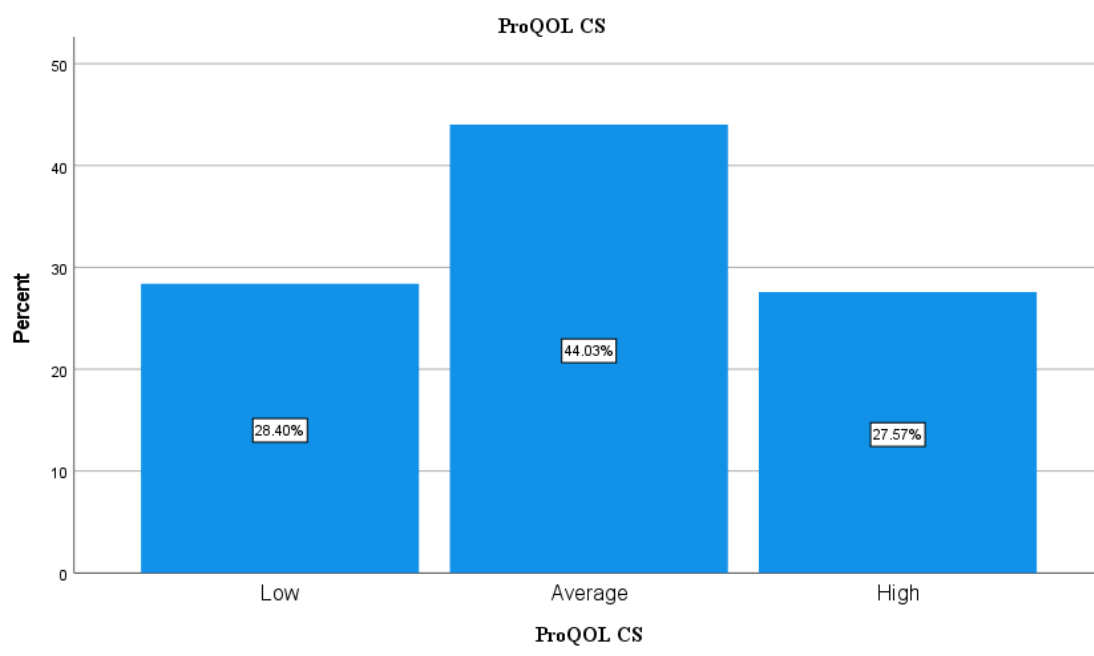
Age

The demographic characteristic of age with this study population of obstetrical nurses demonstrated statistical significance in certain age groups with STS, the ability to cope, CS, and BO.

Age–STSS

A one-way between-groups ANOVA was conducted to explore the impact of age on

levels of STS, as measured by the STSS. Participants were divided into four groups according to

their age (Group 1: 18 to 30; Group 2: 31-40; Group 3: 41-50; Group 4: 51 and above). There

was a statistically significant difference at the $p < .05$ level in STSS scores for the four age

groups: $F(3, 1127) = 13.1$, $p = .001$. The effect size, calculated using eta squared was .03. Post-

hoc comparisons using the Tukey HSD test indicated that the mean score for Group 4 ($M =$

31.97, $SD = 9.69$) was statistically different from all other groups: Group 1 ($M = 35.94$, $SD =$

10.80), Group 2 ($M = 36.54$, $SD = 10.58$), and Group 3 ($M = 34.49$, $SD = 10.38$). Group 1 did not

differ significantly from Group 2 or Group 3. Group 2 did not differ significantly from Group 3.

Age–STSE

A one-way between-groups ANOVA was conducted to explore the impact of age on the

ability to cope, as measured by the STSE Scale. Participants were divided into four groups

according to their age (Group 1: 18 to 30; Group 2: 31-40; Group 3: 41-50; Group 4: 51 and

above). There was a statistically significant difference at the $p < .05$ level in STSE scores for the

four age groups: $F(3, 1129) = 18.4$, $p = .001$. The effect size, calculated using eta squared,

was .05. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for

Group 1 ($M = 38.96$, $SD = 5.85$) was statistically different from all other groups: Group 2 ($M =$

40.59, $SD = 5.41$), Group 3 ($M = 41.17$, $SD = 4.80$), and Group 4 ($M = 42.65$, $SD = 5.41$). Group

2 ($M = 40.59$, $SD = 5.41$) was significantly different from Group 4 ($M = 42.65$, $SD = 5.41$).

Group 3 did not differ from Group 2 or 4.

Age–ProQOL CS

A one-way between-groups ANOVA was conducted to explore the impact of age on CS, as measured by the ProQOL CS scale. Participants were divided into four groups according to their age: Group 1: 18 to 30; Group 2: 31-40; Group 3: 41-50; Group 4: 51 and above. There was a statistically significant difference at the $p < .05$ level in CS scores for the four age groups: F (3, 1087) = 22.10, $p = .001$. The effect size, calculated using eta-squared was .06. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 4 ($M = 52.83$, $SD = 8.86$) was statistically different from all other groups: Group 1 ($M = 46.41$, $SD = 10.36$), Group 2 ($M = 47.70$, $SD = 10.27$), and Group 3 ($M = 49.77$, $SD = 10.06$). Group 3 ($M = 49.77$, $SD = 10.06$) was statistically different from Group 1 ($M = 46.41$, $SD = 10.36$). Group 3 did not differ significantly from Group 2, and Group 2 did not differ significantly from Group 1.

Age–ProQOL BO

A one-way between-groups ANOVA was conducted to explore the impact of age on BO, as measured by the ProQOL BO scale. Participants were divided into four groups according to their age (Group 1: 18 to 30; Group 2: 31-40; Group 3: 41-50; Group 4: 51 and above). There was a statistically significant difference at the $p < .05$ level in BO scores for the four age groups: F (3,1097) = 16.12, $p = .001$. The effect size, calculated using eta squared, was .04. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 4 ($M = 47.49$, $SD = 9.44$) was statistically different from all other groups: Group 1 ($M = 52.13$, $SD = 10.05$), Group 2 ($M = 52.26$, $SD = 9.47$), and Group 3 ($M = 50.30$, $SD = 10.55$). Group 3 did not differ significantly from either Group 2 or Group 1. Group 2 did not differ significantly from Group 1.

Age–ProQOL STS

A one-way between-groups ANOVA was conducted to explore the impact of age on secondary traumatic stress, as measured by the ProQOL STS scale. Participants were divided into four groups according to their age (Group 1: 18 to 30; Group 2: 31-40; Group 3: 41-50; Group 4: 51 and above). There was a statistically significant difference at the $p < .05$ level in STS scores for the four age groups: $F (3, 1093) = 13.04$, $p = .001$. The effect size, calculated using eta squared, was .04. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 4 ($M = 47.87$, $SD = 9.17$) was statistically different from all other groups: Group 1 ($M = 52.74$, $SD = 9.90$), Group 2 ($M = 51.92$, $SD = 10.38$), and Group 3 ($M = 49.92$, $SD = 10.15$). Group 3 did not differ significantly from either Group 2 or Group 1. Group 2 did not differ significantly from Group 1. These findings were similar to the STSS. (Table 4.22)

Table 4.22

ANOVA–Age and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	1552.980	3	517.660	18.373	< .001
	Within Groups	31725.130	1126	28.175		
	Total	33278.110	1129			
STSS Total Score	Between Groups	4122.684	3	1374.228	13.126	< .001
	Within Groups	117678.761	1124	104.696		
	Total	121801.446	1127			
Tscore ProQOL CS	Between Groups	6265.459	3	2088.486	22.101	< .001
	Within Groups	102434.541	1084	94.497		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	4643.569	3	1547.856	16.119	< .001
	Within Groups	105056.431	1094	96.030		
	Total	109700.000	1097			

Tscore ProQOL STS	Between Groups	3786.077	3	1262.026	13.037	< .001
	Within Groups	105513.923	1090	96.802		
	Total	109300.000	1093			

The findings showed that nurses in higher age groups had less effects from STS and BO, higher mean scores on the STSE scale (which measures the ability to cope), and higher mean scores for CS. This may be due to more experience of this group in caring for patients and families experiencing a perinatal loss and their growth as a nurse, which aligns with Bandura's theory of self-efficacy.

Certification

The demographic characteristic of nurses who have certification in an obstetric specialty demonstrated statistical significance with the ability to cope and CS. STS and BO did not demonstrate statistical significance with certification.

Certification–STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have certification in an obstetrical specialty on the ability to cope, as measured by the STSE scale. Participants were divided into two groups according to being certified or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for certification: $F(1, 1129) = 5.29$, $p = .02$. The effect size, calculated using eta squared, was .01. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small: Group 1 ($M = 41.69$, $SD = 5.38$), Group 2 ($M = 40.81$, $SD = 5.55$).

Certification–CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have certification in an obstetrical specialty on CS, as measured by the ProQOL CS subscale. Participants were divided into two groups according to being certified or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for certification: $F(1, 1087) = 8.00$, $p = .005$. The effect size, calculated using eta squared, was .01. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small: Group 1 ($M = 50.48$, $SD = 9.81$), Group 2 ($M = 48.47$, $SD = 10.47$). (Table 4.23)

Table 4.23

ANOVA–Obstetric Specialty Certification and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	155.447	1	155.447	5.294	.022
	Within Groups	33122.663	1128	29.364		
	Total	33278.110	1129			
STSS Total Score	Between Groups	51.861	1	51.861	.480	.489
	Within Groups	121749.585	1126	108.126		
	Total	121801.446	1127			
Tscore ProQOL CS	Between Groups	795.325	1	795.325	8.004	.005
	Within Groups	107904.675	1086	99.360		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	33.635	1	33.635	.336	.562
	Within Groups	109666.365	1096	100.061		
	Total	109700.000	1097			
Tscore ProQOL STS	Between Groups	24.323	1	24.323	.243	.622
	Within Groups	109275.677	1092	100.069		
	Total	109300.000	1093			

Nurses who have certification in an obstetric specialty had a positive relationship with the ability to cope and CS by evidence of both mean scores being higher for nurses with certification. Certification in a nursing specialty is a rigorous process that necessitates both experience and knowledge in the specialty. There was no statistical difference for STSS, STS, or BO.

Magnet Hospital

The demographic characteristic of nurses who have worked in obstetrics at a Magnet-recognized hospital demonstrated statistical significance with the ability to cope. STS in either scale, CS, and BO did not demonstrate statistical significance.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have worked in obstetrics at a Magnet-recognized hospital on the ability to cope, as measured by the STSE scale. Participants were divided into two groups according to working in a Magnet hospital or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for working in a Magnet hospital: $F(1, 1127) = 5.01$, $p = .03$. The effect size, calculated using eta squared, was .00. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small: Group 1 ($M = 41.83$, $SD = 5.12$), Group 2 ($M = 41.11$, $SD = 5.76$). (Table 4.24)

Table 4.24

ANOVA–Magnet Hospital and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale,

ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	147.333	1	147.333	5.011	.025
	Within Groups	33108.020	1126	29.403		
	Total	33255.354	1127			
STSS Total Score	Between Groups	2.598	1	2.598	.024	.877
	Within Groups	121688.028	1124	108.263		
	Total	121690.626	1125			
Tscore ProQOL CS	Between Groups	4.196	1	4.196	.042	.838
	Within Groups	108670.967	1084	100.250		
	Total	108675.164	1085			
Tscore ProQOL BO	Between Groups	2.648	1	2.648	.026	.871
	Within Groups	109509.670	1094	100.100		
	Total	109512.318	1095			
Tscore ProQOL STS	Between Groups	22.677	1	22.677	.227	.634
	Within Groups	109135.106	1091	100.032		
	Total	109157.783	1092			

Perinatal Bereavement Course

The demographic characteristic of nurses who have taken a formal perinatal bereavement

course demonstrated statistical significance with the ability to cope, CS, and BO. STS did not

demonstrate statistical significance.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses who

have taken a formal perinatal bereavement course on the ability to cope, as measured by the

STSE scale. Participants were divided into two groups according to whether they have taken a formal perinatal bereavement course or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for having taken a formal perinatal bereavement course: $F(1, 1129) = 12.17$, $p = .001$. The effect size, calculated using eta squared, was .01: Group 1 ($M = 42.09$, $SD = 5.22$), Group 2 ($M = 40.97$, $SD = 5.56$). (Table 4.25)

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have taken a formal perinatal bereavement course on CS, as measured by the ProQOL CS subscale. Participants were divided into two groups according to whether they have taken a formal perinatal bereavement course or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for having taken a formal perinatal bereavement course: $F(1, 1087) = 11.79$, $p = .001$. The effect size, calculated using eta squared, was .01. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small: Group 1 ($M = 51.13$, $SD = 9.62$), Group 2 ($M = 49.05$, $SD = 10.22$). (Table 4.25)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have taken a formal perinatal bereavement course on BO, as measured by the ProQOL BO subscale. Participants were divided into two groups according to whether they have taken a formal perinatal bereavement course or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in BO scores for having taken a formal perinatal bereavement course: $F(1, 1097) = 3.95$, $p = .05$. The effect size, calculated using eta

squared, was .00. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small: Group 1 ($M = 49.35$, $SD = 9.76$), Group 2 ($M = 50.56$, $SD = 10.17$). (Table 4.25)

Table 4.25

ANOVA–Perinatal Bereavement Course and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	355.095	1	355.095	12.166	.001
	Within Groups	32923.015	1128	29.187		
	Total	33278.110	1129			
STSS Total Score	Between Groups	217.758	1	217.758	2.017	.156
	Within Groups	121583.688	1126	107.978		
	Total	121801.446	1127			
Tscore ProQOL CS	Between Groups	1167.097	1	1167.097	11.787	.001
	Within Groups	107532.903	1086	99.017		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	394.239	1	394.239	3.953	.047
	Within Groups	109305.761	1096	99.732		
	Total	109700.000	1097			
Tscore ProQOL STS	Between Groups	135.123	1	135.123	1.352	.245
	Within Groups	109164.877	1092	99.968		
	Total	109300.000	1093			

Obstetrical nurses who have taken a formal perinatal bereavement course have higher mean scores for the ability to cope and CS while having a lower mean score for BO.

Level of Education

The demographic characteristic of nurses' level of education was discussed in Question 4 and demonstrated statistical significance with the ability to cope. Further analyses with the Pro QOL STS, CO, and BO did not demonstrate statistical significance.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of the level of education on the ability to cope, as measured by the STSE Scale. Participants were divided into five groups according to their level of education (Group 1: Diploma; Group 2: Associate's; Group 3: Bachelor's; Group 4: Master's; Group 5: Doctoral). There was a statistically significant difference at the $p < .05$ level in STSE scores for the five level of education groups: $F(4, 1125)$ $= 2.39$, $p = .05$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .01. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 2 ($M = 40.29$, SD $= 6.98$) was statistically different from Group 4 ($M = 41.96$, $SD = 5.65$). Group 1 did not differ from Group 2, 3, 4, or 5. Group 2 did not differ from Group 3 or 5. Group 3 did not differ from Group 4 or 5. Group 4 did not differ from Group 5. (Table 4.26)

Table 4.26

ANOVA–Level of Education and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	281.011	4	70.253	2.390	.049
	Within Groups	32947.742	1121	29.391		
	Total	33228.753	1125			

STSS Total Score	Between Groups	188.286	4	47.071	.434	.784
	Within Groups	121336.319	1119	108.433		
	Total	121524.605	1123			
Tscore ProQOL CS	Between Groups	741.917	4	185.479	1.856	.116
	Within Groups	107832.435	1079	99.937		
	Total	108574.353	1083			
Tscore ProQOL BO	Between Groups	525.043	4	131.261	1.312	.264
	Within Groups	108962.402	1089	100.057		
	Total	109487.445	1093			
Tscore ProQOL STS	Between Groups	233.302	4	58.325	.581	.676
	Within Groups	108948.744	1086	100.321		
	Total	109182.046	1090			

Those with a master's degree had a statistically significant difference in mean scores for the ability to cope than those with an associate's degree. The level of education did not demonstrate an impact in the relationship with STS, CS, BO, or the ability to cope.

Protocol

The demographic characteristic of nurses who have a protocol to follow at their institution to care for patients and families experiencing a perinatal loss demonstrated statistical significance with CS and BO. STS and the ability to cope did not demonstrate statistical significance.

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have a protocol to follow at their institution to care for patients and families experiencing a perinatal loss on CS, as measured by the ProQOL CS subscale. Participants were divided into two groups according to having a protocol or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for having a protocol: F (1,

1087) = 4.93, *p* = .03. The effect size, calculated using eta squared, was .01: Group 1 (*M* = 50.21,

SD = 9.97), Group 2 (*M* = 47.80, *SD* = 10.10). (Table 4.27)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses who

have a protocol to follow at their institution to care for patients and families experiencing a

perinatal loss on BO, as measured by the ProQOL BO subscale. Participants were divided into

two groups according to having a protocol or not (Group 1: Yes; Group 2: No). There was a

statistically significant difference at the *p* < .05 level in BO scores for having a protocol: *F* (1,

1097) = 4.77, *p* = .03. The effect size, calculated using eta squared, was .00: Group 1 (*M* = 49.80,

SD = 10.00), Group 2 (*M* = 52.20, *SD* = 9.75). (Table 4.27)

Table 4.27

ANOVA–Perinatal Loss Protocol and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress

Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	5.364	1	5.364	.182	.670
	Within Groups	33272.746	1128	29.497		
	Total	33278.110	1129			
STSS Total Score	Between Groups	228.822	1	228.822	2.119	.146
	Within Groups	121572.624	1126	107.969		
	Total	121801.446	1127			
Tscore ProQOL CS	Between Groups	491.348	1	491.348	4.931	.027
	Within Groups	108208.652	1086	99.640		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	474.993	1	474.993	4.766	.029
	Within Groups	109225.007	1096	99.658		
	Total	109700.000	1097			
	Between Groups	.879	1	.879	.009	.925

Tscore ProQOL STS	Within Groups	109299.121	1092	100.091
	Total	109300.000	1093	

Having a protocol for obstetrical nurses to follow when caring for patients and families experiencing a perinatal loss demonstrated higher mean scores for CS and lower mean scores for BO in this study group. There was no relationship found for STS or the ability to cope with having a protocol to follow.

Personal Loss

The demographic characteristic of nurses who have personally experienced a perinatal loss demonstrated statistical significance with CS and BO. STS and the ability to cope did not demonstrate statistical significance.

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have personally experienced a perinatal loss on CS, as measured by the ProQOL CS subscale. Participants were divided into two groups according to having personally experienced a perinatal loss or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the p < .05 level in CS scores for personal perinatal loss: $F(1, 1085) = 6.39$, $p = .01$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .01: Group 1 ($M = 51.10$, $SD = 9.70$), Group 2 ($M = 49.47$, $SD = 10.11$). (Table 4.28)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses who have personally experienced a perinatal loss on BO, as measured by the ProQOL BO subscale. Participants were divided into two groups according to having personally experienced a perinatal loss or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the p < .05 level in BO scores for personal perinatal loss: F (1, 1095) = 4.60, p = .03. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .00: Group 1 (M = 49.08, SD = 9.47), Group 2 (M = 50.45, SD = 10.24). (Table 4.28)

Table 4.28

ANOVA–Personal Perinatal Loss and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	11.141	1	11.141	.377	.539
	Within Groups	33258.305	1126	29.537		
	Total	33269.446	1127			
STSS Total Score	Between Groups	5.218	1	5.218	.048	.826
	Within Groups	121785.884	1124	108.350		
	Total	121791.102	1125			
Tscore ProQOL CS	Between Groups	636.767	1	636.767	6.393	.012
	Within Groups	107970.668	1084	99.604		
	Total	108607.435	1085			
Tscore ProQOL BO	Between Groups	459.250	1	459.250	4.602	.032
	Within Groups	109184.636	1094	99.803		
	Total	109643.885	1095			
Tscore ProQOL STS	Between Groups	74.714	1	74.714	.747	.388
	Within Groups	109181.093	1091	100.074		
	Total	109255.807	1092			

Nurses who have personally had a perinatal loss had higher mean scores for CS and lower mean scores for BO, which were statistically significant in the population in this study. STS and the ability to cope did not have statistical significance in this population.

Parent

The demographic characteristic of nurses who are a parent demonstrated statistical significance with the ability to cope, STS, CS, and BO.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of being a parent on the ability to cope, as measured by the STSE scale. Participants were divided into two groups according to being a parent or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for being a parent: $F(1, 1126) = 21.76$, $p = .001$. The effect size, calculated using eta squared, was .02: Group 1 ($M = 41.86$, $SD = 5.21$), Group 2 ($M = 39.97$, $SD = 5.63$). (Table 4.29)

STSS

A one-way between-groups ANOVA was conducted to explore the impact of being a parent on STS, as measured by the STSS scale. Participants were divided into two groups according to being a parent or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSS scores for being a parent: $F(1, 1125) = 10.70$, $p = .001$. The effect size, calculated using eta squared, was .01: Group 1 ($M = 33.78$, $SD = 10.35$), Group 2 ($M = 36.38$, $SD = 10.40$). (Table 4.29)

CS

A one-way between-groups ANOVA was conducted to explore the impact of being a parent on CS, as measured by the ProQOL subscale. Participants were divided into two groups according to being a parent or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for being a parent: $F (1, 1084) = 18.08$, $p = .001$. The effect size, calculated using eta squared, was .02: Group 1 ($M = 50.62$, $SD = 9.79$), Group 2 ($M = 47.34$, $SD = 10.42$). (Table 4.29)

BO

A one-way between-groups ANOVA was conducted to explore the impact of being a parent on BO, as measured by the ProQOL subscale. Participants were divided into two groups according to being a parent or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in BO scores for being a parent: $F (1, 1095) = 24.44$, $p = .001$. The effect size, calculated using eta squared, was .02: Group 1 ($M = 49.30$, $SD = 9.83$), Group 2 ($M = 53.08$, $SD = 10.17$). (Table 4.29)

STS

A one-way between-groups ANOVA was conducted to explore the impact of being a parent on STS, as measured by the ProQOL subscale. Participants were divided into two groups according to being a parent or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STS scores for being a parent: $F (1, 1091) = 24.44$, $p = .001$. The effect size, calculated using eta squared, was .01: Group 1 ($M = 49.45$, $SD = 9.91$), Group 2 ($M = 52.35$, $SD = 10.07$). (Table 4.29)

Table 4.29

ANOVA- Being a Parent and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale,

ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	610.459	1	610.459	21.775	.000
	Within Groups	31539.078	1125	28.035		
	Total	32149.537	1126			
STSS Total Score	Between Groups	1148.055	1	1148.055	10.703	.001
	Within Groups	120566.482	1124	107.266		
	Total	121714.537	1125			
Tscore ProQOL CS	Between Groups	1776.276	1	1776.276	18.079	.000
	Within Groups	106406.296	1083	98.251		
	Total	108182.572	1084			
Tscore ProQOL BO	Between Groups	2394.266	1	2394.266	24.440	.000
	Within Groups	107173.022	1094	97.964		
	Total	109567.288	1095			
Tscore ProQOL STS	Between Groups	1394.428	1	1394.428	14.113	.000
	Within Groups	107694.552	1090	98.802		
	Total	109088.980	1091			

The findings show that nurses who are parents had lower mean scores of STS and BO, while demonstrating higher mean scores on the STSE scale measuring the ability to cope and higher mean scores for CS. This may be due to the experience of being parents and growing in the parental role positively influencing nurses when providing care for patients and families experiencing a perinatal loss.

Religious

The demographic characteristic of nurses' self-description of how religious they consider themselves demonstrated statistical significance with the ability to cope, STS as measured by the STSS, CS, and BO. The ProQOL subscale of STS did not demonstrate statistical significance.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how religious they consider themselves on the ability to cope, as measured by the STSE scale. Participants were divided into four groups according to their self-description of how religious they consider themselves (Group 1: I am very religious; Group 2: I am somewhat religious; Group 3: I am not at all religious; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in STSE scores for how religious nurses described themselves: $F(3, 1129) = 5.31$, $p = .001$. The effect size, calculated using eta squared, was .01. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 42.57$, $SD = 5.05$) was significantly different from Group 2 ($M = 41.14$, $SD = 5.60$), and Group 3 ($M = 40.98$, $SD = 5.22$). Group 2 did not differ significantly from Group 3 or Group 4 ($M = 41.78$, $SD = 5.86$). Group 4 did not differ significantly from any other group. Those that identify as very religious had a statistically significant difference than those that identify as somewhat or not at all religious. (Table 4.30)

STSS

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how religious they consider themselves on STS, as measured by the STSS scale. Participants were divided into four groups (Group 1: I am very religious; Group 2: I am

somewhat religious; Group 3: I am not at all religious; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in STS scores for how religious nurses described themselves: $F(3, 1127) = 3.20$, $p = .02$. The effect size, calculated using eta squared, was .01. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 2 ($M = 34.85$, $SD = 10.31$) was significantly different from Group 4 ($M = 30.33$, $SD = 10.18$). Group 1 ($M = 33.42$, $SD = 10.72$) did not differ significantly from Group 2, Group 3 ($M = 34.56$, $SD = 10.11$), or Group 4. Group 2 did not differ significantly from Group 3, and Group 3 did not differ significantly from Group 4. Those that identify as somewhat religious had a statistically significant difference than those that identify as prefer not to say. (Table 4.30)

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how religious they consider themselves on CS, as measured by the ProQOL CS subscale. Participants were divided into four groups (Group 1: I am very religious; Group 2: I am somewhat religious; Group 3: I am not at all religious; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in CS scores for how religious nurses described themselves: $F(3, 1087) = 3.13$, $p = .02$. The effect size, calculated using eta squared, was .01. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 51.50$, $SD = 9.97$) was significantly different from Group 3 ($M = 48.88$, $SD = 10.26$). Group 1 did not differ significantly from Group 2 ($M = 49.69$, $SD = 9.83$) or Group 4 ($M = 51.00$, $SD = 10.11$). Group 2 did not differ significantly from Group 3 or Group 4. Group 3 did not differ significantly from Group 4. Those that identify as very religious had a statistically significant difference than those that identify as not religious at all. (Table 4.30)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how religious they consider themselves on BO, as measured by the ProQOL BO subscale. Participants were divided into four groups according to their self-description of how religious they consider themselves (Group 1: I am very religious; Group 2: I am somewhat religious; Group 3: I am not at all religious; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in BO scores for how religious nurses described themselves: $F (3, 1097) = 12.84$, $p = .001$. The effect size, calculated using eta squared, was .03. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 47.22$, $SD = 9.74$) was significantly different from Group 2 ($M = 50.41$, $SD = 9.81$) and Group 3 ($M = 52.50$, $SD = 9.95$). Group 2 was statistically different from Group 3. Group 4 ($M = 48.44$, $SD = 10.35$) did not differ significantly from Group 1, Group 2, or Group 3. Those that identify as very religious had a statistically significant difference than those that identify as somewhat or not at all religious. (Table 4.30)

Table 4.30

ANOVA–How Religious and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	464.287	3	154.762	5.311	.001
	Within Groups	32813.823	1126	29.142		
	Total	33278.110	1129			
STSS Total Score	Between Groups	1033.854	3	344.618	3.207	.022
	Within Groups	120767.592	1124	107.444		
	Total	121801.446	1127			
	Between Groups	987.613	3	329.204	3.313	.019

Tscore ProQOL CS	Within Groups	107712.387	1084	99.366		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	3731.270	3	1243.757	12.840	.000
	Within Groups	105968.730	1094	96.864		
	Total	109700.000	1097			
Tscore ProQOL STS	Between Groups	761.966	3	253.989	2.551	.054
	Within Groups	108538.034	1090	99.576		
	Total	109300.000	1093			

The percentage of obstetric nurses who identified themselves as somewhat religious made up 50.6% of the respondents to the question of how religious they felt they are. Only 3.6% preferred not to say while those that stated very religious made up 24.7% and those that stated not at all religious were 21.1% of respondents. The findings showed that nurses who consider themselves very religious have higher mean scores than those who consider themselves somewhat or not at all religious, with the ability to cope when caring for patients and families experiencing a perinatal loss. Those that are somewhat religious demonstrated higher mean scores for STS as measured by the STSS than those of any other group. Those that prefer not to say had the lowest STSS mean scores. There were higher mean scores for CS for those that are very religious than those who are not at all religious. BO was noted to have lower mean scores for those who identified as very religious as opposed to those who identified as somewhat or not at all religious.

Spiritual

The demographic characteristic of nurses' self-description of how spiritual they consider themselves demonstrated statistical significance with the ability to cope, CS, and BO. STS did not demonstrate statistical significance on either scale used.

STSE

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how spiritual they consider themselves on the ability to cope, as measured by the STSE scale. Participants were divided into four groups according to their self-description of how spiritual they consider themselves (Group 1: I am very spiritual; Group 2: I am somewhat spiritual; Group 3: I am not at all spiritual; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in STSE scores for how spiritual nurses described themselves: $F (3, 1129) = 8.19$, $p = .001$. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 42.18$, $SD = 5.34$) was significantly different from Group 2 ($M = 40.80$, $SD = 5.44$). Group 2 was significantly different from Group 4 ($M = 44.93$, $SD = 3.33$). Group 3 ($M = 40.81$, $SD = 5.55$) was significantly different from Group 4. Group 1 did not differ significantly from Group 3 or Group 4. Group 2 did not differ significantly from Group 3. (Table 4.31)

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how spiritual they consider themselves on CS, as measured by the ProQOL CS scale. Participants were divided into four groups according to their self-description of how spiritual they consider themselves (Group 1: I am very spiritual; Group 2: I am somewhat spiritual; Group 3: I am not at all spiritual; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in CS scores for how spiritual nurses described themselves: $F (3, 1087) = 8.75$, $p = .001$. The effect size, calculated using eta squared, was .00. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 51.63$, $SD = 9.56$) was significantly different from Group 2 ($M = 48.79$, $SD = 9.94$) and Group 3

(M = 47.00, SD = 12.25). Group 1 did not differ significantly from Group 4 (M = 50.85, SD = 9.32). Group 2 did not differ significantly from Group 3 or Group 4. Group 3 did not differ significantly from Group 4. (Table 4.31)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses' self-description of how spiritual they consider themselves on BO as measured by the ProQOL BO subscale. Participants were divided into four groups according to their self-description of how spiritual they consider themselves (Group 1: I am very spiritual; Group 2: I am somewhat spiritual; Group 3: I am not at all spiritual; Group 4: Prefer not to say). There was a statistically significant difference at the $p < .05$ level in BO scores for how spiritual nurses described themselves: F (3, 1097) = 14.44, p = .001. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M = 48.22, SD = 10.02) was significantly different from Group 2 (M = 51.22, SD = 9.53) and Group 3 (M = 55.37, SD = 10.84). Group 2 was significantly different from Group 3. Group 4 (M = 45.82, SD = 9.90) was significantly different from Group 3. (Table 4.31)

Table 4.31

ANOVA–How Spiritual and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	710.320	3	236.773	8.186	< .001
	Within Groups	32567.790	1126	28.923		
	Total	33278.110	1129			
STSS Total Score	Between Groups	65.312	3	21.771	.201	.896
	Within Groups	121736.134	1124	108.306		

	Total	121801.446	1127			
Tscore ProQOL CS	Between Groups	2570.587	3	856.862	8.752	< .001
	Within Groups	106129.413	1084	97.905		
	Total	108700.000	1087			
Tscore ProQOL BO	Between Groups	4177.989	3	1392.663	14.438	< .001
	Within Groups	105522.011	1094	96.455		
	Total	109700.000	1097			
Tscore ProQOL STS	Between Groups	510.195	3	170.065	1.704	.164
	Within Groups	108789.805	1090	99.807		
	Total	109300.000	1093			

The percentage of obstetric nurses who identified themselves as very spiritual made up 45% of the respondents to the question of how religious they felt they are. Those who identified as somewhat spiritual represented 49% of respondents while 4.8% responded not at all spiritual and 1.4% preferred not to say. The findings showed that nurses who consider themselves very spiritual have higher mean scores than those who consider themselves somewhat spiritual with the ability to cope. Those that preferred not to say ($N = 15$ of 1,129 participants) had higher mean scores than those who responded very, somewhat, or not at all spiritual with the ability to cope when caring for patients and families experiencing a perinatal loss. There were higher mean scores for CS for those that are very spiritual than those who are somewhat, not at all spiritual, or preferred not to say. BO was noted to have lower mean scores for those who identified as very spiritual as opposed to those who identified as somewhat or not at all religious. Those who preferred not to say demonstrated the lowest mean score for BO but was not statistically significant.

Religious or Spiritual Beliefs Supportive

The demographic characteristic of nurses who find their religious and spiritual beliefs supportive demonstrated statistical significance with the ability to cope, CS, BO, and STS. The STSS did not demonstrate statistical significance with participants' religious or spiritual beliefs being supportive or not.

STSE

A one-way between groups ANOVA was conducted to explore the impact of nurses who find their religious and spiritual beliefs supportive on the ability to cope, as measured by the STSE. Participants were divided into two groups according to finding their religious or spiritual beliefs supportive or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for finding religious or spiritual beliefs supportive: $F(1, 1127) = 5.38$, $p = .02$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using the eta squared, was .01. The mean score for Group 1 ($M = 41.63$, $SD = 5.33$) was significantly different from Group 2 ($M = 40.42$, $SD = 5.66$). (Table 4.32)

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who find their religious and spiritual beliefs supportive on the ability to cope, as measured by the ProQOL CS subscale. Participants were divided into two groups according to finding their religious or spiritual beliefs supportive or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for finding religious or spiritual beliefs supportive: $F(1, 1085) = 6.07$, $p = .01$. The effect size, calculated using eta

squared, was .01. Group 1 ($M = 50.27$, $SD = 9.82$) was significantly different from Group 2 ($M = 47.89$, $SD = 11.00$). (Table 4.32)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses who find their religious and spiritual beliefs supportive on BO, as measured by the ProQOL BO subscale. Participants were divided into two groups according to finding their religious or spiritual beliefs supportive or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in BO scores for finding religious or spiritual beliefs supportive: $F (1, 1095) = 7.94$, $p = .01$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .01. Group 1 ($M = 49.70$, $SD = 9.95$) was significantly different from Group 2 ($M = 52.45$, $SD = 10.14$). (Table 4.32)

STS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who find their religious and spiritual beliefs supportive on STS, as measured by the ProQOL STS subscale. Participants were divided into two groups according to finding their religious or spiritual beliefs supportive or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STS scores for finding religious or spiritual beliefs supportive: $F (1, 1091) = 4.39$, $p = .04$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .00. Group 1 ($M = 50.21$, $SD = 10.05$) was significantly different from Group 2 ($M = 48.16$, $SD = 9.39$). (Table 4.32)

Table 4.32

ANOVA–Religious and Spiritual Beliefs Supportive and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	*df*	Mean Square	*F*	Sig.
STSE Total Score	Between Groups	155.123	1	155.123	5.382	.021
	Within Groups	32452.877	1126	28.821		
	Total	32608.000	1127			
STSS Total Score	Between Groups	85.998	1	85.998	.794	.373
	Within Groups	121701.004	1124	108.275		
	Total	121787.002	1125			
Tscore ProQOL CS	Between Groups	601.749	1	601.749	6.071	.014
	Within Groups	107442.842	1084	99.117		
	Total	108044.591	1085			
Tscore ProQOL BO	Between Groups	788.787	1	788.787	7.937	.005
	Within Groups	108724.084	1094	99.382		
	Total	109512.871	1095			
Tscore ProQOL STS	Between Groups	437.233	1	437.233	4.387	.036
	Within Groups	108630.898	1090	99.661		
	Total	109068.131	1091			

The findings show that nurses who find their religious and spiritual beliefs supportive had higher mean scores for the ability to cope and higher mean scores for CS while having lower mean scores for BO. The mean scores for STS on the ProQOL subscale were higher for those that find their religious and spiritual beliefs supportive while those that do not find religious or spiritual supportive with lower mean scores. Even though nurses had higher mean scores for STS, they also had higher mean scores for the ability to cope and CS, which may mitigate the effects of STS.

Ability to Share Loss Experience

The demographic characteristic of nurses who are able to share a work-related experience of perinatal loss with others was discussed in Question 4 for STSS and STSE and demonstrated statistical significance with the ability to cope. Further analyses with the ProQOL demonstrated statistical significance CS and BO. STS did not demonstrate statistical significance with participants who are able to share a work-related experience of perinatal loss with others or not.

STSE

A one-way between groups ANOVA was conducted to explore the impact of nurses who are able to share a work-related experience of perinatal loss with others on the ability to cope, as measured by the STSE. Participants were divided into two groups according to being able to share a work-related experience of perinatal loss with others or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in STSE scores for being able to share a work-related experience of perinatal loss with others: $F(1, 1127) = 8.23$, $p = .004$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using the eta squared was .01. The mean score for Group 1 ($M = 41.67$, $SD = 5.40$) was significantly different from Group 2 ($M = 40.34$, $SD = 5.48$). (Table 4.33)

CS

A one-way between-groups ANOVA was conducted to explore the impact of nurses who are able to share a work-related experience of perinatal loss with others on the ability to cope, as measured by the ProQOL CS subscale. Participants were divided into two groups according to being able to share a work-related experience of perinatal loss with others or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in CS scores for

finding religious or spiritual beliefs supportive: $F(1, 1085) = 6.07$, $p = .01$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .01. Group 1 ($M = 50.27$, $SD = 9.82$) was significantly different from Group 2 ($M = 47.89$, $SD = 11.00$). (Table 4.33)

BO

A one-way between-groups ANOVA was conducted to explore the impact of nurses who are able to share a work-related experience of perinatal loss with others on BO, as measured by the ProQOL BO subscale. Participants were divided into two groups according to being able to share a work-related experience of perinatal loss with others or not (Group 1: Yes; Group 2: No). There was a statistically significant difference at the $p < .05$ level in BO scores for being able to share a work-related experience of perinatal loss with others: $F(1, 1095) = 6.42$, $p = .01$. Despite reaching statistical significance, the actual difference in mean scores between groups was quite small. The effect size, calculated using eta squared, was .01. Group 1 ($M = 49.68$, $SD = 9.96$) was significantly different from Group 2 ($M = 51.91$, $SD = 10.06$). (Table 4.33)

Table 4.33

ANOVA–Ability to Share and Secondary Trauma Self-Efficacy, Secondary Traumatic Stress Scale, ProQOL CS, BO, and STS Scores

		Sum of Squares	df	Mean Square	F	Sig.
STSE Total Score	Between Groups	240.836	1	240.836	8.219	.004
	Within Groups	32994.964	1126	29.303		
	Total	33235.801	1127			
STSS Total Score	Between Groups	78.225	1	78.225	.723	.395
	Within Groups	121663.963	1124	108.242		
	Total	121742.188	1125			
Tscore ProQOL CS	Between Groups	1321.955	1	1321.955	13.385	<.001

	Within Groups	107063.112	1084	98.767		
	Total	108385.068	1085			
Tscore ProQOL BO	Between Groups	638.393	1	638.393	6.422	.011
	Within Groups	108745.102	1094	99.401		
	Total	109383.495	1095			
Tscore ProQOL STS	Between Groups	1.376	1	1.376	.014	.907
	Within Groups	109268.057	1090	100.246		
	Total	109269.433	1091			

Nurses who are able to share had higher mean scores for the ability to cope and CS, while having lower mean scores for BO. This demonstrates that the ability to share perinatal loss experience can decrease feelings of BO and positively affect coping and CS.

Open-Ended Question Analysis

The qualitative section presented three open-ended questions with comment boxes embedded in the survey to collect information from participants. Participants were asked to share their experiences caring for patients and families with perinatal loss, have participants describe the support they receive (if any) while caring for patients and families experiencing a perinatal loss (from their organization, peers, or those outside of work), and for participants to describe what helps them cope during or after caring for a patient and their family experiencing a perinatal loss. Preliminary analyses of the qualitative data obtained in this study through the narrative questions were done with some examples as reported here. These examples provide some contextualization relating to the quantitative findings reported above.

Qualitative Question 1: What do you want to share about your experience caring for patients and families with perinatal loss?

This question allowed the participants to share their experiences caring for patients and families with perinatal loss. The responses included sharing actual experiences with patients and

families, how it made them feel, and what they think may assist them. Some of the responses

discussed a few of the variables in the study. There were many responses that referred to both

positive (CS, ability to cope) and negative (STS, BO) that obstetrical nurses feel when caring for

patients and families experiencing a perinatal loss.

Compassion Satisfaction/Ability to Cope

The words of the study participants are very powerful in their descriptions of their

experiences. Some responses that demonstrate CS and the ability to cope included,

> I can make a difference, I feel supported and prepared to care for these patients, thanks to
>
> my coworkers, though it is sad, I am grateful I can be there to hold their hands, give them
>
> hugs and help them process their grief and loss. It is difficult but rewarding work. It is
>
> stressful, emotional, yet can be such a privilege to be with a family during this terrible
>
> time, and I love the work we do with our perinatal loss patients.

Secondary Traumatic Stress/Burnout

Some responses that demonstrated STS or BO included:

> I avoid looking at deceased babies. I find it heartbreaking. I feel I lacked resources and
>
> time to appropriately care for families experiencing loss. After the delivery occurred, I
>
> was expected to take a full load of clients. I carry it with me; I found that I was anxious to
>
> go to work after shifts where I cared for patients that had experienced a demise, and I had
>
> two back-to-back patients with perinatal loss. They were so traumatic that I left OB for 4
>
> years to heal.

A few study variables mentioned specifically in this question included nurses' experience, perinatal bereavement course, protocol, parent, and personal loss.

Nurses' Experience:

I always am conflicted when I get assigned patients with a loss. It's a lot of work both physically and emotionally and sometimes I feel uncomfortable, but through the years, I have become more confident. Fulfilling…however, initially I was frightened. Caring for patients and their families with perinatal loss is difficult and took many years of experience for me to become comfortable with it…and never get used to it, but can become more comfortable. I find openly grieving with patients helpful to both.

Parent:

My experience with perinatal loss makes me appreciate my own kids more, and I became more understanding after having children—thus more compassionate.

Personal Loss:

I could never relate to them until 7 months ago when I had my first loss. I am able to convey more empathy because of that, and I lost two fetuses before I had my daughter. I could not comprehend why I lost my babies, and I wanted to quit OB nursing. My manager at the time would not let me quit. Slowly, I began to realize I suffered my losses so I would have the perspective to help other mothers get through their time of grief when they lost babies. I had extra skills in dealing with families experiencing perinatal loss because of what I went through.

Perinatal Bereavement Course:

I felt utterly unprepared as a new nurse. Utterly. Really let down by my education. I have

worked in four different institutions and all but this current location had a formal policy

and program for perinatal loss…important to have training and incorporate a

bereavement program into the care model at our individual organization. One of the

hospitals in which I worked has a very well-organized and supportive bereavement

program. It is supportive of both the caregiver and the client(s) and only that there should

be training. It should be mandatory. I really have no evidenced-based training on how to

support these patients. I actually try to avoid.

Qualitative Question 2: Describe the support you received (if any) while caring for a

patient and their family when they are experiencing a perinatal loss. Was the support from

the organization, peers, or outside of work?

Obstetric nurses were asked to describe the support they received when caring for a

patient and family experiencing a perinatal support and if that support was organizational, from

peers, or outside of work. The responses give insight on how and what nurses receive that make

them feel supported and how or what organizations may consider to develop to better support

obstetric nurses when caring for patients and families as well as themselves.

Organizational:

When reviewing responses from participants' view of organizational influence, the

following responses demonstrate both positive and negative viewpoints:

I will say it depends on the situation. I can say that an early loss was not viewed as a staff

burden, yet just part of the job. If the delivery was traumatic and the baby was full-term,

the organization was much more concerned and provided support if requested, debriefing as a group who cared for the patient, frequent debriefs as well as access to speak with our doctors freely about these situations. We also have our chaplain as a resource. From the organization, there's a lot of education around perinatal loss. I feel fortunate to have received great support over the years from the organization I worked for and from charge nurses and peers working with me. Each organization has been different, but at least they have all tried to provide me with the resources needed to give these patients the memories they deserve. I had a very difficult experience at work one day and it really bothered me. I broke down crying so hard for the parents, but I could not stop. My coworkers were so supportive and helped me get through the day. Our hospital has an

"Embrace Day" program for all staff members; if they have a traumatic delivery, they can take a day off with pay. I have worked at several hospitals of various sizes. At hospitals that took care of high-volume, high-risk patients, we also took care of more losses, and I think the social support at work was better. Management at these facilities and peers on that shift were good about supporting you through the actual work so you didn't feel alone and helping acknowledge the care and comfort you were able to provide to a family during a difficult time. At the smaller facilities I've been at, the losses were few and far between, so no one was particularly comfortable and taking care of those losses felt isolating. Disappointing that as soon as I was done with physical care and memory activities, I was assigned another labor and forced to be happy for the next couple. All because staffing was bad from the ones involved. Nothing from management. I do not receive any formal support from the institution I work for. I have my own network of coworker friends and my own therapist if needed. I think organizations could do better

with debriefing and following up on the bereavement nurse. My organization is very poor at providing meaningful support to nurses after a traumatic event. Peer-to-peer support is present but not well supported by the organization. Nurses are expected to deal with any traumatic situations and are often reminded of what they did wrong instead of receiving support or recognition for what was done well.

Peers

When reviewing responses from participants' view of peer support, the following responses demonstrated both positive and negative viewpoints:

The most important would-be peers, my peers would be there to help either pick up the slack or encourage me enough to continue. As a military nurse, I feel there was a deep camaraderie of the other nurses I worked with on labor and delivery. Military families have special needs—typically a spouse is deployed and mothers are dealing with a situation of perinatal loss without their spouse. This situation placed on military nurses was profoundly felt as we may have been the only supporter. I felt very supported by other team members on the unit and by the organization and the higher levels of the chain of command. Fellow nurses are very helpful. My support is primarily from my nursing peers...while my husband is supportive, I feel that the only people that truly understand are those that have walked the same journey. I did not have support whatsoever from my peers the first time I cared for a family experiencing a loss. I felt very alone and vulnerable. I try and support others now as much as possible. I did not feel very supported by my peers or charge nurse. Mostly I felt that I was on my own unless the unit had a low census of patients and therefore a surplus of nurses to help. I received no support when I have worked with families experiencing loss.

Outside of Work

When reviewing responses from participants' view of support outside of work, the following responses demonstrated both positive and negative viewpoints:

I feel like my faith helps me deal better with loss. There are some nurses who are supportive, but there is very little support offered within the organization I work. I find so much strength from my religion. I try and find something in common with my patient. My peers are always supportive. I get my support mainly from my family. My faith and my family support me. My husband allows me to talk about it in order to get it off my chest. Organization very unsupportive of nursing staff, some peers are helpful, but most are not, so my real support comes from family and friends outside of work. Outside of work, my clergy person, my spouse, my therapist, and getting to hug my own child. Outside work from my therapist and my wife and spiritual support and bonding with the family.

Qualitative Question 3: Describe what helps you cope during or after caring for a patient and their family experiencing a perinatal loss.

Participants were asked what helps them cope during or after caring for a patient and family experiencing a perinatal loss. Their responses were plentiful and covered a broad range of what might help an obstetrical nurse cope. The following are a few responses of the participants:

Based on my own experience of loss and how long ago it was, I have come to realize that what happens in life after the loss replaces the illusions of what life could have been had there been no loss. So, for me, generally I cope because I know in time, these families will not forget, but time will move them forward and they will still live and eventually

laugh, and maybe get a second shot at a family. We have no choice in the matter anyway. Sometimes I'm just too tired physically and emotionally to expend any hours after my shift dwelling on it. Sometimes I avoid taking these patients because there are days I just can't be that person they will need me to be and I don't want to do a half-ass job caring for them because they deserve so much more and better. I guess these are my coping mechanisms—being able to communicate feelings, and I usually try to work out or have a glass of wine and just decompress and reflect. Generally, say a prayer for the family, too—being able to debrief and share with those who know about perinatal loss, the support from my husband on a daily basis, being in the moment and trusting God's plan for each of our lives, caring for my own family, exercising/meditation helps for my own personal well-being. Having a debrief after an event helps with focusing on what we did and if we can do it better next time, crying on the way home from work, talking to other doc/nurse friends who understand, hugging my kids. I try to compartmentalize my work life from my personal life. I find that talking with peers about a situation is often most helpful as they can relate and share their own experiences. Knowing I am making a difference. My religion and faith. Writing in my journal. Prayer. Debriefing with coworkers. Family support at home. Being able to come home and hug my own children and support and love from colleagues, heartfelt conversations with my patient, and just being a good listener. I felt that the simple act of listening helps me cope knowing that my patient and I can have a therapeutic conversation about their loss and unique needs. Involving social workers and other perinatal loss specialists/nurses also helps me cope by taking some of the stress off of my duties as the primary caregiver.

Conclusion

The results of this study demonstrated relationships with obstetric nurses and the study variables of STS/CF, the ability to cope, BO, and CF. It is important to further examine findings for those who have higher negative effects such as BO and STS. The results of the STSS demonstrated that 30% of participants had moderate to severe STS. The results of the ProQOL STS demonstrated that 25% of participants had high STS. The results of ProQOL BO demonstrated that a little under 25% experienced higher BO. While these results are not representative of the majority of the participants, it is important to understand the negative effects of BO and STS for those that fall into more severe ranges.

Examining the inverse or negative relationships can help identify what may mitigate negative effects of BO and STS. This population of obstetrical nurses demonstrated that their ability to cope, as measured on the STSE scale, was high and their STS scores as measured by the STSS were lower. Higher levels of STSE demonstrated lower levels of BO. Studying the demographic characteristic of age further investigated the relationships between STSE, STS, CS, and BO, demonstrating that older nurses have lower negative effects of STS and BO and higher CS and STSE, while younger nurses have higher negative effects of STS and BO and lower CS and STSE. Years of experience as an obstetric nurse demonstrated that the more years a nurse worked, the lower their mean scores of STS and higher mean scores of STSE (ability to cope).

Relating the demographic characteristics to either the negative effects of BO and STS or the positive effects of CS and STSE can identify what can increase the positive effects of caring for patients and families experiencing a perinatal loss while identifying what may mitigate the negative effects. Certification in an obstetric specialty and having had a perinatal bereavement course demonstrated a positive relationship for STSE and CS. Having a protocol to follow when

caring for patients and families experiencing a perinatal loss demonstrated higher CS and lower BO mean scores. The participants who identified as being a parent had higher mean scores for the ability to cope and CF while having lower mean scores for STS (on either scale) and BO. Those that found their religious and spiritual beliefs supportive demonstrated higher mean scores for the ability to cope, CS, and interestingly STS (on the ProQOL scale) but lower mean scores for BO.

The responses to the open-ended questions allowed obstetric nurses to share their experience(s) of caring for patients and families experiencing a perinatal loss, describe support received, and describe what helps them cope. The experiences they shared vary and include both positive "sense of fulfillment, gratified with the ability to help, blessing, honor to care, training assisted tremendously" and negative "I carry it with me, lacked resource, unprepared as a new nurse, the ones that affect me the most are when we can't save the baby." Obstetric nurses described the support they received: peers at work, difficult if not impossible to talk to friends/family outside of work, bereavement training, I receive no significant support, group debriefing, organization provides Code Lavender, and spiritual support, and bonding with the family. What helps obstetric nurses cope include being supportive, being present, a good cry, debriefing, exercise, faith, prayer, and talking. The qualitative component of this study offered deeper insight to the quantitative findings by the depth of description provided by the participants about their experiences, support, and coping.

Chapter 5 DISCUSSION

The purpose of this study was to explore relationships between STS, STSE, and Quality of Life including CS and BO of obstetric nurses in caring for patients and families with perinatal loss. This study also described what nurses state help them cope and feel supported when caring for patients experiencing perinatal loss. A quantitative descriptive correlational design with an additional qualitative component was conducted so the researcher could examine the responses from the open-ended questions and provide some contextualization relating to the quantitative findings. Participants were asked to provide demographic information, complete three instrument scales on STS, STSE, ProQOL, and answer three open-ended questions on sharing their experience of caring for patients and families experiencing a perinatal loss, describe the support if any they received, and what helps them cope. Through this research, identification of what affects nurses' ability to cope with perinatal loss, as well as what supports are impactful can inform policy and practice recommendations to best support care practices for obstetric nurses.

The RAM (Roy, 2009) provided the theoretical framework for this study. Within the RAM framework, nurses are human systems that are in continuous interactions with perinatal patients and their families. The act of caring by an obstetric nurse for patients and families experiencing a perinatal loss represents the focal stimuli that can affect an obstetric nurse's regulator and cognator responses. The contextual stimuli of what is surrounding this event including the process of caring for bereaved parents and care of the demised infant can profoundly affect the focal stimulus. The responses can have both positive outcomes (CS and the ability to cope) and negative outcomes (STS/ CF and BO). A nurse's self-efficacy behaviors can affect the positive or negative output response from the experience of caring for these bereaved patients and families. The output response of obstetric nurses on their perceptions of physical or

emotional positive or negative coping responses and their perception of self-efficacy behaviors were studied to identify relationships to assist other obstetric nurses to cope when caring for patients and families experiencing a perinatal loss.

Participant Characteristics

Participants were recruited from the national professional nursing organization AWHONN. There were 1,178 participants included in the statistical analysis of this study. Participants were predominantly White (84.1%), female (99%), and married (71.9%). The largest grouping of participants was over age 51 (37.2%) followed by 31-40 (27.8%), and 41-50 (25.2%), and geographically lived in the South (35.7%) followed by the West (25.6%) and the Northeast (20.5%). Obstetric nurses in this study predominantly held a bachelor's degree (54.2%), followed by a master's (30.9%), have 11-20 years' experience as an obstetrical nurse (28.9%), followed by 21-30 years (18.2%), and cared for approximately 16-30 patients and families experiencing a prenatal loss (26.0%), followed by 6-15 (24.4%) losses and > 50 (24.4%) for others. Other characteristics include 54.4% have taken a perinatal bereavement course, 91.9% report having a protocol to follow involving caring for patients and families experiencing a perinatal loss, 75.9% have nursing certification in an obstetrical specialty, and 51.1% report working in a Magnet hospital while practicing obstetrics. It was reported that 33.3% of participants had a personal experience of their own perinatal loss, 81.2% are parents, 50.6% reported they were somewhat religious, 49% somewhat spiritual, 89.3% reported their religious or spiritual beliefs are supportive, and 85.8% of participants are able to share work-related experience of perinatal loss.

Synthesis of Findings

    Research Question 1: What is the incidence and severity of secondary traumatic stress in obstetric nurses due to perinatal loss?

    The findings of the incidence and severity of STS in obstetric nurses due to perinatal loss in this study were similar to the findings of Beck and Gable (2012) who studied labor and delivery nurses and traumatic birth. Their findings for incidence and severity demonstrated that 63% of their sample of labor and delivery nurses experienced little to mild STS while 35% experienced moderate to severe STS. The findings in this study demonstrates that 64% of the sample of obstetric nurses experienced little to mild STS while 35% experience moderate to severe STS. These findings, nine years apart, illustrate how there still needs to be interventions to help nurses deal with STS and research to further identify what can be done to reduce the severity for some nurses.

    Research Question 2: Is there a relationship between the scores on the STSE scale and the STSS among obstetric nurses?

    The findings in this study demonstrated a strong negative correlation between the scores. Higher scores on the STSE scale showing the ability to cope demonstrated an inverse relationship to the STSS showing STS. Obstetrical nurses who perceive themselves with the ability to cope measured by the STSE when caring for patients and families experiencing perinatal loss have lower STS symptoms when measured using the STSS. These findings demonstrate the importance of how hospitals and organizations need to support nurses in building resources to help them cope with the stressful experience of perinatal loss. A few of the demographic characteristics are further evaluated and discussed in Question 6 that identify what can foster coping among obstetric nurses when caring for perinatal loss and what can decrease

the effects of STS they may experience. Some open-ended responses that further support these findings include "being able to communicate, debrief, and talking to other doc/nurse friends who understand."

Research Question 3: What is the relationship between obstetric nurses who care for patients and families experiencing a perinatal loss and their ability to deal (cope) with thoughts or feelings (STSS Intrusion) that occur with this traumatic event?

This relationship also demonstrated a strong negative correlation between the ability to cope as measured by the STSE and thoughts and feelings as measured by the STSS subscale of Intrusion. This finding was not surprising, as Question 2 demonstrated the total STSS scale score negatively correlating with the ability to cope. The subscale of Avoidance demonstrated a higher mean score in this study as opposed to Beck and Gamble (2012) studying traumatic birth in which Arousal had the highest mean score. Further investigation in these subscales is recommended to see which one, if any, has the most negative impact on obstetric nurses caring for perinatal loss and what may mitigate any identified negative impacts.

Research Question 4: What are the relationships among nurses' experience, education, and ability to share with secondary traumatic stress and STSE?

Years of experience as an obstetric nurse had statistically significant findings for both STS as measured by the STSS and the ability to cope as measured by the STSE. The more years of experience a nurse had as an obstetric nurse demonstrated lower mean scores of STS and higher mean scores of the ability to cope. These findings align with Bandura's (1997) theory of self-efficacy in that after developing ways to manage situations that recur, obstetrical nurses act on their perceived efficacy, which is the guide for action under altered conditions. Organizations should consider having more experienced nurses' mentor newer nurses, as they can support

newer nurses in adapting to the emotional and stressful experience of caring for a patient and families through perinatal loss. Maturing in the role of an obstetric nurse and learning from the experiences of caring for patients and families with perinatal loss increases levels of satisfaction and decreases stress. Level of education demonstrated significance for the ability to cope with comparing those with a master's degree to those with an associate's degree. No other educational levels demonstrated statistical significance for the ability to cope or STS. The ability to share a work experience of perinatal loss with others demonstrated statistical significance in relation to the ability to cope and not with STS. Obstetric nurses may find support groups helpful to be able to share work experiences of perinatal loss. The open-ended questions on what supports or helps these participants cope had many comments regarding "peer support, debriefing, and talking with other nurses and doctors."

Research Question 5: Is there a relationship between BO (CF), secondary traumatic stress, CS and how one copes with secondary trauma as measured by the STSE?

There were strong negative correlations between BO and how one copes as well as STS and how one copes. Participants with higher mean scores for coping had lower mean scores for BO and STS. There was a strong positive correlation between CS and how one copes. This demonstrates that the obstetric nurses in this study with higher mean scores for the ability to cope as measured by the STSE had higher mean scores for CF and lower mean scores for both STS and BO as measured by the ProQOL scale. These findings reveal that if an obstetric nurse's ability to cope can be increased, then BO can be decreased. As in Question 2 with the STSS and STSE, those with higher mean scores for coping demonstrated lower mean scores of STS from the ProQOL scale. This can be assisted with further support of programs, defined protocols, and education, as seen in Question 6. Those with higher mean scores of CS had higher mean scores

for the ability to cope and these may come from supports of "programs, education, debriefing/protocols, and being able to decompress after caring for loss before another patient" as stated in the open-ended response section. Further study is recommended on this relationship and how organizations can identify what they have in place that supports obstetric nurses in coping with perinatal loss and what may be lacking that can be instituted.

Research Question 6: Is there a relationship between obstetric nurses' demographic characteristics and secondary traumatic stress, STSE, BO, and CS?

Question 6 takes an in-depth look for relationships between the demographic variables and what influence they may have on STS, the ability to cope, BO, and CS. When looking at the descriptive statistics for the STS subscale of the ProQOL, 75% of this population studied have low to average mean scores for STS. Twenty-five percent of this population studied have high mean scores for STS. These findings were similar to those found in Question 2 when measuring STS with the STSS by Bride (2004). These two scales measuring STS had similar findings among the same population, 25% for the STS, and 35% for STSS demonstrating higher levels of stress, which is a large portion of the population in this study of 1,178 participants.

Overall, age demonstrated the higher the age, the lower STS and higher STSE and CS. As discussed in Question 4, Bandura (1997), in developing ways to manage in certain situations, can be related to growth as a person. In this study, obstetric experience, life experience, and for some experience with their own personal perinatal loss, developing ways to manage can contribute to higher STSE mean scores and CS. Further investigation should be conducted to see if there is a relationship between age and years of experience as an obstetric nurse to see if there is a stronger relationship for either on CS, STS, BO, and the ability to cope. Some individuals may go into obstetrics directly from school or transfer into obstetrics later in their nursing career, so perhaps

it is their age, years of obstetric nursing experience, or experience in the caring for perinatal that has the most impact.

Participants with certification in an obstetric specialty demonstrated statistical significance with the ability to cope and CS. Certification assists an obstetric nurse's ability to cope when dealing with the trauma of perinatal loss. The variable of having taken a perinatal bereavement course has shown significance in several important areas, although not a big difference in the mean scores. Having taken a formal perinatal bereavement course, 45.6% of participants demonstrated statistical significance with the ability to cope, CS, and BO. Level of education showed a significant difference in CS for those with a master's degree as opposed to those with an associate's degree. There were no differences in any other education group and the dependent variables of STS, BO, or the ability to cope. Participants who had a protocol to follow, which were 91.9% of participants, demonstrated statistical significance with CS and BO (higher mean scores for CS and lower mean scores for BO). Protocols assist in decreasing BO and increasing CS. Perhaps having the guide of a protocol eases their minds, gives a sense of focus, and helps to decrease the negative feelings of loss. The following responses were reported by obstetrical nurses regarding what they felt is supportive included "bereavement program, education, workshops, checklist."

Participants who themselves experienced a perinatal loss consisted of 33% of the sample studied. Nurses who have personally had a perinatal loss demonstrated statistical significance in CS and BO. Perhaps those that personally experienced perinatal loss have more empathy and compassion as they went through this experience in their own lives. Statistical significance was noted with the ability to cope, STS, CS, and BO for the characteristic of being a parent or not. Those who identified as being a parent had higher mean scores on the STSE scale (ability to

cope) and CS while having lower mean scores for STS and BO. When orienting nurses to obstetrics and perinatal loss, nurses who are older, have perinatal loss experience, and are parents should be paired with newer nurses who are not parents. Their work and life experiences can both influence, educate, and provide a support to newer nurses.

Obstetric nurses in this study who identified themselves as having religious (75%) or spiritual (94%) beliefs showed statistically significant findings. Those that found themselves very religious have higher CS and STSE mean scores and lower mean scores for BO, but those that prefer not to say has the lowest STS mean scores as measured by the STSS (no difference on the subscale of STS with the ProQOL). Those that found themselves very spiritual demonstrated statistical significance with the ability to cope, CS, and BO. Those that identified as very spiritual have higher mean scores for CS than all other groups, have higher mean scores for the ability to cope than those somewhat spiritual, and lower mean scores for BO than somewhat spiritual or prefer not to say. Nurses were asked if they found these beliefs supportive. Those that responded yes demonstrated statistical significance in all areas—CS, BO, STS, and the ability to cope. They had higher mean scores for CS and the ability to cope and lower mean scores for BO. An interesting finding was on the ProQOL subscale of STS, as the participants who found their religious and spiritual beliefs supportive had higher mean scores. Even though nurses who found their religious and spiritual beliefs supportive had higher mean scores for STS, they also had higher mean scores for the ability to cope and CS, which might help mitigate the effects of STS. Participants who stated yes (85.8%) that they had the ability to share work-related perinatal loss experiences demonstrated statistical significance with CS, ability to cope, and BO. They had higher mean scores for CS and STSE and lower mean scores for BO. Obstetric nurses responded

that "debriefing, code/team lavender, embrace days, peer support, talking with other health care providers, support from chaplain/spouse/family" help support them during these experiences.

Strengths and Limitations

This study demonstrated statistical significance among some of the relationships studied on obstetric nurses caring for patients and families experiencing perinatal loss. The large sample size of 1,178 participants well exceeded the 200 estimated for power scoring. With a large participation response rate, the findings of this study may be generalizable to the population of obstetric nurses. To this researcher's knowledge, this is the first study examining relationships of STSS, STSE (coping), ProQOL, and an in-depth analysis of the demographic characteristics.

Although this national study demonstrated many relationships among obstetrical nurses with STS, the ability to cope, CS, and BO, it is important to identify the limitations. The sample consisted of a relatively homogenous group of nurses who were predominantly White, female, and over 30 years old. The findings may not accurately represent nurses of other races (such as Black, Hispanic, or Asian), gender, or those under 30 years of age. Nurses who are members of professional organizations are generally more interested in the topic and participating in research, and therefore, this study may not represent those who do not belong to a professional nursing organization. This study was conducted during the COVID-19 pandemic, which may have had influence on how participants responded and could have been a variable for responses to have been different.

Implications for Nursing

Practice

It is important for organizations to develop protocols and offer education in perinatal bereavement courses. Having a protocol to follow in this study demonstrated higher mean scores

for CS while having lower mean scores for BO. Having had a formal perinatal bereavement course demonstrated higher mean scores for CS, the ability to cope, and lower mean scores for BO. Encouraging nurses and developing pathways to obtain certification in an obstetrical specialty can assist nurses in gaining knowledge to support their ability to cope and increase CS, as they would gain further knowledge to assist them in their work with patients and families. Obstetrical nurses who either have religious or spiritual beliefs can benefit from having dedicated time and space to decompress and center themselves in their beliefs to help cope with perinatal loss. To provide a safe area, organizations can create or use quiet areas such as a chapel for obstetrical nurses to reflect and take time to understand what they may be feeling. When orienting new nurses to the obstetrical area, institutions should consider pairing newer nurses with those holding more experience with perinatal loss to assist in the training of newer nurses. Their knowledge, skill, and lessons could be valuable to the training of a nurse experiencing perinatal loss for the first time. Facilities are encouraged to establish mentorship programs for newer obstetrical nurses to be mentored by more senior nurses when caring for perinatal loss.

Research

For further research in this area, it is recommended to investigate debriefing and if there is a direct or indirect relationship with the ability to cope, STS, BO, CS, and the effects that debriefing has on perinatal loss events. Debriefs allow for sharing, reviewing situations, discussing thoughts and emotions, aid in coping, and reflecting on impact (Maloney, 2012; Puia et al., 2013). Identifying a safe place, away from patients, provides an opportunity to allow for a debrief of the event, cry, or just talk (Forman, 2014). Debriefing a traumatic event, such as perinatal loss, can give the nurse and all members of the team an opportunity to share the account of events, how they are feeling, and identify what they may need for support to help them

emotionally. Further investigation into what contributes to higher levels of STS for some of this population should be studied, as this percentage is similar to that of Beck and Gable (2012) in their study of traumatic birth. These similar percentages show no decrease over nine years in this population. The work remains moderately to severely stressful for approximately 35% of participants.

Further research should be considered to study the benefits of a perinatal bereavement course for obstetrical nurses. Participants (45.6%) that took a perinatal bereavement course showed significance in the areas of coping, CS, and BO. Although there was not a large difference in mean scores, this is an area to investigate. Taking the course itself may influence that those that have attended are able to deal with perinatal loss or if organizations have the course as part of orientation it can offer as a significant support to obstetrical nurses. Another area of study would be to look at existing courses and see if there are any additions or changes to make them more effective.

The robust responses from the narrative questions should be formally analyzed to identify qualitative findings that can further add to the existing limited work on obstetrical nurses and perinatal loss. Puia et al. (2013) conducted a secondary qualitative content analysis to open-ended statements in which a perinatal loss was described during a traumatic birth. Willis' (2019) qualitative analysis described the experiences of caring for women with a perinatal loss from the perspective of the nurse and how the response reflects a process. She identified a need for more education, managerial support, and debriefing. Analyzing the responses from this study could identify themes that can reveal what (if any) further support may be needed, what effects nurses develop from these experiences, and what helps obstetrical nurses cope during a perinatal loss.

Summary of Findings

Caring for perinatal loss can have a profound effect on obstetric nurses. This study focused on the effects of STS, STSE, BO, and CS. The research questions demonstrated relationships among the study variables and the results are summarized below:

- The STSS analyses demonstrated that approximately two thirds of participants had little to mild STS and one third had moderate to severe STS.

- A strong negative correlation was identified among obstetric nurses with high levels of the ability to cope associated with lower levels of STS.

- A strong negative correlation was identified among obstetric nurses with high levels of coping associated with lower levels of BO.

- A strong positive correlation was identified among obstetric nurses with high levels of CS associated with high levels of coping.

- Relationships of obstetric nurses' demographic characteristics and study variables were demonstrated as follows:

  o Age: Those in the higher age group demonstrated statistical significance for STS, BO, STSE, and CS, with having lower mean scores for STS and BO, higher mean scores for STSE, and higher mean scores for CS.

  o Certification: Participants with certification demonstrated statistical significance for STSE and CS, with higher mean scores for STSE and CS.

  o Magnet Hospital: Participants who responded yes to having worked in a Magnet hospital demonstrated statistical significance for STSE with higher mean scores for STSE.

o Perinatal Bereavement Course: Participants who responded yes demonstrated statistical significance for STSE and BO with higher mean scores for STSE and CS and lower mean scores for BO.

o Level of Education: Participants with a master's degree demonstrated statistical significance for STSE, with higher mean scores for STSE than those with an associate's degree.

o Protocol: Participants who responded yes demonstrated statistical significance for CS and BO, with higher mean scores for CS and lower mean scores for BO.

o Personal Loss: Participants who reported having had their own perinatal loss demonstrated statistical significance for CS and BO, with higher mean scores for CS and lower mean scores for BO.

o Parent: Participants who responded yes for being a parent demonstrated statistical significance for STSE, STSS, CS, and BO, with higher mean scores for STSE and CO and lower mean scores for STS and BO.

o Religious: Participants responded to how religious they considered themselves. Those that considered themselves very religious had higher mean scores for STSE than those that considered themselves somewhat or not at all religious. Those somewhat religious demonstrated higher mean scores with the STSS than any other group and was statistically significant with those that preferred not to say. Those that responded very religious demonstrated statistical difference for CS than those that were not at all religious with higher mean scores. Those that responded very religious

demonstrated statistical difference for BO than those somewhat or not at all religious with lower mean scores.

- o Spiritual: Participants responded how spiritual they considered themselves. Those that considered themselves very spiritual demonstrated statistical significance for STSE than those somewhat spiritual with higher mean scores. Those that preferred not to say demonstrated statistical significance with higher mean scores for STSE than those somewhat or not at all spiritual with a higher mean score. Those that responded very spiritual demonstrated statistical significance for CS, with higher mean scores than those somewhat or not at all spiritual. Those that responded very spiritual demonstrated statistical significance for BO with lower mean scores than those who responded somewhat or not at all. Those that preferred not to say demonstrated statistical significance for BO with lower mean scores than those who responded not at all spiritual.

- o Religious or Spiritual Beliefs Supportive: Participants who responded yes in finding their religious or spiritual beliefs supportive demonstrated statistical significance for STSE, CS, BO, and ProQOL STS, with higher mean scores for STSE, CS, and ProQOL STS and lower mean scores for BO.

- o Ability to Share Loss Experience: Participants who responded yes for having the ability to share loss experiences demonstrated statistical significance for STSE, CS, and BO, with higher mean scores for STSE and CS and lower mean scores for BO.

Conclusion

This study explored relationships between STS, STSE, and Quality of Life of obstetrical nurses in caring for patients and families with perinatal loss. An in-depth exploration of the demographic characteristics was investigated to see what influence they had on STS, BO, CS, and the ability to cope. The open-ended responses allowed the participants to share their experiences of caring for patients and families experiencing a perinatal loss, describe what supports them during these experiences, and what helps them cope. The RAM provided the theoretical framework to demonstrate how obstetrical nurses interact with their environment during perinatal loss and how the stimuli either can negatively or positively affect their adaptability with these experiences.

The age and experience of obstetrical nurses demonstrated higher CS and the ability to cope while demonstrating lower mean scores for STS and BO. Most of the participants have little to mild STS, while 30% collectively have moderate to severe STS. Even though there is some level of STS for these participants overall, they have average CS. Some demographic variables included the following: have taken a formal perinatal bereavement course, being a parent, having an obstetrical certification, having some level of either religious or spiritual beliefs, and having the ability to share demonstrate higher mean scores of CS and ability to cope with lower mean scores of BO and STS. These variables should be further investigated to offer more insight into what organizations can incorporate for nursing practice.

Further research is recommended to assist in policy development or changes to provide operational support for obstetrical nurses. Further investigation on debriefs and other interventions need to be developed to help obstetrical nurses deal with the effects of STS during perinatal loss and further support what helps nurses cope during these events. Someone has to

provide this delicate care to this vulnerable population. The investment in further research and implementing policy change from the findings can further support nurses in caring for patients and families experiencing perinatal loss.

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Appendix A IRB Approval Letter

Molloy College

1000 Hempstead Ave., PO Box 5002, Rockville Center, NY 11571-5002
www.molloy.edu

Kathleen Maurer Smith, Ph.D.
Dean, Graduate Academic Affairs
T: 516.323.3801
F: 516.323.3398
E: ksmith@molloy.edu

DATE:	January 18, 2021
TO:	Jennifer Baierlein, MS
FROM:	Molloy College IRB
PROJECT TITLE:	[1701768-1] Relationships of Secondary Traumatic Stress and Self-Efficacy Among Obstetric Nurses Caring for Patients and Families With Perinatal Loss
REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	DETERMINATION OF EXEMPT STATUS
DECISION DATE:	January 18, 2021
REVIEW CATEGORY:	Exemption category # *(2)*

Thank you for your submission of New Project materials for this project. The Molloy College IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations. However, exempt research activities are subject to the same human subject protections and ethical standards as outlined in the Belmont Report.

This acknowledgement expires within three years- unless there is a change to the protocol.

Though this protocol does not require annual IRB review, the IRB requires an annual report of your exempt protocol (Expedited and Exempt Research Protocol Annual Report Form) which is available on the IRB webpage.

If there is a proposed change to the protocol, it is the responsibility of the Principal Investigator to inform the Molloy College IRB of any requested changes before implementation. A change in the research may change the project from EXEMPT status and requires prior communication with the IRB.

We will retain a copy of this correspondence within our records.

If you have any questions, please contact Patricia Eckardt at 516-323-3711 or peckardt@molloy.edu. Please include your project title and reference number in all correspondence with this committee.

Sincerely,

Patricia Eckardt, Ph.D., RN, FAAN
Chair, Molloy College Institutional Review Board

Generated on IRBNet

Appendix B Demographic Questionnaire

Inclusion Criteria- first three questions:

1. Are you over the age of 18?
   - o Yes
   - o No

2. Are you a registered nurse?
   - o Yes
   - o No

3. Do you have experience caring for patients and families with perinatal loss?
   - o Yes
   - o No

4. Gender
   - o Male
   - o Female
   - o Gender Variant/nonconforming
   - o Prefer not to say

5. Age
   - o 18-30
   - o 31-40
   - o 41-50
   - o 51 and over

6. According to the map below, please indicate the region you practice as a registered nurse:
   - o Northeast
   - o South
   - o Midwest
   - o West
   - o Other region outside the United States
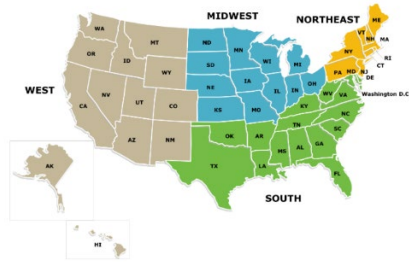
7. Race
- o White or Caucasian
- o Black or African American
- o Hispanic or Latino
- o Asian or Asian American
- o American Indian or Alaska Native
- o Native Hawaiian or other Pacific Islander
- o Multiple race
- o Other

8. Marital status
- o Married
- o Single
- o Divorced
- o Widowed
- o Prefer not to say

9. What is the highest Nursing degree you obtained?
- o Diploma
- o Associates
- o Bachelors
- o Masters
- o Doctoral

10. How many years of experience do you have practicing as a registered nurse?
- o 1-5
- o 6-10
- o 11-20
- o 21-30
- o >30

11. How many years of experience do you have practicing as an obstetrical nurse?
- o 1-5
- o 6-10
- o 11-20
- o 21-30
- o >30

12. What is the estimated number of experiences you have had caring for patients and families experiencing a perinatal loss?
- o 1-5
- o 6-15
- o 16-30
- o 31-50
- o >50

13. Do you consider yourself religious?
- o I am very religious
- o I am somewhat religious
- o I am not at all religious
- o Prefer not to say

14. Do you consider yourself spiritual?
- o I am very spiritual
- o I am somewhat spiritual
- o I am not at all spiritual
- o Prefer not to say

15. Do you find your religious or spiritual beliefs to be supportive?
- o Yes
- o No

16. Do you have experience as an obstetrical nurse?
- o Yes
- o No

17. Do you have a nursing certification in an obstetrical specialty?

      o Yes
      o No

18. Have you worked in obstetrics in a Magnet recognized hospital?
      o Yes
      o No

19. Are you a parent?
      o Yes
      o No

20. Have you, yourself, personally experienced a perinatal loss?
      o Yes
      o No

21. Have you taken a formal perinatal bereavement course?
      o Yes
      o No

22. Is there a protocol you follow in your institution involving caring for patients and families experiencing a perinatal loss?
      o Yes
      o No

23. Are you able to share a Perinatal loss experience with others?
      o Yes
      o No

Appendix C Secondary Traumatic Stress Scale

As you answer the following questions, to the best of your knowledge, recall your experience within a week of caring for patients/clients experiencing a perinatal loss. The following is a list of statements made by persons who have been impacted by their work with traumatized client. Read each statement, then indicate how frequently the statement was true for you in the past seven (7) days by circling the corresponding number next to the statement.

Note: *"Client" is used to indicate persons with whom you have been engaged in a helping relationship. You may substitute another noun that better represents your work such as consumer, patient, recipient, etc.*

	Never	Rarely	Occasionally	Often	Very Often
1. I felt emotionally numb.	1	2	3	4	5
2. My heart started pounding when I thought about my work with patients.	1	2	3	4	5
3. It seemed as if I was reliving the trauma(s) experienced by my patients.	1	2	3	4	5
4. I had trouble sleeping.	1	2	3	4	5
5. I felt discouraged about the future.	1	2	3	4	5
6. Reminders of my work with patients upset me.	1	2	3	4	5
7. I had little interest in being around others.	1	2	3	4	5
8. I felt jumpy	1	2	3	4	5
9. I was less active than usual	1	2	3	4	5
10. I thought about my work with patients when I didn't intend to.	1	2	3	4	5
11. I had trouble concentrating.	1	2	3	4	5
12. I avoided people, places, or things that remind me of my work with patients.	1	2	3	4	5
13. I had disturbing dreams about my work with patients.	1	2	3	4	5
14. I wanted to avoid working with some patients.	1	2	3	4	5
15. I was easily annoyed.	1	2	3	4	5
16. I expected something bad to happen.	1	2	3	4	5
17. I noticed gaps in my memory about patient sessions.	1	2	3	4	5

Appendix D Secondary Trauma Self-Efficacy Scale

For each situation described below, please rate how capable you are to deal with thoughts or

feelings that occur (or may occur) as the result of your work with patients experiencing perinatal

loss.

Very Incapable	Incapable	Somewhat Incapable	Neither Incapable nor Capable	Capable	Somewhat Capable	Very Capable
1	2	3	4	5	6	7

"How capable am I to…"

_____Deal with my emotions (anger, sadness, depression, anxiety) about working with patients

     experiencing perinatal loss.

_____Find some meaning in what had happened to patients experiencing a perinatal loss.

_____Control recurring distressing thoughts or images about patients experiencing perinatal loss.

_____Deal with thoughts that similar things may happen to me.

_____Be supportive to others after my experiences with patients experiencing perinatal loss.

_____Cope with thoughts that I can't handle working with patients experiencing perinatal loss.

_____Get help from others to better handle working with patients experiencing perinatal loss.

Appendix E Professional Quality of Life Scale (PROQOL)

COMPASSION SATISFACTION AND COMPASSION FATIGUE (PROQOL)

VERSION 5 (2009)

When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]/Nurse. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things when caring for patients and families experiencing perinatal loss.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

_____ 1. I am happy.

_____ 2. I am preoccupied with more than one person I provide nursing care for.

_____ 3. I get satisfaction from being able to provide nursing care to people.

_____ 4. I feel connected to others.

_____ 5. I jump or am startled by unexpected sounds.

_____ 6. I feel invigorated after working with those I provide nursing care for.

_____ 7. I find it difficult to separate my personal life from my life as a Nurse.

_____ 8. I am not as productive at work because I am losing sleep over traumatic

experiences of a person I provided nursing care for.

_____ 9. I think that I might have been affected by the traumatic stress of those I provide

nursing care for.

_____ 10. I feel trapped by my job as a Nurse.

_____ 11. Because of my Nursing, I have felt "on edge" about various things.

_____ 12. I like my work as a Nurse.

_____ 13. I feel depressed because of the traumatic experiences of the people I provide

nursing care for.

_____ 14. I feel as though I am experiencing the trauma of someone I have provided

nursing care.

_____ 15. I have beliefs that sustain me.

_____ 16. I am pleased with how I am able to keep up with Nursing techniques and

protocols.

_____ 17. I am the person I always wanted to be.

_____ 18. My work makes me feel satisfied.

_____ 19. I feel worn out because of my work as a Nurse.

_____ 20. I have happy thoughts and feelings about those I provide nursing care and how

I could help them.

_____ 21. I feel overwhelmed because my workload seems endless.

_____ 22. I believe I can make a difference through my work.

_____ 23. I avoid certain activities or situations because they remind me of frightening

experiences of the people I provided nursing care for.

_____ 24. I am proud of what I can do to provide nursing care.

_____ 25. As a result of my nursing care, I have intrusive, frightening thoughts.

_____ 26. I feel "bogged down" by the system.

_____ 27. I have thoughts that I am a "success" as a Nurse.

_____ 28. I can't recall important parts of my work with trauma victims.

_____ 29. I am a very caring person.

_____ 30. I am happy that I chose to do this work.

Appendix F Invitation to Participate

Dear Nursing Colleague,

You are invited to participate in a study that will explore relationships between secondary traumatic stress and self-efficacy among nurses who have cared for patients that have experienced a perinatal loss. The purpose of this study is to explore these relationships and what effect they have on the nurses who care for patients who have experienced perinatal loss.

Obstetrical nurses who have cared for patients and families experiencing perinatal loss are invited to participate in this study. The online survey will take approximately 15-20 minutes to complete. Please read the following information that outlines the risks and benefits of participating in this research study. If you agree to participate in this study, please continue as prompted and submit the completed survey when you are finished. Submission of responses will serve as your consent to participate in this study.

Your participation in this study is voluntary and all your answers are confidential. Your name will not be associated with the research findings and codes will be used to maintain confidentiality. You do not have to be in this study if you do not wish to participate. You have the right to change your mind and leave the study at any time without giving a reason and without penalty. There are no known risks if you decide to participate other than the inconvenience of completing the forms, but there is a possibility that questions asked in the survey may make you uncomfortable as you remember caring for patients and families with perinatal loss. There is no direct benefit to you from participation in this study, however, your input can enhance our knowledge to educate and create policies to support nurses who care for patients and families

with perinatal loss. At your request, when the study is completed research findings will be shared. As a token of appreciation participants may send their email address at the end of the survey to the principal investigator to be entered into a drawing where 5 randomly selected participants will each receive a $100 Amazon gift card for participation in the study.

For information, questions or comments regarding this study, you may contact the Principal Investigator, Jennifer Baierlein at 516-680-4760 or by email at jbaierlein@molloy.edu. If you have questions about your rights, an unresolved question, a concern or complaint about this research, you may contact the Molloy IRB office at IRB@molloy.edu or call 516-323-3000.

Your participation contributes to the profession of nursing, in particular Obstetrics nursing, and the further development of the science of nursing. Please click onto the link or QR code to participate in the study.

Respectfully,

Jennifer Baierlein

Jennifer Baierlein MS, RNC-OB

https://www.surveymonkey.com/r/rnperinatalloss

Appendix G Permission for use of Secondary Traumatic Stress Scale:

On Feb 28, 2019, at 4:44 PM, Jennifer Baierlein <jbaierlein@molloy.edu> wrote:

Hi Dr. Bride,

My name is Jennifer Baierlein and I am currently a PhD student at Molloy College in Rockville Centre, NY. I am in my dissertation proposal phase and requesting permission to use the Secondary Traumatic Stress Scale for a tool of measurement for my study. I am studying nurses who have experience working with families that have had a perinatal loss. Please let me know at your earliest convenience. I look forward to hearing from you.

Sincerely,
Jennifer Baierlein MS, RNC-OB
jbaierlein@molloy.edu
516-680-4760

From: Brian Bride <bbride@gsu.edu>
Sent: Thursday, February 28, 2019 5:26:25 PM
To: Jennifer Baierlein
Subject: Re: requesting use of scale

Hi Jennifer,
Permission granted.

Best,
Brian

Brian E. Bride, Ph.D., M.S.W., M.P.H.
Distinguished University Professor
Director, School of Social Work
Georgia State University
55 Park Place NE, 5th Floor
Atlanta, GA 30302

Appendix H Permission to use the Secondary Trauma Self-Efficacy scale:

From: Jennifer Baierlein <jbaierlein@molloy.edu>
Sent: Thursday, February 28, 2019 10:54 PM
To: Roman Cieslak <rcieslak@uccs.edu>; Charles Benight <cbenight@uccs.edu>
Subject: requesting use of scale

Hi Dr. Cieslak and Dr. Benight,

My name is Jennifer Baierlein and I am currently a PhD student at Molloy College in Rockville Centre, NY. I am in my dissertation proposal phase and requesting permission to use the Secondary Trauma Self-Efficacy Scale for a tool of measurement for my study. I am studying nurses who have experience working with families that have had a perinatal loss. Please let me know at your earliest convenience. I look forward to hearing from you.

Sincerely,

Jennifer Baierlein MS, RNC-OB

jbaierlein@molloy.edu

516-680-4760

From: Roman Cieslak <rcieslak@uccs.edu>
Sent: Saturday, March 2, 2019 12:14:38 PM
To: Jennifer Baierlein
Cc: Charles Benight
Subject: RE: requesting use of scale

Dear Jennifer,
Good luck with your study. The scale is freely available for research purposes.
Best wishes,
Roman

Appendix I Permission to use the ProQOL 5 Scale (Professional Quality of Life):

ProQol <proqol@cvt.org>
Mon 8/17/2020 1:24 PM

To: Jennifer Baierlein
CAUTION
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Hello,

Please feel free to use this modification, noting however that it is not the time period for which the ProQOL has been validated.

Best wishes,

ProQOL Office
The Center for Victims of Torture
2356 University Ave W., Suite 430 / St. Paul, MN 55114
https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fproqol.org&c=E,1,h_j-LUHJm98tUTgduJIPC2M9xm_vTFZz7JUKK3ACNMjoZpm4fXEGjFTQoGLNfCMj8WsqK0KLXwFyWKNqtguzp8NNs-2SGJXBAiru4jHh230Ep0hs62kETUkWNJE,&typo=1 /
https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.cvt.org&c=E,1,CoyW8qj879cB_h4clwPIpytH4T_p4NKeC9t98xaL-KC0nRlpY9ns8pF6qjvnxfBg8ycuxwLxUqYDrAYrbbDYWAAYQUU0H1sDdccVkvjuCMRVKv0Q1Q,,&typo=1