Post-Traumatic Stress Disorder in Nursing Populations: Implications for Practice

By

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Abstract

Post-traumatic Stress Disorder (PTSD) is a psychiatric condition measurable through stress responses resulting from exposure to a traumatic event and affects 5.2 million adults in the United States. The aim of this project was to arm nursing professionals and organizational leadership with knowledge regarding the prevalence of post-traumatic stress disorder among nursing professionals within their institution. Eighty-four participants (19% completion rate) completed a questionnaire consisting of demographic, trauma exposure and response questions modeled from the *Clinician-Administered PTSD Scale for DSM-5* (*CAPS-5*) and the *PTSD Checklist for DSM-5* (*PCL-5*). Using a Likert Scale each survey was manually scored for lifetime trauma and prior six-month trauma exposures, PTSD symptoms and impairment. Results included 2% of participants were scored as having subclinical signs of PTSD, 38% met *Diagnostic and Statistical Manual-V*, criterion for a diagnosis of PTSD, with 26% of the participants reporting severe symptomology. Based on these findings, it can be concluded that nursing professionals are at increased risk for the development of PTSD and the long-term sequelae affecting personal and professional functionality. It is hoped this project will increase awareness of PTSD in nursing professionals leading to the development of interventions and policies focused on prevention by reducing the impact of work-related exposures and resilience building.

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Chapter I

Post-traumatic Stress Disorder (PTSD) is a psychiatric condition measurable through stress responses resulting from exposure to a trauma event (National Institute of Mental Health, 2016). According to the Substance Abuse and Mental Health Services Administration (SAMHSA) (2016), traumatic events can be defined as incidents of physical abuse, sexual abuse, neglect, bullying, community-based violence, disaster, terrorism, and war. In the United States (U.S.), 70% of adults have experienced at least one traumatic incident in their lifetime (Kilpatrick et al., 2013). According to the U.S. Bureau of labor and Statistics, in 2016, 2.9 million nurses were representative of 0.6% of the workforce. Based on the general populous exposures, there is a probability that 2,030,000 nurses have experienced one trauma, yet, we can logically conclude, nursing professionals are exposed to more than one traumatic event daily. Additionally, of those nurses in the U.S. experiencing trauma, it is estimated 20% will go on to develop PTSD (Kilpatrick et al., 2013). Within the nursing population, this could potentially represent 406,000 nurses meeting diagnostic criteria for PTSD. This is inconceivable to consider.

Background and Significance

Post-traumatic Stress Disorder is a psychiatric condition affecting approximately 5.2 million adults in the U.S. at a cost of $42 billion dollars annually (Kilpatrick et al., 2013). In consideration for diagnosis, exposure to trauma must exist and stress responses must last greater than one month (American Psychiatric Association, 2013; National Institute of Mental Health, 2016). Since the inception of PTSD in the 3rd edition of the *Diagnostic and Statistical Manual* (*DSM*), several characteristics attributed to diagnosis have changed, but four key elements continue to exist in the criterion-based symptomology and include dissociative reaction,

cognitive-behavioral distortions, intrusion, and avoidance (Sareen, 2014; Levin, Kleinman, & Adler, 2014; Perrin et al., 2013).

The current *DSM-V* edition defines trauma as actual or threatened death, serious injury or sexual violence, and exposure whether through direct suffering, or indirectly by learning a close family member or friend has been affected, or through experiencing details of the event repeatedly (Sareen, 2014; Levin et al., 2014; Perrin et al., 2014). The components used in diagnosis are generally reserved for those attending to the first wave of trauma or shock such as members of the military, pre-hospital responders, law enforcement agents, and victims of violence. The lack of recognition of nursing professionals as high risk for the development of this disorder, regardless of repeated exposure to trauma including lateral violence, places them in the vulnerable category of secondary stress victims. Secondary stress, compassion fatigue, burnout, and vicarious traumatization are associated more frequently with care providers within hospital and office settings. In consideration of the daily incidents occurring during nursing care, it should be reiterated that as part of the general and specialized professional population, nurses have an increased risk of succumbing to psychiatric distress. A relative risk for PTSD development exists but is seemingly overshadowed by the secondary syndromes and utilization of the *DSM-IV* criteria for diagnosis in past research (Perrin et al., 2014; Mealer, Shelton, Berg, Rothbaum, & Moss, 2006; Adriassens, deGucht, & Maes, 2012).

The significant costs associated with unidentified psychiatric illness in care providers goes beyond monetary expenditures related to training and retention; the costs extend into patient safety areas, organizational quality, and individual losses directly related to the maintenance of functionality (Kilpatrick et al., 2013). Research addressing the unit level care environment occurrence of PTSD in nursing professionals is needed to shape policy, education, and health

care. Removed from its designation in the 4th edition of the *DSM* as an anxiety disorder and now securely placed in trauma stressor related disorders in the current edition, the criterion for diagnosis have become more stringent which may eliminate nursing professionals due to diminishing support for the trauma laden environment of nursing practice (American Psychiatric Association, 2000; American Psychiatric Association, 2013).

Problem Statement

During the past decades, housed providers such as nurses, physicians, and ancillary staff, have frequently been classified as casualties of secondary trauma related to being witness to the suffering of others (Figley Institute, 2012). In literature, more instances of post-traumatic stress have been discovered in nursing populations. A study performed by Kessler, Sonnega, Bromet, Hughes, and Nelson (1995) revealed 7.8% of healthcare workers in the U.S. (n=9282) working with disabled persons have suffered from PTSD. During their careers, nurses will experience events considered traumatic such as patient injury or sudden death, failed intervention or error, patient or family violence, and lateral violence. The results of a study of nurses and allied health professionals by Latimer et al. (2017), where nurses were found to have significantly higher secondary trauma and burnout scores (empathy p=.04), Compassion Fatigue p=.001), provide documentation of nursing response to the trauma of others, but not necessarily to the individual perception of self-experienced traumatic events. Rarely considered is the humanness of nurses, who as individuals, may be experiencing dual personal and professional contact with trauma, or as often termed, critical incidents. In respect to Criterion A of the *DSM-V*, the slant of direct experience, personal witnessing, intimate relation, and repetitive exposure seemingly excludes nurses from victimization (American Psychiatric Association, 2013). The nurse-patient relationship carries an intimacy based on trust and depth of care. Through these elements the

nurse is viewed as fulfilling the requirements of the *DSM-V* criteria. A descriptive study performed by Han and Yoo (2016) revealed the most common traumatic events rated by nursing participants were verbal/physical violence (32.8%) and death of a child or resuscitation attempts (42.1%). Further it was discovered that 35.8% of the respondents (n=363) attained a high score for risk of PTSD (Han & Yoo, 2016).

The phenomena of study are the global presence of PTSD symptomology in nursing professionals and how peers and leadership can respond through intervention on behalf of affected nurses. It is hypothesized that nurses will meet criterion for the diagnosis of PTSD due to exposure to diverse trauma events. It is further hypothesized education, acute and long-term intervention, and policy deployment will lead to measurable improvements in nursing performance and retention, patient safety, quality of care, and operational costs.

Project Aim

The aim of this project was to arm nursing professionals and organizational leadership with the knowledge necessary to understand the prevalence of PTSD among nurses within their institution.

Clinical Question

This DNP project sought to address the clinical questions: Does recognizing, reporting, and intervening in cases where nurses exhibit symptoms of PTSD restore functionality, maintain professional character, promote post traumatic growth, lessen peer bias and damaging lateral behaviorisms, reduce costs associated with poor retention and sustainability, and maintain patient safety and quality measures? Important stakeholders are nurses, patients, physicians, ancillary staff, administrators, families, and community members.

Congruence with Organizational Strategic Plan

This project involved research and education implementation within a region of a large U.S. based hospital system. The commitment of the organization to providing patient-centered care through partnership development is well supported in its mission statement where philosophical beliefs emphasizing human dignity and social justice supported by education and research promote healthier communities (Catholic Health Initiative, 2017). The project focused on the value of caring and as part of the community, caring for the nurse suffering from the disability related to PTSD secondary to workplace exposures; The project meets the agape outreach of the organization through both education and research.

Synthesis of Literature

Search process. A systematic literature review was conducted using several databases. The databases used included the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Research Gate, Google Scholar, and PubMed. Additional support regarding assessment tools was obtained from the National Center for PTSD and the American Psychological Association.

Using the keywords, "PTSD" and "Nursing Professionals" yielded greater than two million results. The search was narrowed down by combining the terms and placing the Boolean connector, "AND" in the search engines and publication dates were limited to those published in the period of 2012-2018. This search returned greater than 20,000 articles and the Boolean connector was changed to "IN" with no change in publication dates. Under Google Scholar 16,700 articles were resulted and 30 were reviewed with three articles selected for use. Research Gate yielded 17 articles of which 10 were reviewed with two articles selected for their significance. Searches under PubMed produced 96 articles with five reviewed and two chosen

for use and CINAHL generated 23 articles of which four were reviewed and one was selected as being relevant to the project. Articles selected for inclusion were those focused on the development of PTSD or secondary stress in nursing professionals within an acute care setting. Excluded articles were those detracting nursing experiences, literature reviews and those occurring outside the acute care environment. A total of eight articles were selected for their significance and were used.

Trauma and secondary stress. Baldwin (2013) refers to PTSD as sympathetically mediated behavioral responses to traumatic events resulting from a person's innate response systems' failure to integrate with conscious experience. The psychobiological responses to trauma are specific, persistent, and resistant with many derived from compensatory mechanisms ill-aimed at preserving the individual (Baldwin, 2013). Based on current definitions of PTSD, presumed psychobiological characteristics, and work environment, the role of nurses in caring places them in a precarious category of secondary stress victims to compassion fatigue, burnout, and vicarious traumatization. Trauma does not unfailingly raise symptoms of PTSD, but can cause a precipitous onset of affective, anxiety and behavioral symptom. Cumulative trauma exposure (direct and indirect) is predictive of a creep toward eligibility for diagnosis of PTSD (Levin et al., 2014).

General populations. A critical role of literature synthesis is to assess the presence of these characteristics in nursing populations and identify key constituents influencing the definition and perception of trauma as applied to the mechanism and environment in which nurses' practice. To assess the prevalence of PTSD in nursing populations, it is best to start by presenting data representative within the general population.

Perrin et al. (2013) assert that PTSD is a debilitating disorder with profound personal and professional consequences and estimate 20-90% adults experience a traumatic stressor at least once in their life and 1.3-11.2% develop PTSD. Perrin et al. (2013) conducted a random population-based study focusing on the establishment of PTSD prevalence rates measuring potential risk factors including sociodemographic characteristics, type of exposure, pre-existing psychiatric disorders, and family history using the *Diagnostic Interview for Genetic Studies* and *PsyCoLaus Psychiatric Evaluation* (n=3,691). Statistical analysis involved bivariate associations between type of exposure and PTSD assessed using Chi-square tests with significant level for interaction terms set $p<0.01$ (Perrin et al., 2013). Among 775 respondents who were exposed to at least one traumatic event, 25% developed PTSD symptoms (Perrin et al., 2013). This finding among the general population provides attestation to the need for further research on the prevalence of PTSD among nursing professionals as it relates to the broad spectrum of trauma, its definition and effects. These determinants were based on prior versions of diagnostic criteria and may be argued when applying newer criteria to qualifying exposures and symptomology assessments.

Levin et al. (2014) performed an analysis of the changes in diagnostic criterion and the impact on forensic cases. How this applies to the nursing population lies in the qualifying event. In prior versions of the *DSM (III-IV),* Levin et al. (2014) recognized a 59% rise in qualifying traumatic events with 38% elevation in PTSD diagnoses. Under current *DSM-V* criterion, a lower incidence of PTSD (n=2953; 89.7% *DSM-IV* versus 1-2% *DSM-V*) with a lower lifetime prevalence (93.7% *DSM-IV* versus 9.4-10.6% *DSM-V*) was observed (Levin et al., 2014). This study provides support for the movement of nursing populations as being more likely to succumb to secondary stress by reliance on the examiner to understand the nature and extent of work-

related traumatic material and calls for additional research on PTSD in nursing professionals utilizing current diagnostic standards to identify consequences for professional and personal well-being (Sheen, Spiby & Slade, 2014).

Nursing populations. Throughout their careers, nurses will experience multiple events defined as traumatic. These events are generally related to patients presenting with severe injury, death, suicide, and violent behaviors (Adriaenssens et al., 2012). Events such as sudden (unexpected) death of a patient, especially pediatric populations, abuse from patients, family members, physicians, resource exhaustion, and lateral workplace violence contribute to the progression toward PTSD development when coupled with what one may see as routine nursing care (Adriaenssens et al., 2012). Critical incidents may lead to poor responses to patients and families as well as lasting post incident stress reactions (DeBoer, van Rikxoort, Bakker, & Smit, 2013). Historically, nurses working in the emergency department or intensive care unit were associated with significant trauma exposures related to patient acuity. Recent research reveals occurrences of direct and indirect trauma exposures at all levels of nursing care.

Birks et al. (2017) conducted a cross-sectional survey design to assess the student experience of bullying during their first, second, and third clinical rotations. An 80-item questionnaire, void of the definition of bullying, was delivered to Australian (n=833) and United Kingdom (U.K.) (n=561) participants (Birks et al., 2017). Relationships between demographic and behavioral variables were tested. The analysis used t test, or non-parametric tests such as Pearson's Chi square test of independence for categorical variables, Mann-Whitney U or Spearman's correlation with $p<0.05$ set as the level of significance. In the Australian cohort, 50.1% reported bullying and in the U.K. cohort, 35.5% (Birks et al., 2017). Those identified as committing the acts were nursing hierarchy, preceptor, mentor, or supervisory nurses, nurse

managers, clinical education staff and health care assistants (53% Australian and 68% U.K.) (Birks et al., 2017). Although neglect and being ignored were the highest acts rated, sexual harassment (10%), verbal/physical abuse (27.7%), and threats with a weapon (4.2%) were the most alarming (Birks et al., 2017). Targeting an individual by those in charge of nurturing the growth of new professionals can also be experienced by nurses routinely assigned to a unit. According to Sabbath et al. (2018), bullying causes distress and humiliation while interfering with the performance of core duties leading to depression, anxiety, suicidal ideation, PTSD, and psychosomatic complaints.

In a two part Generalized Linear Model, Sabbath et al. (2018) assessed the association between bullying and mental health care costs in general staff nurses. The nurses responded (85%, n=793) to a negative acts questionnaire used to measure categories of incivility and bullying by number and form of acts committed (Sabbath et al., 2018). No activities were reported by 51%, 16% reported a single form, 16% two forms, and 12% three forms (Sabbath et al., 2018). The acts experienced included information essential to care being withheld (30%), incivility (26%), and bullying (5%) (Sabbath et al., 2018). Expenditures for those experiencing negative actions were measurable at an average of $2,641 versus $957 for those unexposed (Sabbath et al., 2018).

Zhang et al. (2017) performed a cross-sectional study to assess workplace violence, sexual harassment and organized healthcare disturbances against nurses in 28 hospitals in China. The surveys used included demographic information, the *Jefferson Scale of Empathy-Health Professions,* the *Workplace Violent Incident Questionnaire,* and the *Practice Environment Scale of Nursing Index* (Zhang et al., 2017). From the 4125 surveys distributed, a 92.97% (n=3835) response rate was obtained and 3004 determined to be valid (Zhang et al., 2017). The nursing

experiences reported were physical violence (25.77%), non-physical violence (63.65%), sexual harassment (2.76%), and organized healthcare disturbances (11.72%) (Zhang et al., 2017). A logistic regression analysis revealed nurses having less experience, working rotating shifts, and home units in the emergency department or pediatric units as having lower empathy levels and those in low poverty areas at greater risk for experiencing violence (Zhang et al., 2017).

Birks et al. (2017), Sabbath et al. (2018), and Zhang et al. (2017) demonstrate through research that a clear threat to violence perpetrated by patients, families, and peers exist. These studies support the existence of direct trauma exposure in nursing. Current *DSM-V* criterion leaves to interpretation, the distinction of traumatic events occurring during routine nursing care as direct versus indirect. While inpatient units are often considered sanitized from the exposures often witnessed in the emergency department, critical incidents occur (Brown, 2017).

Sheen et al. (2014) utilized the membership rolls of the International Confederation of Midwives to deliver 2800 postal surveys to randomly selected midwives to measure perinatal trauma experiences using *DSM-IV Criterion A.* Posttraumatic symptomology was measured using the *Impact of Event Scale-Revised* and responses were scored in a range of 0-88 based on degree of current difficulty (Sheen et al., 2014). Descriptive statistics were computed for total scores with standard multiple regression analysis used to investigate associations between variables associated with PTSD. Respondents reporting at least one traumatic event (n=421) formed the final sample (Sheen et al., 2014). An average of seven traumatic events were experienced throughout the midwives' careers (M=6.63, SD=9.93), 71% witnessed and listened to accounts of the trauma, 24% only witnessed the event, and 19.5% had only listened to accounts of the event (Sheen et al., 2014). Of these respondents, 32% (n=138) exceeded scoring for symptoms relative to a clinical diagnosis of PTSD (Sheen et al., 2014).

In a cross-sectional study of 15 Belgian hospitals, Adriassens et al. (2012) utilized self-administered surveys composed of elements from the *Impact of Event Scales, Brief Symptom Inventory, Checklist Individual Strength,* and the *American Insomnia Survey* to calculate post-traumatic stress reactions in emergency nurses (final respondent n=248, p=0.05). Subscales of re-experiencing, avoidance and chronic psychological arousal were calculated using descriptive statistics, Pearson correlations, One Way ANOVA and Independent Sample t-tests using the statistical software package for Windows version 18. The most distressing event reported by emergency nurses was the death of a young person (31.6%) followed by resuscitation of a child or infant (25.6%) (Adriassens et al., 2012).The frequency of exposure rates within the prior six months revealed one event occurred in 15%, two or three events in 23%, four or five events in 23%, and six or more events in 17% (Adriassens et al., 2012).Those nurses reaching clinical levels of PTSD measured 8.5% (Adriassens et al., 2012). The findings of sub-clinical and clinical levels of anxiety, depression, somatic disorders, sleep disturbances, and PTSD point to a critical theme that a negative impact in work functionality can be subsequent to trauma exposure and response (Adriassens et al., 2012). In comparison of emergency department and midwife professionals, the latter suffered a greater rate of PTSD symptoms. This data is supportive of the call for further research on traumatic exposure, impact on nursing, and mitigation for policies addressing this crisis in nursing.

Mitigating response. Heightened organizational costs due to diminished productivity, increased turnover and employee healthcare costs must be considered in the orientation and continued employment of all nursing professionals who are at risk for traumatic event exposure. (Brown, 2017). Prior experiences cannot be ethically assessed in the pre-employment process and the organization must understand cumulative trauma with poor recovery options can

contribute to negative cognitive-behavioral responses including diminished response and quality of care, absenteeism, turnover, somatic illness, substance abuse, and suicidality (Sareen, 2014). Muller et al. (2015) assessed a strong relationship of comorbid PTSD and alcohol use disorder in those with traumatic events in childhood. Sheen et al. (2014) assert that individually experienced direct trauma could predispose nursing professionals to PTSD or secondary stress syndromes following subsequent exposures. A nurse experiencing a negative perception will feel their resources have been depleted and suffer an erosion of nursing values leading to personal and professional losses (Adriassens, deGucht, & Maes, 2014). These individuals may endure disciplinary action for behaviors regarded as inadequate performance or error, therefore negating precipitating factors for their disturbance (Cavanaugh, Campbell, & Messing, 2014).

Cavanaugh et al. (2014), using the Hadden Matrix Conceptual Model, performed an analysis of secondary data from the Safe at Work Study examining interpersonal violence and depressive symptoms. The *Primary Care PTS* screen was used in online and paper survey formats to assess nine types of lifetime interpersonal violence victimization and summed cumulative victimization using six controlled types of trauma (Cavanaugh et al., 2014). Descriptive statistics were used to describe the sample, Chi-square tests examined associations between types of violence or cumulative trauma and a multinomial logistic regression evaluated the influence of cumulative trauma on positive screens for depression. Cumulative trauma was scored according to the number of events participants had undergone (n=1044) with 35.2% having none, 21.9% one type of trauma had been experienced, 15.3% two, and 27.6% three or more types of trauma experiences were calculated (Cavanaugh et al., 2014). Among the types of trauma exposures rated, workplace violence was the most prevalent having 23.7% reporting psychological abuse and 22.6% physical abuse, however those experiencing psychological

interpersonal violence were the most prevalent group with comorbid PTSD/depression (43.7%) (Cavanaugh, Campbell, & Messing, 2014). Evidence gathered through this study demonstrates that cumulative trauma is associated with mental health symptoms presumptively interfering with functionality. The chronic course of PTSD if left untreated may leave the patient symptomatic for 30 years and often is associated with a greater risk of physical health conditions, comorbid mental health conditions and an increased risk of suicide (Allen, Newby, Smith, & Andrews, 2015). Ineffective coping coupled with personal and professional trauma leads to unresolved pain and the projection of individual emotions onto others (Conte-O'Hare, 2002). This defends the need for the legislation of national and state policies incorporating requirements for instituting violence screening for employees and action plans promoting activation of critical incident response programs (Cavanaugh et al., 2014).

Analysis of findings. The purpose of this project was to arm nursing professionals and organizational leadership with the knowledge necessary to understand the prevalence of PTSD among nurses within their institution. The systematic literature review conducted revealed substantial traumatic exposure and clinical levels of PTSD symptomology in research participants from variable areas of practice at a rate consistent with and often greater than the general public (Perrin et al., 2013; Birks et al., 2017; Sabbath et al., 2018; Zhang et al., 2017; Sheen et al., 2014; Adriassens et al., 2012; Cavanaugh et al., 2014). To effect change, more research is needed to offer evidence of current trends in working environments, PTSD and secondary stress responses among nursing professional, and the use of transformational interventions. This change will expose environmental and personal dynamics eliciting stress responses, identify nurses negatively affected, reduce the stigma associated with mental disorder in professionals, and offer treatment and sustainability. The studies used for review included

self-rated, mixed interview and clinician administered scales (Perrin et al., 2013; Levin et al, 2014; Birks et al., 2017; Sabbath et al., 2018; Zhang et al., 2017; Sheen et al., 2014; Adriassens et al., 2012; Cavanaugh et al., 2014). The literature demonstrates registered nurses meet the criterion of PTSD diagnosis generated from trauma exposures within the professional environment. It was hoped that this project demonstrates a need for further research, education, and policy change within individual facilities, regulatory and governing bodies as well as professional organizations to improve identifying and treating nursing professionals succumbing to trauma related stress while reducing the stigma associated with nurses having PTSD, ultimately leading to improved work environments, retention, and sustainability.

Concept/Theoretical Framework

A well-established nursing theory and proven diagnostic and treatment model guided this project. Nursing, as a caring profession composed of biopsychosocial helping of others, is vulnerable to the wounds often associated with healing the ill and injured. This is especially true of those led into nursing through personal experience and the passion to help others. Marion Conte-O'Hare developed the theory, *Nurse as Wounded Healer*, which recognizes when trauma is not processed effectively as coping mechanisms have failed, the pain of the trauma persists remaining unresolved (Conte-O'Hare, 2002). For nurses to pass from "walking wounded" to "wounded healer," they must recognize and process their pain moving rhythmically from recognizing to transforming onto transcendence (Christie & Jones, 2017). Based on the theoretical assumptions, nurses can pass through the stages and become a wounded healer, positively impacting peers, organization, patients, and community (Christie & Jones, 2017).

The foundation of this project was grounded in the Conte-O'Hare theory through all phases with influences from the caring processes of Jean Watson's *Theory of Human Caring*

(2008) and Calhoun and Tadeschi's (2006) practice of *Posttraumatic Growth*. Caruso, Cisar and Pipe (2008) introduced the approach used to incorporate the caritas of equanimity, caring, consciousness, authentic presence, cultivation, trust, creative use of self, engagement, healing and spiritual environment, and needs applicable to patient and peer relationships. The transference of this theory to the care of nursing professionals experiencing stress responses is congruent with the importance of recognizing human vulnerability, tolerances, and humility. The caritas processes used as a framework of caring for the nurse as wounded healer will be used in moderate context in the application of *Trauma Informed Care*, underscoring physical, psychological, and emotional safety for providers and survivors (Substance Abuse and Mental Health Services Administration, 2016).

Trauma Informed Care uniformly emphasizes safety, trustworthiness, transparency, collaboration/mutuality, empowerment, vice/choice, peer support, resilience/strength-based, inclusiveness/shared purpose, cultural, historical, gender issues and change processes (National Center on Trauma Informed Care, 2012). The amalgamation of these theories and model will provide a framework from which to explain and resolve barriers associated with fear of peer responses, maintenance of functionality, and behavioral issues in nurses experiencing PTSD.

Chapter II

Methodology

Needs Assessment

The rising ages in patient populations and changes in social dynamics has led to a surge in patient volumes affecting nursing care delivery. Exposure to violence, traumatic injury, and unexpected death generates stress responses in care providers. Nursing professionals often reveal their vulnerability through cognitive-behavioral means. An impromptu interview conducted with nurse managers within one of the study site facilities uncovered the concern for professionals exhibiting PTSD related symptoms versus those expressed in compassion fatigue, burnout, or vicarious traumatization. While these nurses were not professionally diagnosed, they had been identified by peers and medical staff as having significant stress responses affecting the work environment. The concern for the continued success in quality care and patient safety was identified and led to the project design. Multiple studies exist to support the presence of events characteristic of trauma exposure and presence of PTSD related symptoms in nursing professionals (Perrin et al., 2013; Birks et al., 2017; Sabbath et al., 2018; Zhang et al., 2017; Sheen et al., 2014; Adriassens et al., 2012; Cavanaugh et al., 2014).

Routine nursing care involves exposure to a variety of traumatic events during the shift. Although previous research has indicated nurses are more likely to suffer secondary stress, vicarious traumatization, compassion fatigue, and burnout, Adriaessens et al. (2012) revealed 87% of emergency room nurses experience one or more traumas over a six-month period with 28.7% to 37.2% surpassing sub-clinical levels of psychological effects. Mealer et al. (2012) identified 20%-30% of critical care nurses suffered from symptoms of PTSD. Emerging violence against nurses by patients and family members have been reported to be occurring at a rate of

9.9% at least once weekly (AlBashtawy, 2013). Lateral violence is a term used when describing violent acts that are committed by one peer against another (American Academy of Medical-Surgical Nurses, 2015). Nemeth et al. (2017) found 34%-43% of clinical and emergency nursing professionals have been exposed to lateral violence, which is consistent with the American Academy of Medical-Surgical Nurses (2015) report that 27.3% of nurses had experienced bullying in the last six months. The prevalence of trauma and exhibition of clinical symptomology for PTSD experienced by professional nurses is supported in literature and demonstrates the need for ongoing research and intervention development.

Project Design

A descriptive cross-sectional design was used. The project involved two phases. The first phase involved use of a self-rated questionnaire to assess trauma related exposures and the presence of cognitive-behavioral responses in registered nurses with six months or greater working experience. The second phase was the implementation of an educational program for nurses and providers on trauma and stress responses, prevalence of symptomology, and intervention proposals. The project team, physically based at the mid-sized facility, consisted of the Vice President of Operations, Chief Nursing Officer, Emergency Department Clinical Coordinator and House Supervisor having highly collaborative relationships among lateral partners in the other organizations.

Setting

The initial phase of the project was set in inpatient and emergency department units in three hospitals in Texas that have 337 licensed inpatient beds. The inpatient units include medical-surgical, intensive care, and obstetrical areas. The educational presentation, the second phase of the project, was posted to the contract educational website, HealthStream.

Population

Registered nurses with a minimum of six months experience working on all emergency and inpatient units were invited to participate in the survey. At the time of implementation, there were approximately 436 full-time, part-time, and per diem registered nurses employed between the three facilities.

Tools or Instruments

Participants were asked to complete a demographic questionnaire, a trauma exposure and response questionnaire that included questions consistent with *DSM-5* criteria for PTSD diagnosis. The trauma and exposure questionnaire was modeled from the *Clinician-Administered PTSD Scale for DSM-5 (CAPS-5)* and the *PTSD Checklist for DSM-5 (PCL-5).* Both the *CAPS-5* and *PCL-5* were created by employees of the National Center for PTSD, are not copyrighted, and permission was granted by Heather Balch to access each tool (Appendix C). The combined demographic and trauma exposure and response questionnaire in found in Appendix A. To gain access to the full *CAPS-5* tool, the National Center for PTSD requires completion of a training course (Appendix B) (National Center for PTSD, 2017a) which was performed by this investigator.

The *CAPS-5* is a 30-item instrument used to make current and life time diagnosis of PTSD as well as to assess the symptoms of PTSD over the past week (Weather et al., 2018). The *CAPS-5* is the "gold" standard for PTSD evaluation with interrater reliability ranging from 0.92 to 1.00 for frequency rating and 0.93 to 0.98 intensity rating; the global severity correlation was 0.89 and test-retest for diagnosis was 0.63 with 83% agreement (International Society for Traumatic Stress Studies, 1995).

The *PCL-5* is a self-report measure assessing the presence and severity of PTSD symptoms (National Center for PTSD, 2017b). Developed by researchers for the National Center for PTSD, this screen is often used as an adjunct to the CAPS-5. Psychometric properties estimate internal consistency range between 0.94 to 0.97 and test-retest reliability has been reported as 0.96 at two to three days (Blanchard, Alexander, Buckley, & Forneris, 1996).

The demographic tool is part of the survey and was designed to capture data on each participant's level of education, years of experience, and principal area of practice. This information was critical to assessing correlations between experience and environment regarding levels of exposure to trauma within each working environment and the comparison of response levels based on education and experience levels.

Project Plan

Phase one of the project began after Bradley University Institutional Review Board and final project approvals. Prior to survey distribution, nurse managers were contacted via e-mail and telephone to introduce the project and request access to each unit. Following initial contact, the nurse managers were provided information surrounding the DNP project, the consent and survey documents and location of locked boxes on each unit. Nurses received surveys in their individual mailboxes on their respective units. Locked boxes were purchased for the nurses to place their completed surveys in. The student was responsible for distribution and retrieval of all survey materials.

Phase two of the project was an educational program provided for informational purposes. While not supportive of diagnosing peers with a disorder, this program was designed to offer registered nurses insight on the prevention, recognition, early intervention, and professional treatment of secondary stress and PTSD as it affects peers who may be in distress

(See Appendix D). The educational program was developed in the Microsoft Power Point application and implemented within week one of the onset of data collection. Unit managers were notified of its availability on HealthStream and were able to assign registered nurses the task of completing the education. Assigning the education as a mandatory assignment was left to the discretion of the nurse managers due to employment policies requiring an employee be paid for participating in mandatory assignments versus those nurses who could access the program at random without incurring additional costs. This phase had an expected time frame of completion of two weeks.

Data Analysis

Data were collected by having participants complete an anonymous self-rated questionnaire which was scored using a Likert Scale manually. All analyses were conducted using SPSS Version 25 and statistical significance was assumed at an alpha value of 0.05. Skewness and kurtosis statistics were run on the continuous outcome distributions to check for the assumption of normality. If either statistic was above an absolute value of 2.0, then the assumption was violated. Levene's Test of Equality of Variances was used to test for the assumption of homogeneity of variance. Between-subjects' analyses were run amongst the independent demographic groups for the trauma exposure (*CAPS-5*) and criteria-based score (*PCL-5*). One-way ANOVA was used to test for significant main effects with demographic variables with three or more levels. Post hoc tests were conducted when a significant main effect was found using Tukey's test. Independent samples t-tests were used when comparing demographic variables with two levels. Means and standard deviations were reported and interpreted for the between-subjects analyses.

Institutional Review Board and/or Ethical Issues

All eligible subjects were educated regarding the project, researcher contact information, informed consent, opportunity to participate, and refusal to participate through printed material contained in the consent. The questionnaires did not request any participant personal information and the researcher was solely responsible for delivering, retrieving, and coding the questionnaire forms. The risk to participants was limited to their emotional responses to previous experiences and information was provided for assistance within and outside the facilities to assist with any adverse reactions. (See *Information and Consent* in Appendix E).

Institutional Review Board approval from the Bradley University Committee on the Use of Human Subjects in Research for this project was obtained (Appendix F). In the approval, this study was found exempt. All participants were provided information for emergency psychological care and principal contact information for assistance at the time of consent.

Chapter III

Organizational Assessment and Cost Effectiveness Analysis

Organizational Assessment

The network of facilities targeted for participation in the project included two Level IV trauma facilities and one critical access facility. Located in the southeast region of Texas, they possess licensure for 337 inpatient beds. At the time this project was conducted, there were approximately 1,000 licensed nursing and ancillary professionals working in the clinic, emergency department, inpatient units, and physician offices. As part of a faith-based country wide system, these facilities are characteristically aligned with the corporate mission and operating vision supporting education and research.

Readiness for change is often associated with regulatory mandates, industry demands, and changes in practice guidelines. The nursing leadership response to this project was mixed among the three facilities. While the Vice-President of Operations, Chief Nursing Officer, and Clinical Coordinators in the larger facility did not express a negative reaction, they remained marginally silent in this process; they were willing to participate, but did not commit to assigning staff to post survey educational activities. Those leaders occupying the same positions in the mid-level facility, where the project was housed, had a high level of enthusiasm for the project and its implementation and encouraged registered nurses to participate in the project activities. This facility has begun to consider debriefing team formation and expressed interest in publishing information gained through this study system-wide. Those in similar positions in the critical access facility expressed support of the study but did not commit to incorporating the educational phase into current registered nurse assignments. Depreciated commitment to participation could be viewed as a barrier to project success, however, this project could be the

tool needed to change the minds of administrative members by revealing through research the needs of their staff.

Barriers to successful completion of this project directly related to registered nurses not completing the questionnaires. Non-participation can be linked to lack of interest, limited time for data collection, and work demands. Risks were associated with those participants willing to disclose cognitive-behavioral concerns and not having been provided assessment and intervention from an organizational based PTSD support program. A role of the student was to ensure participant safety and that unintended consequences were avoided. In the absence of organization policy to refer associates to outside facilities, the immediate plan was to refer any nurse disclosing symptomology to their respective employee assistance programs. Interventions within the education program are for informational purposes; referral for aid complied with current organizational policy.

Cost Factors

Identifying and intervening on behalf of the registered nurse with PTSD will result in the reduction of operational costs related to productivity losses, retention and turnover. The Resilience in Stressful Events Program (RISE) of Johns Hopkins Medicine estimates a cost of $300,000 for every 1% of nurses leaving a current position (Moran et al., 2017). Utilizing the Markov Model to perform a comparative cost-benefit study pre and post program implementation, Johns Hopkins measured the monetary benefits for losses in labor productivity for a one-year period of nurse time off and quit rates (Moran et al., 2017). The net monetary benefit post program implementation was $22,576 per nurse and an estimated savings of $1.8 million dollars (Moran et al., 2017). In addition to savings for the organization, the loss of work

time and possible licensure suspension or revocation can have tremendous implications for the nurse suffering from PTSD.

All costs related to project completion were bore by the student. The budgeted amount for completion was $1,500 with an estimated variance (+/-) of $500.00. This included reproduction, supplies and statistician expenditures. (See Table 1 below).

Table 1. Project Budget

ITEM	**COST/UNIT**	**UNITS/HOURS**	**TOTAL**
Primary Researcher	$40.00/hours	200 hours	$8000.00
Team Members	$35.00/hour	40 hours	1400.00
Nurse Managers	$30.00/hour	6 total hours	180.00
Participants	$25.00/hour	250 total hours	6250.00
Statistician	$50.00/hour	6	300.00
Printing	$0.10/page	2500	250.00
Lock boxes	$10.00/box	18	180.00

Total	$16560.00
Less uncompensated fees and wages	15830.00
NET TOTAL	730.00

Chapter IV

Results

Analysis of Implementation Process

The implementation process at the mid-level facility went well. Challenges arose from the other facilities due to changes in unit leadership in the emergency and obstetrical departments at the clinical coordinator level. A week delay in educating leadership and coordinating collection box locations occurred. This delay led to a subsequent interruption in scoring and analyzing data. An additional delay was incurred when the consulting statistician moved out of the area leading to a three-day delay in coordinating consultation. Total survey posting and collection time was three weeks.

Analysis of Project Outcome Data

The survey yielded a 19% completion rate among 436 eligible participants (n=84). The characteristics of participating registered nurses are presented in Table 2. Participants were principally female (77.4%), predominantly in the age group of 31-40 years (26.2%), had 6-10 years experience (27.4%), held an associate degree (70.2%), and currently were working in the emergency department. The proportion of male participants was small (22.6%) and all working within the emergency department (48.8%). There was no significant difference between genders. A significant difference was found between the 41-50 and 51-60 age groups (p=0.008) and the 41-50 and 61-XX age groups (p=.015).

TABLE 2 Demographic data of study sample

Item		(n=84) n	N (%)
Sex	Male	19	22.6
	Female	65	77.4
Age	Years		
	20-30	19	22.6
	31-40	22	26.2
	41-50	19	22.6
	51-60	17	20.2
	61-XX	7	8.3
Experience	Years		
	0-5	21	25.0
	6-10	23	27.4
	11-15	12	14.3
	16-20	9	10.7
	21-XX	19	22.6
Degree	Level		
	ADN	59	70.2
	BSN	25	29.8
Area	Assigned		
	ED	41	48.8
	M/S	21	25.0
	ICU	13	15.5
	SURGERY	5	6.0

L&D	4	4.8

The lifetime experiences of personal traumatic exposure were examined. Participants were asked to respond to questions regarding physical, sexual and verbal abuses, severe illness or injury to self and others close to them as well as the death of a close family member prior to age 18 and after becoming an adult. There was a significant positive response to prior experiences with 75% (n=63) (See Life Experiences of Trauma, Table 3) of the participants reporting a history of traumatic exposures throughout their lifetime.

Table 3: Trauma exposure

TRAUMA EXPOSURE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ZERO	13	14.4	15.5	15.5
	1 EXPOSURE	19	21.1	22.6	38.1
	2 EXPOSURES	16	17.8	19.0	57.1
	3 EXPOSURES	18	20.0	21.4	78.6
	4 EXPOSURES	5	5.6	6.0	84.5
	5 EXPOSURES	7	7.8	8.3	92.9
	8 EXPOSURES	3	3.3	3.6	96.4
	7 EXPOSURES	2	2.2	2.4	98.8
	9 EXPOSURES	1	1.1	1.2	100.0
	Total	84	93.3	100.0	
Missing	System	6	6.7		
Total		90	100.0		

Items typically classified as indirect traumatic incidents experienced routinely in the hospital environment during nursing care and the frequency of experiencing these events were examined and are listed in Workplace exposures; Indirect, Table 4. Nurses were asked to rate

the frequency of caring for patients suffering from trauma, cardiac arrest, and sudden death. Those witnessing or caring for these groups of patients frequently were measured at 28.9% trauma, 28.9% cardiac arrest, and 18.9% sudden death. Direct exposures to verbal and physical violence perpetrated by patients, families, physicians and peers were also examined (See Workplace exposure; Direct, Table 4). Verbal abuse by patients and peers was measured as an often occurrence in 28.9% while physical abuse at the same measure was 6.6%. Of additional concern, fear of licensure due to the work environment was an added stressor with a frequency of often scored in 15.6% of the participants (n=14).

Table 4: Workplace exposures

Indirect	Event	Frequency	(n=84)	N
	Trauma patient	Never	30	33.3
		Rare	20	22.2
		Sometimes	8	8.9
		Often	26	28.9
	Cardiac arrest	Never	22	24.4
		Rare	22	24.4
		Sometimes	14	15.6
		Often	26	28.9
	Sudden death	Never	36	40.0
		Rare	20	22.2
		Sometimes	11	12.2
		Often	17	18.9

Direct	Event	Frequency	(n=84)	N
	Physical abuse/Peer	Never	73	81.1
		Rare	6	6.7
		Sometimes	3	3.3
		Often	2	2.2
	Verbal abuse/Peer	Never	23	25.6
		Rare	26	28.9
		Sometimes	27	30.0
		Often	8	8.9
	Physical abuse/Patient	Never	57	63.3
		Rare	15	16.7
		Sometimes	8	8.9

	Often	4	4.4
Verbal abuse/Patient	Never	19	21.1
	Rare	17	18.9
	Sometimes	30	33.3
	Often	18	20.0
Fear of Licensure	Never	20	22.2
	Rare	23	25.6
	Sometimes	27	30.0
	Often	14	15.

The experience of PTSD symptomology was measured by presence and frequency. Participants were asked to report symptoms of intrusion, avoidance, cognitive/behavioral, and reactive responses. Intrusive symptoms were reported in 63% (n=53), avoidance behaviors in 56% (n=47), cognitive/behavioral 69% (n=58), and reactive symptoms were present in 85% (n=71) of the registered nurse participants. Questionnaires were then scored for the clinical level of PTSD based on *DSM-V* criterion. Those meeting clinical levels of PTSD were assessed at 35.6% (n=32), 26.7% (n=24) exceeding clinical expectations and those with symptomology consistent with criteria, but at a sub-clinical level was 2.2% (n=2) (See Table 5: Criterion scoring).

Table 5: Criterion scoring

CRITERIA BASED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Doesn't fit criterion	47	52.2	56.0	56.0
	Consistent with criteria, severity not clinically significant	3	3.3	3.6	59.5
	Consistent with criterion, severity subclinical	2	2.2	2.4	61.9
	Consistent with criterion, severity clinical	8	8.9	9.5	71.4
	Consistent with criterion, exceeds clinical expectations	24	26.7	28.6	100.0

	Total	84	93.3	100.0	
Missing	System	6	6.7		
Total		90	100.0		

Chapter V

Discussion

Findings

The purpose of this project was to assess the prevalence of PTSD related symptoms in registered nurses and to arm nursing professionals and organizational leaders with this knowledge. The findings of this project suggest registered nurses are vulnerable to acute and cumulative effects of traumatic incident exposure and the development of PTSD. Scoring based on exposure and symptomology to determine subclinical and clinical signs of PTSD yielded a return of 2% of participants as having subclinical signs of PTSD and 38% of participants meeting DSM-V criterion for a diagnosis, with 26% reporting severe symptomology. The number of participants having one or more life exposures to a traumatic event was 73%. Of these, 14% had experienced five or more traumatic events. It is known that prolonged or recurrent exposure to trauma can lead to developing PTSD. Due to the high volume of participants having multiple life-time exposures, it is difficult to draw conclusions regarding direct work-related trauma exposures and the development of this disorder. While a direct correlation cannot be made, this was supportive of research on cumulative effects of trauma and shows a need for research on the effects of traumatic experiences in nursing populations. The

educational program was posted to the organizational learning website, HealthStream. The total participant level was too low (n=4) to draw any conclusions as to its benefit.

Limitations or Deviations from Project Plan

A 19% response rate was felt to be adequate to test the prevalence of PTSD at subclinical and clinical thresholds in nursing professionals. Findings of life experienced trauma and PTSD development were consistent with research reviewed in the literature search. A larger sample size would have been appreciated, but the greatest limitation of this project was the time constraints. Deviations from the project plan have not been identified at this time. Unexpected discovery may tempt deviation, but mechanisms were in place to maintain target producible outcomes.

Implications

Project results support the presence of traumatic exposure in nursing practice and the risk of PTSD development. The information gained from this project will be shared within the hospital system addressing organizational leaders in nursing and administrative roles. Recommendations for the development of critical incident stress management and workplace violence focus groups as well as policy development addressing employee referral for assistance will be made at the organizational level. This researcher would like to see violence screening performed at hire and at intervals throughout an employee's anniversary year. As an adjunct to employee annual health screens, violence screening could be completed, and the registered nurse referred for counseling if the screen is positive.

Implications for further research. Findings for consideration in future research relate to the prevalence and affects of workplace violence on nursing performance. The variables for such would include quality and performance measures and the cognitive-behavioral impact of this phenomenon. It was apparent to the researcher that prior life experiences generated cumulative

effects undiscernible as the source of symptomology in this group of participants. Any such studies should be longitudinal to allow for a larger sampling of the nursing population.

Chapter VI:

Conclusion

Value of the Project

Post-traumatic Stress disorder is a psychiatric condition affecting 7% of the adult population in the U.S. Estimated annual costs exceed $42 billion dollars (PTSD United, 2013). Nursing professionals are often associated with secondary stress disorders relative to being witness of another's suffering. It was hypothesized that nursing professionals would meet criteria for PTSD. Current data concerning the prevalence of PTSD in nursing is unavailable as more recent studies found utilized an older version of the *Diagnostic and Statistical Manual* criteria for diagnosis. This project demonstrated a prevalence of PTSD related exposures and symptomology exists.

This project has proven valuable to the health of the nursing community, patient safety, organizational quality and community health. By identifying the number of nurses with life-time trauma effects and revealing current work place exposures helped to promote individual and organizational growth. The DNP project utilized tools, people and systems to move through research and dissemination to practice (Harris, n.d.). It was the aim of this project to influence practice and encourage positive outcomes through peer assisted healing.

DNP Essentials

The *DNP Essentials* as a guide for this scholarly project defined and molded its outcomes. *DNP Essentials III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice* directed the project proposal and implementation, approval processes and data analysis (American Association of Colleges of Nursing, 2006). The goal of identifying nursing professionals with PTSD in order to improve organizational responses, preserve nursing functionality and improve the quality of patient relationships and care was aligned with *DNP Essentials VI: Interprofessional Collaboration for Improving Patient and Population Health Outcome.*

Plan for Dissemination

This project will be shared with the Bradley University Community through formal oral presentation. Upon final approval, the project will be submitted into the Doctors of Nursing Practice e-Repository. A meeting was held with the Vice President of Operations, Chief Nursing Officer and Clinical Coordinator of the emergency department to discuss project findings and plan a clinical debriefing team. It is hopeful that permission will be given to participate in upcoming grant programs addressing violence in the workplace and trauma informed care.

Attainment of Personal and Professional Goals

Discovery through research on the presence of PTSD related symptoms in nursing peers has built on previous experience of working with others suffering similar effects of trauma exposure. Helping others gain knowledge on the prevalence of PTSD and the long-term sequelae of untreated illness was once a desire and having completed this project, I have fulfilled both a personal and professional goal. I hope to continue working with nursing professionals suffering

from this and other secondary stress conditions to improve retention, resilience and patient outcomes through nursing care delivery.

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Appendices

Appendix A: Participant questionnaire

AGE GROUP	20-30		31-40		41-50		51-60 years		61-XX	
GENDER	MALE		FEMALE		[redacted]		[redacted]		[redacted]	
DEGREE	ADN		BSN		[redacted]		[redacted]		[redacted]	
YEARS OF PRACTICE	0-5		6-10		11-15		16-20		21-XX	
AREA OF PRACTICE	ED		M/S		ICU		SURGERY		OTHER	

Please answer the following questions about events that may be stressful or disturbing for almost anyone.

Event	Has this ever happened to you?	If this has happened to you, did you feel your life was in danger or you might be seriously injured	If the event happened, were you seriously injured?
Have you ever served in a war zone or noncombat job exposing yourself to war-related casualties?	Yes	Yes	Yes

	No	No	No
Have you ever been in a serious car accident, or a serious accident at work or somewhere else?	Yes No	Yes No	Yes No
Have you ever had a life-threatening illness such as cancer, a heart attack, AIDS or, multiple sclerosis?	Yes No	Yes No	Yes No
Before age 18, were you ever physically punished or beaten by a parent, caretaker, or teacher?	Yes No	Yes No	Yes No
Before age 18, were you ever sexually abused or assaulted?	Yes No	Yes No	Yes No
Have you ever experienced physical or sexual abuse after the age of 18	Yes No	Yes No	Yes No
Have you ever been in any other situation where you were seriously injured or were fearful you might be seriously injured or killed?	Yes No	Yes No	Yes No
Have you witnessed, in person, an event of actual or threatened death, serious injury, or sexual violence	Yes No	[redacted]	[redacted]
Have you learned of a traumatic event occurring to a close family member or friend?	Yes No	[redacted]	[redacted]
Have you experienced repeated or extreme exposure to aversive details of a	Yes	[redacted]	[redacted]

traumatic event (direct exposure, do not answer yes if experienced through media)	No		

Please rate the following based on your experiences when at work

Over the past six months:	**never**	**rarely**	**sometimes**	**often**	**weekly**	**daily**
Taken care of a patient with traumatic injuries?						
Taken of a patient in cardiac arrest?						
Taken care of a patient suffering sudden/unexpected death?						
Suffered physical abuse by a patient or family member?						
Suffered verbal abuse by a patient or family member?						
Suffered physical abuse by a physician or peer?						
Suffered verbal abuse by a physician or peer?						
Felt your license threatened by your patient load or, acuity?						
Have you had any unwanted memories of an event you've experienced above not counting dreams?						
Have you had any unpleasant dreams of an event you've experienced above?						
Have there been times when you suddenly acted or felt as if an event you've experienced above was happening again?						
Have you gotten emotionally upset when something reminded you of an even you've experienced above?						
Have you had any physical reactions when something reminded you of an event you've experienced above?						
Have you tried to avoid thoughts or feelings about an event you've experienced above?						
Have you tried to avoid things that remind you of an event experienced above such as certain people, places or situations?						
Have you had difficulty remembering						

some important parts of an event experienced above?						
Have you had any strong negative feelings such as fear, horror, anger, guilt or shame related to an event						
Over the past six months:	**never**	**rarely**	**sometimes**	**often**	**weekly**	**daily**
Have you been less interested in activities that you used to enjoy since experiencing an event listed above?						
Have you felt distant or cut off from other people?						
Have there been times when you had difficulty experiencing positive feelings like love or happiness?						
Have there been times when you felt especially irritable or angry and showed it in your behavior?						
Have there been times when you were taking more risks or doing things that might have caused you harm?						
Have you been especially alert or watchful, even when there was not specific threat or danger?						
Have you had any strong startle reactions?						
Have you had any problems with concentration?						
Have you had any problems falling or staying asleep?						
How often are you bothered by these symptoms?						
How often are your relationships with other people affected?						
How often is your ability to work affected by these symptoms?						
How often have you felt as if you were separated from yourself?						

How often have there been times when things going on around you feel unreal, strange or unfamiliar?						

Appendix B: CAPS-5 Certificate

Appendix C: Copyright Information

- **Balch, Heather G.** <Heather.Balch@va.gov>

  To:fnetexas@yahoo.com

  Mar 26 at 1:10 PM

  Greetings, and thank you for your assessment instrument request.

  You may access National Center for PTSD assessment measures by following the link below:

  http://www.ptsd.va.gov/professional/assessment/documents/ptsd_trauma_assessments.asp

  These assessment tools were created by government employees and therefore are not copyrighted. In accordance with the American Psychological Association's ethical guidelines, these instruments are intended for use by qualified health professionals with advanced graduate training in psychodiagnostic assessment.

Please let us know if you have any difficulties downloading these instruments. Also, no thank you email is necessary.

Sincerely,

National Center for PTSD Staff

Appendix D: Educational Program

PRESENTATION.HS.SCHOFIELD825.pptx

Appendix E: Information and Consent Form

Post-traumatic Stress Disorder in Nursing Populations: Implications for Practice

I am a graduate student at Bradley University. To obtain my Doctor of Nursing Practice (DNP), I am required to implement a DNP project.

You are being asked to take part in a research study. Before deciding to participate in this study, it is important that you understand why the research study is being done and what it will involve. Please read the following information carefully. Please contact the researcher is there is anything that is not clear or if you need more information.

The purpose of the project is to examine the prevalence of post-traumatic stress disorder (PTSD) amongst registered nurses. The aim of the project is to arm nursing professionals and

organizational leaders with the knowledge to understand PTSD prevalence and recognize those impaired by the effects of critical incidents.

This project is important for ensuring the sustainability of nurses everywhere. You are being asked to participate in this project by completing a survey on your experience as a registered nurse. As a quality measure, please answer yes or no to the questions below:

1. Are you a registered nurse?
2. Have you worked as a registered nurse for at least six months?

If you answered "no" to any of the above questions, you do not meet the eligibility requirements for participation in this study.

If you answered "yes" to both questions above, you are eligible to participate in this project.

Your participation in this project is completely voluntary. If you agree to be part of this project you will be asked to complete the attached survey about your experience as a nurse and how certain events have affected, you. This survey also asks some demographic data. The survey takes approximately 10-15 minutes to complete.

This is an anonymous survey; there is no link between your name and the research record.

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. You may also skip specific questions.

There is no compensation for participation. Although your participation may not benefit you personally, it will help us understand the current practice, beliefs, demographics, and emotional status of nursing professionals who have been exposed to traumatic events. This project will provide valuable information about what is occurring in clinical practice. The knowledge gained will provide a foundation for understanding the psychological effects of trauma and how those affects can be influenced through peer support and education.

If you participate in this project, there is a risk of triggering emotional responses due to recall of traumatic exposures. If you experience any distress during the completion of this survey, please stop and seek assistance immediately through your employee assistance program or by contacting the local Burke Center.

Questions about this project may be directed to the DNP project student, Patricia Schofield at (409-350-2495), or the DNP project advisor, Dr. Erickson (309-677-4974), during normal business hours. You may also contact the Committee on the Use of Human Subjects in Research (CUHSR) office (309-677-3877) with any questions or concerns related to this project.

Thank you for your interest and participation in this project.

Sincerely,

Patricia Schofield, RN, MSN

Appendix F: Institutional Review Board Approval

Dear Investigators:

Your proposed study (CUHSR 43e-18) Posttraumatic Stress Disorder in nursing population: Implications for practice has been reviewed and was found to be exempt from full review under Category 2.

Your vita and ethics certificates are on file.

Be aware that future changes to the protocols must first be approved by the Committee on the Use of Human Subjects in Research (CUHSR) prior to implementation and that substantial changes may result in the need for further review.

While no untoward effects are anticipated, should they arise, please report any untoward effects to CUHSR promptly (within 3 days).

As this study was reviewed as exempt, no further reporting is required unless you change the protocol or personnel involved.

This email will serve as notice that your study has been reviewed unless a more formal letter is needed. Please let me know, and I will provide the letter.

Ross L. Fink, Ph.D.
Chairperson, CUHSR