DO GAPS IN PRE-DEPLOYMENT PREPAREDNESS
RAISE THE RISK OF PTSD
FOR MILITARY RNS?

by

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A DNP Project Submitted to the Faculty of the
COLLEGE OF NURSING
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF NURSING PRACTICE
In the Graduate College
THE UNIVERSITY OF ARIZONA

2017
THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the DNP Project Committee, we certify that we have read the DNP project prepared by Ambrosia Melinda Boyd entitled “Do Gaps in Pre-deployment Preparedness Raise the Risk of PTSD for Military RNs” and recommend that it be accepted as fulfilling the DNP project requirement for the Degree of Doctor of Nursing Practice.

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Final approval and acceptance of this DNP project is contingent upon the candidate’s submission of the final copies of the DNP project to the Graduate College.

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STATEMENT BY AUTHOR

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SIGNED: __Ambrosia Melinda Boyd________________________
ACKNOWLEDGMENTS

I want to thank the military registered nurses who graciously supported this project. Thank you so much for sharing your stories and experiences with me. I am grateful for all of you and the sacrifices you make to serve our great Nation. Your servant attitudes humble me, and I am proud to know you. Thank you for all you do, you are amazing!

I want to thank my husband, Nathan Boyd, for your support, love, and understanding throughout this journey. You have been my biggest fan and my source of strength since the day we met. I am proud to be your wife and partner in life. I believe with my entire being that you are my gift from God. He placed you in my life to save me. I thank Him every day for you and I couldn’t love or cherish you more. Thank you, baby.

I want to thank my parents, Tom and Donna. They raised me with the love and support that has pushed me to take risks and live life fully. Dad, I love you more than I tell you and couldn’t do half of what I do without you as an example. Your free spirit and kind heartedness are admired by everyone who knows you. Mom, I love you, I miss you, and there’s you in everything I do. Marva, my aunt and friend, your words, “fear is not from God” have kept me from quitting more times than I can count.

I want to thank all the people who allowed graduate school to be possible. My family and friends who have supported me, fed me, gave me places to stay during long commutes, encouraged me, and been patient with me when my patience was thin. My clinical preceptors who have taught me, encouraged me, and challenged me this year to grow into a Nurse Practitioner.

I want to acknowledge and thank the members of my DNP project committee: Dr. Kate Sheppard, my committee chair, Dr. Sara Edmund, and Dr. Dawn Goldstein. You have all guided me, supported me, and pushed me farther than I thought I could go at times. I am grateful for your willingness to participate in this project and I appreciate your knowledge and commitment. Dr. Sheppard, you have been an instrumental part in my professional growth these past couple of years and there is no way I would have made it to graduation day without you. Thank you.

Finally, I want to express the depth of my gratitude for God’s presence in my life. I fully believe He has placed people in my life to guide me and protect me. I have no doubt that my time serving in the military was God’s way to bring people into my life that I would need to get me through very dark times. I didn’t know it then, but I am absolutely sure now. My heart is full, and I am humbled by His grace.
DEDICATION

To Nathan:

The Love of my Life
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ABSTRACT

Purpose: Describe the perceptions of military registered nurses (RNs) on being prepared to provide nursing care during a deployment.

Background: Injuries sustained by war are different from trauma-related injuries occurring within the Unites States. Nurses who provide care during overseas deployment encounter patients with poly-trauma, multiple and highly complex injuries; consequently, this type of nursing requires strong clinical skills beyond what is required in stateside facilities. Additionally, military nurses undergo intense stress related to overseas deployment in a war zone. In fact, military medical providers have one of the highest rates of post-traumatic stress post-deployment.

Methods: This project employed a qualitative, case study approach. Semi-structured interviews were conducted with military RNs who worked as nurses during overseas deployment. A script was developed to guide the interview, and further discussion stemmed from participant responses. Recorded interviews were transcribed into text and analyzed for commonalities.

Findings: Five military nurses who previously provided nursing care during overseas employment participated in this study. Commonalities included the realization that higher acuity injuries are seen in a deployed setting versus a military stateside hospital. Participants also shared fears that they would not be prepared enough to provide excellent patient care. Another commonality was not knowing how to prepare for an unknown experience. A positive commonality was the sense of pride expressed by the participants regarding their military service and deployment experience. All participants outlined what they had learned and what might have helped them to better prepare for deployment. Unanimously, more clinically relevant training
was recommended. The participants shared that they had grown and changed from their deployment experience.

**Implications:** All five participants felt a gap in perceived adequate pre-deployment preparation. They believed they lacked the training to care for the high acuity patients they would encounter during overseas deployment; this shook their self-confidence and caused them to worry about being an effective team member. Military preparedness programs should be expanded to include skills and knowledge relevant to nursing in high acuity, hostile environments. Research looking at the personal preparations, specifically mental and emotional, of military members may be helpful in determining any links between mental resilience and the development of PTSD.
INTRODUCTION

United States military nurses serving in deployed locations bear an enormous load of stress in relation to their occupation. They are the helper, the healer, the expert in their clinical field, and the steady hand you want by your side if you are in need of care. These nurses are at high risk for developing post-traumatic stress disorder (PTSD) due to their intense working conditions in which they experience trauma, death, challenges, and emotional and physical fatigue. The Air Force Office of the Surgeon General states that military medical providers are among the top three specialties reporting the highest scores of PTSD symptoms on their post deployment health assessments (Boivin, 2010). In a study conducted by Rivers, Gordon, Speraw, and Reese (2013), nurses who had returned home from deployments described their experience as difficult to talk about and memories they tried to forget. The risk of PTSD can be thought of as an occupational hazard for nurses with those working in critical environments, including during military deployments, at higher risk. Compounding the risk of PTSD development from being witness to battlefield injuries is the level of preparedness individuals feel. Levels of perceived threat have been strongly correlated with the severity of PTSD symptoms; therefore, it is reasonable to think that the more prepared a person feels and the more realistic their assessment of a threat is, the more manageable PTSD symptoms can be (Renshaw, 2011). The consequence of military registered nurses (RNs) experiencing PTSD is a potential negative change in job performance and an impact on retention in the nursing profession (Hood, 2011). The purpose of this project is to describe the perceptions of military RNs on being prepared to provide nursing care during a deployment.
Background Knowledge

In the military health system, RNs are required to have the education and appropriate licensure that helps to ensure safe and quality care, the same as in any civilian healthcare system. The US military health system is comprised of 56 hospitals, 361 ambulatory care clinics and 249 dental clinics (MHS Review, 2014). Some of these facilities are located outside of the United States within allied countries including Germany and the United Kingdom.

Approximately 0.4% of the United States population (Chalabi, 2015) who serve in the Armed Forces deploy to volatile settings where health care is delivered within “theater” hospitals. A theater is a geographical location where a war is being fought. Theater hospitals are strategically located within war zone settings to provide a place to care for the injured. In the beginning stages of a conflict, theater hospitals consist of mobile tents that are set up quickly. If the conflict persists, more equipment, staff, and ancillary capabilities are added to the facility (USAF College of Aerospace Doctrine, Research and Education, 1997).

Injuries experienced in a wartime environment are different from injuries experienced in a trauma setting in the Unites States. For example, gunshot wounds, which are experienced in both stateside and deployed settings, account for 19.9% of explosive injuries seen in deployment settings while 74.4% of explosive injuries are caused by improvised explosive devices mortars, and rocket propelled grenades (Belmont, McCriskin, Seig, Burks, & Schoenfeld, 2013). Polytrauma (multiple, complex injuries) is seen frequently in those who are injured during military combat operations. These polytrauma injuries are the primary reason clinical competencies needed in a deployed setting may be more complex than what is utilized in a stateside military treatment facility. The military has a large spectrum of specialty providers such
as orthopedic surgeons and critical care nurses who may all be stationed at a military treatment facility that provides only outpatient primary care services. Therefore, it is likely that nurses working in these stateside facilities will not be caring for the multi-casualty patients they will encounter overseas. This may lead to a feeling of being unprepared for the type of patient one will encounter overseas. “This sequestering in our MTFs with little civilian contact and few opportunities to maintain trauma management skills is suboptimal” (Cannon, 2015, p 8).

**Statement of the Problem**

As is common throughout history, the United States military goes through periods of downsizing after major conflicts end. This leads to a decreased need for large military medical centers, which results in several of the large inpatient hospitals closing or merging with one another, and an increase of the outpatient, primary care military treatment facilities. While a necessary change, this does not change the type of injuries that are being seen in war settings, and as expected, the skill set needed during deployment is not being routinely used during time at home. This becomes problematic when the next conflict begins. Since war is an unplanned event, there is often little time for adequate skills preparation and refreshment. As was seen in Desert Storm this lack of continuous skills sustainment led to substandard care and devastating consequences (Cannon, 2015).

With the United States being in a continual war with other countries since the terror attacks occurring on September 11, 2001, many military healthcare providers have been deployed to war zones where their skills are needed. The media has widely publicized the impacts of combat on soldiers reporting the incidences of PTSD and the associated health risks. The US Department of Veteran’s Affairs (2016), reported that veterans consistently report PTSD
rates of 11-30% depending on the era of their military service, which contrasts significantly from the 7-8% prevalence of PTSD among civilians. In 2008, the Army reported their highest rate of PTSD related suicides in 28 years, a statistic that surpassed the suicide rates of civilian persons with similar demographics (Kuehn, 2009). Military nurses are not exempt from these experiences and statistics. RNs in deployed settings are subject to personal safety concerns such as bombings or Rocket Propelled Grenade attacks and exposure to traumatic casualties, which should be considered as raising the risk of PTSD among these nurses.

**Purpose**

The purpose of this project is to describe the perceptions of military RNs on being prepared to provide nursing care during a deployment. The aims of this study are: 1) to describe the nature of pre-deployment clinical training; 2) to describe the emotional preparation prior to a deployment; 3) to describe commonalities of participants’ experiences, and 4) to describe, retrospectively, what would have been helpful for these RNs be more prepared to deliver nursing care while in a deployed location.

**Theoretical Framework**

Deployment Anxiety Reduction Training (DART) was developed with the goal of keeping military personnel mentally healthy during deployment and thereby reducing the risk of PTSD development before it begins (University of California San Francisco (UCSF), 2010). The aim of DART is to minimize the stress response to a traumatic event experienced in a combat setting. It has been shown that extreme levels of stress can cause vivid recollections of the event resulting in an increased risk for developing PTSD (UCSF, 2010). DART includes muscle
relaxation techniques such as deep breathing and the deflecting of thoughts from a traumatic event (UCSF, 2010).

The Planning Committee on Workforce Resiliency Programs (2012) identifies that the branches of the military are threat-based organizations; therefore, it is important that they develop countermeasures against combat and operational stressors that military members may face. Individual branches of service have adapted their own models within the framework of DART with the aim of promoting psychological fitness and better preparing service members for the psychologic stressors experienced during deployment and ultimately reducing stress reactions and PTSD development. These programs focus on resiliency through comprehensive mental, spiritual, emotional, and physical trainings delivered on an ongoing basis and while in deployment locations (Institute of Medicine, 2012). Resilience is defined as the capacity of people to continue to function physically and mentally despite their exposure to trying situations (Planning Committee on Workforce Resiliency Programs, 2012). The Air Force employs a program called Comprehensive Airman Fitness; that program goal is to “build and sustain a thriving and resilient Air Force community that fosters mental, physical, social and spiritual fitness” (Leslie, 2014). The Army utilizes a program titled Comprehensive Soldier and Family Fitness, aimed at helping Army members be better able to “cope with adversity, perform better in stressful situations, and thrive in life” (Ready Army, n.d.). Finally, the Navy has implemented “21st Century Sailor” where Sailor’s total fitness needs -including physical, mental, social and spiritual – are met to ensure they can better meet the challenges they face during their military service such as being ready to deploy when called upon (Kelly, 2013). By their definitions, all of these programs focus on resiliency trainings in order to promote total health and well-being of
individual military members, but it is important to recognize that members from the different branches of service have received varied training prior to deployment.

Nurses who experience working in critical environments are exposed to many stressors including end of life care, cardiopulmonary resuscitation, and ethical dilemmas. While PTSD occurs more commonly in those who experience a traumatic event first hand, it is also possible that those individuals with indirect exposure to critical events are affected (Mealer, Shelton, Berg, Rothbaum, & Moss, 2006). The DART framework is used to inform this project because it speaks to the RNs’ mental preparedness for overseas deployment. DART emphasizes the importance of resilience by focusing on individuals maintaining combat readiness through constant development of mental and physical health (UCSF, 2010). When nurses feel unprepared for the demands of clinical rotations, they report inadequacy, self-doubt, depression, anxiety, worry, and anger (Reeve, Shumaker, Yearwood, Crowell, & Riley, 2012). Because the DART framework addresses mental well-being among military personnel, it was selected to guide this project.

**Conceptual Definitions**

Combat, the preparation for and conduct of war, is the military’s core activity, and its primary reason for existence (Hsu, 2010). While each branch of service has their individual mottos and values there is a military culture shared by all based upon the ethos of discipline, service, and obedience. Two of the following concepts are unique to military culture: pre-deployment training and combat setting injuries. PTSD occurs outside of military personnel, but is an important concept to discuss as it relates to the purpose of this project.
Pre-Deployment Training

Deployments involve an increased exposure to potential traumatic events in a brief period of time (Price, Gros, Strachan, Ruggiero, & Acierno, 2013). Renshaw (2011) describes the role of pre-deployment training as a “potential buffer” between combat experiences and the development of PTSD. Perceived threat, or a persons’ personal perception regarding a certain situation or event, has been suggested to be the primary mechanism by which combat experiences are associated with PTSD in service members (the higher the perceived threat, the higher the likelihood of later developing PTSD) (Renshaw, 2011). Additionally, military members who report high levels of preparedness training prior to deployments also reported levels of perceived threat that were in line with the actual combat experience whereas those who reported low levels of pre-deployment preparedness training reported a greater perceived threat even in the face of low levels of combat (Renshaw, 2011).

Primary, or universal prevention, is a technique used by the U.S. military with the goal of preventing PTSD. This technique often focuses on the development of resilience through trainings (Institute of Medicine, 2012). Mandated by the Department of Defense (DoD) in 2011, each branch of service has adopted their own individualized training programs with the underlying theme of each being to promote psychological resilience and self-care for the goal of reducing the risk of PTSD development (Institute of Medicine, 2012). Military RNs are also provided clinical pre-deployment training. Centers for Sustainment of Trauma and Readiness Skills (C-STARS) is a clinical program the Air Force sends pre-deployers to for a few weeks to help prepare them for the type of injuries they’re likely to encounter in a combat setting (Miles, 2012). Lieutenant Colonel (Dr.) Fang, C-STARS director, outlines that most of the students
come from military hospitals or clinics where they rarely experience the severity of wounds they'll face in the combat theater (Miles, 2012). Additionally, in some geographical locations there are ongoing clinical skill sustainment trainings where the military partners with civilian Level I Trauma centers to provide approximately 40 hours a year of lecture, skills refreshers, and clinical duties (Honor Health, 2014).

**Combat Stetting Injuries**

Within the military health system, there are five levels of care capabilities with level one care being provided in the combat setting or battlefield frontline and level five being provided at stateside military hospitals (Spencer, 2006). The majority of military RNs provide care in a level three setting where there are hospitals containing trauma, emergency, and operative services. At the time of the Vietnam War, most military combatants were injured by gunshots to the chest or abdomen (Spencer, 2006). Advances in vehicle and body armor have protected the chest and abdomen areas; however, arms and legs remain exposed. In current war settings, explosive devices penetrating blast injuries are responsible for 78% of injuries (Owens et. al., 2008) resulting in the need for complex treatment and care of trauma, burns, blood loss, and embedded fragments of the explosive (Manring, Hawk, Calhoun, & Anderson, 2008). For the military nurse, a combat setting means separation from family for extended periods of time, culture and language differences, medical care supply shortages, and threats from local insurgents being just a short list of challenges.

**Post-Traumatic Stress Disorder**

PTSD is defined as a disorder that results after exposure to a shocking, scary, or dangerous event (National Institute of Mental Health, 2016). PTSD can develop quickly after the
event or can be delayed for years. The American Psychiatric Association (APA) details PTSD diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). There are eight criteria associated with PTSD. In order for a diagnosis of PTSD to be made, individuals must experience symptoms from each of the following criteria: intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity (APA, 2013). These symptoms must be present for at least one month. There are a variety of manifestations including flashbacks, disturbed sleep or nightmares, labile mood, and trouble recalling specific features of the event (APA, 2013; National Institute of Mental Health, 2016).

PTSD is one of the signature injuries of the recent U.S. wars in Iraq and Afghanistan. Of the more than 2.6 million service members who have been deployed to Operation Enduring Freedom in Afghanistan since 2001 and Operation Iraqi Freedom since 2003, an estimated 13–20% of them have or may develop PTSD (Institute of Medicine, 2012). 3.5% of the adult population in the US suffers from PTSD while the number of nurses with PTSD is estimated to be 14% or four times higher than the general adult population (Hood, 2011). Critical care and military nurses are considered to be vulnerable populations for the risk of PTSD development.

SYNTHESIS OF EVIDENCE

There is extensive research available on PTSD, with much focus directed to PTSD among military personnel. However, evidence regarding PTSD among military health care providers is more limited. The available literature regarding deployed military RNs addresses their individual deployment experiences, their perceptions of their safety while deployed, the difficulty experienced in reintegrating to home life post-deployment, and the commonalities shared by deployed RNs. Although nurses are not usually witnessing direct combat, the way war is fought
has changed in recent history. The military bases where nurses live, sleep, and work for the duration of their deployment are often subject to enemy attacks, resulting in nurses living with sustained fear of their safety (Mealer, Shelton, Berg, Rothbaum, & Moss, 2006). The following discussion outlines the current evidence regarding military nursing.

**Literature Search**

The literature search for this project included the topics of military nurses, deployment, education, and PTSD. Databases searched included: PubMed, CINHAL, Cochrane Library, and Google Scholar. As previously mentioned, literature surrounding the risk or development of PTSD in military healthcare workers specifically is limited. Initial searches utilizing the key words *military training* and *deployment* yielded 653 results. The addition of *PTSD* yielded an additional 142 results. The search was narrowed by limiting to reports written in English with full text available yielding 123 results. There were no date parameters set. When the key term *nurse* was added, 33 results were available. This project includes the review of 20 articles most closely related to deployment exposure, preparation, and resultant psychological effects on military healthcare providers (Appendix A).

**Strengths of the Literature**

Negative psychological experiences have been described as an ‘occupational hazard’ of the nursing profession, especially in critical care areas such as the intensive care unit (ICU) or emergency department (Hood, 2011). Several studies examined for this project shared the sentiment of military nurses who participate in deployments have heightened risks for the development of PTSD just as those military members who are exposed to direct combat do (Gibbons, Hickling, & Watts, 2011; Holloway, 2016; Mealer et al., 2006; & Price, 2011). Mealer
et al., (2006), examined RNs working in an ICU and found that 24% of those surveyed had symptoms of PTSD after being exposed to similar situations reported by non-combat war veterans such as handling dead bodies.

There were variations in commonalities reported by nurses who were interviewed regarding their deployment and reintegration experiences in these reviewed studies. The most common expressions from these nurses were experience and meaning (Gibbons, Hickling, & Watts, 2011). The nurses frequently described their experiences as stressful related to the long work hours, consecutive shifts and the amount of severe injuries they were exposed to caring for. The theme of meaning was related to a sense of participation in a greater cause and personal sacrifice was a benefit to the mission of the deployment and the patients being cared for.

Primarily, military healthcare pre-deployment training consists of lectures, skills training, and clinic or hospital setting experience (Holloway, 2016). This training supports the development of strong foundational skills and experience to be practiced while at home duty stations. This is not adequate preparation for a deployment setting where the equipment, conditions, and level of care to be provided is different. Holloway (2016) discusses the importance of less didactic focus and more time for relevant hands-on training as well as continuous sustainment training as opposed to just in time pre-deployment training to ensure continual competence and increased confidence.

The state of an individual’s mental health prior to a deployment has been shown to play a role in the state of his or her mental health after deployment. Those who have resilient traits such as a positive attitude, trust in their leadership and other members of their units, and previous positive life experiences show a lower rate of PTSD development than those who have
experienced previous traumatic life events or have had a negative experience during their time serving in the military (Maguen et al., 2008). These findings substantiate the claims made by both Holloway (2016), and Hourani, Council, Hubal, and Strange (2011), that continuous training in both skills and resilience are imperative for the long-term health and the retention in their clinical specialty area of military healthcare providers.

**Limitations of Current Literature**

This literature review helps to describe the prevalence and impact of post-traumatic stress among military personnel, yet available research provides only limited information on military nurses. Despite attempts to make the initial literature search broad and inclusive, the limited results infer the need for more research specifically related to military nurses and other healthcare providers. With the ongoing Global War on Terror, some military nurses undergo continuous or repeated deployments (Elliott, 2015). This may place these nurses at a higher risk for the development of PTSD, and yet there is little information describing risks associated with repeated deployment among RNs.

The most significant gaps in the literature concern the lack of pre-deployment preparation for military nurses, and how any preparedness may modify the risk of PTSD. The literature outlines the benefits of military preparation prior to exposure to traumatic events, and even speaks to the success of resiliency training at reducing risk of PTSD among military personnel.

**METHODS**

There is an abundance of research regarding PTST among military veterans. There is very little research regarding PTSD in military healthcare providers specifically and there is even less literature regarding the link between pre-deployment training, and the risk of PTSD
development. Finally, there is a gap in understanding how military RNs perceive their readiness to provide care during overseas deployment and how this relates to risk of PTSD.

Qualitative methods allow the researcher the opportunity to connect with the project participant and seeks to understand a concept through the lived experience of participants (Tymkow, 2017). This project utilized a qualitative, multiple case study method to describe military RNs’ perceptions at readiness to provide care during overseas deployment. Case studies are valuable, flexible methods of qualitative research entailing close collaboration between participant and researcher where the participants have the opportunity to describe their individual experiences and personal views of reality (Baxter & Jack, 2008). Further, descriptive case studies are utilized to describe a phenomenon and the context in which it occurred (Yin, 2003). According to Yin (2003), a case study method is appropriate when attempting to answer “how” questions, and when it is believed that the contextual conditions are relevant to the topic of study. In this DNP project, the context of a deployed setting is the catalyst for the resultant potential of PTSD development. This project utilized level VII evidence as it described the experiences of the participants. Due to the limited amount of literature quantitatively depicting the relationship between pre-deployment training and rates of PTSD, this project sought to enhance the understanding of participants’ experiences in order to provide a more holistic view.

**Ethical Considerations**

Data collection was achieved using semi-structured, open-ended interviews among RNs who provided nursing care during overseas deployment. When planning for, and interviewing the participants, I anticipated that any participant might experience unpleasant emotions, due to the
potentially distressing memories and subject matter of military deployment. In addition, I addressed the three principals of ethical research: respect for persons, beneficence, and justice.

All the participants in this project chose to participate voluntarily. To address the ethical principal of respect for persons, the participants were provided adequate information regarding the study prior to participation, and weight was given to their opinions during the project. Beneficence relates to my obligation as the interviewer not to harm and to minimize possible harms for the participants. Since this project utilized non-medical data collection without interventions, the risk of bodily harm was nonexistent. To minimize the risk of negative memory recollection, all participants were fully aware of the purpose of the study and could voluntarily choose to participate or decline to answer a particular question and withdraw from the study at any time. Justice was ensured by IRB approval.

**Protection of Human Subjects**

This DNP project included human subjects as participants; therefore, it met the criteria for clinical research and was approved by the University of Arizona’s Human Subject’s Protection Program (HSPP). The privacy of all participants was protected using pseudonyms and redacting any other identifying information including, military rank, branch of service, job title other than registered nurse, and duty or deployment locations. Participant contact and data collection began once Institutional Review Board (IRB) approval was received. No participants are identified by name, and any information that might cause others to recognize any participant has been deleted from this paper.
Sample Criteria

Participants (N=5) consisted of RNs who are currently serving or have previously served in the US military and have provided nursing care during at least one overseas deployment. Additionally, participants needed to communicate in written and spoken English. Participants were included regardless of branch of service or duty status (active, reserve, national guard), gender, race, or marital status.

Recruitment

According to the Agency for Healthcare Research and Quality (AHRQ), participant recruitment is often a major challenge of a study (AHRQ, n.d.). Recruitment flyers were hung around public establishments where military members were likely to visit, such as grocery stores, gas stations, and restaurants. The targeted sample size was four to six participants. Once initial contact was made with one potential participant, other participants were identified through referral and snowball sampling. Disclosure statements were used to identify the purpose and aims of the project, and to inform participants of their rights in taking part in the project. Participants were made aware of their ability to request clarification, decline to answer a question, or withdraw from the study at any time.

Data Collection

There are six types of data that can be used in case study methodology. Of these six options, two were used in this project: interviews and participant observation (Colorado State University, 2017). Each participant was interviewed one time, and each interview lasted approximately 30 minutes. I conducted all interviews. Interview questions were semi-structured
and open ended, giving the participants the ability to elaborate and answer the question from their perspective. Interview questions included:

- Tell me about your military service career
- How many times have you been deployed to an overseas location?
- Tell me about your daily job functions/duties at your home base prior to your deployment
- Describe your deployment experience including your job functions and your schedule
- Tell me about any official training you received prior to your deployment
- Did you feel this training was adequate?
- Did you feel this training was beneficial?
- Tell me about anything you did personally to prepare for your deployment
- How prepared for your deployment(s) did you feel?
- Is there anything you would have liked to have been trained on/prepared for prior to deploying?
- Have you experienced any negative responses since your deployment? If so, do you feel different preparation could have eliminated any of those responses?
- Is there anything else you’d like to tell me about this topic?

It is important to note that while the interviews all began with pre-developed questions; any other key information brought forth by participants during their interviews was explored and documented for clarification. This process of seeking clarification by asking further questions opens the door to the possibility of further research (Colorado State University, 2017).

Due to the transient nature of military operations, all participants chose to conduct their interviews over a web-based platform. All interviews were conducted in privacy with both
myself and the participants being alone in a room. I paid close attention to not only the words of the participants but also non-verbal cues such as their tone, emotions, and gestures. My observations were annotated in a notebook during the interview for later review and reflection. Digital audio recordings of each interview were stored on a personal, password-protected home computer until transcription was completed, and then transcribed verbatim utilizing a dictation program to ensure integrity of the participants’ words.

**Participants**

Five military RNs participated in this project, two males and three females. All five self-identified as active duty military, with Air Force, Army, or Navy health care experiences. The average length of military service among the five project participants was 16.4 years. Some information such as participant rank, job titles, deployment dates, and duty and deployment locations are omitted from this report to best protect the participants’ anonymity, and they do not contribute to the overall project.

**Data Management**

Participants are not identified in any reports or publications resulting from this study. The digital audio recordings were permanently deleted after transcription. The notes I took during the interviews and the transcription reports identify the participants by pseudonyms. Interview transcripts will be maintained at the Office of Nursing Research at the University of Arizona College of Nursing as required by the University of Arizona’s Data Classification and Handling Standard.
Data Analysis

A hallmark of case study research is the multiple sources of data (Baxter & Jack, 2008). A focused analysis should relate to the initial aims of the project (Yin, 2003). The goal of this project was to identify commonalities between the participants’ experiences such as events, triggers, emotional and physical responses, short and long-term outcomes, and the perception from the participants of any additional training they would deem helpful for deployments.

Once the audio tapes were transcribed into a word format, I listened to the audio tapes once more to verify transcription accuracy and then my DNP project chair reviewed the transcriptions for quality. The digital audio recordings were then destroyed. Next, all five transcripts were printed and reviewed side by side. Common words, feelings, or experiences were highlighted to display commonalities of findings. A danger in data analysis is the separation of findings which is not the intent of a case study. Rather, the researcher must ensure convergence of data in an attempt to understand the overall descriptions of the participants (Baxter & Jack, 2008).

FINDINGS

Multiple commonalities were identified and are described next. Commonalities included experiences, feelings, perceptions, and triggers. Direct participant quotes are included within the findings to illustrate the commonalities, but any potentially identifying information is excluded from this discussion.

Preparation

Most participants expressed their patient’s acuity in an overseas, deployed location to be higher than the acuity they are used to seeing while serving in a stateside military hospital, even
in the intensive care unit. Four of the participants had worked in ICUs within the military systems stateside; all voiced surprise at the vast differences in patient acuity within civilian ICUs, stateside military hospital ICUs, and ICUs they encountered during overseas deployment. Two participants had been ICU nurses in the civilian sector prior to their military experience and felt that a “real” ICU is only found at a large level I civilian-based trauma centers. They felt that patient acuities in stateside military hospitals were lower: “we’re lucky to have one vented patient a month,” and “it’s called an ICU but when my patients are all looking at me talking, I think they just call it that to keep the ICU designation.” One participant spoke about “moonlighting” in the civilian level I trauma centers in order “to maintain skills” that she was not staying current on while being stationed at a stateside military ICU unit. This same participant shared her experience during deployment:

“…as far as the injury patterns…taking care of that…before I started to deploy I always thought, and I would always say, I thought trauma is sexy for the first 24 hours and after that it’s wound care. I didn’t give it enough credit. When I’m [deployed] taking care of these trauma patients I’m like ‘oh my gosh why are you still profusely bleeding?’ It was very much an eye-opener to me.”

Two participants deployed to an overseas prison setting, which was entirely different from the type of patient care they had been providing at their home duty location. One participant described that experience as:

“I worked six days a week. I was the only nurse there and none of the patients were American. I received some training related to the prison, but nothing clinical. I ended up getting a burn patient and I have no idea how to manage that…or even seen or touched a burn. I didn’t know anything about the types of ointments and those types of things.”

All five project participants articulated that they felt their military-delivered pre-deployment training was not adequate. Specifically, many voiced that they did not receive the
clinical training they needed. One participant mentioned her time at a two-week pre-deployment course located at a busy civilian trauma center where, “sometimes the nurses wouldn’t let you touch or do anything.” Universally, participants reported relying on previous experiences they had obtained working in the civilian sector, at a civilian fellowship training, or assistance from other people who had been in similar situations. The military sanctioned hands-on trainings were thought of as merely good “refreshers,” and a place to learn specifics about military paperwork and logistics. Three participants mentioned countless computer based trainings that were required to be completed prior to deployment. One participant described those computer training sessions a waste of time stating:

“I bet you there are a hundred hours at a minimum to do prior to deployment. It’s mind numbing, and I can’t say any of them have any value whatsoever when I’m…pushing drugs on a patient. Absolutely none.”

While none of the participants found their training to be adequate, all of them spoke about the benefits of their individual trainings. The most commonly appreciated method of training was simulations. The participants felt as though these were good refreshers and a way to practice in a non-threatening environment. The cultural and job specific training was also seen as beneficial.

In addition to the participants’ concerns about not being prepared for the types of patients they would be taking care of in a deployed setting, there was a lot of discussion about the unknown of logistics such as what to bring, what not to bring, and how their daily routine would go while deployed. As discussed above, all the participants related some level of hesitation on how prepared they felt for their deployment, with one nurse even stating, “I will straight up say I wasn’t prepared for my deployment as far as the injury pattern and how to take care of it.”
was also a shared understanding that the first couple of weeks to one month would be a difficult transition but then would improve. As one articulated, “I didn’t feel prepared, but who does…you can do simulations all day, but it never truly prepares you for the real deal.” Many participants spoke to other people they knew who had deployed in order to gain a sense of comfort for what to expect in the process of deploying. A participant shared:

“Basically, I got with the people who had deployed before in that capacity. I was getting their tips on what to bring, what not to bring, what kind of injuries to expect, what to do, what not to do. In the military, I really feel like that is the best. I feel the military now has done a great job in establishing protocols in what to do and how to prepare, but when we were deploying early on in the war it was mostly stories on what to do and how to prepare. Now that the war is starting to close down…but at the time it was, ‘who do I know that can help me survive this and make the patient survive.’ That’s kind of what it used to be. You’d just get these tips.”

Self-Doubt

Many concerns about technical abilities were voiced during the interviews. One nurse described his fear of “looking stupid” in front of his peers, and worried that he might disappoint those who expect more of him due to his years of experience and rank. He outlined:

“I’ve been a nurse for about 20 years and I don’t want my ignorance displayed, I mean, I was scared, to everyone because I’ve been in an office and not working bedside for years. These are perishable skills and some things I haven’t been exposed to because I don’t use it. I push a paper and pencil all day. Will I get through it? Yes, I would like to think I would I don’t know if that’s my ego talking and I’ll rely on my experience and hope that it’ll kinda come back to you.”

All expressed the desire to deliver excellent nursing care, and all worried that their perceived lack of preparedness might compromise their ability to provide the excellent care. One participant worries, “I want to provide good patient care, and do I think I’m the most qualified person to go on this deployment? No way.” Three participants worked as a bedside nurse prior to deployment, and in a role that paralleled their deployment role. Two worked in administration
prior to deployment, and not providing direct patient care added to their anxiety and perception of being unprepared. One participant stated she felt, “60-70%” prepared clinically for what would be expected of her during deployment. Despite the fears of not being clinically prepared for deployment, all participants described becoming familiar with their role, their expectations, and their working environment within a few weeks. One volunteered:

“I had been really excited to deploy, but for some reason on the very last day, we were getting ready to fly out that night and I got like really nervous. I just couldn’t handle it. I was just anticipating what was to come. I thought that I was, well this is true, I knew that when we got there we were gonna hit the ground running and it was going to be busy and stressful and I wasn’t sure how I was going to handle it, but then when I got there it was busy, but it was surprising how fast it was to learn everything. How easy it was to get used to everything and get comfortable there.”

**Service**

One positive commonality was the pride the participants expressed in serving their country through a deployment. They spoke of deployment as an “opportunity” and the “reason I joined.” One outlined:

“Deploying has been one of the best experiences of my life. It was such a privilege to serve in that capacity and that’s why I joined the military, to have that experience.” “I enjoyed it [my deployment experience].”

The work schedule varied between the participants, but there was an understanding that the hours were long, often six days a week or more if needed and sleep was described as “a luxury over there.” All participants shared that the comradery they experienced both in the military and especially in a deployed setting was very valuable and on a deeper level than is experienced in the civilian world. When some participants identified their length of service, this was shared with smiles, upright posture, and clearly with pride.
Reflections

All participants were asked if there was any type of preparation they would like to have received prior to deployment. The commonality was that the military does a good job “with what we have” but several mentioned they would have appreciated time spent in a civilian trauma center where the acuity of ICU patients includes more traumatic injuries likely to be closer to the injuries seen in a deployed setting. One participant proposed that military nurses take graduate level courses in pathophysiology, pharmacology, and health assessment and then work full time in a Level I civilian hospital until deployed overseas. She described military medicine as, “not effective compared to the civilian sector. We are just not as well trained.” Another suggested an increase in cultural training because many patients cared for while deployed are not American and have different cultural beliefs regarding their health, and especially care provided by women. An interesting perspective from one participant was the fear felt in expressing concerns to their leadership:

“No one wants to hear the truth. I can’t tell my bosses, ‘Hey, I feel ill prepared for this.’ Because they’re going to say, ‘well why not? We’ve sent you to all this training, all these computerized trainings, all your little check marks are green.’ I like the military, I like the comradery. But we are not well trained. But, I simply can’t tell my boss. God, they may kick you out. The military way is if you don’t do 20 years you don’t get anything. I’m more worried about getting kicked out and having to go start over than I am about any rules and regulations. You’ll do whatever you have to to stay in and get your pension. That’s the honest truth. And all my colleagues that I talk to on a daily basis feel the same way.”

While none of the participants feel that they experience symptoms of PTSD, they did recognize that their deployment experience has changed them. One participant described his feelings saying, “I took it as a growth opportunity.” Another said, “If seeing these types of
injuries and being in this kind of environment doesn’t change you even a little bit…I don’t think that’s normal.” Another participant who has deployed multiple times recalls:

“Well, I’ve never slept well, and I’ve slept less well since my first deployment and it’s gotten progressively worse through subsequent deployments. I don’t think I have PTSD, but I definitely feel differently about things. For example, I grew up hunting and own very expensive hunting guns, but since my first deployment I’ve never pulled a trigger on a living animal since. And I just don’t want to. I don’t want to watch any suffering.”

Several participants discussed their time in deployed locations as a surprisingly easy adjustment from their home life. It was mentioned that it was easy to detach from life at “home” and was actually more difficult and overwhelming transition back into a home routine than expected:

“I was actually kinda sad to leave. I think it’s different going single. I don’t know what I have to come home to. I was excited to see my dog and my brothers and family, but I was also kinda sad. I didn’t want to leave.”

**DISCUSSION**

It was my privilege to interview these military RNs and hear their perspectives on their deployments. While the consensus among all the participants was that they did not feel their official pre-deployment training was entirely adequate, they were all very gracious about the positions they are in and the opportunities they have to serve other members of the military and their country. Their desire to provide excellent care to both American and non-American patients alike was evident in their words, tone of their voice, and body language.

Analysis of participant commonalities revealed a lack of perceived preparation for deployment and pride in their service to their country experienced during the trying times of deployment. They spoke of their emotions related to deployment as grateful and proud rather than negative or traumatic. The participants identified many areas where pre-deployment
preparation was lacking and offered their ideas on how to improve this. The following discussion relates the findings from this project with the literature.

**Preparation**

Improved training of job-specific tasks enhances mental health and resilience (Beaton & Johnson, 2002). The voices of the project participants acknowledge efforts and advancements in military pre-deployment training but still express the inadequacy of the preparation especially as it related to clinical skills. During the interviews, when participants were asked if they felt their pre-deployment training was adequate they would pause before answering and then would vacillate between “yes” and “no.” Four of the five participants ended with the answer “no” when asked if they felt their pre-deployment training was adequate. The fifth participant relied on his years of experience and the hand-off training he received from the nurse he was replacing in the deployed setting to prepare for his role. Despite the military recognizing the need for clinical pre-deployment training, adequate preparation remains lacking as stated by the project participants.

The Army has designed an educational residency program to assist new graduate nurses in connecting their didactic knowledge to the clinical skills they will need during a deployment (Crawley, 2008). The Air Force has a similar program that one participant spoke of called a “fellowship” where nurses participate in a yearlong didactic and clinical program aimed at teaching critical care skills. The participants spoke of their military specific training as beneficial in teaching them the logistics of providing care in an austere environment, the military paperwork, and weapons training among other professional aspects.

While there is research and information available to address resiliency training for military personnel, it may be difficult to locate information for RNs to prepare themselves
mentally or even perhaps clinically, for overseas deployment. Furthermore, as described by one participant, there may be RNs who fear letting their superiors know they feel less than prepared for aspects of deployment. One fear is that current unpreparedness may impact current or future career opportunities. Regarding perceived preparedness, the commonality the participants shared was that they were not prepared for the type of role they would be filling while deployed. Two RNs deployed to an overseas prison setting without any previous experience. One deployed to a pre-hospital setting with the only previous critical care experience being long-term ICU patients post-stabilization. Two participants went from working in administration away from the bedside, to overseas deployment. These participants reported that as military members gain rank, they often transition from bedside care to positions of leadership and administrative duties while at their home duty station.

**Self-Doubt**

The time between receiving deployment orders and leaving varied for the participants from six months to two weeks. Hall (2017) discusses the self-preparation that occurs during this pre-deployment time, stating it is common for people to move through excitement, nervousness, stress, and irritability during this time. One participant described her self-preparation as visiting with friends and family and doing yoga to “mentally prepare.” Adjusting to new situations is a common occurrence throughout human life as people are faced with new schools, new jobs, moving to new cities, and changes in families through marriages.

Adjusting to a deployment experience is heightened from the cultural and language differences and being in a hostile environment. Adaptation to new environments is thought to occur in stages from initial euphoria, frustration, adaptation, and the “home” stage (Rice, 2014).
The participants’ recollection of their experiences fit these stages as they spoke about being excited to deploy and then becoming very nervous about the unknown. They spoke about learning to navigate the cultural differences between themselves and their patients and being frustrated with the differences. One participant recalled:

“There was a lot of cultural stuff that they did not cover as far as how to we handle some of the disrespect and the differences in culture. Some of that stuff I learned to not tolerate even though it’s a cultural thing and I get that they just don’t view women the same, but I wasn’t necessarily going to accept that I guess.”

Much of the change that occurred among the participants parallels Benner’s (1982), novice to expert cycle. Benner (1982) explained that nurses go through a continuous cycle of novice to expert and while a nurse may be an expert in their daily jobs, placing them into a new environment such as a deployment will recycle them back to a novice practitioner. Experience and formal education is required to develop competence. In addition to many of the participants stating that their pre-deployment simulation experiences were beneficial, they also told of how they had spoken to people who had previous deployment experience to help prepare for the unknown. Although the participants expressed anxiety regarding a perceived lack of preparation, they also discussed how surprised they were by how easy it was to adapt and become competent at their new role while deployed.

Service

Military RNs serve two distinct roles, one as a health care provider and one as a service member. Despite the challenges and dangers associated with being in a deployed location, the participants spoke of the pride they felt for their role in serving their country. The sense of pride serving in the military has been echoed by others such as Rivers (2017), who interviewed military nurses about their deployment experiences (N=65). In the Rivers (2017) study, the
participants shared that while they experienced terror in a war setting and continue to struggle with those memories, they are grateful for the experience and felt a sense of pride at contributing to “the greater good.”

While deployment can present a professional challenge due to the difference in injury patterns and increased level of patient acuity, many nurses feel more challenged personally. It is thought that nurses, through formal training, are equipped with coping mechanisms to help them deal with grief, trauma, pain, and death (Elliott, 2014). As one participant stated, “deployment was one of the best experiences of my life and the reason I joined the military.”

**Reflections**

Returning home from deployment may cause mixed emotion such as joy, stress, and loneliness. Rivers, Gordon, Speraw and Reese (2013) described the difficulties experienced by nurses upon returning home from deployments. The participants in this project spoke of their singular focus of providing patient care and the lack of extraneous responsibilities while deployed. Having limited choices while deployed such as what to wear, what to eat, and what to do in their free time were some of the same choices that were most overwhelming to the participants once they returned home. These reintegration challenges are as important as the risk of PTSD development from traumatic experiences. Researchers such as Doyle and Peterson (2005) describe that many nurses feel worthless describe their work as mundane and unchallenging after the intensity of their deployment. Additionally, they describe their home life as overwhelming. With the acute readjustment phase lasting three to nine months, and sometimes lasting up to 18 months, these reintegration challenges can lead to depression, substance abuse,
and even suicide (Doyle & Peterson, 2005). One participant spoke to her challenges of readjusting to life at home saying:

“But then when I got home I was obviously glad to be here, but it was a big adjustment. It was just like little things like going to the grocery store was a little overwhelming at first. Just getting used to everything again was interesting and then it got better.”

The effects of war on mental and physical health are well established. Mental disorders lead to significant military losses related to increased attrition, misconduct, and absenteeism (Engel et al., 2008). None of the participants in this project spoke of leaving their respective branch of service related to their deployment experiences. In fact, three of the participants plan on retiring from military service, one plans to exit the service after her initial commitment is complete, and one has completed 10 years of service but is not sure if she will stay until retirement. In modern warfare settings, health care workers commonly experience personal threat and perceived threat to their personal safety. These exposures place health care workers at risk for PTSD (Kolkow, Spira, Morse, & Grieger, 2007). None of the project participants identified with the clinical diagnosis of PTSD, and at least one actively denied the possibility of PTSD. One participant states he sleeps “less well” since deploying overseas. Although he states he does not think he has PTSD, studies have shown a relationship between sleep disturbances and mental health issues. Of note, sleep disturbances are shown to be a core feature of PTSD rather than a result of the disorder (Seelig et al., 2010). The participants did discuss the impact of deployment expressing that they felt they had grown and changed as individuals and while their deployment experience will always stay with them, they do not feel it has a negative impact on their mental health.
The above discussion helps to illustrate the perceptions of the participants who provided military nursing care during overseas deployment. Their experiences differ, but a number of commonalities exist. Some of their experiences and perceptions have similarities to current literature. In order to stay true to the perceptions of the participants, I utilized four principles of trustworthiness.

**Trustworthiness**

Trustworthiness is crucial for the findings of a qualitative study to be considered accurate. Trustworthiness is evident when detailed accounts of the study process are described. Four key aspects of trustworthiness are described below: credibility, dependability, confirmability, and transferability.

A key method in establishing credibility is prolonged engagement. Prolonged engagement is defined as spending sufficient time in the field to understand the phenomenon of interest (Cohen & Crabtree, 2006). Since I spent four years as an active duty RN, I am able to understand the culture of the military, the nature of deployments, and forge a rapid bond with participants based on our shared experiences. I also had to allow each participant’s story to be unique and avoid having my own experiences influence their stories.

Another way to ensure credibility is by member checking. Member checking is the process of sharing the analyzed and interpreted data with the participants from whom the data was obtained (Cohen & Crabtree, 2006). Member checking is being addressed by inviting all participants to attend the final presentation of the project. They were notified of the date, time, and web-link needed to virtually attend the project defense. I will check with each participant
after the final defense and make any necessary adjustments to this manuscript after that step is complete.

Dependability relates to study results being reproducible. With a qualitative study based on experiences, the traditional definition of dependability may not be reasonable. However, Lincoln and Guba (1985) closely relate dependability to credibility. Lincoln and Guba further state that in a qualitative study the details of data collection should be described fully to allow a future researcher to repeat the work although the same results may not be achieved. This project addresses dependability by documenting the steps in the process of data collection and analysis, searching for commonalities between the participants’ experiences, and receiving continual guidance from the project chair.

Confirmability is the extent to which the work relates the experiences of the participants and not the biases of the researcher. Due to my previous military service, I had to strive for objectivity during the interview process to ensure the findings were those of the participants while allowing my personal experiences to provide a richer, more developed understanding of the collected data. Malterud (2001) writes, “Preconceptions are not the same as bias, unless the researcher fails to mention them” (p. 484). The interview questions used in this study were open ended, allowing for elaboration from each participant on their personal experience and not simply an answer to a question the researcher developed. Throughout the process of this project, I maintained a journal of reflective thoughts, asked the participants for clarification of my interpretations, and had an ongoing dialogue with the project committee.

Transferability is the ability of a study’s findings to be generalized to other contexts. This project explored the perceptions of military RNs from different branches of service, who
deployed to different overseas locations at different times, and who had different nursing roles. These differences aim to widen the generalizability of the participant’s experiences to other healthcare providers who serve in the military. Although this project looked at a unique population, a thorough description of the participants’ commonalities within their experiences was provided to enable readers to compare the project results with their situations and determine the degree of transferability (Shenton, 2003). A lack of transferability should not be seen as a research flaw, but rather a reflection of the multiple realities experienced by different individuals and a foundation upon which further research can be based (Shenton, 2003).

**Study Limitations**

Because I previously served as an RN in the military, I believe I was able to establish a quick rapport with the participants as we do share a common bond. I must also consider that my own military experience may have caused me to have some preconceptions, which may have influenced the nature of the interviews. Additionally, as much as my personal experience as a military RN served as a strength in this project, I also feel it limited my perception of the need to ask further probing questions. For example, a participant discussed their training at a “fellowship” and I did not seek clarify the details of this fellowship since I was slightly familiar with the course from my active duty time.

The participants consisted of Active Duty nurses only; there were no Reservists or National Guard members. This may limit the transferability of the findings across all medical providers in the Service. Many of the participants voiced their concern that they wanted their identity to remain anonymous due to fear of reprisal from their chain of command. This may have been a limitation, as I did not feel comfortable pushing or clarifying some topics that I
thought the participant was hesitant to answer. Finally, none of the participants discussed PTSD without prompting and none of them recognized the possibility of themselves suffering from PTSD and actually, those who did mention PTSD emphatically denied that they suffer from PTSD symptoms.

### Implications for Research

This project touched on an area of research where significant gaps exist. Further benefit could be obtained by studying the perceptions of other healthcare provider disciplines such as medics and providers. Furthermore, research looking at the personal preparations, specifically mental and emotional, of military members may be revolutionary in determining any links between mental resilience and the development of PTSD. Much of the current literature on PTSD among military includes participant self-reports, which may not be generalizable to a wider population. There is also a lack of generalizability and lack of longitudinal studies exploring the mental well-being of military RNs before, during, and after overseas deployment. Another area that would benefit from further research is the links of pre-deployment preparation that occurs in the different branches of the military and an increased risk of PTSD. Finally, more research on the effects of a nurses’ pre-deployment job compared to the role they fill while deployed could be of benefit.

### Implications for Practice

All five participant interviews identified a gap in perceived adequate pre-deployment preparation. From these commonly identified themes, the opportunity for improving the quality and applicability of future trainings exists. Based on the improvement ideas of the project participants I think there is a strong future in developing a more robust civilian training regimen.
to maintain sharpness in perishable skills. Military leaders would benefit from decreasing the amount of routine, non-beneficial computer based training and focus on realistic skills and experience preparation.

Finally, the military utilizes many advanced practice registered nurses (APRN). APRNs may be placed in situations that require more autonomy than they expect or are used to. They may be asked to take on more of a leadership role but may not perceive that they have the training or expertise. In fact, the role of NPs within the military has been expanded significantly since 2001, with NPs now providing unsupervised, autonomous lifesaving emergency care, taking on new leadership roles and administrative duties (Lewis, Stewart, & Brown, 2012). In the Lewis et al. (2012), study of NPs deployed since 2001 (N=50), participants were asked to rate their perceived level preparation for the role they filled while deploying (Likert scale of 1-10, with 1-very poor and 10-superb); their mean score was 6.5. Because the advanced clinical skills and critical decision-making abilities of APRNs are a valuable resource to injured and ill military personnel in deployment settings, it is imperative that they be provided with the necessary skills and techniques to do their job while protecting their physical and mental well-being.

**Conclusion**

In conclusion, this DNP project speaks to all nurses serving in the military. The RNs participating in this project expressed the lack of adequate clinical pre-deployment training they received. The level of preparedness an individual feels has been shown to impact the level of perceived threat, which correlates with the manifestation and severity of PTSD symptoms. It is therefore a reasonable assumption that the more prepared a military nurse feels and the more realistic their assessment of a threat is, the more stable their long-term mental health can be.
This DNP project addresses a gap in literature related to the military nurses’ perception of their pre-deployment preparation and the impact of this to PTSD development in military RNs. More in-depth research of the potential link between inadequate training and PTSD development could lead to a substantial decrease in mental health concerns for military healthcare providers. As summed up by one participant:

“And as far as the military piece, I would say I was pretty prepared. I don’t know if you can ever say you are 100% prepared to deal with things you don’t know are going to happen. The deployment setting responses like incoming bombs, I would say I was as prepared as I could be until it happened.”
APPENDIX A:

EVIDENCE APPRAISAL
### Evidence Appraisal

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<th>Theoretical Framework</th>
<th>Design</th>
<th>Sample (N)</th>
<th>Data Collection (Instruments/tools)</th>
<th>Findings</th>
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<td>Akbayrak et al. (2005)</td>
<td>Qualitative, PTSD risk factors and utilization of mental health services</td>
<td>Not Identified</td>
<td>Descriptive Study</td>
<td>N=225</td>
<td>Questionnaire</td>
<td>Nurses appear to be at higher risk for PTSD than other healthcare professionals and the rates of seeking help are very low</td>
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<td>Declercq et al. (2011)</td>
<td>Quantitative, frequency and subjective experience of exposure to critical incidents in predicting PTSD symptoms</td>
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<td>Multivariant regression analysis</td>
<td>N=136</td>
<td>Self-report questionnaire</td>
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<td>Elliott (2015)</td>
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<td>Not Identified</td>
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<td>Not Identified</td>
<td>Randomized Control Trial</td>
<td>N= 80</td>
<td>DESTRESS-PC</td>
<td>Self-management was significantly beneficial in decreasing PTSD symptoms however the benefits were absent at an 18 week follow up after therapy completion</td>
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<td>Feczer et al. (2009)</td>
<td>Qualitative, examination of the experience of PTSD in a female military nurse veteran and barriers to care</td>
<td>Not Identified</td>
<td>Case Study</td>
<td>N=1</td>
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<td>Gibbons et al. (2011)</td>
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<td>Life threatening</td>
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<td>Military healthcare providers have increased risk of negative psychological disorders following traumatic experiences</td>
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<td>Hagerty et al (2011)</td>
<td>Qualitative</td>
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<td>Holloway, M. D. (2016)</td>
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<td>Educational pre-</td>
<td>N=8 patients</td>
<td>Retrospective look</td>
<td>A significant gap in deployment prep was noted by military PA’s leading to development of Tactical Combat Medical Care course</td>
<td></td>
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<tr>
<td>Hourani et al. (2011)</td>
<td>Literature</td>
<td>Literature review, primary prevention techniques of PTSD</td>
<td>N=14</td>
<td>Literature review</td>
<td>Strongest strategies of primary prevention include education, skills training, and resiliency training</td>
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<tr>
<td>Kashani et al. (2011)</td>
<td>Quantitative</td>
<td>Relationship</td>
<td>N=255</td>
<td>Questionnaire</td>
<td>Nurses must engage in vigilant self-care to prevent stress and fatigue</td>
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<tr>
<td>Kenny et al. (2008)</td>
<td>Qualitative</td>
<td>Stressors of nurses in MTF before and after recent wars</td>
<td>N=18</td>
<td>Questionnaire</td>
<td>Increased situational stress occurred post war beginning and risk of moral distress is increased in military RNs</td>
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<tr>
<td>Kolkow (2007)</td>
<td>Quantitative</td>
<td>risk factors for mental health disorders among military healthcare providers</td>
<td>N=209</td>
<td>Questionnaire</td>
<td>Direct and perceived threats of personal harm increased risk for PTSD</td>
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<tr>
<td>LeardMann et al. (2008)</td>
<td>Quantitative</td>
<td>Relationship</td>
<td>N=5,410</td>
<td>Questionnaire</td>
<td>Low mental or physical health before deployment significantly increases symptoms or diagnosis of PTSD post deployment</td>
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<td>Reference</td>
<td>Designation</td>
<td>Methodology</td>
<td>Analysis</td>
<td>Sample Size</td>
<td>Data Collection</td>
<td>Results/Findings</td>
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<tr>
<td>Maguen et al (2008)</td>
<td>Quantitative</td>
<td>Not Identified</td>
<td>Pre- &amp; Post Test</td>
<td>N=328</td>
<td>Survey</td>
<td>Pre-deployment resilience is a protective factor against PTSD symptom development</td>
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<td>Mealer et al. (2005)</td>
<td>Quantitative, PTSD rates in ICU nurses</td>
<td>Not Identified</td>
<td>Chi-squared &amp; non-parametric</td>
<td>N=491</td>
<td>Survey</td>
<td>Critical Care nurses experience a higher rate of PTSD</td>
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<td>Price et al. (2011)</td>
<td>Quantitative, Investigation of combat exposure and treatment outcome for exposure therapy</td>
<td>Not Identified</td>
<td>Pre- &amp; Post Test</td>
<td>N=111</td>
<td>Questionnaire</td>
<td>Combat exposure is associated with poorer PTSD treatment response</td>
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<td>Reeve et al. (2012)</td>
<td>Quantitative, Stress experience and coping mechanisms used</td>
<td>Not Identified</td>
<td>Mixed method</td>
<td>N=107</td>
<td>Survey</td>
<td>Positive coping strategies are needed to help with high levels of maladaptive stress</td>
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<td>Renshaw (2011)</td>
<td>Quantitative, Pre-deployment preparation and PTSD</td>
<td>Not Identified</td>
<td>Pre- &amp; Post Test</td>
<td>N=207</td>
<td>Questionnaire</td>
<td>Greater deployment preparedness may help mitigate PTSD development</td>
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<tr>
<td>Scannell-Desh et al. (2010)</td>
<td>Qualitative, Describe lived experiences of military RNs who deployed from 2003-2009 and life afterward</td>
<td>Not Identified</td>
<td>Phenomenological</td>
<td>N=37</td>
<td>Interviews</td>
<td>Deployment is challenging and reintegration to home takes time and effort</td>
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<tr>
<td>Skeffington et al. (2012)</td>
<td>Quantitative, identification of current programs used for primary PTSD prevention</td>
<td>Not Identified</td>
<td>Descriptive</td>
<td>N=7</td>
<td>Systematic Review</td>
<td>Studies of PTSD prevention techniques are limited and more research is needed</td>
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</table>
APPENDIX B:

CASE STUDY QUESTIONS
Case Study Questions

1. Tell me about your military service career
   a. How long have you been in the service?
   b. How many times have you been deployed to an overseas location?

2. Tell me about your daily job functions/duties at your home base prior to your deployment

3. Describe your deployment experience
   a. What were your job functions during deployment?
   b. What was your daily schedule?

4. Tell me about any official training you received prior to your deployment
   a. Do you feel this training was adequate?
   b. Do you feel the training was beneficial?

5. Tell me about anything you did personally to prepare for your deployment

6. Describe how prepared for your deployment(s) you felt?

7. Is there anything you would have liked to have been trained on/been prepared for prior to deploying?
REFERENCES


Kolkow, T. T., Spira, J. L., Morse, J. S., & Griger, T. A. (2007). Post-traumatic stress disorder and depression in military healthcare providers returning from deployment to Iraq and Afghanistan. Military Medicine, 172(5). http://dx.doi.org/10.7205MILMED.172.5.451


Rivers, F. M., & Gordon, S. (2017). Military nurse deployments: Similarities, differences, and resulting issues. *Science Direct*, Retrieved from [https://ac-els-cdn-com.ezproxy2.library.arizona.edu/S0029655417301653/1-s2.0-S0029655417301653-main.pdf?_tid=d84f04cc-b162-11e7-98f3-00000aab0f6c&acdnat=1508042555_f3a8c34967a56d08944c2909138e6fd3](https://ac-els-cdn-com.ezproxy2.library.arizona.edu/S0029655417301653/1-s2.0-S0029655417301653-main.pdf?_tid=d84f04cc-b162-11e7-98f3-00000aab0f6c&acdnat=1508042555_f3a8c34967a56d08944c2909138e6fd3)


