Educating Novice Nurses and Nurse Practitioners about Military Sexual Trauma Screening

Alyssa D. Freeman
University of Massachusetts Amherst

Follow this and additional works at: https://scholarworks.umass.edu/nursing_dnp_capstone

Freeman, Alyssa D., "Educating Novice Nurses and Nurse Practitioners about Military Sexual Trauma Screening" (2023). Doctor of Nursing Practice (DNP) Projects. 315.
Retrieved from https://scholarworks.umass.edu/nursing_dnp_capstone/315

This Open Access is brought to you for free and open access by the Elaine Marieb College of Nursing at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Doctor of Nursing Practice (DNP) Projects by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.
Educating Novice Nurses and Nurse Practitioners about Military Sexual Trauma Screening

Alyssa Freeman

Elaine Marieb College of Nursing, University of Massachusetts, Amherst

DNP Project Chair: Dr. Karen Kalmakis, PhD, MPH, FNP, FAANP

Site Mentors: Dr. Chizoba Nwosu, PhD, APRN, FNP-BC and Dr. Donna Glynn, PhD, MSN

Date of Submission: April 19, 2023
Table of Contents

Abstract .................................................................................................................. 4

Introduction ........................................................................................................... 5

VHA Military Sexual Trauma Screening Method............................................... 5

Review of the Literature ....................................................................................... 9

Evidence Based Practice: Verification of Chosen Option................................... 13

Theoretical Framework/Evidence Based Practice Model.................................... 16

The VHA Nurse Residency, Transition to Practice, and NP Residency............... 16

Goals & Objectives ............................................................................................... 17

Methods ............................................................................................................... 18

Project Site and Population .................................................................................. 18

Measurement Instrument(s) ............................................................................... 19

MST Knowledge Questionnaires Pre/Post........................................................... 21

MST Learning, Screening, and Confidence Pre-Survey....................................... 21

MST Learning, Screening, and Confidence Post Survey......................................... 22

Participant Post Satisfaction Survey................................................................... 22

Implementation and Data Collection Procedure ............................................... 21

Data Analysis ....................................................................................................... 22

Ethical Considerations/Protection of Human Subjects........................................ 24

Results ................................................................................................................ 23

Discussion .......................................................................................................... 34

Facilitators and Barriers....................................................................................... 36
Abstract

Background: Military sexual trauma prevalence has continually increased over the past 25 years. Exposure to sexual trauma, violence, and abuse result in notable health consequences. The Veterans Health Administration has led the integration of universal Military Sexual Trauma (MST) screening and training. Purpose: The purposes of this project were to educate novice nurses and nurse practitioners about MST and to increase their knowledge and comfort in MST screening techniques. Methods: Following an educational session, a pre- and post-study design was used to evaluate improvement in knowledge and comfort screening for MST. Thirty-two participants including PBRNR Nurse Residents, Transition to Practice Nurse Residents, and Nurse Practitioner Residents participated in a 1-hour educational session on military sexual trauma, screening, and its impact on the healthcare setting. Twenty-nine participants fully completed pre and post surveys. These pre and post surveys were used to determine the impact of the educational session on the knowledge, confidence, and opinions of project participants. Results: Nearly 90% eligible nurses participated in the program, and 100% of participants reported that they learned from the educational session. All the participants had less than one year of clinical experience in their roles. Analysis of pre and post survey data found both knowledge and screening for MST increased. There was a significant difference in specific areas of participants MST knowledge after the educational session. Conclusion: The project successfully increased novice nurse and nurse practitioner knowledge and comfort level in screening for MST.

Keywords: Clinical reminders, audit and feedback, military sexual trauma, sexual abuse, screening methods, screenings, novice nurse, education
Educating Novice Nurses and Nurse Practitioners about Military Sexual Trauma Screening

Introduction

Over the past two and a half decades, there has been an increase in the prevalence of military sexual trauma (MST) (Lofgreen et al., 2017). Adult veteran patients (ages 18-65) seen in inpatient Veteran Health Administration (VHA) settings not routinely screened for military sexual trauma can be at increased risk for negative health outcomes (mental, physical, and psychosocial) that are associated with MST (Forkus et al., 2021). MST screenings are often conducted in VHA Primary Care, Women’s Health Clinic and Mental Health settings. Consistent and routine military sexual trauma screening practices by VHA inpatient and outpatient healthcare personnel (nurses, primary care providers, women’s health providers) is important to identify MST and provide appropriate services to prevent sequelae. Caring for those with MST is a unique need, and hence it is important for VHA novice nurse residents to receive training in this area.

VHA Military Sexual Trauma Screening Method

The VHA MST screen is designed to be administered only on the veteran’s initial encounter. This means that screening for military sexual trauma most likely will occur only once between the patient and health care provider. Within the VA, screening can be conducted by nurses, primary care providers or specialty providers (women’s health, mental health, etc.) (Hollis et al., 2022). This screen is prompted by a clinical reminder located within the Computerized Patient Record System (CPRS). VHA staff nurses can see the clinical reminders. This is the Veteran’s Health Administration’s electronic health record (Hollis et al., 2022). Screening is part of a 2-item method that asks the following questions: “While you were in the
military, a) Did you receive uninvited and unwanted sexual attention, such as touching, cornering, pressure for sexual favors, or verbal remarks? B) Did someone ever use force or threat of force to have sexual contact with you against your will?” (Hollis et al., 2022). Entering a “yes” to either question would translate into a positive MST screen.

Screening practices are influenced by healthcare personnel’s knowledge and time constraints (Bell, 2013). While VHA training for MST exists, an assessment is needed to determine if the current procedure and education module represent a best practice. Currently, nurse residents are not required to complete the VHA MST Learning Module Military Sexual Trauma for Medical Professionals. Therefore, the purpose of this DNP Evidence Based Scholarly Project was to determine if the current utilization of the VHA MST Learning Module *Military Sexual Trauma for Medical Professionals* is an example of best practice and can be used to increase awareness of military sexual trauma among novice nurse residents. Nurse residents should receive education that is addressed to them. This project involved nurse and nurse practitioner residents receiving education adapted from the MST Learning Module that is targeted for them and then they completed a pre and posttest after the learning sessions.

According to the Department of Veteran Affairs, “1 in 3 women, and 1 in approximately 50-100 men have reported experiencing sexual trauma in the military” when screened by a health care provider (U.S. Department of Veteran Affairs, p.1, 2017. (MST) is defined as “sexual assault or harassment experienced during military service” (U.S. Department of Veteran Affairs, p.1, 2020). Veterans who have experienced MST are at a higher risk for mental, sexual, and medical health problems. Mental and psychosocial issues can include PTSD, suicide ideation, interpersonal alcohol, and substance abuse, eating disorders, depression, and anxiety (Holliday et al., 2017; Forkus et al., 2020; Maguen et al., 2011). Sexual health issues may include increased
incidences of sexually transmitted infections, risky sexual behaviors, sexual dysfunction (Holliday et al., 2017; Forkus et al., 2020; Pulverman et al., 2019). Medical comorbidities associated with MST include weight conditions, liver disease, pulmonary disease, chronic pain, and sleep disturbances (Kimerling et al., 2008; Kelly et al., 2011).

It is significant to recognize that there are barriers to consistent and routine MST screening. A key and pivotal study in 2007 found that screening only reached 70% of patients (Kimerling et al., 2008). Furthermore, while the Veteran’s Health Administration (VHA) implemented universal screening for MST of all Veteran’s Health Administration facilities in 2000, in 2010 it was noted that 97% of the screening was from solely outpatient locations (Hyun et al., 2012). Even among VHA outpatient facilities, there was variability in MST screening by providers that vastly ranged from 13% to 98% (Hyun et al., 2012). Inconsistent screening practices can happen on outpatient settings and inpatient surgical units of a large medical center where there are “time constraints and high patient to provider ratios” (Hyun et al., 2012). Variability among VHA facilities and inconsistent screening by healthcare personnel across facilities endangers an already vulnerable specific veteran population. Screening should be implemented by all providers in both the outpatient and inpatient setting. VHA Directive 1115.01 (2017) is the current VHA facility policy that requires “all mental health and primary care providers must complete their respective MST training requirement no later than 90 days after entering their position.” This policy amended in 2020 clearly states that all mental health and primary care providers within the VHA must be within mandatory MST training compliance to meet the federal statute (VHA Directive 1115.01, 2017). This directive is related to staff nurses and novice new graduate nurses that are in mental health, primary care or women’s health settings as the directive states that “at a minimum, providers in the following professions must be
assigned the training requirement for mental health providers: Psychiatrists, Psychologists, Social Workers, Psychiatric Nurses, Marriage and Family Therapists, Licensed Professional Mental Health Counselors, and Mental Health Clinical Pharmacy Specialists” (VHA Directive 1115.01, 2017). The directive further includes providers working in primary care settings must have this assigned training as it lists “Physicians, Advanced Practice Registered Nurses, Clinical Pharmacy Specialists, Physician Assistants, Registered Nurses, and Licensed Practical/Vocational Nurses” (VHA Directive 1115.01, 2017). Training and MST competency checks can be performed via the VHA’s Talent Management System (TMS). The Joint Commission on Accreditation of Healthcare Organizations mandates healthcare facilities to have established policies in place regarding the identification and assessment of sexual abuse victims (The Joint Commission, 2020). Nurses and nurse practitioners are uniquely positioned to identify and assess victims of sexual abuse and trauma, and explore how to promote safety, best practice, and improve patient health outcomes (Kimerling et al., 2007). Elliott (2018) infers that civilian and new nurses have “limited experience with working with active military.” Therefore, both civilian and new graduate nurses and nurse practitioners need continuing education on veteran specific topics” such as military sexual trauma (Elliott, 2018). Action is “needed to improve the awareness and education of novice practicing nurses as well as nursing students” (Elliott, 2018).

Bourke (2021) suggests that the incidence of MST and abuse could be lower with greater awareness, earlier identification, detection, and MST screening and preventative measures in place. Preventative measures include screenings, assessments, and educational resources. Not all nurses have the knowledge, confidence, and proper training in MST screening to identify MST among veterans (Bell, 2013). Therefore, the purposes of this project were to educate novice
nurses and nurse practitioners about MST and to increase their knowledge and comfort in MST screening techniques.

**Review of Literature**

A literature review was conducted using the databases CINHAL, PSYCH Info, Medline, PubMed, and the Cochrane Library for studies published between 2008 and 2023. While it is important to include studies within the last 10 years, the study by Kimerling and colleagues (2008) is significant to this project and therefore, was included. The study by Kimerling et al (2008) laid the foundation and provided a framework for universal mandatory MST screenings to be conducted in VHA locations. The initial search of the literature for the key term “clinical reminders” yielded 2 studies on CINHAL and PSYCH Info and 37 from Medline. Next the search of literature using “provider incentives” yielded 30 studies from Medline. A subsequent search of literature using the terms “audit and feedback” yielded 1 study from each CINHAL and PSYCH Info, 1 study from The Cochrane Library, and 21 studies from Medline. The next search of the literature using “education” yielded 14 studies on CINHAL and PSYCH Info, and 113 studies on Medline. A search using the terms “mandatory, universal military sexual trauma screening policies” yielded 10 studies on CINHAL and PSYCH Info, and 105 related studies on Medline. Two systematic reviews were identified using “military sexual trauma,,” four high quality retrospective and quantitative studies were identified using the search term “mandatory universal screening policies,” and one randomized control trial and 1 high quality cohort study was identified using “audit/feedback use.”

One hundred and sixty-one studies found through this literature search were reviewed and selected using the following inclusion criteria: available in English, peer-reviewed, and focused
on veterans. Exclusion criteria were opinion articles and lab studies. Fifteen studies were retained for review after this process.

An additional literature review was performed to identify relevant articles published between 2013 and 2023 using the PubMed database on new graduate nurses and military sexual trauma. This yielded 5 studies from PubMed database. Two studies were retained for review after this process.

In the first literature review, the fifteen studies used various designs; 5 are systematic reviews, 3 are randomized controlled trials, 3 cross sectional designs, 1 retrospective cohort design, 1 exploratory study, and 1 journal. For the retrospective cohort design, the sample size consisted of 426, 223 men and 59, 611 women. One randomized control trial consisted of 153 women between the ages of 18 and 65 (Creech, 2021). Another randomized controlled trial included 523 females all over the age of 18 (Chen, 2013). A third randomized controlled trial included 69 male veterans (Taft et al., 2016). Among the systematic reviews, one study had 56 articles which were included (Ratan et al., 2019), one with 6 articles that met the inclusion criteria (UA, 2019), another with 47 included (Forkus, 2020), and one with 56 (Zakrison, 2019). For the prospective design, in one group there are 573, 640 male and female veterans and in another group 33, 259 female veterans and 540, 381 male veterans (Kimerling et al, 2008). In a cross-sectional design, 2,220 participants completed and returned the survey (McBain et al., 2020). In the published law journal, female veterans with MST returning from Iraq and Afghanistan were the sample population (Koo et al., 2014). In one exploratory study, only female veterans were included in the study (Hyun, 2011). In one cross sectional study, 113, 796 female veterans were used (Reddy et al., 2019).
A review of the literature revealed that there are many screens for sexual violence utilized at VHA and non-VHA healthcare facilities. These include the National Intimate Partner and Sexual Violence Survey (NISVS), Extended Hurt Insult Threaten Scream (E-HITS), the HARK (Humiliation, Afraid, Rape, and Kick), OVAT (Ongoing Violence Assessment Tool, STAT (Slapped, Things and Threaten), and the CTQ-SF (Modified Childhood Trauma Questionnaire-Short Form). It is important to note, however, that the VHA MST Screen is the only screen that emphasizes a historical event where sexual assault occurred on or off base while an active military member was serving (Hollis et al., 2022).

Research evidence supports mandatory, universal MST screening as an effective way to identify veterans with histories of MST (Kimerling et al., 2007; Hyun et al., 2012; Creech et al., 2018; Rattan et al., 2018). Studies demonstrated a correlation between consistent clinician MST screening and improved veteran mental health, sexual health, and physical health outcomes (Pulverman et al., 2019; Forkus et al., 2020; Reddy et al., 2019). For example, Pulverman and colleagues (2019) found in a systematic review that MST is associated with mental health and sexual health issues in female veterans. Similarly, a study conducted by Reddy et al (2019) examined factors associated with HIV and MST screening in female veterans. Authors for another study found that sexual risky behaviors, suicide ideation and attempted suicide, and interpersonal alcohol and drug use were associated with military sexual trauma (Forkus et al., 2020). These studies further support the use of sexual health screenings because they lead to more preventative health care. Furthermore, screening may allow for the detection of some underlying psychiatric conditions. For example, veterans who screen positive for military sexually trauma are more likely to screen positive for sexually transmitted disease (Reddy et al.,
Hence, research findings strongly support the use of the universal military sexual trauma screen. Based on the evidence, it is also important, when approaching military sexual trauma related care, that gender relation considerations and veteran’s comfort with the provider should be considered (McBain et al., 2020). Military sexual trauma and abuse can have crippling, devastating effects on both male and female veterans (Bourke, 2021). Nurse residents, as patient advocates, must be able to provide information and comprehensive assistance to veterans who have experienced military sexual trauma. It is important to note that though the VHA MST screening questions are uniform, they are not gender specific.

The review of literature suggests that there is a need for MST training for civilians and new novice nurses. The Current VHA Directive includes nurses as part of the healthcare team. Nurses play a significant role when it comes to addressing military sexual trauma. Nurses conduct the screenings, they identify military sexual trauma and associated mental health disorders, “create sensitive atmospheres for veterans to voice their concerns, connect veterans to VA services that need comprehensive care, and encourage veterans to join support groups. (Bradswick, 2022).” The study by Elliot (2018) points to a mixed-methods study that was designed to examine home care nurse’s knowledge, comfort, and confidence in caring for active military, Veterans, and their families”. The study provides data from a national survey of 102 home care nurses. In the mixed methods study by Elliott (2018), it was found that nurses were more confident in managing issues like pain but least confident in managing issues such as military sexual trauma. This study included nurses that had little experience in clinical practice (3 years) (Elliott, 2018). Marino and colleagues (2019) affirm the importance of defining military sexual trauma and its prevalence for all nurses. They advocate for a push for education
of military sexual trauma be available to nurses in healthcare and in schools and nursing school curriculum (Marino et al., 2019).

The Melnyk Level of Evidence is an evidence-based tool for nursing that was used to critique the level of evidence (University of Michigan, 2020). Levels of evidence were rated on a scale between 1 and 7.

**Evidenced-Based Interventions**

Universal Military Sexual Trauma Screening includes the clinical reminder that asks every new veteran whether they have experienced MST. The screening process includes a veteran disclosing the incident or responding positive to MST related screening questions, being diagnosed with a mental health condition related to MST, and then being referred to the appropriate program or consultant to treat the condition (Koo & Maguen, 2014). Screening for MST is conducted in settings (such as Women’s Health Clinic, Primary Care Clinic, and Mental Health Clinic) only upon initial encounter of a veteran. Screening is an opportunity for nurses and nurse practitioners to highlight the recovery resources available to veterans at the VA free of charge to veterans (U.S. Department of Veteran Affairs, 2022). Nurses that participate in the screening process demonstrate that they are willing to have open conversations with patients. Veterans should also be able to choose when they are open to having these conversations with providers. Nurses and nurse practitioners that engage in the screening should be in listening mode, be in a private setting, maintain good eye contact, and sit face to face with the veteran (Bell, 2013, p.25). Avoiding negative wording, pace, and tone of speech are all important in the screening process (Bell, 2013). Having universal MST screening policies in place increase the likelihood of veterans being screened for military sexual trauma and use of mental health services (Kimerling et al., 2008).
The best practice to improve military sexual trauma screenings is to follow the current mandated, universal military sexual trauma screening policy. A longitudinal, quantitative study by Kimerling and colleagues (2008) was conducted to assess the utility and effectiveness of the universal military sexual trauma screening method in a sample 185,880 women and 4,139,888 men (Kimerling et al., 2008). The study is consistent with more recent studies that support the use of universal MST screening policies (Hyun et al., 2011). This study found that the use of universal military sexual trauma screening is feasible in Veterans Health Administration settings.

One group explored veteran gender relations and comfort level and barriers to military sexual trauma related care (McBain et al., 2020). The use of universal military sexual trauma policies provides veterans access to free MST mental and physical resources and removes the burdens and challenges associated with disclosing sexual abuse and trauma (McBain et al., 2020). Other studies also strongly support the use of universal military sexual trauma screens in female and male veterans (Reddy et al., 2019; Rattan et al., 2018).

The evidence supports the importance of MST screening. Organizational barriers account for inconsistencies in MST screening for male and female veterans across Veteran’s Health Administration facilities (Hyun et al., 2012). The study sample size consisted of 50,763 female veterans and 1,004,758 males in 119 Veteran’s Health Administration facilities (Hyun et al., 2012). Both universal military sexual trauma screening policies and audit and feedback systems increased the probability that veterans received screening (Hyun et al., 2012). In another study, a randomized controlled trial, the Safety and Health Experiences (SHE) program was introduced and tested for validity. SHE is an innovative program that provides screening, assessment, and feedback to female veterans with a history of sexual trauma (Creech, 2018). This study is also of
significance because it highlights the necessity to have an audit/feedback method in a program designed to identify and assess military sexual trauma (Creech, 2018).

The current Learning Module *Military Sexual Trauma for Medical Professionals* is accredited by Accreditation Council for Continuing Medical Education (ACCME), American Nurses Credentialing Center (ANCC), and ACCME non-physician credentialing center (ACCME-NP) (Department of Veteran Affairs, 2019). For one to receive credit, one must participate in the 1-hour course, complete 100% of the session, and take the evaluation (Department of Veteran Affairs, 2019). An adaptation of this will be used to present to new graduate nurse and nurse practitioner residents.

The objective strongly supports staff nurses (new graduate and civilian) receiving education on military sexual trauma. According to Elliott (2018) “knowledge of resources available to veterans, war-specific exposures, and veteran specific health issues tend to be the areas in which nurses are least confident in.” Elliott (2018) strongly recommends that continuing education for nurses that cover veteran specific topics are important so that culturally competent care can be delivered. The TMS education module establishes “competency standards” (U.S. Department of Veteran Affairs, 2022). However, the current TMS education training is broad and while it covers for all providers, it focuses mainly on medical providers It also does not address nurse knowledge or their perceptions regarding the current VA military sexual trauma screening method. Although, it is important to note that there is more training, courses, and accreditation programs for MST education specifically for specialty providers other than nurses. This imbalance in educational resources is important to note, since nurses and nurse practitioners are the ones that are also and identifying military sexual trauma and conducting military sexual
trauma screenings. Marino et al (2019) recommend that there should be a strong support for education of military sexual trauma to new nurses at hospitals and in schools.

**The VHA Nurse Residency, Transition to Practice, and NP Residency**

The VA Nurse Residency Post Baccalaureate Program (PB-RNR) and Transition to Practice Program (RN-TTP) is and has been effective in training novice post-Baccalaureate and Associate of Science Degree (ADN) prepared graduate nurses based on a clinical, didactic, and evidence-based practice curriculum (U.S. Department of Veteran Affairs, 2022). It is important that new graduate nurses are provided with educational experiences and support. An identified need was noted to include education on military sexual trauma in the curriculum for new graduate nurses. The VA NP Residency Program is a one-year residency program designed for new nurse practitioner graduates that desire to work with the VA Healthcare System. This project aims to address the educational need and support a fostering community for learning.

**Theoretical Framework/Evidence Based Practice Model**

The Plan Do Study Act (PDSA) framework (Agency for Healthcare Research and Quality, 2015) was used to implement data collection. The “plan” for this project was to have the nurse and nurse practitioner residents’ complete surveys by hand that are voluntary and anonymous. There was pre-post testing of nurse knowledge related to MST. The “do” for this project was to evaluate. For example, some questions that arose were: Was there not enough time for completion by the nurse or nurse practitioner resident? Were too many participants declining to participate in the survey? The “study” aspect of this project was to examine whether enough nurse and nurse practitioner residents returned surveys and assess if anything needed to be changed in the process. The “act” part of this project was to determine if the nurse and nurse practitioner residents felt the current survey is a best practice and if there were any
recommendations they would recommend, do, and study process of this framework. This framework was chosen because it allows for evaluation and changes in process, as needed, throughout the implementation of the project. Please refer to this model in (Appendix A).

**Objectives and Expected Outcomes**

Evidence supports the need for education to increase novice nurses and nurse practitioner knowledge about military sexual trauma and screening. Therefore, the purposes of this project were to educate novice nurses and nurse practitioners about MST and to increase their knowledge and comfort in MST screening techniques. The following objectives and outcomes are proposed (Table 1).

**Table 1**

**Objectives and Outcomes**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Objective(s)</th>
<th>Outcome(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>To educate novice nurses and nurse practitioners about MST and to increase their knowledge and comfort in MST screening techniques.</td>
<td>Assess current VHA screening and training for military sexual trauma and provide current recommendations for the current VHA TMS Learning Module <em>Military Sexual Trauma for Medical Professionals</em></td>
<td>At least 90% of the novice nurses and nurse practitioners within this setting attended the educational session</td>
</tr>
<tr>
<td>Evaluate knowledge of the topic before and after the educational program using pre and post-education assessment tools, developed by this DNP student.</td>
<td>Following educational session, knowledge of military sexual trauma and screening increased among at least 75% of the participants as evidenced by the MST Knowledge Questionnaires (pre/post)</td>
<td></td>
</tr>
<tr>
<td>Evaluate novice nurse and nurse practitioner confidence and comfortability with screening before and after the educational program using pre and post-education assessment tools, developed by this DNP student</td>
<td>Following educational session, confidence and comfortability with military sexual trauma screening increased by at least 60% of the participants as evidenced by the Learning, Confidence, Screening Post Survey, and the Participation Satisfaction Post Survey</td>
<td></td>
</tr>
<tr>
<td>Evaluate the effectiveness of the educational program with two post survey evaluation tools</td>
<td>At least 90% of participants completed the Post Session Survey on Confidence and Learning and...</td>
<td></td>
</tr>
</tbody>
</table>
Methods

A pre and post education survey design was used. The project was based on the premise that implementing a new educational session that targets educating novice nurses and nurse practitioners on military sexual trauma and screening would improve knowledge and comfort level when screening for MST. A 60-minute educational session was implemented during March 2023. Data using questionnaires and surveys was quantified to understand the impact and value of the educational session.

Project Site and Population

This project took place at the Veteran’s Affairs Hospital. The Veteran’s Health Administration is a government facility. The Veterans Health Administration is America’s largest integrated health care system, providing care at over 1,000 healthcare facilities including “171 medical centers and 1,113 outpatient sites of care of varying complexity (VHA outpatient clinics), serving 9 million enrolled Veterans each year” (U.S. Department of Veteran Affairs, 2008). Providers listed at the VA include “physicians, dentists, nurse practitioners, clinical nurse specialists, physician assistants, chiropractors, certified registered nurse anesthetists, optometrists, podiatrists, and psychologists” (U.S. Department of Veteran Affairs, 2010). There are around “19 million U.S. veterans” (Schaeffer, 2021). Approximately “11% of the veteran population are women and 89% are men” (Schaeffer, 2021).

The target population for this study was novice nurse residents and nurse practitioners that deliver health care to veterans and have less than 1 year of clinical experience in their respective roles. New graduate nurse residents in the Post-Baccalaureate RN and RN Transition
to Practice Residency Programs and novice nurse practitioner residents were recruited for this project. PBRNR residents are considered trainees at the VA while RN TTP and Nurse Practitioner Residents are considered VA employees. The nurse and nurse practitioner residents consisted of various age groups, genders, and had different backgrounds. The nurse residents and transition to practice nurses have less than twelve months of experience as a licensed registered nurse. The nurse practitioner residents also have less than twelve months of experience as a nurse practitioner.

**Measurement Instruments**

2 questionnaires and 3 surveys were used to assess the impact of the educational session. The tools were valuable instruments to determine nurse resident and nurse practitioner competency.

**MST Knowledge Questionnaire Pre/Post**

A tool developed by Elgibaly et al named Healthcare workers’ knowledge about infection control practice of COVID-19 is a questionnaire that was used to measure healthcare workers’ knowledge (Elgibaly et al., 2021). To assess changes in nurse resident knowledge regarding MST, an adaptation of this tool named MST Knowledge Questionnaire was used for this project (Appendix B). Once the questionnaire was developed, it was pilot tested with two nurse practitioners and their feedback was used to refine the MST Knowledge Questionnaire. The MST Knowledge Questionnaire (Appendix B) is an 8-item scale that addresses knowledge items about MST, screening, and resources. Before providing the educational session, the MST Knowledge Questionnaire was administered to measure individual levels of knowledge. The post-test was done using the same assessment to measure levels of increased knowledge among individual participants (Appendix B). The tool took 5 minutes to complete. The rating scale was 1= True,
0=False. For assessing knowledge, a score of one point was given if the right answer was chosen and a score of zero if the wrong answer was chosen. A total of > 6 points (75% of total marks) was considered adequate knowledge.

**MST Learning, Screening, and Confidence Pre-Survey**

The MST Learning Objectives Pre-Survey was used to collect qualitative data on participants’ expectations and perceptions of the learning session prior to implementation (Appendix C). This DNP student developed the survey. The survey contained 5 open ended questions. The survey was created to get baseline information on the nurse residents and nurse practitioners’ goals, learning objectives and confidence level on their knowledge of MST and screening prior to the educational session. The participants were asked questions such as “What are your key learning objectives for this learning session?” and “At the end of this educational module, what do you hope to have achieved?” This questionnaire took 5 minutes to complete.

**MST Learning, Screening and Confidence Post-Survey**

The MST Screening and Confidence Post-Survey (Appendix D) was used to collect quantitative data on whether the learning sessions met participants expectations and goals and their confidence levels on being able to screen future patients for MST. This survey included 5 binary closed-ended questions with (YES/NO) responses. The rating scale was 1=Yes, 0=No. This survey took 5 minutes to complete. From this survey, demographic information including participant “age” and “gender” was also able to be collected.

**Participant Satisfaction Post Survey**

To evaluate the participants’ satisfaction with the educational session, the DNP student developed a 9-question survey. This survey can be found in Appendix G. This survey allowed for evaluation of the impact of the overall educational session. The questions were framed using
the 5-point Likert Scale. The participants were asked to rate themselves in 9 domains. The rating scale was 1-5 with 1= Does not apply, 5= Strongly Agree. The higher the score (5 = strongly agree), the higher the self-reported participant satisfaction and improving competence in that domain. This survey took 10 minutes to complete.

Implementation and Data Collection Procedure

Pre-Intervention

A total of 32 nurses and nurse practitioner residents at VA Healthcare System participated in the project. Study participants were recruited from a Didactic Workshop organized by VA Nursing Affiliation and Leadership of the RN/NP Residency Program. The DNP student gave introductory presentation materials with the project description to the VA Nursing Affiliations of the RN/NP Residency Program Coordinators and Leadership. The RN residents, TTP nurses, and nurse practitioner residents were given a description of the educational session being offered and were asked to participate. Participants willingly participated based on their interest in MST content and screening. Two pre-surveys were administered 30 minutes prior to educational session implementation. Participants were given random anonymous 6 digit ID numbers that would not identify them.

Intervention

Participants attended a one-hour educational session within the nurse/nurse practitioner residency didactic workshop day. The outline of the educational session can be viewed in (Appendix I). This education session was provided to nurse and nurse practitioner participants live in person in a PowerPoint format. The Educational Intervention included a background of the problem, recommendations for screening, and a review of current VA MST screening tools. The session for nurse and nurse practitioner residents also included review of current VHA
policy and TMS module, training on identification of military sexual trauma, and using the best practice MST screening tool. In addition, the learning session focused on associated mental and physical health conditions with MST and patient resources. An additional 15 minutes was allotted towards the end for questions and answers. Educational materials such as brochures were handed out to participants. Immediately following the educational session, post-education questionnaires were administered.

**Post Intervention**

Following the educational session, participants were provided with 1 questionnaire and 2 post-educational session surveys. These assessment tools were utilized to assess knowledge of MST and MST related screening, confidence level with MST screening, and participant satisfaction with the educational session. Post assessment surveys were collected following the presentation. Data was collected via paper form. Once the educational session was complete, the data was entered into Excel spreadsheet and coded for analysis.

**Data Analysis**

All data from the MST Knowledge Questionnaires was transferred to Excel file, coded, and double checked for accuracy. Responses by PBRNR, Transition to Practice Nurse Residents, and Nurse Practitioner Residents were transformed into numerical values to be used for analysis. A non-parametric version of Wilcoxon Signed Ranks test was run on the data from the MST Knowledge Questionnaires. The Wilcoxon Signed Ranks test was used for data collected before and after the educational session. For the MST Learning, Screening and Confidence Pre-Survey, a thematic analysis approach was applied. This was appropriate as data collected for that survey was through open-ended questions. Chi-square was run for the data from the MST Learning, Screening and Confidence Post-Survey because there are two independent variables with yes/no
responses in the survey. The Chi Square test for the MST Learning, Screening, and Confidence Post Survey was appropriate to examine the relationship of the educational session on confidence levels of the participants.

**Ethical Considerations/Protection of Human Subjects**

The project was determined not to be human subjects research by the University of Massachusetts-Amherst Internal Review Board and Research Team (Appendix F) and was approved by the VA Institutional Review Board (IRB) prior to the implementation (Appendix H). Standards of care for practice and approved protocols were followed. Questionnaires did not include any personal identifying information. Data collection instruments such as the surveys were secured. Data was stored on a personal laptop of the DNP student with a secure lockdown and protected password. The DNP student also notified the local and hospital VA IT Department about the project and when it would be conducted at the hospital. There were no breaches of confidentiality.

**Results**

The pre-post surveys on knowledge about military sexual trauma and MST screening showed that there was an increase after the educational session, but this increase was not statistically significant except Question 5. For 6 out of 8 questions (75%) on the 8 item MST Knowledge Questionnaire, participants demonstrated a response shift by increasing their pre to post scores. For 2 out of 8 questions (0 %), there was no change. For questions 1 and 2, there was no increase in scores. For question 3, there was a 6.9% increase between pre and post-test scores (Wilcoxon Signed Rank Z = -.707, p = 0.48); for question 4, there was a 3.4% increase between pre and post test scores (Wilcoxon Signed Rank Z = -1.000, p = 0.3); for question 5, there was a 17.3% increase between pre and post test scores (Wilcoxon Signed
Rank $Z = -2.236, \ p = 0.03$); for question 6, there was a 17.4% increase between pre and post test scores (Wilcoxon Signed Rank $Z = -1.890, \ p = 0.059$); for question 7, there was a 17.3 % increase between pre and post test scores (Wilcoxon Signed Rank $Z = -1.387, \ p =0.166$) and for question 8, there was a 1.9% increase between pre and post test scores (Wilcoxon Signed Rank $Z = -1.414, \ p = 0.15$).

**Table 2**

*Nurse and Nurse Practitioner MST Knowledge Descriptive Results*

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Pre (Number/ Percentage)</th>
<th>Post (Number/Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Military Sexual Trauma, or MST is the term used by the Department of Veteran Affairs (VA) to refer to experiences of sexual assault or sexual harassment that a Veteran experienced during their military service</td>
<td>29/29 Answered True Correctly 100%</td>
<td>29/29 Answered True Correctly 100%</td>
</tr>
<tr>
<td>2. For some Veterans, the experience of MST may continue to affect their mental and physical health in significant ways, even many years later</td>
<td>29/29 Answered True Correctly 100%</td>
<td>29/29 Answered True Correctly 100%</td>
</tr>
<tr>
<td>3. 1 in 3 Women and 1 in 50 men respond “yes” that they experienced MST, when screened by their VA provider</td>
<td>21/29 Answered True Correctly 72.4%</td>
<td>23/29 Answered True Correctly 79.3%</td>
</tr>
<tr>
<td>4. Every VA Healthcare facility has a designated MST coordinator who serves as a contact person for MST-related issues. This person can help Veterans find and access VA services and programs</td>
<td>27/29 Answered True Correctly 93.1%</td>
<td>28/29 Answered True Correctly 96.5%</td>
</tr>
<tr>
<td>5. Recognizing that many survivors of sexual survivors of sexual trauma do not disclose their experiences unless asked directly, VA health care providers ask every Veteran whether they experienced MST. This is an</td>
<td>24/29 Answered True Correctly 82.7%</td>
<td>29/29 Answered True Correctly 100%</td>
</tr>
</tbody>
</table>
important way of making sure Veterans know about the services available to them.

### Question 6
Veterans need to be service connected (or have a VA disability rating). Veterans do not need to have reported the incident at the time of have other documentation that they occurred to get care.

- **Answered True Correctly**
  - **16/29**
  - **55.4%**
  - **21/29**
  - **72.4%**

### Question 7
MST-related services are available only at certain VA medical center and many VA- community based outpatient clinics

- **Answered True Correctly**
  - **12/29**
  - **41.3%**
  - **17/29**
  - **58.6%**

### Question 8
For self-care, you can also download Beyond MST, a free mobile app that was created for survivors of MST to cope with MST-related challenges and improve health, relationships, and quality of life

- **Answered True Correctly**
  - **27/29**
  - **98.1%**
  - **29/29**
  - **100%**

---

**Table 3**

**Comparison of Nurse and Nurse Practitioners’ Knowledge Score Before Educational Session v. After Educational Session for Question 3**

**Question #3. 1 in 3 Women and 1 in 50 men respond “yes” that they experienced MST, when screened by their VA provider**


<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MST Knowledge Scores Comparison Pre and Post</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>3</td>
<td>4.5</td>
<td>13.5</td>
<td>-.707</td>
<td>.48</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>5</td>
<td>4.5</td>
<td>22.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note. A Wilcoxon Signed Rank statistic indicates that there is not a significant difference in participant’s knowledge of the incidence of MST before and after the educational session ($Z = -707, p = 0.48$).

Table 4
Comparison of Nurse and Nurse Practitioners’ Knowledge Score Before Educational Session v. After Educational Session for Question 4

Question #4. Every VA Healthcare facility has a designated MST coordinator who serves as a contact person for MST-related issues. This person can help Veterans find and access VA services and programs.

<table>
<thead>
<tr>
<th>MST Knowledge Scores Comparison Pre and Post</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Ranks</td>
<td>0</td>
<td>.00</td>
<td>.00</td>
<td>-1.000</td>
<td>0.317</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>1</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. A Wilcoxon Signed Rank statistic indicates that there is not a statistically significant difference in participant’s knowledge of MST VA designated coordinator before and after the educational session ($Z = -1.000, p =0.317$).

Table 5
Comparison of Nurse and Nurse Practitioners’ Knowledge Scores Before Educational Session v. After Educational Session for Question 5

Question #5. Recognizing that many survivors of sexual survivors of sexual trauma do not disclose their experiences unless asked directly, VA health care providers ask every Veteran whether they experienced MST. This is an important way of making sure
Veterans know about the services available to them.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>MST Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scores Pre and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>0</td>
<td>0</td>
<td>.0</td>
<td>-2.236</td>
<td>.025</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. A Wilcoxon Signed Rank statistic indicates that there is a statistically significant difference in participant’s knowledge of MST screening method before and after the educational session ($Z = -2.236, p =0.025$).

Table 6

Comparison of Participant’s Knowledge Score Before Educational Session v. After Educational Session for Question 6

Question #6. Veterans need to be service connected (or have a VA disability rating).

Veterans do not need to have reported the incident at the time of have other documentation that they occurred to get care.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>MST Knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scores Comparison Pre and Post</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>1</td>
<td>4.00</td>
<td>4.00</td>
<td>-1.890</td>
<td>0.059</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>6</td>
<td>4.00</td>
<td>24.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. A Wilcoxon Signed Rank statistic indicates that there is not a statistically significant difference in participant’s knowledge of MST provider documentation before and after the educational session ($Z = -1.890, p =0.059$). It is important to note that with $p =0.059$, it approaches significance, but is not significant.
Table 7

Comparison of Participant’s Knowledge Score Before Educational Session v. After Educational Session for question 7

Question #7. MST-related services are available only at certain VA medical center and many VA- community based outpatient clinics.

<table>
<thead>
<tr>
<th>MST Knowledge Scores Comparison Pre and Post</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Ranks</td>
<td>4</td>
<td>7.00</td>
<td>28.00</td>
<td>-1.387</td>
<td>0.166</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>9</td>
<td>7.00</td>
<td>63.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. A Wilcoxon Signed Rank statistic indicates that there is not a statistically significant difference in participant’s knowledge of MST resources before and after the educational session (Z = -1.387, p =0.166).

Table 8

Comparison of Participant’s Knowledge Score Before Educational Session v. After Educational Session for Question 8

Question 8. For self-care, you can also download Beyond MST, a free mobile app that was created for survivors of MST to cope with MST-related challenges and improve health, relationships, and quality of life

<table>
<thead>
<tr>
<th>MST Knowledge Scores Comparison Pre and Post</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Ranks</td>
<td>0</td>
<td>7.00</td>
<td>0.00</td>
<td>-1.414</td>
<td>0.157</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>2</td>
<td>7.00</td>
<td>1.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note. A Wilcoxon Signed Rank statistic indicates that there is not a statistically significant difference in participant’s knowledge of MST self-care for veterans before and after the educational session ($Z = -1.414, p = 0.157$).

**Table 8**

*Comparison of Participant’s Knowledge Score Before Educational Session v. After Educational Session for Question 8*

**Question 8.** For self-care, you can also download Beyond MST, a free mobile app that was created for survivors of MST to cope with MST-related challenges and improve health, relationships, and quality of life

<table>
<thead>
<tr>
<th>MST Knowledge Scores Comparison Pre and Post</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Wilcoxon Z</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Ranks</td>
<td>0</td>
<td>7.00</td>
<td>0.00</td>
<td>-1.414</td>
<td>0.157</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>2</td>
<td>7.00</td>
<td>1.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. A Wilcoxon Signed Rank statistic indicates that there is not a statistically significant difference in participant’s knowledge of MST resources before and after the educational session ($Z = -1.414, p = 0.157$).

**MST Learning, Screening, and Confidence Pre-Survey**

MST Learning, Screening, and Confidence Pre-Survey was a qualitative instrument utilized to identify common themes. 75.8% of participants stated similar key learning objectives for the session was to “learn how MST is assessed and be able to screen better for MST”, 89% of the participants stated that they are “very confident” that the educational session would deliver on their learning objectives, 20% identified similar motivation for taking this module such as “wanting to be able to provide better care for veterans”, 17% of
participants stated that they hope to achieve “a better understanding of how to care for
veterans” and another 17% of participants stated that they “want to know more about MST
resources, and 20% of participants stated that there “were no barrier to achieving goals with
the learning session.”

Table 9

*MST Learning, Screening, and Confidence Pre-Survey Outcomes*
<table>
<thead>
<tr>
<th>Questions # 1-5</th>
<th>Description of Emerging Themes</th>
<th>Specific Statement of Participants/ Most Frequent Theme (Number n=) % Percentage of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>What are your key learning objectives for this learning module?</strong></td>
<td>Need for Military Sexual Trauma and Screening Educational Model for Nurse Residents and Nurse Practitioners</td>
<td>“Learn how MST is assessed and be able to screen better for MST” n = 22 Percentage = 75.8%</td>
</tr>
<tr>
<td>2. <strong>How confident are you that the education module will deliver on the learning objectives?</strong></td>
<td>Confidence in MST educational session addressing the learning needs of participants</td>
<td>“Very confident” n = 26 Percentage = 89.6%</td>
</tr>
<tr>
<td>3. <strong>What are your motivations for taking this learning module?</strong></td>
<td>Challenges associated with caring for veterans with military sexual trauma and traditional understanding of veterans with MST</td>
<td>“Wanting to be able to provide better care to veterans.” n = 6 Percentage = 20.6%</td>
</tr>
<tr>
<td>4. <strong>At the end of this educational module, what do you hope to have achieved?</strong></td>
<td>Desire to know about Military Sexual Trauma Resources</td>
<td>“Want to know more about MST resources” n = 5 Percentage = 17.2%</td>
</tr>
<tr>
<td>5. <strong>What are your biggest barriers to</strong></td>
<td>No perceived barriers with objectives or goals of educational session</td>
<td>“There are no barriers to achieving goals in learning module.”</td>
</tr>
</tbody>
</table>
MST Learning, Screening, Confidence Post Survey

The MST Learning, Screening, Confidence Post Survey regarding screening practices and educational session did not reveal any significant relationships between participant age and MST screening experience, comfortability, and confidence levels. While there were differences between two groups (participants above the age of 30) and (participants below the age of 30), the differences were not statistically significant.

Table 10

*MST Learning, Screening, Confidence Post Survey Outcomes*

(Questions # 1-5)

Question 1. Have you been screening patients for military sexual trauma prior to today?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Marginal Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Above 30</td>
<td>3 (2.9) [0]</td>
<td>11 (11.1) [0]</td>
<td>14</td>
</tr>
<tr>
<td>Age below 30</td>
<td>3 (3.1) [0]</td>
<td>12 (11.9) [0]</td>
<td>15</td>
</tr>
<tr>
<td>Marginal Column Totals</td>
<td>6 [0]</td>
<td>23 [0]</td>
<td>29 (Grand Total)</td>
</tr>
</tbody>
</table>

The chi-square statistic is 0.009. The p-value is .924393. Not significant at $p < .05$.

Question 2. Did you learn anything about military sexual trauma / MST screenings through this educational session? Did it meet your objectives?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Marginal Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age above 30</td>
<td>14 (14.03) [0]</td>
<td>0 (0.97) [0]</td>
<td>15</td>
</tr>
<tr>
<td>Age below 30</td>
<td>15 (14.97) [0]</td>
<td>0 (1.03) [0]</td>
<td>14</td>
</tr>
<tr>
<td>Marginal Column Totals</td>
<td>29 [0]</td>
<td>0 [0]</td>
<td>29 (Grand Total)</td>
</tr>
</tbody>
</table>
The chi-square statistic is 0.0022. The *p*-value is .962361. Not significant at *p* < .05.

**Question 3.** Now that you have received this educational session, will you discuss screening for military sexual trauma with your patients?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Marginal Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Above 30</strong></td>
<td>14</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Age below 30</td>
<td>14</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td><strong>Marginal Column Totals</strong></td>
<td>28</td>
<td>1</td>
<td>29 (Grand Total)</td>
</tr>
</tbody>
</table>

The chi-square statistic is 0. The *p*-value is 1. Not significant at *p* < .05.

**Question 4.** Do you think the educational session was time consuming?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Marginal Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Above 30</strong></td>
<td>3</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Age below 30</td>
<td>0</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Marginal Column Totals</strong></td>
<td>3</td>
<td>26</td>
<td>29 (Grand Total)</td>
</tr>
</tbody>
</table>

The chi-square statistic is 1.4887. The *p*-value is .222423. Not significant at *p* < .05.

**Question 5.** Do you think the educational session on military sexual trauma screening was beneficial and achieved your goals?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Marginal Row Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Above 30</strong></td>
<td>13</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Age below 30</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td><strong>Marginal Column Totals</strong></td>
<td>28</td>
<td>1</td>
<td>29 (Grand Total)</td>
</tr>
</tbody>
</table>

The chi-square statistic is 0.0096. The *p*-value is .922085. Not significant at *p* < .05.
Participant Satisfaction Post Survey

Based on the Participant Satisfaction Post Survey (see Appendix G), 45% of participants reported “agreed” that the learning session was satisfying, they would recommend it to others, they learned a “fair amount” of new knowledge, content was fair and unbiased, and that they found the content to be useful and would apply it to their job setting. More than half of participants (55%) reported “strongly agreed” that the learning session was satisfying, that they would recommend this training session to others, that they learned a “great deal” from the learning session, that it was appropriate to their professional needs, content was fair and unbiased, found the content to be “extremely useful” and would apply it to their job setting.

Figure 1

Participant Satisfaction Post Survey

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agreed</td>
<td>16</td>
<td>55.2%</td>
</tr>
<tr>
<td>Agreed</td>
<td>13</td>
<td>44.8%</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

Cost-Benefit Analysis/Budget
The initial costs for this project include the need for education, training, materials, data collection, and implementation. There were no capital investments. There was no cost to the VA. Participants were not reimbursed for their participation.

**Timeline**

A total of 1 month was required for implementation and data collection. Approval was received from the University of Massachusetts Amherst Human Research Protection Office in June 2022. Approval by the University of Massachusetts Amherst Department Chair was obtained in August of 2022. VA Hospital IRB authorization was given in February 2023. The VA Union gave permission for the tools and instruments for the project. (See Appendix E). The PowerPoint education session was conducted and completed in March 2023. Surveys completed by nurse and nurse practitioner residents in March 2023. Data collection was initiated and primarily conducted in March 2023. Statistical data analysis was performed in March 2023 using descriptive statistics, Wilcoxon Ranks Signed Test, and Chi Square tests. Themes were analyzed for qualitative data. The write up process of the results took place between March 2023 and April 2023. Final project report completed by May 2023.

**Discussion**

Following the educational session, knowledge of military sexual trauma and screening increased among at least 75% of the participants as evidenced by the MST Knowledge Questionnaires (pre/post). Participant comfortability increased following the educational session by at least 60% as evidenced by the Learning, Screening and Confidence Post Survey. 90% of participants attended the educational session and fully completed surveys and 100% of participants indicated learning. The MST Knowledge Questionnaire responses reflected an increase in knowledge and statistical difference in pre and post scores except only one question.
The findings indicate that though there was an increase in knowledge, this increase was mostly not significant. Participants were satisfied with the educational session as 45% reported that they “agreed” that the educational session was “satisfying” and “would recommend it to others” and 55% reported that they “strongly agreed” that the educational session was “satisfying” and “would recommend it to others.” There was a total of 29 participants. The nurse and nurse practitioner residents showed an increase in knowledge and confidence in military sexual trauma screening. This could also be attributed to the fact that they were enthusiastic about caring for veterans and the opportunity to have willing open conversations with a vulnerable population that has been exposed to trauma. Of note, all the nurse and nurse practitioner residents with less than 1 year of experience demonstrated a willingness to learn and an incentive to broaden their skills. Due to time constraints, the project implementation phase concluded once the post tests were completed.

Findings from the literature review are evidence that support the use of a mandatory, universal MST screening as an effective way to identify veterans with histories of MST (Creech et al., 2018; Hyun et al., 2012; Kimerling et al., 2007; Rattan et al., 2018). While there are several screens for sexual trauma and MST, the VA continues to lead with their mandatory, universal MST screening method. The literature review also demonstrated a correlation between consistent clinician MST screening and improved veteran mental health, sexual health, and physical health outcomes (Forkus et al., 2020; Pulverman et al., 2019; Reddy et al., 2019). This is important as many studies indicate an association between military sexual trauma and adverse sexual, physical, and mental consequences. Studies also revealed that military sexual trauma screening should be conducted in a “sensitive atmosphere for veterans to voice their “concerns” (Bradswich, 2022). The literature review also highlighted a need for MST training for civilian
and new novice nurses. Nurses play a significant role when it comes to addressing military sexual trauma. Nurses conduct the screening, and they identify military sexual trauma, however in recent studies, it was found that nurses with less than 3 years of clinical experience were “more confident in managing issues like pain but least confident in managing issues such as military sexual trauma” (Elliott, 2018). The literature review parallels what was found during the implementation phase of the project. Prior to the educational session, 79% of the novice nurse and nurse practitioner participants reported that they never screened veterans for military sexual trauma before. After the educational session, 96% of the novice nurse and nurse practitioner participants reported that they felt confident in screening and would screen veterans for military sexual trauma. This project highlighted the role of nurses and nurse practitioners in the screening process for military sexual trauma. This project supports findings that novice nurse and nurse practitioner education, collaboration with patients, and providing resources improves outcomes with veterans that have a history of military sexual trauma. The project intervention led to an increase in knowledge of military sexual trauma because it addressed MST screening and identification, associated negative health outcomes with MST, MST treatment, and MST project resources.

One facilitator of the project was that the VA Health Administration had an environment that encouraged nurse and nurse practitioner participation and involvement. Leadership of the PBNR Program, TTP Program and Nurse Practitioner Residency Program were receptive to the educational session as it addresses a learning need for new graduate nurses and nurse practitioners entering the VA Health Administration. Leadership gave permission and allowed for the educational session to take place during a Didactic Workshop. The participants were receptive to the information and attended the session.
The project faced some challenges, one barrier to implementation the project was that the VA IRB twice deemed the project as “Research.” This restriction created delays with implementation of the project. Modifications were made to the project so that it could not be viewed as “Research” by the VA IRB. VA IRB Approval was given in February 2023 and the project was implemented and completed in March 2023. The theoretical model for this project was PDSA Cycle. This Cycle includes the phases of plan, do, study, and act. Due to the time restraints, only one PDSA cycle was able to be conducted. The longevity of the scores was not assessed after a 3-4 week period as was initially intended. The comfort and knowledge levels were measured only immediately after the session.

29 out of 32 participants fully completed the pre and post surveys. For those who did not fully complete surveys, it was expressed that some questions on the layout of the surveys were confusing. Clearer instructions could have been provided to participants prior to administration of the pre and post surveys and the instruments could use revision. Time may have also been a factor. This was implemented as a 1-hour educational session, as it was part of a Didactic Workshop that included other educational sessions and projects on the same day.

The findings demonstrated that implementation of MST educational session led to an increase in nurse and nurse practitioners’ knowledge of MST and MST related screening. Additionally, the findings showed that the implementation of MST educational session led to an increase in nurse and nurse practitioner’s confidence with MST screening. In this regard, all VA Healthcare facilities should determine a knowledge gap among all providers new to the VA and implement educational sessions and trainings. It can be recommended that this educational session and training on MST and MST screening should be conducted more than once to meet the identified educational need. Additionally, as veterans have the option to
receive healthcare outside the VA and at civilian healthcare sites, future discussions should also be on implementing MST educational sessions and trainings for civilian providers (nurses, advance practice nurses, physician assistants, physicians) for private health care facilities outside of the VA.

**Conclusion**

There is a strong association between military sexual trauma and negative health outcomes. The implementation of MST screenings by healthcare providers and the healthcare team is a form of prevention and intervention. Nurses and nurse practitioners are part of the healthcare team. It is important that they use a trauma sensitive approach and screen for patients in a private confidential manner. The project results support the effectiveness of an MST educational intervention among novice nurse and nurse practitioner residents. Such educational programs should be offered more widely in the effort to decrease MST.
References


Creech, S. (2021). *Addressing the health concerns of VA women with sexual trauma - study results*. Addressing the Health Concerns of VA Women with Sexual Trauma


https://doi.org/10.1037/cfp0000232


Department of Veteran Affairs, Employee Education System, & Mental Health Services Military Trauma Support Team (2019, September 29). Military Sexual Trauma (MST) for Medical Professionals.


Koo, K., & Maguen, S. (2020). Military Sexual Trauma and Mental Health Diagnoses in Female Veterans Returning from Afghanistan and Iraq: Barriers and Facilitators to Veterans Affairs Care. https://repository.uchastings.edu/hwlj/vol25/iss1/3/


https://doi.org/10.1016/j.sxmr.2019.03.002


https://www.ncbi.nlm.nih.gov/books/NBK207234/


https://deming.org/explore/pdsa/

https://www.mentalhealth.va.gov/mentalhealth/mssthome/index.asp

https://guides.lib.umich.edu/nursing


https://www.hsrd.research.va.gov/research_topics/pact.cfm

VHA Directive. (2017). *Military Sexual Trauma (MST) Mandatory training and reporting requirements for VHA Mental Health and Primary Care Providers*

file:///C:/Users/VH9FD8~1/AppData/Local/Temp/12/MicrosoftEdgeDownloads/f836d5a2-5052-4b37-a386-1d1576a14e42/1115_01(1)_D_2017-04-14.pdf.


http://www.pressureulcer.scot/?page_id=301

Appendix A

Theoretical Framework/Model

PDSA Model (Plan Do Act Study)
Appendix B

MST Knowledge Questionnaires (Pre/Post)

1. Military sexual trauma, or MST, is the term used by the Department of Veterans Affairs (VA) to refer to experiences of sexual assault or sexual harassment that a Veteran experienced during their military service. (True/False)

2. For some Veterans, the experience of MST may continue to affect their mental and physical health in significant ways, even many years later. (True/False)

3. 1 in 3 women and 1 in 50 men respond "yes," that they experienced MST, when screened by their VA provider. (True/False)

4. Every VA health care facility has a designated MST Coordinator who serves as a contact person for MST-related issues. This person can help Veterans find and access VA services and programs. (True/False)

5. Recognizing that many survivors of sexual trauma do not disclose their experiences unless asked directly, VA health care providers ask every Veteran whether they experienced MST. This is an important way of making sure Veterans know about the services available to them. (True/False)

6. Veterans need to be service connected (or have a VA disability rating). Veterans do not need to have reported the incident(s) at the time or have other documentation that they occurred to get care. (True/False)

7. MST-related services are available only at certain VA medical center and many VA community-based outpatient clinics. (True/False)

8. For self-care, you can also download Beyond MST, a free mobile app that was created for survivors of MST to cope with MST-related challenges and improve health, relationships and quality of life. (True/False)
Appendix C

MST Learning, Screening, and Confidence Pre-Survey

<table>
<thead>
<tr>
<th>Pre-Survey</th>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are your key learning objectives for this learning module?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How confident are you that the education module will deliver on the learning objectives?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are your motivations for taking this learning module?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the end of this educational module, what do you hope to have achieved?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are your biggest barriers to you achieving your goals with this learning module?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What additional questions do you have?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix D

### MST Learning, Screening, and Confidence Post-Survey

**Post-Survey**

<table>
<thead>
<tr>
<th>Question</th>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you been screening patients for military sexual trauma prior to today?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Did you learn anything about military sexual trauma/MST screenings through this educational session? Did it meet your objectives?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Now that you have received this educational session, will you discuss screening for military sexual trauma with your patients?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Do you think the educational session was time consuming?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Do you think the educational session on military sexual trauma screening was beneficial and achieved your goals?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**What additional recommendations would you provide?**
Appendix E

Veteran’s Health Administration Union Correspondence

From: Presskreischer, Benjamin <Benjamin.Presskreischer@va.gov>
Sent: Friday, July 15, 2022 4:27 PM
To: Rose, Jacquelyn M <Jacquelyn.Rose@va.gov>; Freeman, Alyssa
     <Alyssa.Freeman@va.gov>
Subject: RE: Union/AFGE letter/Priority

No letter is needed from AFGE.

From: Rose, Jacquelyn M <Jacquelyn.Rose@va.gov>
Sent: Friday, July 15, 2022 4:14 PM
To: Freeman, Alyssa <Alyssa.Freeman@va.gov>; Presskreischer, Benjamin
     <Benjamin.Presskreischer@va.gov>
Subject: Re: Union/AFGE letter/Priority

Looks good from NAGE. No letter is required
Appendix F

UMASS Amherst IRB Approval

Memorandum – Not Human Subjects Research Determination

Date: June 1, 2022

To: Alyssa Freeman, College of Nursing

Project Title: An Educational Program to Increase Military Sexual Trauma (MST) Screening Among Veterans

HRPO Determination Number: 22-97

The Human Research Protection Office (HRPO) has evaluated the above named project and has made the following determination based on the information provided to our office:

☐ The proposed project does not involve research that obtains information about living individuals [45 CFR 46.102(f)].

☐ The proposed project does not involve intervention or interaction with individuals OR does not use identifiable private information [45 CFR 46.102(1), (2)].

☒ The proposed project does not meet the definition of human subject research under federal regulations [45 CFR 46.102(d)].

Submission of an Application to UMass Amherst IRB is not required.

Note: This determination applies only to the activities described in the submission. If there are changes to the activities described in this submission, please submit a new determination form to the HRPO prior to initiating any changes. Researchers should NOT include contact information for the UMass Amherst IRB on any project materials.

A project determined as “Not Human Subjects Research,” must still be conducted ethically. The UMass Amherst HRPO strongly expects project personnel to:

- treat participants with respect at all times
- ensure project participation is voluntary and confidentiality is maintained (when applicable)
- minimize any risks associated with participation in the project
- conduct the project in compliance with all applicable federal, state, and local regulations as well as UMass Amherst Policies and procedures which may include obtaining approval of your activities from other institutions or entities.

Please do not hesitate to call us at 413-545-3428 or email humansubjects@ora.umass.edu if you have any questions.

Jorge A. Guzman, Assistant Director
Human Research Protection Office
Appendix G

Participant Satisfaction Post Survey

Participant Satisfaction (Standard Questions)

1. Overall, I was satisfied with this learning activity.
   - Does not apply
   - Strongly Disagree
   - Disagree
   - Neither Disagree nor Agree
   - Agree
   - Strongly Agree

2. I would recommend this training session to others.
   - Does not apply
   - Strongly Disagree
   - Disagree
   - Neither Disagree nor Agree
   - Agree
   - Strongly Agree

3. I learned new knowledge and skills from this learning activity.
   - Does not apply
   - Strongly Disagree
   - Disagree
   - Neither Disagree nor Agree
   - Agree
   - Strongly Agree

4. How much did you learn as a result of this session?
   - Very Little
   - Little
   - Neutral
   - Fair Amount
   - Great Deal

5. The scope of the learning session was appropriate to my professional needs.
**Participant Satisfaction (Standard Questions)**

<table>
<thead>
<tr>
<th>Does not apply</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

6. The content was presented in a manner that was fair and unbiased. If not, please elaborate.

<table>
<thead>
<tr>
<th>Does not apply</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

7. How useful was the content of this session for your practice or other professional development?

- [ ] Not Useful
- [ ] Little Useful
- [ ] Neutral
- [ ] Useful
- [ ] Extremely Useful

8. I will be able to apply the knowledge and skills learned to improve my job performance.

<table>
<thead>
<tr>
<th>Does not apply</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

9. The environment for this learning session was effective for my learning.

<table>
<thead>
<tr>
<th>Does not apply</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree nor Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Appendix H

VA IRB Approval

Please note that VA Boston Healthcare System Determinations has taken the following action on IRBNet:

Project Title: [1726399-1] VA Boston Health Care Staff Education PowerPoint session on screening and early identification of Military Sexual Trauma to increase military sexual trauma awareness Principal Investigator: Alyssa Freeman

Submission Type: New Project
Date Submitted: December, 2022

Action: NOT RESEARCH
Effective Date: February 2, 2023
Review Type: Limited Review

Should you have any questions you may contact Paula Martin at paula.martin@va.gov.

Thank you,
The IRBNet Support Team

gov.irbnet.org
Appendix I

Educational Session Excerpt

Military Sexual Trauma for Medical Professionals
(RN Residents, Transition to Practice Nurse Residents, and Nurse Practitioners)

ALYSSA FREEMAN DNP
STUDENT, RN - BSN
## Appendix J

### Timeline

**PDSA QI Cycle 1**

<table>
<thead>
<tr>
<th>Task</th>
<th>November</th>
<th>December</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Engagement, Dissemination to Stakeholders</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Administer Questionnaires, Pre-test checklist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review of Pretest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Present MST education intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Administer Questionnaires, Post-test checklist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Review Post-tests, Questionnaires, MST screenings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Descriptive Analysis and Analyze Data, Findings Present, Write Report</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>