Coping Abilities of Military Veterans: Spirituality and Self-Efficacy

Cheryl Major-Cooper
Virginia Beach, Virginia

Bachelor of Nursing, University of Evansville, 1987
Master of Science in Nursing, University of Cincinnati, 2013

A Scholarly Practice Project presented to the Graduate Faculty
of the University of Virginia in Candidacy for the Degree of
Doctor of Nursing Practice

School of Nursing

University of Virginia
May 2018

Catherine F. Kane, PhD, RN, FAAN
Advisor and Practice Mentor

Edie Devers Barbero, PhD, RN, PMHNP-BC
Faculty Member

Abstract

Purpose: The purpose of this study was to better understand how two aspects of holistic care, spirituality and self-efficacy, inform interventions to reduce symptoms of Posttraumatic Stress Disorder in Military Veterans.

Research Question: How do daily spiritual experience and self-efficacy relate to PTSD?

Setting, sample: The convenience sample (N=200) was recruited from multiple Veteran Service Organization (VSO) sites in Hampton Roads, Virginia and three close outlying sites.

Measures: A demographic survey and three standard measures were used**:** the PTSD Checklist (PCL-5; (α=0.97), The Daily Spiritual Experience Scale (DSES), (α=0.96), and the General Self Efficacy Scale (GSES), (α=0.92).

Method: Descriptive correlational

Procedures: The PI recruited participants on-site at the VSOs. Following completion of the consent process, participants answered paper and pencil questionnaires anonymously. The completed questionnaires were collected and the data was analyzed.

Results: Scores on DSES were not significantly associated with scores on the PCL-5. DSES and GSES were directly correlated (r = .164, p = .021). GSES scores were negatively correlated with the PCL-5 (r = -.555, p < .001). When controlling for relevant covariates, Generalized Self-Efficacy predicted fewer PTSD symptoms (b = -1.78, t (175) = -8.38, p < .001).

Conclusion: This study supports the promotion of self-efficacy in interventions to prevent and possibly reduce PTSD. Though spirituality was not found to directly impact PTSD, further study of the relationship between spirituality, self-efficacy and PTSD is warranted.

Keywords: Post Traumatic Stress Disorder, Spirituality, Self-Efficacy

Coping Abilities of Military Veterans:

Spirituality and Self-Efficacy

Section I: Introduction

Prevalence of PTSD in Veterans

Posttraumatic Stress Disorder (PTSD) prevalence is estimated to be 8-12% in the general population and 13-31% among veterans (as cited in Kronish, 2012). PTSD is accompanied by multiple psychiatric and physical symptoms, with depression being one of the most pronounced. The PTSD Foundation of America (2016) provides the following statistics: about 30% of the men and women who have spent time in war zones experience PTSD and an additional 20% to 25% have had partial PTSD at some point in their lives. Additionally, according to the PTSD Foundation of America's website, more than half of all male Vietnam veterans and almost half of all female Vietnam veterans have experienced "clinically serious stress reaction symptoms". PTSD has also been detected among veterans of other wars. The PTSD Foundation of America provides the following statistics as estimates of PTSD in Gulf War veterans: about 30% of the men and women who have spent time in war zones experience PTSD and an additional 20% to 25% have had partial PTSD at some point in their lives.

The symptoms of PTSD were first named by Swiss military physicians in 1678. "'Nostalgia' was the term they used to define a condition characterized by melancholy, incessant thinking of home, disturbed sleep or insomnia, weakness, loss of appetite, anxiety, cardiac palpitations, stupor, and fever" (Bentley, 2005, p.1). Advances through years of research have produced diagnostic criteria for PTSD. In 2013, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; 1) was released by the American Psychiatric Association. In the DSM-5, PTSD was placed in a new category: Trauma and Stressor Related

Disorders. The criteria for PTSD have criteria A through H (see Definition of Terms, pages 12-13, for details), all of which are required for a diagnosis of PTSD (American Psychiatric Association, 2013).

Cost of treating PTSD

According to the National Institutes of Health (PubMedHealth, 2005), Department of Veteran Affairs (PTSD.va.gov, 2018), and the Sidran Institute ("Post Traumatic Stress Disorder Fact Sheet | Sidran.org", 2016), the societal and economic burden of PTSD is extremely heavy. Diagnosis and treatment of PTSD, and anxiety disorders, can have far reaching consequences. According to the non-profit organization, PTSD United (2013), the cost is well over $40 billion annually for anxiety disorders. In addition, persons diagnosed with PTSD tend to be the highest utilizers of health care services. Those with PTSD are often misdiagnosed and undertreated due to the multiple symptoms, at the time of presentation, that are not associated with PTSD.

On the family level, costs also arise related to a soldier's PTSD, as "spouses and partners and some family members often also need therapy," says Rothbaum (Hill, 2014, p.1). Indeed, Jeffrey Borenstein (Hill, 2014), a psychiatrist and president and CEO of the Brain & Behavior Research Foundation, says that PTSD can take a "tremendous toll" (p. 1) on families, and that family members may also suffer from depression, anxiety and sleep disturbances related to the soldier's PTSD. The cost of this chronic disorder is financial, mental, emotional, and in some cases physical; the price of which is often more than patients and families can afford.

PTSD, spirituality, and self-efficacy

Polusny, et al., (2015) reported that standard treatments for PTSD have not demonstrated the effectiveness expected. Traditional treatment for PTSD, including psychotherapy and medication, is entirely dependent upon patient compliance, which is historically low for PTSD

sufferers. The need for alternative treatments and treatment options is clearly recognizable and more necessary than previously believed. Spirituality and Religion though often used interchangeably are separate, but closely related constructs. Spirituality addresses an ultimate truth, purpose and meaning (Zinnbauer, et al., 1997) and has been found to have a profound effect when incorporated into PTSD treatment (Harris et al., 2011).

Likewise, self-efficacy has been found to be a significant factor in the treatment of PTSD (Bormann, 2008) and though Veterans with PTSD are historically very difficult to treat, Oman and Bormann (2015), observed that veterans with PTSD usually have a low baseline self-efficacy. In one spirituality-based treatment program (Oman & Bormann, 2015), self–efficacy improved linearly from week to week. Therefore, the impact of spirituality and self-efficacy is an important area for study in the treatment of PTSD.

Theoretical Framework

The theoretical framework guiding this research was the Health Promotion Model (HPM), a nursing model developed by Pender (1982, revised 1996), (see *Figure 1*). The HPM has been used internationally for research, education, and practice. HPM describes how positive health behaviors lead to the achievement of higher levels of well-being and self-actualization (Pender, 1987). The HPM has its theoretical roots in Expectancy Value Theory, which posits that individuals engage in actions to achieve goals they perceive as possible and that result in valued outcomes, and Social Cognitive Theory, which explains the interaction of thoughts, behavior, and environment. For people to alter how they behave, they must alter how they think (Pender et al., 2011). One construct in the HPM model is ‘perceived self-efficacy,’ or judgement of one's personal ability to carry out a particular course of action. The higher the perceived self-efficacy, the more vigorous and persistent will be the effort to perform a behavior, even when faced with

obstacles and aversive experiences which serve as impediments, determining health habits (Bandura, 2004). The HPM (1982, 1996) has been used successfully, for nearly thirty-five years in multiple areas including: chronic disease, diabetes (Ho, et al., 2010), chronic disabling conditions (Stuifbergen, et al., 2000), nutrition among female Iranian students (Dehdari, et al., 2014), and most recently in the study of spirituality (Fournier, 2017). The purpose of this study was to examine how veterans' experiences of spirituality and self-efficacy are related to their perception of PTSD symptoms.

Section II: Literature Review

The focus of this integrative review was to examine the role spirituality and self-efficacy play for combat veterans coping with PTSD. The inclusion criteria for this integrative review were: 1) Any study that assessed the impact of spirituality/religion and self-efficacy, for military members/veterans with PTSD primarily or any other mental health diagnosis, 2) Any study that utilized an intervention to assess the impact of spirituality and/or Self Efficacy for military members/veterans. Exclusion criteria were 1) Studies that were for foreign services, 2) Studies that focused primarily on other than mental health diagnoses or suicidal ideations, 3) Studies that included children.

Literature search

In an attempt to identify all existing research on these topics, an electronic search of the following bibliographic databases was conducted: Google Scholar, Pubmed, PsycINFO, and CINAHL (see Table 1). The keywords used in the search were spirituality, religion, self-efficacy, posttraumatic stress disorder and combat (military) veterans. Research articles were included if they addressed spirituality in combat veterans, active duty military or veterans of combat.

A total of 73 articles were identified in the initial search (see *Figure 2*). Articles that discussed issues beyond spirituality, (i.e. suicidal ideation, depression, etc.) were omitted. Table 1 provides the findings. Of the 73 articles, eleven were duplicates of the 62 articles remaining; eleven articles met inclusion criteria (Berg, 2011, Borman, et al., 2013, Borman, et al., 2012, Borman, et al., 2005, Borman, et al., 2008, Currier, et al., 2015, Ganocy, et al., 2016, Harris, et al., 2011, Hourani, et al., 2012, Kopacz, et al., 2016, Oman and Borman, 2015). Of the eleven included studies, ten were quantitative and one was qualitative.

Findings

The eleven articles provided empirical support for the relationship between spirituality, self-efficacy, and decreased PTSD symptoms. Berg's (2011), findings concerning Vietnam Combat Veterans indicated that PTSD, along with depression, was associated with profound spiritual factors. Berg (2011) acknowledged that the cause and effect could not be assumed. However, there was a lower level of spiritual distress for those who regularly attended religious services and who were able to articulate the importance of faith in their lives.

Five of the ten articles that met inclusion criteria were from studies with Jill E. Bormann, Ph.D., RN as the lead researcher on four articles and the second author on one. Bormann, et al. (2005), tested the efficacy of frequent Mantram repetition on stress, quality of life, and spiritual well-being in Veterans. The Mantram was defined as a silent frequent repetition of a word or phrase with spiritual significance, sometimes called a Holy Name. The Mantram repetition was found to be significantly related to an improvement in spiritual well-being. *Existential Well-Being:* EWB (n=43, M=38.6/43.4; p = .001); Religious Well Being RWB (n=42, M=41.6/44.9; p = .001); Total Spiritual Well Being TSWB (n=43, M=79.2/88.0; p = .001).

In another test of the Mantram repetition intervention, Bormann, Thorp, Wetherell, and Golshanl (2008) found that self-reported PTSD severity (PCL) improved after the intervention with a large effect size (d −.72), whereas clinician-assessed (CAPS) scores demonstrated less improvement (d −.33). Bormann, Liu, Thorp, and Lang (2012) then tested the hypothesis that increases in existential spiritual well-being (ESWB) would mediate a reduction in self-reported PTSD symptoms following a group Mantram intervention. The findings suggested that Mantram intervention reduced the severity of PTSD symptoms by enhancing the experience of ESWB. According to Bormann, et al., these findings were consistent with results from other

investigations in other groups which included veterans with chronic illness and health care employees. Bormann, Hurst, and Kelly (2013), conducted a qualitative analysis of responses to Mantram Repetition Program from veterans with PTSD that concluded that Mantram repetition is a strategy that can be used in a variety of situations for managing PTSD symptom severity. These studies indicate that veterans are willing to participate in a nontraditional spirituality integrated program and that such programs have positive outcomes for participants.

Currier, Holland, and Drescher (2015), performed a cross-lagged panel design to examine the longitudinal association between spirituality and PTSD symptom severity in 532 U.S. veterans in a residential treatment program for combat related-PTSD. The results of this study indicated that veterans who scored high on spirituality scored lower on PTSD symptoms, associations between the variables, βs=.10 to .16. Ganocy et al. (2016), findings indicated that higher overall spiritual well-being (Odds ratio (OR), 0.96; 0.94-0.99) and existential well-being (OR, 0.92; 0.87-0.96) were associated with less lifetime PTSD. Kopacz, Currier, Drescher, and Pigeon (2016), studied suicidal behavior and spiritual functioning in veterans diagnosed with PTSD. The study findings indicated that spiritual functioning was negatively associated with suicidal thoughts and attempts Wilks' λ= 0.94, $F(12, 918.00) = 2.22$, $p= .009$, among veterans dealing with PTSD.

Hourani, et al. (2012) drew data from the 2008 Department of Defense (DOD) Survey of Health Related Behaviors among Active Duty Military Personnel (2008 HRB Survey). The final sample of participants consisted of 28,546 military personnel (5,927 Army, 6,637 Navy, 5,117 Marine Corps, 7,009 Air Force, and 3,856 Coast Guard), who completed self-administered questionnaires anonymously. The findings showed that spirituality buffered PTSD symptoms in that high spirituality was associated with a more pronounced protective influence against PTSD,

compared to medium spirituality in the low-moderate combat exposure group (4.4% versus 6.4%) for those with low to moderate combat exposure.

Harris, et al. (2011) tested the efficacy of Building Spiritual Strength (BSS), an 8–session spirituality integrated group intervention. This intervention was designed for military trauma survivors to address the strain of combat on their religious beliefs and to enhance religious meaning. In this experimental study, randomly assigned BSS participants showed statistically significant reductions in PTSD symptoms. Once post-treatment means were adjusted for all other variables in the model, including race, treatment status, and pretreatment PTSD scores, the difference between the treatment group and control group was 12.23, which exceeded the established threshold for clinical significance based on self-report compared to those in a wait-list control group.

Oman and Borman, (2015) conducted a randomized trial to investigate the influence of the MRP on post-intervention self-efficacy for managing PTSD symptoms. The study also investigated the effects of self-efficacy with those of spiritual well-being. Results demonstrated the MRP group self-efficacy means, as well as, treatment effect showed linear weekly increases from baseline to post-intervention. The treatment effect was significant at ($p<.01$). "We conclude that MRP fosters self-efficacy for managing PTSD symptoms, favorably affecting diverse facets of well-being" (p. 34).

The available research and lessons learned in everyday practice confirm the importance of self-efficacy in the treatment of PTSD. Likewise, the literature review clearly identifies the benefits of spirituality for veterans with PTSD, however, most of these studies were conducted with Veterans in treatment for PTSD. The current study sample, a pool of Veterans living independently in a civilian community, will investigate the following research question: Do

veterans who describe themselves as ‘spiritual’ *or as having a spiritual practice* report lower levels of PTSD symptoms, including depression, and/or higher levels of self-efficacy than those who do not? The literature review focused on interventions for PTSD. The study focuses on describing the relationship of spirituality and self-efficacy to PTSD in a community living convenience sample of military veterans.

Section III: Methods

Between twelve and thirty percent of all combat Veterans are diagnosed with Post-Traumatic Stress Disorder ("PTSD: National Center for PTSD Home", 2017)**.** These Veterans are returning home and struggling whether from failed treatment, noncompliance, or a combination of both. Even those who experience improvement from treatment continue to search for ways to maintain their coping abilities, mental health, and self-control. Based on the review of the literature this study will investigate the relationship of spirituality and self-efficacy to levels of PTSD symptoms in a convenience sample of community living Veterans.

Purpose of the study

The purpose of this study was to examine how Veterans' experiences of spirituality and self-efficacy are related to their perception of PTSD symptoms.

Project/Research Question

How do daily spiritual experience and self-efficacy relate to PTSD?

Definition of Terms

Posttraumatic Stress Disorder (PTSD): All of the following DSM 5 criteria are required for the diagnosis of PTSD (APA, 2013). The following summarizes the diagnostic criteria:

Criterion A (one required): The person was exposed to: death, threatened death, actual or threatened serious injury, or actual or threatened sexual violence, in the following way(s):

Criterion B (one required): The traumatic event is persistently re-experienced, in the following way(s):

Criterion C (one required): Avoidance of trauma-related stimuli after the trauma, in the following way(s):

Criterion D (two required): Negative thoughts or feelings that began or worsened after the trauma

Criterion E (two required): Trauma-related arousal and reactivity that began or worsened after the trauma,

Criterion F (required): Symptoms last for more than 1 month.

Criterion G (required): Symptoms create distress or functional impairment (e.g., social, occupational).

Criterion H (required): Symptoms are not due to medication, substance use, or other illness.

Spirituality: "is that most human of experiences that seeks to transcend self and find meaning and purpose through connection with others, nature, and/or a Supreme Being, which may or may not involve religious structures or traditions" (Buck, 2006, pp. 289-290).

Self-Efficacy: is confidence in one's own ability to achieve intended results (Bandura, 1977).

Veteran: "a person who served in the active military, naval, or air service and who was discharged or released under conditions other than dishonorable" (Title 38 of the Code of Federal Regulations, VA.ORG, 2017, 3.1).

Combat Zone/Theater: A combat zone is any area the President of the United States designates by Executive Order as an area in which the U.S. Armed Forces are engaging or have engaged in combat. Theater and Combat Zone are often used interchangeably though there are some slight differences (Stanley, 2010).

Veteran Service Organization (VSO): Organizations that help Veterans fill out VA forms, provide information about VA benefits, and provide a wide range of help for veterans and their dependents ("VA.GOV", 2017).

Research Design

The research design for this project is descriptive correlational. According to Wood and Kerr (2011), descriptive correlational research is conducted to examine the statistical strength and direction of the relationships between variables.

Description of the Setting

Setting: VSO sites: Norfolk, Virginia Beach, Portsmouth, Suffolk, Hampton Roads and nearby outlying cities, Gloucester, Yorktown, and Williamsburg, in Virginia. Hampton Roads is comprised of seven cities: Norfolk, Virginia Beach, Chesapeake, Portsmouth, Newport News, Hampton, and Suffolk which are in Southeastern Virginia. Williamsburg, Yorktown, and Gloucester are close by and were included in the study. The Hampton Roads area is home to one of the world's largest populations of military personnel, with approximately 83,000 active duty military. Hampton Roads is home to the largest naval base in the world and the only North Atlantic Treaty Organization (NATO) command on U.S. soil (Hampton Roads Chamber of Commerce, 2017). Greater than 30% of all veterans in the state of Virginia reside in the greater Hampton Roads area. In 2014, the state of Virginia ranked seventh in the nation for number of veterans.

Most VSO are open Monday – Thursday and hold bimonthly or monthly meetings for members or veterans seeking assistance with filing a Veterans Compensation Claim.

Sample

A convenience sample of 200 participants who self-reported Combat Related Post Traumatic Stress Disorder (PTSD), whether sustained during pre-deployment training or actual deployment. Details on demographics are presented in Tables 2, 3, and 4. Participants ranged in age from 19 to 100, with a mean age of 55.68. Age during military service ranged from 17 to 45,

with an average of 20.12. On average, participants served 13.51 years in the military (range: 1 to 45 years). Most participants (92.8%) were not drafted. The most commonly reported fields of combat were Vietnam (27.6%), the Gulf War (24.0%) and the War on Terror (22.5%). The majority of the sample was male (78.6%) and non-Hispanic (78.1%). Approximately 45% of the sample was black and 40.3% was white. Most participants (65.3%) were married and the majority had at least some college education or higher (78.1%). The most commonly reported religious affiliations were Baptist (34.7%) and other Protestant religions (26.5%). The veteran was required to be able to read and write English. Exclusion criteria: not able to provide consent and/or did not meet the definition of a veteran.

Procedures

A written letter or email from the administration of each VSO was solicited (*see Figure 3*) indicating the VSO's permission for the survey to be conducted at their site: Veteran Service Organization Chapters throughout Hampton Roads and surrounding areas.

The project was implemented between October 1 and November 30, 2017, at the VSO Chapters. Recruitment flyers were distributed at each VSO and general information about the research study was announced in their regularly scheduled meetings, and by word of mouth. Any veteran who met the inclusion criteria and provided informed consent was asked to complete the four questionnaires on-site: Demographic Survey, Post Traumatic Stress Disorder Checklist (PCL-5), Daily Spiritual Experience Scale (DSES), and Self-Efficacy Scale. In exchange for their participation, each veteran was provided a brochure outlining local PTSD resources.

Measures

Demographic Data Sheet. The Demographic Data Sheet (see Figure 4) collected information on Gender, Age, Race, Marital Status, Education, Religious affiliation and Military

Service.

The Post Traumatic Stress Disorder Checklist: The Posttraumatic Stress Disorder Checklist Version (PCL-5; Weathers, Litz, Keane, Palmieri, Marx, & Schnurr, 2013) is one of the most widely used self-report measures of posttraumatic stress disorder (PTSD) in the military. The PCL-5 includes 20 items developed to assess PTSD symptoms and associated features of the disorder are related to military experiences (see Figure 5). This is a self-report instrument that asks participants to rate their symptoms based on the past month: Item responses receive scores from 0 to 4, with higher scores corresponding to greater stress: 0=”Not at all”, 1=”A little bit”, 2=”Moderately”, 3=”Quite a bit”, and 4=”Extremely”. The PCL-5 score is the sum of the item scores. This instrument has demonstrated good psychometric properties $\alpha = 0.95$ (Pietrzak et al., 2015).

The General Self-Efficacy Scale (GSES): The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) is a ten-item questionnaire (see Figure 6) scored on a 4-point Likert scale. The self-efficacy score ranges from 10 to 40 with a higher score indicating more efficacy. The GSF scale is a self-report measure. Schwarzer and Jerusalem (1995) reported that the General Self-Efficacy Scale was directly correlated with positive emotion, optimism, and work satisfaction. Negative coefficients were found for depression, stress, health complaints, burnout, and anxiety. Internal reliability for GSE was demonstrated with Cronbach’s alphas between .76 and .90 (Schwarzer & Jerusalem, 1995).

The Daily Spiritual Experience Scale: The DSES (see Figures 7 and 8) is a 16-item, 6-point, Likert scale used to measure everyday ordinary spiritual experience rather than particular beliefs or behaviors. This self-report instrument intends to reach beyond the boundaries of just religion(s) to address existence apart from, and not subject to, the limitations of the material

universe. The DSES evidenced good reliability across several studies with internal consistency estimates in the .90s (Underwood & Teresi, 2002).

Data Analysis plan

Descriptive statistics were computed for the demographic data, frequencies and percentages were computed for categorical variables, and means and standard deviations were computed for the continuous variables. Detailed descriptive statistics were computed for the overall scores for the PTSD checklist, DSES, and GSES for veterans with combat-related PTSD: the possible score for each instrument, sample range, median, mean, standard deviation, and the sample Cronbach's Alpha. Assistance was sought from the UVA School of Nursing statistician to determine the appropriate procedures for inputting and analyzing the collected data.

Relationship between Study Variables

To first examine the research question, a Pearson correlation analysis was used to assess the relationship between study variables. Daily Spiritual Experiences was not significantly associated with scores on the PCL-5 (see Table 5). There was a small, positive correlation between Daily Spiritual Experiences and Generalized Self-Efficacy (r = .164, p = .021). Participants reporting more daily spiritual experiences had higher levels of self-efficacy. There was also a strong, negative correlation between scores on the PCL-5 and Generalized Self-Efficacy (r = -.555, p < .001); higher PTSD symptoms were associated with lower self-efficacy.

Relationship with Participant Demographics

Next, a series of analyses were conducted to explore the relationship between each study variable and participant demographic characteristics. Pearson correlation analyses (see Table 6) were used to assess relationships between the study variables and continuous variables (age, age when served, years in the military, times deployed, and length of deployment) and independent samples *t*-tests (see Table 7) were used to compare scores on binary categorical variables (gender, drafted, deployed, and injured). Multi-categorical variables (race, marital status,

education, religious affiliation, and field of combat) were assessed used an analysis of variance (ANOVA) (see Table 8). Because of low response rates in some categories, race, religious affiliation and field of combat were first recoded. Race was recoded as Black, White, and Other. Marital Status was recoded as Single, Married, and Divorced/Separated/Widowed. For religious affiliation, the categories of Buddhist, Jewish, Muslim, and Other were combined into a single category representing "Other." For field of combat, Korea and WWII were recoded as "Other." A summary of descriptive statistics for recoded variables is presented in Table 9.

Multiple Linear Regression

To address the research question, two multiple linear regression analyses were conducted. First, an analysis was conducted to determine whether the study variables (spiritual experiences and self-efficacy) predicted PTSD symptoms, controlling for the significant (or trending) demographic variables (length of deployment, injury status, gender) identified in the previous analysis. Next, an analysis was conducted to determine if daily spiritual experiences predicted self-efficacy, controlling for the significant demographics previously identified (years in the military, injury status, and education).

Protection of Human Subjects

This study was conducted after receipt of the approval of the proposal from the Institutional Review Board (IRB) of the University of Virginia (see Figure 9). The guidelines, as set by the IRB, were followed in order to protect participants' privacy and confidentiality. Participants signed a consent form (see Figure 10) for participation in the study and were assured that confidentiality and anonymity would be protected. All completed surveys were kept in a locked box with only the investigator and research committee members having access to the raw data.

Data Management

A total of 200 participants took part in the study. The data were entered into Excel and

screened for missing values. Several participants had partially missing data on the primary study variables. On the PCL-5, 19 participants had missing values for one item and an additional one respondent each had missing values for 2, 11, and 18 items. On the Generalized Self-Efficacy Scale, four respondents had missing values for one item. On the Daily Spiritual Experiences scale, 14 participants had one missing value; five participants had 3 missing values; and several different participants each had 3, 8, 11, 12, and 15 missing values.

To address missing data, the following steps were applied. First, the proportion of missing items to total items for each scale was calculated. On the basis of the recommendation by Schwarzer (2014; Generalized Self-Efficacy Scale), participants with missing data on more than 30% of the items within a given were excluded from the sample. A total of four participants were excluded based on this criterion, leaving a final sample of 196 participants. Next, mean scores were computed so that missing values would not distort the outcomes. These mean scores were then multiplied by the total number of items within a scale to return to the original scoring range of the measure.

Section IV: Results

Measures

Scores on the PCL-5 ranged from 0 to 77, with an average score of 34.56 (*SD* = 23.09). The scale demonstrated excellent reliability (α = .97). Scores on the Generalized Self-Efficacy scale ranged from 10 to 40, with an average score of 29.20 (*SD* = 6.60). The scale had excellent reliability (α = .92). Scores on the Daily Spiritual Experiences scale ranged from 1 to 75, with an average score of 48.11 (*SD* = 18.79). The scale had excellent reliability (α = .96). These data are presented in Table 10.

Research Question: How do daily spiritual experience and self-efficacy relate to PTSD?

PCL - 5

Prior to the analysis, the assumptions of multiple regression were examined. Normality was examined using a histogram plot and a P-P plot of standardized residuals. As can be seen in Figure 11, the data is distributed in a normal, bell-shaped curve. In Figure 12, the points do not deviate greatly from the diagonal, indicating that the assumption of normality is met.

Homoscedasticity was evaluated by plotting the residuals against the predicted values. As can be seen in Figure 13, the points are randomly distributed, with no clear pattern or curvature, indicating this assumption was also met.

Finally, variance inflation factors (VIFs) were calculated to detect the presence of multicollinearity between predictors. High VIFs indicate increased effects of multicollinearity in the model. VIFs greater than 5 are cause for concern, whereas VIFs of 10 should be considered the maximum upper limit (Menard, 2009). All predictors in the model had low VIFs (see Table 11).

The results of the first linear regression model were significant, F (5,175) = 18.91, p < .001, R^2 = 0.35, indicating that approximately 35% of the variance in PTSD symptoms is explained by length of deployment, injury status, gender, generalized self-efficacy, and daily

spiritual experiences. When controlling for relevant covariates, generalized self-efficacy predicted the level of PTSD symptoms, $b = -1.78$, $t\ (175) = -8.38$, $p < .001$. The computation indicated that for every one-unit increase in self-efficacy, PTSD symptoms decreased by 1.78 units. Daily spiritual experiences did not significantly predict PTSD symptoms. The results of the regression are presented in Table 12.

Generalized Self-Efficacy

Prior to the analysis, the assumptions of linear regression were evaluated. The data was close to a normal, bell-shaped curve (Figure 14) and the points on the P-P plot of standardized residuals did not show a great amount of deviation from the diagonal (Figure 15), indicating the assumption of normality was met.

Homoscedasticity was again evaluated by examining the plot of the residuals to predicted values. The points were randomly distributed, indicating the assumption was met (see Figure 16).

Finally, multicollinearity was evaluated by calculating VIFs. All predictors in the model had low VIF values, indicating the absence of multicollinearity (see Table 13).

The results of the second linear regression model were significant, $F\ (7,171) = 2.78$, $p = .009$, $R^2 = 0.10$, indicating that approximately 10% of the variance in Generalized Self-Efficacy was explained by years in the military, education, injury status, and daily spiritual experiences. However, when controlling for relevant demographics, daily spiritual experiences did not significantly predict self-efficacy, $b = 0.04$, $t\ (171) = 1.70$, $p = .090$. Table 14 summarizes the results of the regression model.

Summary

The results of these analyses provide insight into the relationships between daily spiritual experiences, self-efficacy, and PTSD symptoms in a veteran population. Neither reports of daily

spiritual experiences, nor identification with a particular religious affiliation were related to level PTSD symptoms. Daily spiritual experiences were associated with increased self-efficacy; however, when controlled for demographic variables, this relationship was no longer significant, suggesting it may be accounted for by other factors. There was a strong correlation between generalized self-efficacy and PTSD symptoms, and this relationship remained significant when controlled for other predictors of PTSD. This suggests that higher levels of self-efficacy predict lower levels of PTSD symptoms. An important limitation to note is that the temporal relationship between these variables cannot be inferred from this data. That is, a possible alternative explanation is that having PTSD negatively impacts generalized self-efficacy.

Section V: Discussion

Spirituality

The interesting, and somewhat surprising, finding in this project was that daily spiritual experiences did not significantly predict PTSD symptoms, yet did demonstrate the need to access this aspect of holistic care. Though the findings of this project did not demonstrate an inverse relationship between PTSD symptoms and spirituality, it did demonstrate that the higher one's spirituality the higher their self-efficacy. The findings also provided insight into understanding that age, religious preference, and race may potentially impact spirituality.

Bormann, in multiple studies, strongly demonstrated the value of utilizing this resource as the intervention of Mantram repetition resulted in decreased PTSD symptoms. The findings were similar in Harris et al. (2011), as the intervention of Building Spiritual Strength 8-week session showed a clinical significance when compared to the control group. In addition, the findings are quite different from the findings from Currier, Holland, and Drescher (2015), who performed a cross-lagged panel design to examine the longitudinal association between spirituality and PTSD symptom severity in 532 U.S. veterans in a residential treatment program for combat related-PTSD. They found that higher spirituality resulted in lower PTSD symptoms scores. Moreover, the same was said for Hourani, et al. (2012) drew data from the 2008 Department of Defense (DOD) Survey of Health Related Behaviors among Active Duty Military Personnel (2008 HRB Survey). The final sample of participants consisted of 28,546 military personnel (5,927 Army, 6,637 Navy, 5,117 Marine Corps, 7,009 Air Force, and 3,856 Coast Guard), who completed self-administered questionnaires anonymously. The findings in the literature *showed* that spirituality buffered PTSD symptoms in that high spirituality was associated with a more pronounced protective influence against PTSD compared to medium spirituality in the low-moderate combat

exposure.

Self-Efficacy

The HPM model provides insight, regarding self-efficacy, 'perceived self-efficacy,' or judgement of one's personal ability to carry out a particular course of action. The findings of this project, which were congruent with other findings, clearly demonstrated that higher self-efficacy was inversely related to level of PTSD symptoms. This study also indicated that length of service and physical injury play an integral part in one's perception of self-efficacy.

Strengths and limitations of the design

Convenience sampling reduced external validity in that the results cannot be generalized to the entire population of Military Veterans. Uncontrolled environmental factors may have influenced responses to study questions and, consequently, study results. Internal validity was reinforced by building on prior research. The study instruments' reliabilities were demonstrated with Cronbach's alpha all exceeding 0.90 (see Table 10).

The inclusion criteria may be considered a strength by some and a weakness by others. The criteria were by self-report and no confirmation of diagnosis was made. In addition, it included those who may have been injured while preparing for deployment in addition to those who actually deployed.

The setting provided both a strength and a weakness. The availability of veterans was present. The challenge is that the mean age of the veterans was above 50-years-old. And the findings clearly demonstrated that older veterans tended to be more spiritual. The other reality is that Virginia is considered a "Bible Belt" state and if this same study were to be performed elsewhere, would the spirituality responses have differed and shown a strong impact on self-efficacy?

Nursing Practice Implications

The potential for nurses to encounter veterans with PTSD is great because many return to their hometown after serving their country in foreign places. These veterans are returning from combat zones and/or traumatic experiences, and it is estimated that between 12-30% will be diagnosed with PTSD. The findings indicate that when veterans identify as spiritual, they have higher self-efficacy and lower PTSD symptoms. With this knowledge, nursing will be able to empower this strength as they continue to care for the veteran holistically. This particular research provides insight into capitalizing on the strengths of spirituality and self-efficacy within a holistic approach to nursing care. The Health Promotion Model reminds us that positive health behaviors lead to the achievement of higher levels of well-being and self-actualization (Pender, 1987). Bandura (2004) stated, "The higher the perceived self-efficacy, the more vigorous and persistent will be the effort to perform a behavior, even when faced with obstacles and aversive experiences which serve as impediments, determining health habits (p. 145)." Having this information, the nurse can promote self-efficacy and spirituality into a holistic approach, knowing that there is supporting evidence. An additional strategy may be advocating for self-efficacy and spirituality beyond the institutions and take advantage of community resources that could play an integral part in promoting self-efficacy and spirituality.

Implications for Further Research

The findings of this study demonstrate the need for replication, refining the inclusion criteria. The literature review demonstrated the benefits of interventions. Yet, the quality of interventions can only be improved by clarifying the needs of the individual prior to implementation. Future research may reveal additional insights by changing settings and geographical areas to target both a larger and younger population. The utilization of the Daily

Spiritual Experience Scale and the Generalized Self-Efficacy Scale, both instruments with proven reliability and validity, may provide for longitudinal studies, if included in initial and periodic assessments in studies and clinical practice.

Products of the DNP Project

This Doctor of Nursing Practice Scholarly project will be archived and made available through LIBRA, the repository at the University of Virginia. This project has been submitted to International Society of Psychiatric Mental Health Nurses Annual Conference, and to the Rho Pi Chapter, Sigma Theta Tau International 20th Annual Research and Scholarship Symposium. In addition, a manuscript version (Appendix A) of this project will be submitted for publication in the Journal of Holistic Nursing.

References

About Healthy People | Healthy People 2020. (2016). *Healthypeople.gov*. Retrieved 19 September 2016, from https://www.healthypeople.gov/2020/About-Healthy-People.American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.

Bandura, A (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review. 84 (2), 191–215.* doi:10.1037/0033-295x.84.2.191.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior*, *31*(2), 143-164. http://dx.doi.org/10.1177/1090198104263660

Beck, A.T., Steer, R.A., Ball, R., Ranieri, W. (1996). Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *Journal of Personality Assessment.* 67(3), 588–97. doi:10.1207/s15327752jpa6703_13.PMID8991972. *Retrieved 2008-10-3.*

Bell Meisenhelder, J. (2002). Terrorism, posttraumatic stress, and religious coping. *Issues in Mental Health Nursing*, 23(8), 771-782.

Bentley, S. (2005). *A Short History of PTSD: From Thermopylae To Hue*. *Combat PTSD Forum*. Retrieved 16 May 2017, from https://www.mycombatptsd.com/threads/a-short-history-of-ptsd-from-thermopylae-to-hue.2989/

Berg, G. (2011). The relationship between spiritual distress, PTSD and depression in Vietnam combat veterans. *The Journal of Pastoral Care & Counseling: JPCC*, *65*(1-2), 6,1-11.

Blanchard, E. B., Jones Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behaviour Research and Therapy, 34,* 669-673.

Boehnlein, J. (2006). Religion and spirituality in psychiatric care: looking back, looking ahead. *Transcultural Psychiatry*, 43(4), 624-651.

Bormann, J. E., Hurst, S., & Kelly, A. (2013). Responses to Mantram repetition program from veterans with posttraumatic stress disorder: A qualitative analysis. *Journal of Rehabilitation Research & Development, 50*(6), 769-784. doi:10.1682/JRRD.2012.06.0118.

Bormann, J. E., Liu, L., Thorp, S. R., & Lang, A. J. (2012). Spiritual well-being mediates PTSD change in veterans with military-related PTSD. *International Journal of Behavioral Medicine, 19*(4), 496-502. doi:https://dx.doi.org/10.1007/s12529-011-9186-1.

Bormann, J. E., Smith, T. L., Becker, S., Gershwin, M., Pada, L., Grudzinski, A. H., & Nurmi, E. A. (2005). Efficacy of frequent Mantram repetition on stress, quality of life, and spiritual well-being in veterans: A pilot study. *Journal of Holistic Nursing, 23*(4), 395-414. doi:https://dx.doi.org/10.1177/0898010105278929.

Bormann, J. E., Thorp, S., Wetherell, J. L., & Golshan, S. (2008). A spiritually based group intervention for combat veterans with posttraumatic stress disorder: Feasibility study. *Journal of Holistic Nursing, 26*(2), 109-116. doi:https://dx.doi.org/10.1177/0898010107311276.

Buck, H. (2006). Spirituality: Concept analysis and model development. *Holistic Nurse Practitioner*, 20, 288-92.

Connor, K. M., Davidson, J. R. T., & Lee, L. C. (2003), Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of Traumatic Stress*, 16, 487–494. doi:10.1023/A:1025762512279.

Currier, J. M., Holland, J. M., & Drescher, K. D. (2015). Spirituality factors in the prediction of outcomes of PTSD treatment for U.S. military veterans. *Journal of Traumatic Stress, 28*(1), 57-64. doi:https://dx.doi.org/10.1002/jts.21978.

Department of Veterans Affairs/Department of Defense. (2004). *Clinical Practice Guidelines for the Management of Post-Traumatic Stress,* Version 1.0.

Drescher, K., Smith, M., & Foy, W. (2007). *Spirituality and Readjustment Following War-Zone Experiences. Chapter in Combat Stress Injury*. New York: Brunner-Routledge, 295-310.

Edberg, M. (Ed). (2010). *Essential readings in health behavior: Theory and practice.* Boston: Jones and Bartlett Publishers.

Everly, G. Jr. (2000). The role of pastoral crisis intervention in disasters, terrorism, violence, and other community crises. *International Journal of Emergency Mental Health*, 2(3), 139-142.

Fournier, A. (2017). *The relationships among spirituality, self-esteem, and participation in physical activity in late adolescent and young adult females* (Ph.D.). Rutgers, The State University of New Jersey.

Ganocy, S. J., Goto, T., Chan, P. K., Cohen, G. H., Sampson, L., Galea, S.,…Tamburrino, M. B. (2016). Association of spirituality with mental health conditions in Ohio national guard soldiers. *Journal of Nervous & Mental Disease, 204*(7), 524-529. doi:https://dx.doi.org/10.1097/NMD.0000000000000519.

Harris, J. I., Erbes, C. R., Engdahl, B. E., Thuras, P., Murray-Swank, N., Grace, D., . . . Le, T. (2011). The effectiveness of a trauma focused spiritually integrated intervention for veterans exposed to trauma. *Journal of Clinical Psychology, 67*(4), 425-438. doi: https://dx.doi.org/10.1002/jclp.20777.

Hill, C. (2014). *What PTSD costs families*. *MarketWatch*. Retrieved 20 May 2017, from http://www.marketwatch.com/story/what-ptsd-costs-families-2014-04-04

Hourani, L. L., Williams, J., Forman-Hoffman, V., Lane, M. E., Weimer, B., & Bray, R. M.

(2012). Influence of spirituality on depression, posttraumatic stress disorder, and suicidality in active duty military personnel. *Depression research and treatment*, *2012*.

Kopacz, M. S., Currier, J. M., Drescher, K. D., & Pigeon, W. R. (2016). Suicidal behavior and spiritual functioning in a sample of veterans diagnosed with PTSD. *Journal of Injury & Violence Research, 8*(1), 6-14. doi:https://dx.doi.org/10.5249/jivr.v8i1.728.

Kronish, I. M., Edmondson, D., Li, Y., & Cohen, B. E. (2012). Post-traumatic stress disorder and medication adherence: Results from the mind your heart study. *Journal of Psychiatric Research, 46*(12), 1595-1599. doi:http://dx.doi.org/10.1016/j.jpsychires.2012.06.011.

McCabe, O., Lating, J., Everly, G., Mosley, A., Teaque, P., Links, J., et al. (2007). Psychological first aid training for the faith community: a model curriculum. *International Journal of Emergency Mental Health*, 9(3), 181-191.

McFall, M., Malte, C., Fontana, A., & Rosenheck, R. (2000). Effects of an outreach intervention on use of mental health services by veterans with posttraumatic stress disorder. *Psychiatric Services*, 51(3), 369-374.

National Comorbidity Survey. (2005). Retrieved September 17, 2016, from http://www.hcp.med.harvard.edu/ncs/index.php.

Oliver, J. (2008) Coming Home: Developing a Theological Response for Returning Combat Veterans. Powerpoint Presentation Sponsored by Mid-Atlantic MIRECC.

Oman, D. and Bormann, J.E. (2015) Mantram Repetition Fosters Self-efficacy in Veterans For Managing PTSD: A Randomized Trial. *Psychology of Religion and Spirituality*, 7.1, 34-45.

Park, C. L., Smith, P. H., Lee, S. Y., Mazure, C. M., McKee, S. A., & Hoff, R. (2017). Positive and Negative Religious/Spiritual Coping and Combat Exposure as Predictors of

Posttraumatic Stress and Perceived Growth in Iraq and Afghanistan Veterans. *Psychology of Religion & Spirituality*, 9, 13-20, 2017.

Pender, N., & Pender, A. (1986). Attitudes, Subjective Norms, and Intentions to Engage In Health Behaviors. *Nursing Research, 35*(1), 15-18.

Peres, J. F. P., Moreira-Almeida, F., Nasello, A. G., & Koenig, H. G. (2007). Spirituality and resilience in trauma victims. *Journal of Religious Health, 46*, 343–350.

Pietrzak, R. H., Tsai, J., Armour, C., Mota, N., Harpaz-Rotem, I., & Southwick, S. M. (2015). Functional significance of a novel 7-factor model of DSM–5 PTSD symptoms: Results from the National Health and Resilience in Veterans study. Journal of Affective Disorders, 174, 522–526. http://dx.doi.org/10.1016/j.jad.2014.12.007.

Polusny, M., Erbes, C., Thuras, P., Moran, A., Lamberty, G., Collins, R. … Lim (2015). Mindfulness-Based Stress Reduction for Posttraumatic Stress Disorder Among Veterans. *Journal of the American Medical Association, 314*(5), 456-465. http://dx.doi.org/10.1001/jama.2015.836.

Post Traumatic Stress Disorder Fact Sheet | Sidran.org. (2016). Sidran.org. Retrieved 19 February 2017, from https://www.sidran.org/resources/for-survivors-and-loved-ones/post-traumatic-stress-disorder-fact-sheet/

Post-traumatic stress disorder. (2005). PubMed Health. Retrieved 15 November 2017, from https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0015860/

PTSD: National Center for PTSD Home. (2016). Ptsd.va.gov. Retrieved 19 May 2017, from http://www.ptsd.va.gov/

Ruggiero, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric Properties of the PTSD Checklist--Civilian Version. *Journal of Traumatic Stress, 16,* 495-502.

Sayer, N. A., Friedemann-Sanchez, G., Spoont, M., Murdoch, M., Parker, L. E., Chiros, C., & Rosenheck, R. (2009). A qualitative study of determinants of PTSD treatment initiation in Veterans. *Psychiatry*, *72*(3), 238-255.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio.* Causal and control beliefs (pp. 35-37). Windsor, UK: NFER-NELSON.

Stanley, C. (2010). *Department of Defense Instruction* (pp. 1-12). Defense Technical Information Center.

Underwood, L., & Teresi, J. (2002). The daily spiritual experience scale: development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, *24*(1), 22-33.

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5) – Standard* [Measurement instrument]. Retrieved from: https://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp

Wood, M.J., & Kerr, J.C. (2011). *Basic Steps in Planning Nursing Research: From Question to Proposal*. Sudbury, MA: Jones and Bartlett.

Wortmann, J. H., Jordan, A. H., Weathers, F. W., Resick, P. A., Dondanville, K. A., Hall-Clark, B., … Litz, B. T. (2016). Psychometric analysis of the PTSD Checklist-5 (PCL-5) among treatment-seeking military service members. *Psychological Assessment, 28,* 1392-1403. doi: 10.1037/pas0000260

Table 1

Literature Review Findings: Spirituality and PTSD

STUDY	SUBJECTS / SETTING	DESIGN	INTERVENTION	OUTCOMES
Berg, (2011)	n=94 Vietnam Veterans, St. Cloud, MN Residential Program or acute inpatient	Empirical data *what was the RESEARCH DESIGN?*	Instruments used: Watson PTSD Interview Demographic data Questionnaire Computerized spiritual assessment program	PTSD and depression were negatively associated with spiritual factors *(Pearson r= -0.257)*
Bormann et al., (2013)	n=146 Veterans Outpatient @ Veteran Affairs Medical Center (VAMC)	RCT using "mixed methods with a two group by two times *qualitative study as part of a RCT	Mantram Repetition Program (Spirituality integrated group intervention) + usual care Compared to: Usual Care	Main outcome: greater quality of life enjoyment and satisfaction. MMRP (n=71, F(1,144=8.17, p=.005 compared to control group-[F(1,144)=12.98, p=.001)
Bormann et al., (2012)	n=66 Veterans Outpatient VAMC	RCT	Mantram, case management and usual care compared to case management and usual care	A significant indirect effect, −2.24, 95% CI (−4.17, −1.05) of the Mantram intervention on PCL change was found.
Bormann et al., (2008)	n=30 Veterans Outpatient VAMC: the VA San Diego Healthcare System in San Diego, CA, between December 2005 and April 2006.	The study consisted of a two-group (intervention vs. a usual care delayed-treatment control) by two-time (pre-intervention	MRP group and usual treatment compared to usual treatment group	A large effect size (d −.72) on self-reported PTSD severity (PCL), whereas clinician-assessed (CAPS) scores improved less dramatically (d −.33). Psychological distress (BSI-18)

STUDY	SUBJECTS / SETTING	DESIGN	INTERVENTION	OUTCOMES
		and post-intervention) experimental design.		improved in the Mantram group showing a large effect (d −.73) and anger expression (STAXI-2) showed a medium effect (d −.55).
Bormann et al., (2005)	N=62 Veterans Outpatient VAMC: the VA San Diego Healthcare System in San Diego, CA,	convenience sample	One group Pre- and posttest self-report questionnaires on stress, anxiety, anger , quality of life and spiritual well being	Pre/Post test results ANOVA: PTSD symptoms (n=30), M,39.4/34.0;p.020 EWB(n=43) M,38.6/43.4; p, .001 RWB (n=42) M,41.6/44.9; p, .001 TSWB(n=43) M,79.2/88.0; p.001
Currier et al., (2015)	N=532 Veterans in Residential PTSD Program	Cross-Legged Panel design 2002-2007	Study examined longitudinal associations between spirituality and PTSD	With regard to the cross-lagged effects, in all six of the tested models the spirituality factors at baseline uniquely and significantly predicted PTSD symptom severity at discharge in the theorized directions. *Report Actual statistics and probabilities*
Ganocy et al., (2016)	N=418 Ohio Army National Guard Soldiers	Longitudinal cohort study of a sample of members of members who	Spiritual Well Being Scale was used to examine the association of spiritual well-being	PTSD and Spirituality: Higher overall spiritual well being (OR, 0.96; 0.94-

STUDY	SUBJECTS / SETTING	DESIGN	INTERVENTION	OUTCOMES
		enrolled in the guard beginning 2008. Randomize sample	with suicidal ideations/behavior, PTSD, and depression	0.99) and existential well being (OR,0.92;0.87-0.96) were associated with less lifetime PTSD
Harris et al., (2011)	N=54 Veterans with PTSD	RCT: Veterans with histories of trauma who volunteered for study were randomly assigned to a BSS group(n=26) or a wait list control group (n=28)	8 week Building Spiritual Strength Program (BSS) compared with those on the waitlist	Main effects emerged for the covariate of baseline PTSD scores, F (1, 46) 5 31.56, p=.001, and the main effect of experimental condition, F(1, 46) 5 5.93, p=5.02 Suggesting that spirituality integrated intervention could help survivors to utilize their spiritual practice to deal with trauma and foster recovery.
Hourani et al., (2012)	n=24,000 Data from 2008 Department of Defense Survey	Descriptive correlational; randomly selected active duty personnel	Survey of spirituality and mental health problems	30.6% of active duty personnel met screening criteria for depression on the CES-D, 10.7% met screening criteria for PTSD on the PCLC, and 6.0% reported either seriously considering or attempting suicide in the past year (Table 1, p. 4): 23.1% fell into

STUDY	SUBJECTS / SETTING	DESIGN	INTERVENTION	OUTCOMES
				the high spirituality category, 48.7% fell into the medium spirituality level, and 28.2% fell into the low spirituality level. Lowest rates of all mental health outcomes (except suicide attempts) were observed in the highest spirituality level.
Kopacz et al., (2016)	N=472 Veterans admitted to Residential PTSD Program	MANCOVA was used to examine the relationship between suicide risk and spirituality amongst PTSD veterans. In addition, ANOVA, ANCOVA and Fisher's Least Significant Difference was run.	Brief multidimensional measure of Religiousness and Spirituality, PTSD Checklist-military version, Combat Exposure scale and in	Wilks' λ=0.94, F(1 2,918.00) =2.22, p=.009. When compared to the No suicide group, Fisher's LSD test revealed that veterans in both the ideation only, p=.001 and ideation/attempt, p=.002. Difference in organizational religiousness emerged between veterans with No suicide and ideations only, p=.008, with suicidal thoughts being linked with less involvement in churches or other spiritual communities.

STUDY	SUBJECTS / SETTING	DESIGN	INTERVENTION	OUTCOMES
Oman and Borman (2015)	n=132 Veterans, Department of Veterans Affairs outpatient PTSD clinic in southern California	Randomized Trial	Case Management alone (control group) or MRP plus case management (intervention group)	The treatment effect was significant at (*p<.01).*

Table 2

Frequency and Percentages for Demographic Variables.

Variable	Categories	*n*	*%*
Gender	Female	42	21.4
	Male	154	78.6
Ethnicity	Hispanic	17	8.1
	Not Hispanic	153	78.1
	Missing	*26*	*13.3*
Race	American Indian	3	1.5
	Asian	3	1.5
	Black	88	44.9
	More than one	19	9.7
	White	79	40.3
	Unknown	4	2.0
Marital Status	Single	26	13.3
	Married	128	65.3
	Divorced	31	15.8
	Separated	2	1.0
	Widowed	9	4.6
Education	High School	42	21.4
	Some College	78	39.8
	College Grad	46	23.5
	Grad school	19	9.7
	Post grad	10	5.1
	Missing	*1*	0.5
Religious Affiliation	Baptist	68	34.7
	Buddhist	2	1.0
	Catholic	30	15.3
	Jewish	3	1.5
	Muslim	1	0.5
	None	13	6.6
	Other	5	2.6
	Other Protestant	52	26.5
	Spiritual	21	10.7
	Missing	*1*	

Note. Due to rounding errors, percentages may not equal 100%.

Table 3

Summary Statistics for Demographic Variables

Variable	*M*	*SD*	*n*	Min	Max
Age	56.68	16.09	196	19.00	100.00
Age when served	20.12	4.16	190	17.00	45.00
Years in Military	13.51	9.34	191	1.00	45.00

Note. Sample size varies due to missing data.

Table 4

Frequency and Percentages for Military Demographics

Variable	*n*	*%*
Drafted		
No	181	92.8
Yes	14	7.2
Missing	*1*	.5
Field of Combat		
Gulf War	47	24.0
Korea	5	2.6
Vietnam	54	27.6
War on Terror	44	22.5
WWII	1	0.5
More than one	28	14.3
Other	12	6.1
Missing	*5*	2.6
Deployed		
No	33	16.8
Yes	163	83.2
Injured		
No	108	55.1
Yes	76	38.8
Missing	*12*	6.1

Note. Due to rounding errors, percentages may not equal 100%.

Table 5

Correlation Matrix among Study Variables

Variable	1	2	3
1. PCL-5	-		
2. Generalized Self-Efficacy	-.558**	-	
3. Daily Spiritual Experiences	-.114	.164*	-

Note: *$p < .05$; **$p < .01$

Table 6

Correlation between study variables and continuous demographic variables

Variable	PCL-5	Generalized Self-Efficacy	Daily Spiritual Experiences
Age	.013	.013	.185**
Age when served	-.031	.048	-.071
Years in Military	-.126	.192**	.076
Times Deployed	.064	.038	-.025
Length Deployed	.171*	-.003	-.063

Note: $*p < .05$; $**p < .01$

Table 7

Results of t-tests for study variables gender, drafted, deployed, and injured

Variable	*M*	*SD*	*t*	*df*	*p*
PCL-5					
Gender			1.72	194	.088
Male	36.03	23.61			
Female	29.17	20.43			
Drafted			.615	193	.539
Yes	38.13	14.73			
No	34.18	23.63			
Deployed			.278	194	.781
Yes	34.77	22.79			
No	33.54	24.82			
Injured			3.17	182	.002**
Yes	41.18	21.17			
No	30.52	23.27			
Generalized Self-Efficacy					
Gender			-.121	194	.904
Male	29.17	6.49			
Female	29.31	7.09			
Drafted			-.145	193	.885
Yes	29.00	3.80			
No	29.27	6.76			
Deployed			1.00	194	.318
Yes	29.41	6.43			
No	28.15	7.41			
Injured			-1.98	182	.049*
Yes	28.06	6.76			
No	30.04	6.59			
Daily Spiritual Experiences					
Gender			-.074	194	.941
Male	48.06	19.04			
Female	48.30	18.05			
Drafted			.520	193	.604
Yes	50.75	21.21			
No	48.04	18.59			
Deployed			-1.40	194	.162
Yes	47.26	18.96			
No	52.28	17.58			
Injured			-1.24	182	.216
Yes	45.61	20.76			
No	49.11	17.43			

Note: *$p < .05$, **$p < .01$

Table 8

ANOVA Results for Race, Marital Status, Education, Religious Affiliation, and Field of Combat

PCL-5			*SS*	*df*	*F*	*p*
Race	2	0.20	.818			
15.91						
Marital Status			12.57	2	0.01	.988
Education			3938.62	4	1.87	.117
Religious Affiliation			873.17	5	0.32	.898
Field of Combat			3632.53	4	1.78	.135
Generalized Self-Efficacy						
Race			63.54	2	0.73	.485
Marital Status			51.09	2	0.58	.559
Education			448.40	4	2.65	.035*
Religious Affiliation			259.61	5	1.19	.315
Field of Combat			36.36	4	0.20	.937
Daily Spiritual Experiences						
Race			3701.38	2	5.49	.005**
Marital Status			113.72	2	.16	.852
Education			1960.44	4	1.42	.231
Religious Affiliation			6291.93	5	3.81	.003**
Field of Combat			1906.81	4	1.34	.258

Note: *$p < .05$, **$p < .01$

Table 9

Frequencies and Percentages for Recoded Variables

Variable	*n*	*%*
Race		
Black	88	44.9
White	79	40.3
Other	29	14.8
Marital Status		
Single	26	14.3
Married	128	65.3
Divorced/Separated/Widowed	42	21.4
Religious Affiliation		
Baptist	68	34.7
Catholic	30	15.3
Other Protestant	52	26.5
Spiritual	21	10.7
None	13	6.6
Other	11	5.6
Missing	*1*	
Field of Combat		
Gulf War	47	24.0
Vietnam	54	27.6
War on Terror	44	22.5
More than one	28	14.3
Other	18	9.2
Missing	*5*	2.6

Table 10

Summary Statistics for Study Variables

Variable	*M*	*SD*	Median	*n*	Scale Range	Sample Range	Cronbach's α
PCL5	34.56	23.09	38	196	0 – 80	0 – 77	.97
Generalized Self-Efficacy	29.20	6.60	30	196	10 – 40	10 – 40	.92
Daily Spiritual Experiences	48.11	18.79	52	196	0 – 75	1 – 75	.96

Table 11

Variance Inflation Factors

Variable	VIF
Gender	1.04
Length of Deployment	1.09
Injury Status	1.08
Generalized Self-Efficacy	1.04
Daily Spiritual Experiences	1.03

Table 12

Results for Linear Regression with Length of Deployment, Injury Status, Generalized Self-Efficacy, and Daily Spiritual Experiences Predicting PCL-5 Scores

Variable	*B*	*SE*	β	*t*	*p*
(Intercept)	76.28	7.68	0.00	9.93	< .001
Gender (ref: Female)	7.30	3.54	0.13	2.06	.041
Length of Deployment	0.01	0.00	0.12	1.96	.052
Injury Status	5.24	2.93	0.11	1.79	.075
Generalized Self-Efficacy	-1.78	0.21	-0.52	-8.38	< .001
Daily Spiritual Experiences	-0.01	0.07	-0.01	-0.08	.932

Overall Model: F (4, 176) = 22.17, p < .001, R^2 = 0.34. Injury status coded 0 = No, 1 = Yes.

Table 13

Variance Inflation Factors

Variable	VIF
Years in the Military	1.20
Education	1.23
Injury Status	1.02
Daily Spiritual Experiences	1.04

Table 14

Results for Linear Regression with Years in the Military, Education, Injury Status, and Daily Spiritual Experiences predicting Generalized Self-Efficacy

Variable	*B*	*SE*	*t*	*p*
(Intercept)	27.18	1.88	14.49	< .001
Years in the Military	0.07	0.06	1.26	.210
Education (High School)	-1.84	1.46	-1.26	.210
Education (Some College)	-0.69	1.26	-0.54	.587
Education (Grad school)	2.62	2.00	1.31	.193
Education (Post grad)	2.45	2.55	0.96	.338
Injury Status	-1.93	1.00	-1.94	.054
Daily Spiritual Experiences	0.04	0.03	1.70	.090

Note. Results: F (7,171) = 2.78, p = .009, R^2 = 0.10. For the variable Education, "College Grad" was selected as the reference category. Injury Status was coded as 0 = No, 1 = Yes.

Nola Pender
The Health Promotion Model

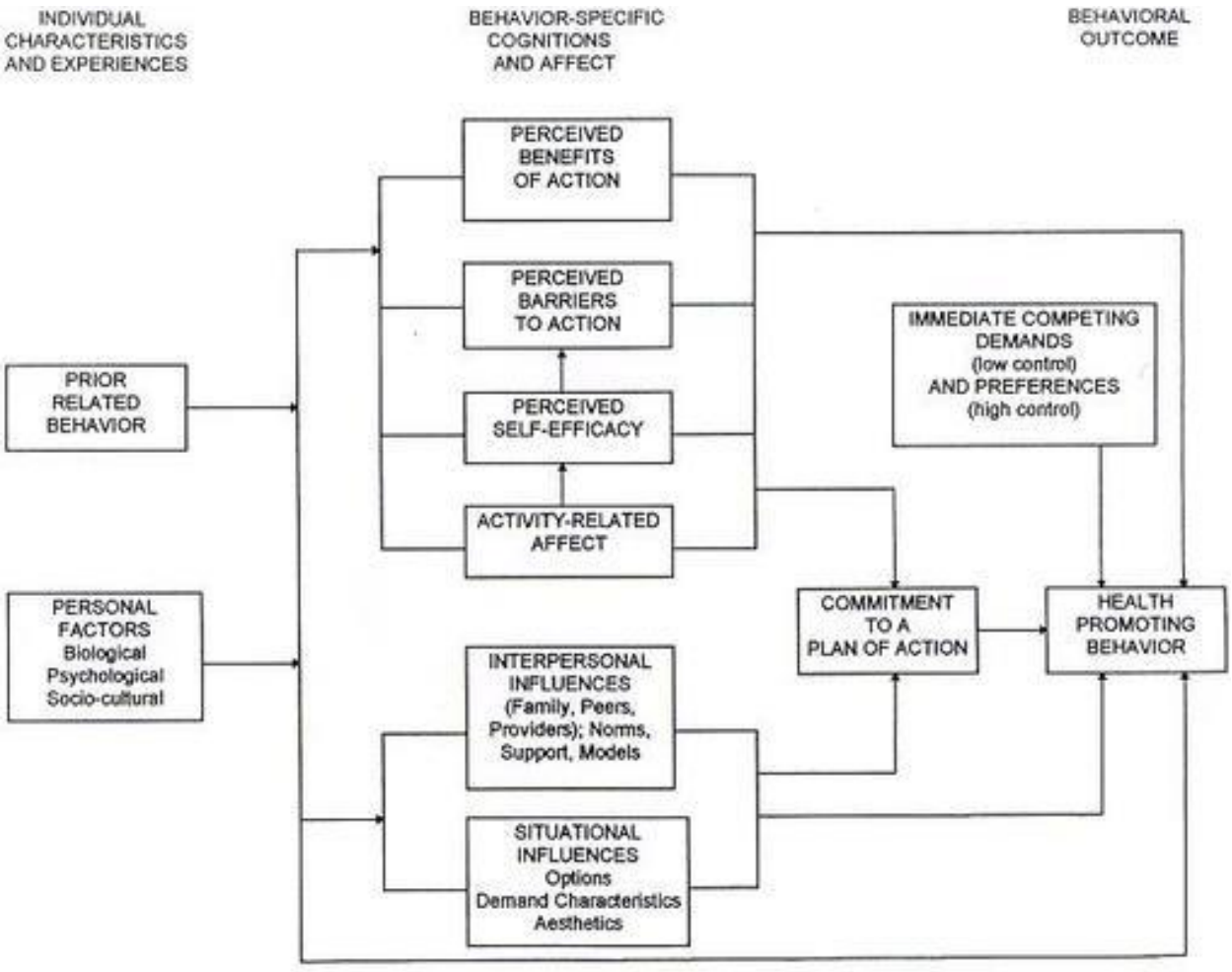


Figure 1. Nola Pender: The Health Promotion Model

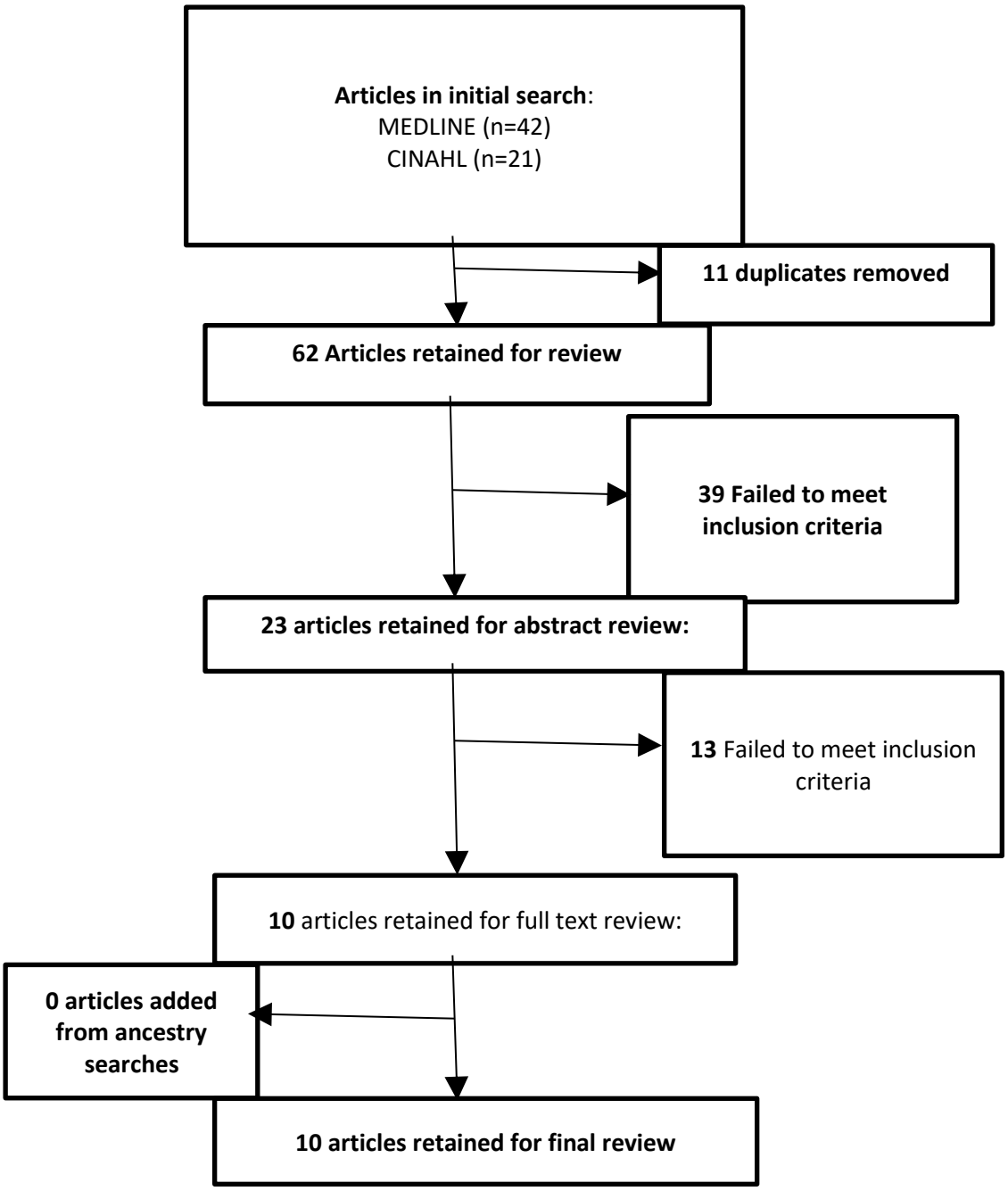


Figure 2. Literature Search Procedure

Date:

Letter for Permission: Conduct Surveys on grounds for University of Virginia, Doctor of Nursing Practice Scholarly Project

Veteran Service Organization: Disabled American Veteran (DAV)

Address

RE: Permission to Conduct Research Study

Dear DAV:

I am writing to request permission to conduct a research study at your site. I am a retired U.S. University of Virginia, School of Nursing, and am in the process of writing my scholarly project (formerly known as dissertation). The study is entitled: Veterans with Post Traumatic Stress Navy Nurse and am currently enrolled in the Doctor of Nursing Practice (DNP) Program at Disorder: Spirituality and Self Efficacy. I hope to recruit 200 participants from VSOs throughout Hampton Roads.

Participants who volunteer to participate will also be given consent forms to be signed, the highest standards will be followed to assure privacy and confidentiality as required by the Institutional Review Board who will approve the project.

If approval is granted, participants would complete the surveys at your facility. No costs will be incurred by either your organization or the individual participants. A copy of the Institutional Review Board's letter will be provided to you the first day onsite.

Your approval to conduct this study will be greatly appreciated. I will follow up with a telephone call next week and would be happy to answer any questions or concerns that you may have at that time. You may contact me at my email address: cm7ax@virginia.edu or telephone: (757) 839-5029. In addition, Dr. Kane, my academic advisor for University of Virginia School of Nursing is available to answer your questions. She may be reached by phone: (434) 924-0100 or email: cfk9m@Virginia.edu.

If you agree, kindly sign below and return the signed form in the enclosed self-addressed envelope. Alternatively, kindly submit a signed letter of permission on your institution's letterhead acknowledging your consent and permission for me to conduct this survey/study at your institution.

Sincerely,

Cheryl Major-Cooper
University of Virginia Doctor of Nursing Practice Student

Figure 3: Letter of Permission

Demographic Survey

Gender: o Male o Female

Age (now): _____ **Age** (when served)_____

Military Branch: _____ Rank: _____ Grade: _____

Number of years in military: _____ Drafted (yes/no): _____

Home of record upon entering the military: _____

Race: o White o Black o Hispanic o Native American o Asian o Pacific Islander o Other: _____

Marital Status: o Single o Married o Separated o Divorced o Widowed

Highest level of education completed: o High school o Some college o College graduate o Graduate school o Post graduate

Religious Affiliation: o Baptist o Buddhist o Catholic o Hindu o Jewish o Muslim o Protestant o Other: _____ o None

In what field of combat did you serve?

oWWII o Korea o Gulf War o War on Terrorism o other

Did you deploy? o Yes o No

If yes, how many times? _____

Time 1: How long were you deployed?_____

Time 2: How long were you deployed?_____

Time 3: How long were you deployed?_____

Time 4: How long were you deployed?_____

Time 5: How long were you deployed?_____

>5: How long were you deployed?_____

Were you physically injured during deployment (required medical attention)?

____Yes ____No

Figure 4: Demographic Survey

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	**Not at all**	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4

13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

PCL-5 (14 August 2013) National Center for PTSD

Figure 5. The PTSD Checklist for DSM-5 (PCL-5) – Standard
From "*The PTSD Checklist for DSM-5 (PCL-5) – Standard* [Measurement instrument]," by F.W. Weathers, B.T. Litz, T.M. Keane, P.A. Palmieri, B.P. Marx, & P.P. Schnurr, 2013. Available from http://www.ptsd.va.gov/professional/

GENERALIZED SELF-EFFICACY SCALE

GL assessment
the measure of potential

Name: .....

Date: ..... **Record Number:** .....

		Not at all true	Barely true	Moderately true	Exactly true
1.	I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2.	If someone opposes me, I can find means and ways to get what I want.	1	2	3	4
3.	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4.	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5.	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6.	I can solve most problems if I invest the necessary effort.	1	2	3	4
7.	I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8.	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9.	If I am in a bind, I can usually think of something to do.	1	2	3	4
10.	No matter what comes my way, I'm usually able to handle it.	1	2	3	4

Figure 6. Generalized Self-Efficacy Scale

Daily Spiritual Experience Scale

The list that follows includes items you may or may not experience. Please consider how often you directly have this experience, and try to disregard whether you feel you should or should not have these experiences. A number of items use the word 'God.' If this word is not a comfortable one for you, please substitute another word that calls to mind the divine or holy for you.

	Many times a day	Every day	Most days	Some days	Once in a while	Never
I feel God's presence.						
I experience a connection to all of life.						
During worship, or at other times when connecting with God, I feel joy which lifts me out of my daily concerns.						
I find strength in my religion or spirituality.						
I find comfort in my religion or spirituality.						
I feel deep inner peace or harmony.						
I ask for God's help in the midst of daily activities.						
I feel guided by God in the midst of daily activities.						
I feel God's love for me, directly.						
I feel God's love for me, through others.						
I am spiritually touched by the beauty of creation.						
I feel thankful for my blessings.						
I feel a selfless caring for others.						
I accept others even when they do things I think are wrong.						
I desire to be closer to God or in union with the divine.						

	Not at all	Somewhat close	Very close	As close as possible
In general, how close do you feel to God?				

Figure 7.

Underwood, LG. 2006. Ordinary Spiritual Experience: Qualitative Research, Interpretive Guidelines, and Population Distribution for the Daily Spiritual Experience Scale. *Archive for the Psychology of Religion/ Archiv für Religionspsychologie,* 28:1 181-218.

UNIVERSITY of VIRGINIA

cheryl major-cooper <cm7ax@virginia.edu>

The Daily Spiritual Experience Scale

Lynn Underwood <lynnunderwood@researchintegration.org> Sat, Jun 10, 2017 at 6:33 AM

To: cheryl major-cooper <cm7ax@virginia.edu>

Dear Cheryl Major-Cooper,
You have my permission to use the Daily Spiritual Experience Scale for non-profit use if you return the attached registration form to me and agree to the terms of use.

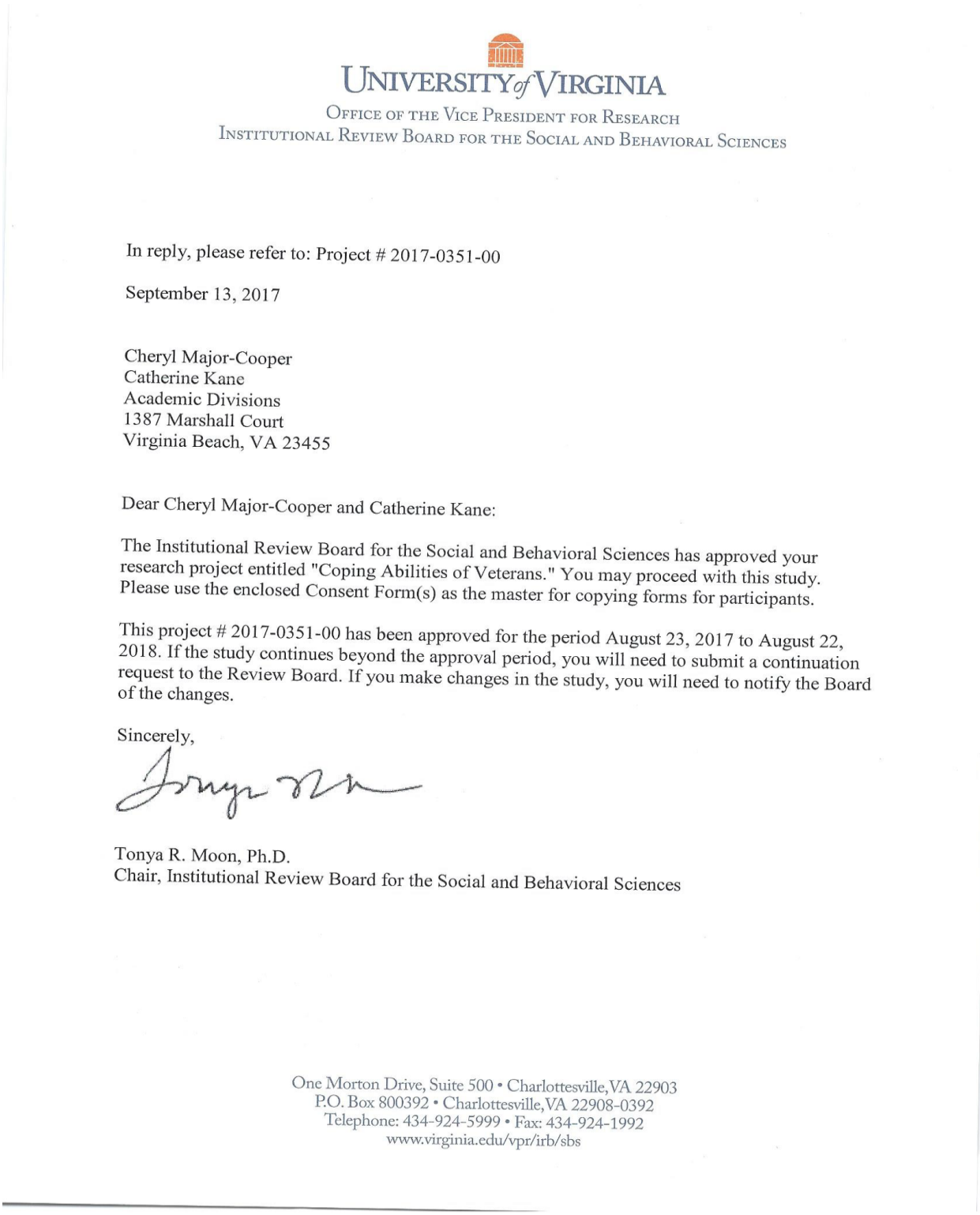
I have written a book on the scale designed for personal and professional use, *Spiritual Connection in Daily Life: 16 Little Questions That Can Make a Big Difference,* and it has been published in paperback.
Information on it can be found at www.lynnunderwood.com/book
I think it would be helpful in your work with the scale. It is not expensive, and is on Amazon and in bookstores. In 2016 an international ebook is now available on Amazon international sites.

There was a recent radio interview on the scale
http://www.abc.net.au/radionational/programs/spiritofthings/are-you-spiritually-connected/8376242
You might find it of interest.

Best wishes to you in your life and in your work,

Lynn Underwood PhD
Senior Research Associate
Inamori International Center for Ethics,
Case Western Reserve University

Figure 8. Permission to use The Daily Spiritual Experience Scale.



UNIVERSITY of VIRGINIA

OFFICE OF THE VICE PRESIDENT FOR RESEARCH
INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2017-0351-00

September 13, 2017

Cheryl Major-Cooper
Catherine Kane
Academic Divisions
1387 Marshall Court
Virginia Beach, VA 23455

Dear Cheryl Major-Cooper and Catherine Kane:

The Institutional Review Board for the Social and Behavioral Sciences has approved your research project entitled "Coping Abilities of Veterans." You may proceed with this study. Please use the enclosed Consent Form(s) as the master for copying forms for participants.

This project # 2017-0351-00 has been approved for the period August 23, 2017 to August 22, 2018. If the study continues beyond the approval period, you will need to submit a continuation request to the Review Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,

Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences

One Morton Drive, Suite 500 • Charlottesville, VA 22903
P.O. Box 800392 • Charlottesville, VA 22908-0392
Telephone: 434-924-5999 • Fax: 434-924-1992
www.virginia.edu/vpr/irb/sbs

Figure 9 UVA IRB Approval

Project Title: **Coping Abilities of Veterans**

Informed Consent Agreement

Please read this consent agreement carefully before you decide to participate in the study.

Purpose of the research study: The purpose of the study is to better understand how spirituality and self-confidence can inform interventions to reduce symptoms of Post-Traumatic Stress Disorder (PTSD).

What you will do in the study: You will complete paper and pencil questionnaires anonymously. The questionnaires are: Demographic data sheet; PTSD - (M) Checklist; Daily Spiritual Experience Scale, and the Self Efficacy Scale.

Time required: This study will require about 30 minutes of your time.

Risks: There are no anticipated risks. Some of the questions may cause you to become upset. You may skip any questions you are not comfortable answering. As I am answering research instruments, that are not requiring detailed responses, there is minimal risk involved. In the event you need immediate assistance, some will be provided to you via the professional staff present.

Benefits: There are no direct benefits. This study has the potential to assist with creating ongoing treatment regimens for veterans with PTSD. In addition, it has the potential to provide Nursing Implications that allow for a holistic approach to care for the veterans which includes promoting Spirituality and Self-efficacy.

Confidentiality: The data will be stored in compliance with UVA's information technology policies and with any other IT protocol that is considered best practice. For the long-term storage: The paper questionnaires will be kept in a locked box and destroyed at the end of the study. Upon completion, the data stored by computer will be maintained as guided by the UVA information technology policies. For reports and publications, the data will be reported in group format.

Data linked with identifying information: The information provided in the study will be handled confidentially. When the study is completed and the data have been analyzed, data will be destroyed. Your name will not be used in any report.

Voluntary participation: Your participation in the study is voluntary. Your treatment or service will not be affected by participation in the study in anyway.

IRB-SBS Office Use Only	
Protocol #	2017-0351-00
Approved	from: 8/23/17 to: 8/22/18
SBS Staff	SMG

Project Title: **Coping Abilities of Veterans**

Right to withdraw from the study: You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study: You may withdraw from the study at any time by informing the PI that you no longer want to participate or by just leaving the room. There is no penalty for withdrawing.

Payment: This is no payment for participating in the study.

If you have questions about the study, contact:
Cheryl Major-Cooper, DNP Student Researcher
Claude Moore Nursing Education Building
UVA School of Nursing
P.O. Box 800826
Charlottesville VA 22908-0782
Email address: majcoop18@gmail.com

Faculty Advisor: Catherine Kane, PhD, FAAN
Claude Moore Nursing Education Building, UVA School of Nursing
P.O. Box 800826
Charlottesville VA 22908-0782
Telephone: (434) 924-0141
Email address: cfk9m@virginia.edu

If you have questions about your rights in the study, contact:
Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences
One Morton Dr Suite 500
University of Virginia, P.O. Box 800392
Charlottesville, VA 22908-0392
Telephone: (434) 924-5999
Email: irbsbshelp@virginia.edu
Website: www.virginia.edu/vpr/irb/sbs

Agreement:
I agree to participate in the research study described above.

Signature: _____ **Date:** _____

You will receive a copy of this form for your records.

Revision date: 11/01/11
Page 2

IRB-SBS Office Use Only	
Protocol #	2017-0351-00
Approved	from: 8/23/17 to: 8/22/18
SBS Staff	SMG

Figure 10 Consent Form

Figure 11

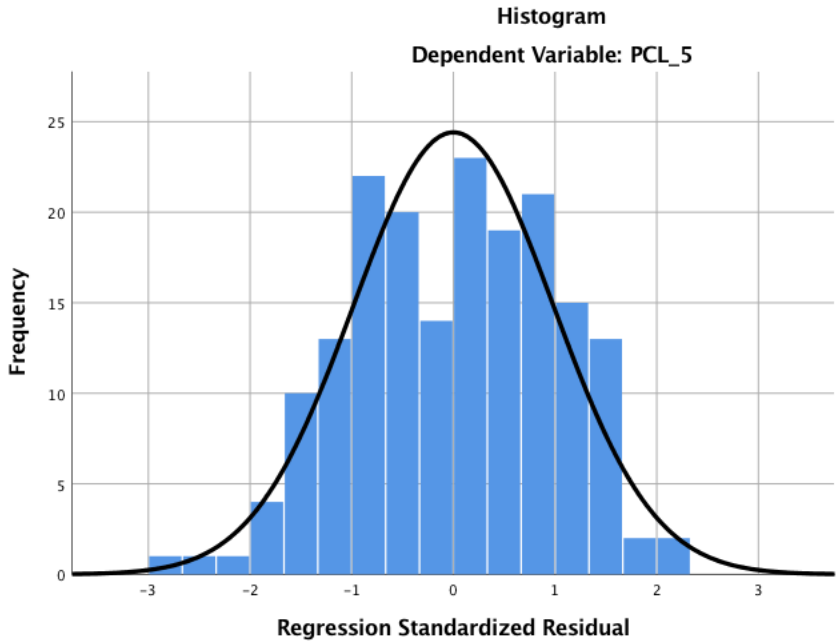


Figure 12

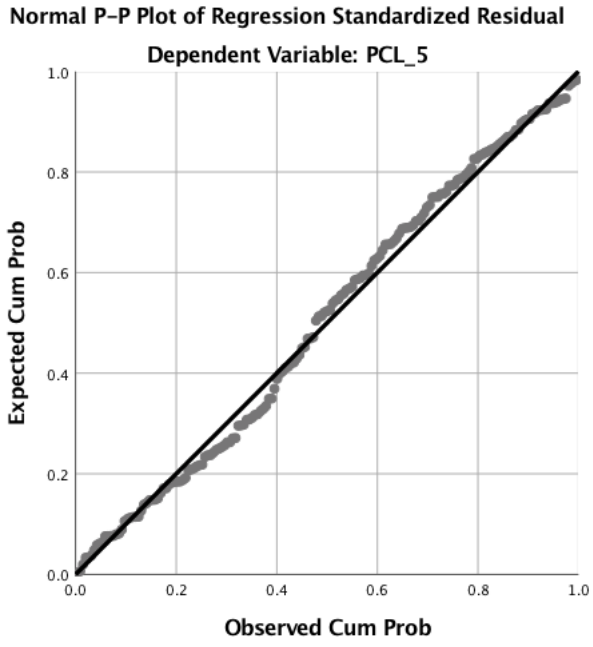


Figure 13

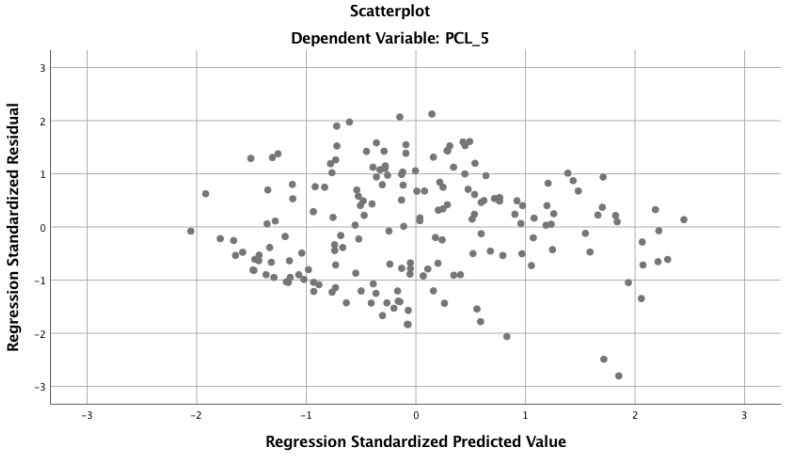


Figure 14

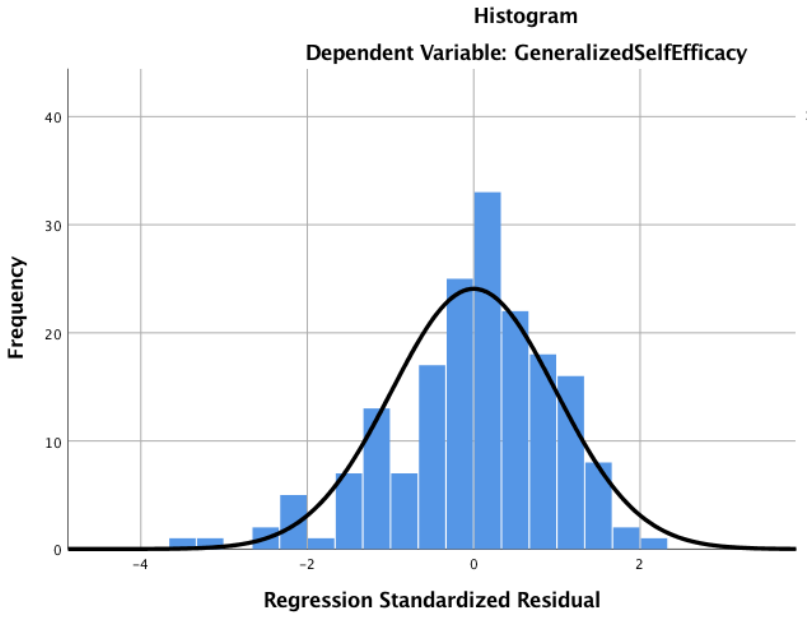


Figure 15

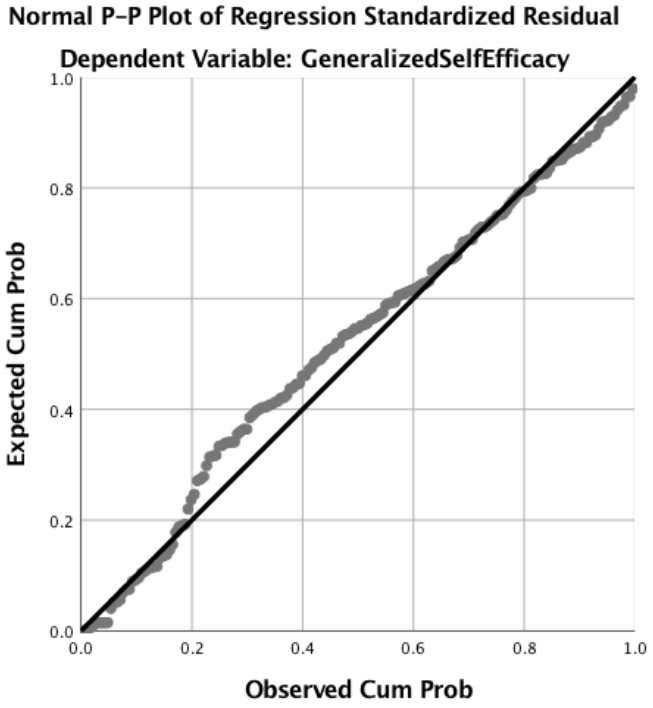
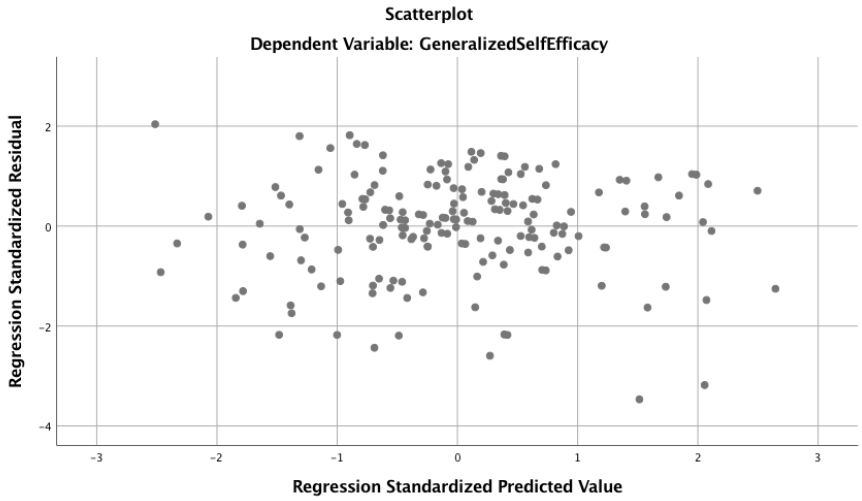


Figure 16



Appendix A

Coping Abilities of Military Veterans:

Spirituality and Self-Efficacy

Cheryl Major-Cooper, MSN, RN, PMHP-BC, DNP
University of Virginia, Charlottesville, VA
Hampton Veterans Affairs Medical Center, Posttraumatic Stress Disorder Clinic, Staff PMHNP
Hampton, Virginia

Catherine Kane, PhD, RN, FAAN
Professor of Nursing, University of Virginia
Charlottesville, Virginia

Edie Devers Barbero, PhD, RN, PMHNP-BC
Assistant Professor of Nursing
University of Virginia
Charlottesville, Virginia

Virginia Rovnyak, PhD
Senior Scientist, School of Nursing
University of Virginia
Charlottesville, Virginia

Ivora Hinton, PhD
Coordinator, Data Analyses and Interpretation
University of Virginia
Charlottesville, Virginia

May 2018

We know of no conflicts of interest associated with this publication, and there has been no financial support for this work that could have influenced its outcome.

ABSTRACT

Purpose: The purpose of this study was to better understand how two aspects of holistic care, spirituality and self-efficacy, Posttraumatic Stress Disorder in Military Veterans.

Research Question: How do daily spiritual experience and self-efficacy relate to PTSD?

Setting, sample: The convenience sample (N=200) was recruited from multiple Veteran Service Organization (VSO) sites near military bases in Virginia.

Measures: A demographic survey, the PTSD Checklist (PCL-5), The Daily Spiritual Experience Scale (DSES), and the General Self Efficacy Scale (GSES).

Design: Descriptive correlational

Procedures: Participants were recruited at the VSOs and following completion of the consent process, completed paper/ pencil questionnaires anonymously.

Results: DSES and GSES were directly correlated (r = .164, p = .021). GSES scores were negatively correlated with the PCL-5 (r = -.555, p < .001). When controlling for relevant covariates, Generalized Self-Efficacy predicted fewer PTSD symptoms (b = -1.78, t (175) = -8.38, p < .001).

Conclusion: This study supports the promotion of self-efficacy in interventions to prevent and reduce PTSD. Self-efficacy was associated with spirituality, however, spirituality did not directly impact PTSD. Further study of the relationship between spirituality, self-efficacy and PTSD is warranted.

Keywords: Post Traumatic Stress Disorder, Spirituality, Self-Efficacy

Coping Abilities of Military Veterans:

Spirituality and Self-Efficacy

Introduction

Posttraumatic Stress Disorder (PTSD) prevalence is estimated to be 8-12% in the general population and 13-31% among veterans (as cited in Kronish, 2012). PTSD is accompanied by multiple psychiatric and physical symptoms, with depression being one of the most pronounced. The PTSD Foundation of America (2016) provides the following statistics: about 30% of the men and women who have spent time in war zones experience PTSD and an additional 20% to 25% have had partial PTSD at some point in their lives. Additionally, according to the PTSD Foundation of America's website, more than half of all male Vietnam veterans and almost half of all female Vietnam veterans have experienced "clinically serious stress reaction symptoms". PTSD has also been detected among veterans of other wars. The PTSD Foundation of America provides the following statistics as estimates of PTSD in Gulf War veterans: about 30% of the men and women who have spent time in war zones experience PTSD and an additional 20% to 25% have had partial PTSD at some point in their lives.

The symptoms of PTSD were first named by Swiss military physicians in 1678. "'Nostalgia' was the term they used to define a condition characterized by melancholy, incessant thinking of home, disturbed sleep or insomnia, weakness, loss of appetite, anxiety, cardiac palpitations, stupor, and fever" (Bentley, 2005, p.1). Advances through years of research have produced diagnostic criteria for PTSD. In 2013, the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; 1) was released by the American Psychiatric Association. In the DSM-5, PTSD was placed in a new category: Trauma and Stressor Related Disorders. The criteria for PTSD have criteria A through H (see Definition of Terms, pages 12-

13, for details), all of which are required for a diagnosis of PTSD (American Psychiatric Association, 2013).

Cost of treating PTSD

According to the National Institutes of Health (PubMedHealth, 2005), Department of Veteran Affairs (PTSD.va.gov, 2018), and the Sidran Institute ("Post Traumatic Stress Disorder Fact Sheet | Sidran.org", 2016), the societal and economic burden of PTSD is extremely heavy. Diagnosis and treatment of PTSD, and anxiety disorders, can have far reaching consequences. According to the non-profit organization, PTSD United (2013), the cost is well over $40 billion annually for anxiety disorders. In addition, persons diagnosed with PTSD tend to be the highest utilizers of health care services. Those with PTSD are often misdiagnosed and undertreated due to the multiple symptoms, at the time of presentation, that are not associated with PTSD.

On the family level, costs also arise related to a soldier's PTSD, as "spouses and partners and some family members often also need therapy," says Rothbaum (Hill, 2014, p.1). Indeed, Jeffrey Borenstein (Hill, 2014), a psychiatrist and president and CEO of the Brain & Behavior Research Foundation, says that PTSD can take a "tremendous toll" (p. 1) on families, and that family members may also suffer from depression, anxiety and sleep disturbances related to the soldier's PTSD. The cost of this chronic disorder is financial, mental, emotional, and in some cases physical; the price of which is often more than patients and families can afford.

PTSD, spirituality, and self-efficacy

Polusny, et al., (2015) reported that standard treatments for PTSD have not demonstrated the effectiveness expected. Traditional treatment for PTSD, including psychotherapy and medication, is entirely dependent upon patient compliance, which is historically low for PTSD sufferers. The need for alternative treatments and treatment options is clearly recognizable and

more necessary than previously believed. Spirituality and Religion though often used interchangeably are separate, but closely related constructs. Spirituality addresses an ultimate truth, purpose and meaning (Zinnbauer, et al., 1997) and has been found to have a profound effect when incorporated into PTSD treatment (Harris et al., 2011).

Likewise, self-efficacy has been found to be a significant factor in the treatment of PTSD (Bormann, 2008) and though Veterans with PTSD are historically very difficult to treat, Oman and Bormann (2015), observed that veterans with PTSD usually have a low baseline self-efficacy. In one spirituality-based treatment program (Oman & Bormann, 2015), self–efficacy improved linearly from week to week. Therefore, the impact of spirituality and self-efficacy is an important area for study in the treatment of PTSD.

Theoretical Framework

The theoretical framework guiding this research was the Health Promotion Model (HPM), a nursing model developed by Pender (1982, revised 1996), (see *Figure 1*). The HPM has been used internationally for research, education, and practice. HPM describes how positive health behaviors lead to the achievement of higher levels of well-being and self-actualization (Pender, 1987). The HPM has its theoretical roots in Expectancy Value Theory, which posits that individuals engage in actions to achieve goals they perceive as possible and that result in valued outcomes, and Social Cognitive Theory, which explains the interaction of thoughts, behavior, and environment. For people to alter how they behave, they must alter how they think (Pender et al., 2011). One construct in the HPM model is ‘perceived self-efficacy,’ or judgement of one's personal ability to carry out a particular course of action. The higher the perceived self-efficacy, the more vigorous and persistent will be the effort to perform a behavior, even when faced with obstacles and aversive experiences which serve as impediments, determining health habits

(Bandura, 2004). The HPM (1982, 1996) has been used successfully, for nearly thirty-five years in multiple areas including: chronic disease, diabetes (Ho, et al., 2010), chronic disabling conditions (Stuifbergen, et al., 2000), nutrition among female Iranian students (Dehdari, et al., 2014), and most recently in the study of spirituality (Fournier, 2017). The purpose of this study was to examine how veterans' experiences of spirituality and self-efficacy are related to their perception of PTSD symptoms.

Literature Review

The focus of this integrative review was to examine the role spirituality and self-efficacy play for combat veterans coping with PTSD. The inclusion criteria for this integrative review were: 1) Any study that assessed the impact of spirituality/religion and self-efficacy, for military members/veterans with PTSD primarily or any other mental health diagnosis, 2) Any study that utilized an intervention to assess the impact of spirituality and/or Self Efficacy for military members/veterans. Exclusion criteria were 1) Studies that were for foreign services, 2) Studies that focused primarily on other than mental health diagnoses or suicidal ideations, 3) Studies that included children.

Literature search

In an attempt to identify all existing research on these topics, an electronic search of the following bibliographic databases was conducted: Google Scholar, Pubmed, PsycINFO, and CINAHL (see Table 1). The keywords used in the search were spirituality, religion, self-efficacy, posttraumatic stress disorder and combat (military) veterans. Research articles were included if they addressed spirituality in combat veterans, active duty military or veterans of combat.

A total of 73 articles were identified in the initial search (see *Figure 2*). Articles that discussed issues beyond spirituality, (i.e. suicidal ideation, depression, etc.) were omitted. Table

1 provides the findings. Of the 73 articles, eleven were duplicates of the 62 articles remaining; eleven articles met inclusion criteria (Berg, 2011, Borman, et al., 2013, Borman, et al., 2012, Borman, et al., 2005, Borman, et al., 2008, Currier, et al., 2015, Ganocy, et al., 2016, Harris, et al., 2011, Hourani, et al., 2012, Kopacz, et al., 2016, Oman and Borman, 2015). Of the eleven included studies, ten were quantitative and one was qualitative.

Findings

The eleven articles provided empirical support for the relationship between spirituality, self-efficacy, and decreased PTSD symptoms. Berg's (2011), findings concerning Vietnam Combat Veterans indicated that PTSD, along with depression, was associated with profound spiritual factors. Berg (2011) acknowledged that the cause and effect could not be assumed. However, there was a lower level of spiritual distress for those who regularly attended religious services and who were able to articulate the importance of faith in their lives.

Harris, et al. (2011) tested the efficacy of Building Spiritual Strength (BSS), an 8–session spirituality integrated group intervention. This intervention was designed for military trauma survivors to address the strain of combat on their religious beliefs and to enhance religious meaning. In this experimental study, randomly assigned BSS participants showed statistically significant reductions in PTSD symptoms. Once post-treatment means were adjusted for all other variables in the model, including race, treatment status, and pretreatment PTSD scores, the difference between the treatment group and control group was 12.23, which exceeded the established threshold for clinical significance based on self-report compared to those in a wait-list control group.

Oman and Borman, (2015) conducted a randomized trial to investigate the influence of the MRP on post-intervention self-efficacy for managing PTSD symptoms. The study also

investigated the effects of self-efficacy with those of spiritual well-being. Results demonstrated the MRP group self-efficacy means, as well as, treatment effect showed linear weekly increases from baseline to post-intervention. The treatment effect was significant at ($p<.01$). "We conclude that MRP fosters self-efficacy for managing PTSD symptoms, favorably affecting diverse facets of well-being" (p. 34).

The available research and lessons learned in everyday practice confirm the importance of self-efficacy in the treatment of PTSD. Likewise, the literature review clearly identifies the benefits of spirituality for veterans with PTSD, however, most of these studies were conducted with Veterans in treatment for PTSD. The current study sample, a pool of Veterans living independently in a civilian community, will investigate the following research question: Do veterans who describe themselves as 'spiritual' *or as having a spiritual practice* report lower levels of PTSD symptoms, including depression, and/or higher levels of self-efficacy than those who do not?

Methods

Based on the review of the literature this study will investigate the relationship of spirituality and self-efficacy to levels of PTSD symptoms in a convenience sample of community living Veterans.

Purpose of the study

The purpose of this study was to examine how Veterans' experiences of spirituality and self-efficacy are related to their perception of PTSD symptoms.

Project/Research Question

How do daily spiritual experience and self-efficacy relate to PTSD?

Definition of Terms

Posttraumatic Stress Disorder (PTSD): All of the following DSM 5 criteria are required for the diagnosis of PTSD (APA, 2013).

Spirituality: "is that most human of experiences that seeks to transcend self and find meaning and purpose through connection with others, nature, and/or a Supreme Being, which may or may not involve religious structures or traditions" (Buck, 2006, pp. 289-290).

Self-Efficacy: is confidence in one's own ability to achieve intended results (Bandura, 1977).

Veteran: "a person who served in the active military, naval, or air service and who was discharged or released under conditions other than dishonorable" (Title 38 of the Code of Federal Regulations, VA.ORG, 2017, 3.1).

Combat Zone/Theater: A combat zone is any area the President of the United States designates by Executive Order as an area in which the U.S. Armed Forces are engaging or have engaged in combat. Theater and Combat Zone are often used interchangeably though there are some slight differences (Stanley, 2010).

Veteran Service Organization (VSO): Organizations that help Veterans fill out VA forms, provide information about VA benefits, and provide a wide range of help for veterans and their dependents ("VA.GOV", 2017).

Research Design

The research design for this project is descriptive correlational. According to Wood and Kerr (2011), descriptive correlational research is conducted to examine the statistical strength and direction of the relationships between variables.

Description of the Setting

Setting: VSO sites: Norfolk, Virginia Beach, Portsmouth, Suffolk, Hampton Roads and nearby outlying cities, Gloucester, Yorktown, and Williamsburg, in Virginia. Hampton Roads is

comprised of seven cities: Norfolk, Virginia Beach, Chesapeake, Portsmouth, Newport News, Hampton, and Suffolk which are in Southeastern Virginia. Williamsburg, Yorktown, and Gloucester are close by and were included in the study. The Hampton Roads area is home to one of the world's largest populations of military personnel, with approximately 83,000 active duty military. Hampton Roads is home to the largest naval base in the world and the only North Atlantic Treaty Organization (NATO) command on U.S. soil (Hampton Roads Chamber of Commerce, 2017). Greater than 30% of all veterans in the state of Virginia reside in the greater Hampton Roads area. In 2014, the state of Virginia ranked seventh in the nation for number of veterans.

Most VSO are open Monday – Thursday and hold bimonthly or monthly meetings for members or veterans seeking assistance with filing a Veterans Compensation Claim.

Sample

A convenience sample of 200 participants who self-reported Combat Related Post Traumatic Stress Disorder (PTSD), whether sustained during pre-deployment training or actual deployment. Details on demographics are presented in Tables 2, 3, and 4. Participants ranged in age from 19 to 100, with a mean age of 55.68. Age during military service ranged from 17 to 45, with an average of 20.12. On average, participants served 13.51 years in the military (range: 1 to 45 years). Most participants (92.8%) were not drafted. The most commonly reported fields of combat were Vietnam (27.6%), the Gulf War (24.0%) and the War on Terror (22.5%). The majority of the sample was male (78.6%) and non-Hispanic (78.1%). Approximately 45% of the sample was black and 40.3% was white. Most participants (65.3%) were married and the majority had at least some college education or higher (78.1%). The most commonly reported religious affiliations were Baptist (34.7%) and other Protestant religions (26.5%). The veteran

was required to be able to read and write English. Exclusion criteria: not able to provide consent and/or did not meet the definition of a veteran.

Procedures

A written letter or email from the administration of each VSO was solicited (*see Figure 3*) indicating the VSO's permission for the survey to be conducted at their site: Veteran Service Organization Chapters throughout Hampton Roads and surrounding areas.

The project was implemented between October 1 and November 30, 2017, at the VSO Chapters. Recruitment flyers were distributed at each VSO and general information about the research study was announced in their regularly scheduled meetings, and by word of mouth. Any veteran who met the inclusion criteria and provided informed consent was asked to complete the four questionnaires on-site: Demographic Survey, Post Traumatic Stress Disorder Checklist (PCL-5), Daily Spiritual Experience Scale (DSES), and Self-Efficacy Scale. In exchange for their participation, each veteran was provided a brochure outlining local PTSD resources.

Measures

Demographic Data Sheet. The Demographic Data Sheet (see Figure 4) collected information on Gender, Age, Race, Marital Status, Education, Religious affiliation and Military Service.

The Post Traumatic Stress Disorder Checklist: The Posttraumatic Stress Disorder Checklist Version (PCL-5; Weathers, Litz, Keane, Palmieri, Marx, & Schnurr, 2013) is one of the most widely used self-report measures of posttraumatic stress disorder (PTSD) in the military. The PCL-5 includes 20 items developed to assess PTSD symptoms and associated features of the disorder are related to military experiences (see Figure 5). This is a self-report instrument that asks participants to rate their symptoms based on the past month: Item responses

receive scores from 0 to 4, with higher scores corresponding to greater stress: 0=”Not at all”, 1=”A little bit”, 2=”Moderately”, 3=”Quite a bit”, and 4=”Extremely”. The PCL-5 score is the sum of the item scores. This instrument has demonstrated good psychometric properties α =0.95 (Pietrzak et al., 2015). Scores in the current ranged from 0 to 77, with an average score of 34.56 (*SD* = 23.09)-and Cronbach’s α of .97.

The General Self-Efficacy Scale (GSES): The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) is a ten-item self-report questionnaire scored on a 4-point Likert scale. The self-efficacy score ranges from 10 to 40 with a higher score indicating more efficacy. Schwarzer and Jerusalem (1995) reported that the General Self-Efficacy Scale was directly correlated with positive emotion, optimism, and work satisfaction. Negative coefficients were found for depression, stress, health complaints, burnout, and anxiety. Internal reliability for GSE was demonstrated with Cronbach’s alphas between .76 and .90 (Schwarzer & Jerusalem, 1995). Scores on the GSE Scale in the current study ranged from 10 to 40, with an average score of 29.20 (*SD* = 6.60)-and Cronbach’s α of .92.

The Daily Spiritual Experience Scale: The DSES (see Figures 7 and 8) is a 16-item, 6-point, Likert scale used to measure everyday ordinary spiritual experience rather than particular beliefs or behaviors. This self-report instrument intends to reach beyond the boundaries of just religion(s) to address existence apart from, and not subject to, the limitations of the material universe. The DSES evidenced good reliability across several studies with internal consistency estimates in the .90s (Underwood & Teresi, 2002). Scores on the DSES ranged from 1 to 75, with an average score of 48.11 (*SD* = 18.79) and Cronbach’s α of .92.

Data Analysis plan

Descriptive statistics were computed for the demographic data, frequencies and percentages were computed for categorical variables, and means and standard deviations were computed for the continuous variables. Detailed descriptive statistics were computed for the overall scores for the PTSD checklist, DSES, and GSES for veterans with combat-related PTSD: the possible score for each instrument, sample range, median, mean, standard deviation, and the sample Cronbach's Alpha.

Protection of Human Subjects

This study was conducted after receiving approval from the Institutional Review Board (IRB) of the University of Virginia

Data Management

A total of 200 participants took part in the study. The data were entered into Excel and screened for missing values. Several participants had partially missing data on the primary study variables. On the PCL-5, 19 participants had missing values for one item and an additional one respondent each had missing values for 2, 11, and 18 items. On the Generalized Self-Efficacy Scale, four respondents had missing values for one item. On the Daily Spiritual Experiences scale, 14 participants had one missing value; five participants had 3 missing values; and several different participants each had 3, 8, 11, 12, and 15 missing values.

To address missing data, the following steps were applied. First, the proportion of missing items to total items for each scale was calculated. On the basis of the recommendation by Schwarzer (2014; Generalized Self-Efficacy Scale), participants with missing data on more than 30% of the items within a given were excluded from the sample. A total of four participants were excluded based on this criterion, leaving a final sample of 196 participants. Next, mean scores were computed so that missing values would not distort the outcomes. These mean scores were then multiplied by the total number of items within a scale to return to the original scoring

range of the measure.

Results

Participant Demographics

The majority of the sample was male (78.6%) and non-Hispanic (78.1%). Approximately 45% of the sample was black and 40.3% was white. Most participants (65.3%) were married and the majority had at least some college education or higher (78.1%). The most commonly reported religious affiliations were Baptist (34.7%) and other Protestant religions (26.5%). These frequencies and percentages are reported in Table 1. Participants ranged in age from 19 to 100, with a mean age of 55.68. Age when served ranged from 17 to 45, with an average of 20.12. On average, participants served 13.51 years in the military (range: 1 to 45 years). These data are presented in Table 2. Most participants (92.8%) were not drafted. The most commonly reported fields of combat were Vietnam (27.6%), the Gulf War (24.0%) and the War on Terror (22.5%). Most participants (83.2%) were deployed and, the majority (55.1%), were not injured. These data are presented in Table 3.

Correlations between study variables and demographics

A series of analyses were conducted to explore the relationship between each study variable and participant demographic characteristics. Pearson correlation analyses were used to assess relationships between the study variables and continuous variables (age, age when served, years in the military, times deployed, and length of deployment) and independent samples *t*-tests were used to compare scores on binary categorical variables (gender, drafted, deployed, and injured). Multi-categorical variables (race, marital status, education, religious affiliation, and field of combat) were assessed used an analysis of variance (ANOVA). Because of low response rates in some categories, race, religious affiliation and field of combat were first recoded

PCL-5

Scores on the PCL-5 were significantly correlated with length of deployment, $r = .171$, $p = .017$. Longer deployment was associated with more symptoms of PTSD. There was also a significant difference in PCL-5 scores between those who were injured and those who were not, $t(182) = 3.17$, $p = .002$. Scores on the PCL-5 were not significantly associated with any other demographic variables.

Generalized Self-Efficacy

Generalized Self-Efficacy was significantly associated with years in the military ($r = .192$, $p = .008$); more time spent in the military was associated with higher self-efficacy. Those who were injured had lower self-efficacy than those who were not. There was a significant difference in generalized self-efficacy by education, $F(4, 190) = 2.65$, $p = .035$. Generalized self-efficacy was not significantly associated with any other demographic variables.

Daily Spiritual Experiences

Daily Spiritual Experiences was significantly associated with age, $r = .185$, $p = .010$. Older participants reported more daily spiritual experiences. There was a significant difference in daily spiritual experiences by race, $F(2, 193) = 5.49$, $p = .005$. White participants had fewer daily spiritual experiences ($M = 42.83$, $SD = 20.20$), compared to Black participants ($M = 51.82$, $SD = 16.63$; $p = .002$) and those whose race was identified as "Other" ($M = 51.25$, $SD = 18.13$; $p = .036$). There was also a significant difference in daily spiritual experiences by religious affiliation, $F(5, 189) = 3.81$, $p = .003$). Those who identified as Baptist scored higher ($M = 53.09$, $SD = 16.69$) than those who were Catholic ($M = 41.65$, $SD = 20.42$; $p = .005$), Spiritual ($M = 43.05$, $SD = 16.66$; $p = .028$), or not religious ($M = 34.49$, $SD = 22.87$; $p = .001$). Daily Spiritual Experiences was not significantly associated with any other demographic variables.

Correlations

A Pearson correlation analysis was used to assess the relationship between study variables (see Table 5). Scores on the DSES were not significantly associated with scores on the PCL-5 ($r = -.114$, $p > 0.5$). There was a positive correlation between DSE and GSE ($r = .164$, $p < 0.05$). There was also a strong, negative correlation between scores on the PCL-5 and

Generalized Self-Efficacy (r = -.555, p < .001); higher PTSD symptoms were associated with lower self-efficacy.

Multiple Linear Regression

To address the research question, two multiple linear regression analyses were conducted. First, an analysis was conducted to determine whether the study variables (spiritual experiences and self-efficacy) predicted PTSD symptoms, controlling for the significant (or trending) demographic variables (length of deployment, injury status, gender) identified in the previous analysis. Next, an analysis was conducted to determine if daily spiritual experiences predicted self-efficacy, controlling for the significant demographics previously identified (years in the military, injury status, and education).

The results of the first linear regression model were significant, F (5,175) = 18.91, p < .001, R^2 = 0.35, indicating that approximately 35% of the variance in PTSD symptoms is explained by length of deployment, injury status, gender, generalized self-efficacy, and daily spiritual experiences. When controlling for relevant covariates, generalized self-efficacy predicted the level of PTSD symptoms, b = -1.78, t (175) = -8.38, p < .001. The computation indicated that for every one-unit increase in self-efficacy, PTSD symptoms decreased by 1.78 units. Daily spiritual experiences did not significantly predict PTSD symptoms. The results of the regression are presented in Table 12.

Generalized Self-Efficacy

The results of the second linear regression model were significant, F (7,171) = 2.78, p = .009, R^2 = 0.10, indicating that approximately 10% of the variance in Generalized Self-Efficacy was explained by years in the military, education, injury status, and daily spiritual experiences. However, when controlling for relevant demographics, daily spiritual experiences did not significantly predict self-efficacy, b = 0.04, t (171) = 1.70, p = .090. Table 14 summarizes the results of the regression model.

Summary

The results of these analyses provide insight into the relationships between daily spiritual experiences, self-efficacy, and PTSD symptoms in a veteran population. Neither reports of daily spiritual experiences, nor identification with a particular religious affiliation were related to level PTSD symptoms. Daily spiritual experiences were associated with increased self-efficacy; however, when controlled for demographic variables, this relationship was no longer significant, suggesting it may be accounted for by other factors. There was a strong negative correlation between generalized self-efficacy and PTSD symptoms, and this relationship remained significant when controlled for other predictors of PTSD. This suggests that higher levels of self-efficacy predict lower levels of PTSD symptoms. An important limitation to note is that the temporal relationship between these variables cannot be inferred from this data. That is, a possible alternative explanation is that having PTSD negatively impacts generalized self-efficacy.

Discussion

Spirituality

The interesting, and somewhat surprising, finding in this project was that daily spiritual experiences were not related to PTSD symptoms, yet did demonstrate the need to access this aspect of holistic care. Though the findings of this project did not demonstrate an inverse relationship between PTSD symptoms and spirituality, the higher one's spirituality the higher their self-efficacy. The findings also provided insight into understanding that age, religious preference, and race may potentially impact spirituality.

Bormann, in multiple studies, strongly demonstrated the value of utilizing this resource as the intervention of Mantram repetition resulted in decreased PTSD symptoms. The findings were

similar in Harris et al. (2011), as the intervention of Building Spiritual Strength 8-week session showed a clinical significance when compared to the control group. In addition, the findings are quite different from the findings from Currier, Holland, and Drescher (2015), who performed a cross-lagged panel design to examine the longitudinal association between spirituality and PTSD symptom severity in 532 U.S. veterans in a residential treatment program for combat related-PTSD. They found that higher spirituality resulted in lower PTSD symptoms scores. Moreover, the same was said for Hourani, et al. (2012) drew data from the 2008 Department of Defense (DOD) Survey of Health Related Behaviors among Active Duty Military Personnel (2008 HRB Survey). The final sample of participants consisted of 28,546 military personnel (5,927 Army, 6,637 Navy, 5,117 Marine Corps, 7,009 Air Force, and 3,856 Coast Guard), who completed self-administered questionnaires anonymously. The findings in the literature *showed* that spirituality buffered PTSD symptoms in that high spirituality was associated with a more pronounced protective influence against PTSD compared to medium spirituality in the low-moderate combat exposure.

Self-Efficacy

The HPM model provides insight, regarding self-efficacy, 'perceived self-efficacy,' or judgement of one's personal ability to carry out a particular course of action. The findings of this project, which were congruent with other findings, clearly demonstrated that higher self-efficacy was inversely related to level of PTSD symptoms. This study also indicated that length of service and physical injury are an integral part of one's perception of self-efficacy.

Nursing Practice Implications

The potential for nurses to encounter veterans with PTSD is great because many veterans return to their hometown after serving their country in foreign places. These veterans are

returning from combat zones and/or traumatic experiences, and it is estimated that between 12-30% will be diagnosed with PTSD. The findings indicate that when veterans identify as spiritual, they have higher self-efficacy and lower PTSD symptoms. Therefore, interventions can build upon these strengths within a program of holistic care. This particular research provides insight into capitalizing on the strengths of spirituality and self-efficacy within a holistic approach to nursing care. The Health Promotion Model reminds us that positive health behaviors lead to the achievement of higher levels of well-being and self-actualization (Pender, 1987). Bandura (2004) stated, "The higher the perceived self-efficacy, the more vigorous and persistent will be the effort to perform a behavior, even when faced with obstacles and aversive experiences which serve as impediments, determining health habits (p. 145)." Having this information, the nurse can promote self-efficacy and spirituality into a holistic approach, knowing that there is supporting evidence. An additional strategy may be advocating for self-efficacy and spirituality beyond the institutions to incorporate community resources that could play an integral part in promoting self-efficacy and spirituality.

Implications for Further Research

The findings of this study demonstrate the need for replication, since this study is one of few that have examined PTSD in a community dwelling sample of military veterans. The literature review demonstrated the benefits of interventions to develop self-efficacy and spiritual practice. Yet, the quality of interventions can only be improved by clarifying the needs of the individual prior to implementation. Future research may reveal additional insights by targeting both larger and younger populations. The utilization of the Daily Spiritual Experience Scale and the Generalized Self-Efficacy Scale, both instruments with proven reliability and validity, may provide for longitudinal studies, if included in initial and periodic assessments in studies and

clinical practice.

References

About Healthy People | Healthy People 2020. (2016). *Healthypeople.gov*. Retrieved 19 September 2016, from https://www.healthypeople.gov/2020/About-Healthy-People.American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Washington, DC: Author.

Bandura, A (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review. 84 (2), 191–215.* doi:10.1037/0033-295x.84.2.191.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior*, *31*(2), 143-164. http://dx.doi.org/10.1177/1090198104263660

Beck, A.T., Steer, R.A., Ball, R., Ranieri, W. (1996). Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *Journal of Personality Assessment.* 67(3), 588–97. doi:10.1207/s15327752jpa6703_13.PMID8991972. *Retrieved 2008-10-3.*

Bell Meisenhelder, J. (2002). Terrorism, posttraumatic stress, and religious coping. *Issues in Mental Health Nursing*, 23(8), 771-782.

Bentley, S. (2005). *A Short History of PTSD: From Thermopylae To Hue*. *Combat PTSD Forum*. Retrieved 16 May 2017, from https://www.mycombatptsd.com/threads/a-short-history-of-ptsd-from-thermopylae-to-hue.2989/

Berg, G. (2011). The relationship between spiritual distress, PTSD and depression in Vietnam combat veterans. *The Journal of Pastoral Care & Counseling: JPCC*, *65*(1-2), 6,1-11.

Blanchard, E. B., Jones Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behaviour Research and Therapy, 34,* 669-673.

Boehnlein, J. (2006). Religion and spirituality in psychiatric care: looking back, looking ahead. *Transcultural Psychiatry*, 43(4), 624-651.

Bormann, J. E., Hurst, S., & Kelly, A. (2013). Responses to Mantram repetition program from veterans with posttraumatic stress disorder: A qualitative analysis. *Journal of Rehabilitation Research & Development, 50*(6), 769-784. doi:10.1682/JRRD.2012.06.0118.

Bormann, J. E., Liu, L., Thorp, S. R., & Lang, A. J. (2012). Spiritual well-being mediates PTSD change in veterans with military-related PTSD. *International Journal of Behavioral Medicine, 19*(4), 496-502. doi:https://dx.doi.org/10.1007/s12529-011-9186-1.

Bormann, J. E., Smith, T. L., Becker, S., Gershwin, M., Pada, L., Grudzinski, A. H., & Nurmi, E. A. (2005). Efficacy of frequent Mantram repetition on stress, quality of life, and spiritual well-being in veterans: A pilot study. *Journal of Holistic Nursing, 23*(4), 395-414. doi:https://dx.doi.org/10.1177/0898010105278929.

Bormann, J. E., Thorp, S., Wetherell, J. L., & Golshan, S. (2008). A spiritually based group intervention for combat veterans with posttraumatic stress disorder: Feasibility study. *Journal of Holistic Nursing, 26*(2), 109-116. doi:https://dx.doi.org/10.1177/0898010107311276.

Buck, H. (2006). Spirituality: Concept analysis and model development. *Holistic Nurse Practitioner*, 20, 288-92.

Connor, K. M., Davidson, J. R. T., & Lee, L. C. (2003), Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of Traumatic Stress*, 16, 487–494. doi:10.1023/A:1025762512279.

Currier, J. M., Holland, J. M., & Drescher, K. D. (2015). Spirituality factors in the prediction of outcomes of PTSD treatment for U.S. military veterans. *Journal of Traumatic Stress, 28*(1), 57-64. doi:https://dx.doi.org/10.1002/jts.21978.

Department of Veterans Affairs/Department of Defense. (2004). *Clinical Practice Guidelines for the Management of Post-Traumatic Stress,* Version 1.0.

Drescher, K., Smith, M., & Foy, W. (2007). *Spirituality and Readjustment Following War-Zone Experiences. Chapter in Combat Stress Injury*. New York: Brunner-Routledge, 295-310.

Edberg, M. (Ed). (2010). *Essential readings in health behavior: Theory and practice.* Boston: Jones and Bartlett Publishers.

Everly, G. Jr. (2000). The role of pastoral crisis intervention in disasters, terrorism, violence, and other community crises. *International Journal of Emergency Mental Health*, 2(3), 139-142.

Fournier, A. (2017). *The relationships among spirituality, self-esteem, and participation in physical activity in late adolescent and young adult females* (Ph.D.). Rutgers, The State University of New Jersey.

Ganocy, S. J., Goto, T., Chan, P. K., Cohen, G. H., Sampson, L., Galea, S.,…Tamburrino, M. B. (2016). Association of spirituality with mental health conditions in Ohio national guard soldiers. *Journal of Nervous & Mental Disease, 204*(7), 524-529. doi:https://dx.doi.org/10.1097/NMD.0000000000000519.

Harris, J. I., Erbes, C. R., Engdahl, B. E., Thuras, P., Murray-Swank, N., Grace, D., . . . Le, T. (2011). The effectiveness of a trauma focused spiritually integrated intervention for veterans exposed to trauma. *Journal of Clinical Psychology, 67*(4), 425-438. doi: https://dx.doi.org/10.1002/jclp.20777.

Hill, C. (2014). *What PTSD costs families*. *MarketWatch*. Retrieved 20 May 2017, from http://www.marketwatch.com/story/what-ptsd-costs-families-2014-04-04

Hourani, L. L., Williams, J., Forman-Hoffman, V., Lane, M. E., Weimer, B., & Bray, R. M.

(2012). Influence of spirituality on depression, posttraumatic stress disorder, and suicidality in active duty military personnel. *Depression research and treatment*, *2012*.

Kopacz, M. S., Currier, J. M., Drescher, K. D., & Pigeon, W. R. (2016). Suicidal behavior and spiritual functioning in a sample of veterans diagnosed with PTSD. *Journal of Injury & Violence Research, 8*(1), 6-14. doi:https://dx.doi.org/10.5249/jivr.v8i1.728.

Kronish, I. M., Edmondson, D., Li, Y., & Cohen, B. E. (2012). Post-traumatic stress disorder and medication adherence: Results from the mind your heart study. *Journal of Psychiatric Research, 46*(12), 1595-1599. doi:http://dx.doi.org/10.1016/j.jpsychires.2012.06.011.

McCabe, O., Lating, J., Everly, G., Mosley, A., Teaque, P., Links, J., et al. (2007). Psychological first aid training for the faith community: a model curriculum. *International Journal of Emergency Mental Health*, 9(3), 181-191.

- McFall, M., Malte, C., Fontana, A., & Rosenheck, R. (2000). Effects of an outreach intervention on use of mental health services by veterans with posttraumatic stress disorder. *Psychiatric Services*, 51(3), 369-374.

National Comorbidity Survey. (2005). Retrieved September 17, 2016, from http://www.hcp.med.harvard.edu/ncs/index.php.

Oliver, J. (2008) Coming Home: Developing a Theological Response for Returning Combat Veterans. Powerpoint Presentation Sponsored by Mid-Atlantic MIRECC.

Oman, D. and Bormann, J.E. (2015) Mantram Repetition Fosters Self-efficacy in Veterans For Managing PTSD: A Randomized Trial. *Psychology of Religion and Spirituality,* 7.1, 34-45.

Park, C. L., Smith, P. H., Lee, S. Y., Mazure, C. M., McKee, S. A., & Hoff, R. (2017). Positive and Negative Religious/Spiritual Coping and Combat Exposure as Predictors of

Posttraumatic Stress and Perceived Growth in Iraq and Afghanistan Veterans. *Psychology of Religion & Spirituality*, 9, 13-20, 2017.

Pender, N., & Pender, A. (1986). Attitudes, Subjective Norms, and Intentions to Engage In Health Behaviors. *Nursing Research, 35*(1), 15-18.

Peres, J. F. P., Moreira-Almeida, F., Nasello, A. G., & Koenig, H. G. (2007). Spirituality and resilience in trauma victims. *Journal of Religious Health, 46*, 343–350.

Pietrzak, R. H., Tsai, J., Armour, C., Mota, N., Harpaz-Rotem, I., & Southwick, S. M. (2015). Functional significance of a novel 7-factor model of DSM–5 PTSD symptoms: Results from the National Health and Resilience in Veterans study. Journal of Affective Disorders, 174, 522–526. http://dx.doi.org/10.1016/j.jad.2014.12.007.

Polusny, M., Erbes, C., Thuras, P., Moran, A., Lamberty, G., Collins, R. … Lim (2015). Mindfulness-Based Stress Reduction for Posttraumatic Stress Disorder Among Veterans. *Journal of the American Medical Association, 314*(5), 456-465. http://dx.doi.org/10.1001/jama.2015.836.

Post Traumatic Stress Disorder Fact Sheet | Sidran.org. (2016). Sidran.org. Retrieved 19 February 2017, from https://www.sidran.org/resources/for-survivors-and-loved-ones/post-traumatic-stress-disorder-fact-sheet/

Post-traumatic stress disorder. (2005). PubMed Health. Retrieved 15 November 2017, from https://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0015860/

PTSD: National Center for PTSD Home. (2016). Ptsd.va.gov. Retrieved 19 May 2017, from http://www.ptsd.va.gov/

Ruggiero, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric Properties of the PTSD Checklist--Civilian Version. *Journal of Traumatic Stress, 16,* 495-502.

Sayer, N. A., Friedemann-Sanchez, G., Spoont, M., Murdoch, M., Parker, L. E., Chiros, C., & Rosenheck, R. (2009). A qualitative study of determinants of PTSD treatment initiation in Veterans. *Psychiatry*, *72*(3), 238-255.

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio.* Causal and control beliefs (pp. 35-37). Windsor, UK: NFER-NELSON.

Stanley, C. (2010). *Department of Defense Instruction* (pp. 1-12). Defense Technical Information Center.

Underwood, L., & Teresi, J. (2002). The daily spiritual experience scale: development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine*, *24*(1), 22-33.

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). *The PTSD Checklist for DSM-5 (PCL-5) – Standard* [Measurement instrument]. Retrieved from: https://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp

Wood, M.J., & Kerr, J.C. (2011). *Basic Steps in Planning Nursing Research: From Question to Proposal*. Sudbury, MA: Jones and Bartlett.

Wortmann, J. H., Jordan, A. H., Weathers, F. W., Resick, P. A., Dondanville, K. A., Hall-Clark, B., … Litz, B. T. (2016). Psychometric analysis of the PTSD Checklist-5 (PCL-5) among treatment-seeking military service members. *Psychological Assessment, 28,* 1392-1403. doi: 10.1037/pas0000260

Table 2

Frequency and Percentages for Demographic Variables.

Variable	*n*	*%*
Gender		
Female	42	21.4
Male	154	78.6
Ethnicity		
Hispanic	17	8.1
Not Hispanic	153	78.1
Missing	*26*	*13.3*
Race		
AIAN (American Indian)	3	1.5
Asian	3	1.5
Black	88	44.9
More than one	19	9.7
White	79	40.3
Unknown	4	2.0
Marital Status		
Single	26	13.3
Married	128	65.3
Divorced/Separated/Widowed	42	21.4
Education		
High School	42	21.4
Some College	78	39.8
College Grad	46	23.5
Grad school	19	9.7
Post grad	10	5.1
Missing	*1*	0.5
Religious Affiliation		
Baptist	68	34.7
Buddhist	2	1.0
Catholic	30	15.3
Jewish	3	1.5
Muslim	1	0.5
None	13	6.6
Other	5	2.6

Other Protestant	52	26.5
Spiritual	21	10.7
Missing	*1*	

Note. Due to rounding errors, percentages may not equal 100%.

Table 3

Summary Statistics for Demographic Variables

Variable	*M*	*SD*	*n*	Min	Max
Age	56.68	16.09	196	19.00	100.00
Age when served	20.12	4.16	190	17.00	45.00
Years in Military	13.51	9.34	191	1.00	45.00

Note. Sample size varies due to missing data.

Table 4

Frequency and Percentages for Military Demographics

Variable	*n*	*%*
Drafted		
No	181	92.8
Yes	14	7.2
Missing	*1*	.5
Field of Combat		
Gulf War	47	24.0
Korea	5	2.6
Vietnam	54	27.6
War on Terror	44	22.5
WWII	1	0.5
More than one	28	14.3
Other	12	6.1
Missing	*5*	2.6
Deployed		
No	33	16.8
Yes	163	83.2
Injured		
No	108	55.1
Yes	76	38.8
Missing	*12*	6.1

Note. Due to rounding errors, percentages may not equal 100%.

Table 5

Correlation Matrix among Study Variables

Variable	1	2	3
1. PCL-5	-		
2. Generalized Self-Efficacy	-.558**	-	
3. Daily Spiritual Experiences	-.114	.164*	-

Note: *$p < .05$; **$p < .01$

Table 6

Correlation between study variables and continuous demographic variables

Variable	PCL-5	Generalized Self-Efficacy	Daily Spiritual Experiences
Age	.013	.013	.185**
Age when served	-.031	.048	-.071
Years in Military	-.126	.192**	.076
Times Deployed	.064	.038	-.025
Length Deployed	.171*	-.003	-.063

Note: *$p < .05$; **$p < .01$

Table 7

Results of t-tests for study variables gender, drafted, deployed, and injured

Variable	*M*	*SD*	*t*	*df*	*p*
PCL-5					
Gender			1.72	194	.088
Male	36.03	23.61			
Female	29.17	20.43			
Drafted			.615	193	.539
Yes	38.13	14.73			
No	34.18	23.63			
Deployed			.278	194	.781
Yes	34.77	22.79			
No	33.54	24.82			
Injured			3.17	182	.002**
Yes	41.18	21.17			
No	30.52	23.27			
Generalized Self-Efficacy					
Gender			-.121	194	.904
Male	29.17	6.49			

Female	29.31	7.09			
Drafted			-.145	193	.885
Yes	29.00	3.80			
No	29.27	6.76			
Deployed			1.00	194	.318
Yes	29.41	6.43			
No	28.15	7.41			
Injured			-1.98	182	.049*
Yes	28.06	6.76			
No	30.04	6.59			
Daily Spiritual Experiences					
Gender			-.074	194	.941
Male	48.06	19.04			
Female	48.30	18.05			
Drafted			.520	193	.604
Yes	50.75	21.21			
No	48.04	18.59			
Deployed			-1.40	194	.162
Yes	47.26	18.96			
No	52.28	17.58			
Injured			-1.24	182	.216
Yes	45.61	20.76			
No	49.11	17.43			

Note: *$p < .05$, **$p < .01$

Table 8

ANOVA Results for Race, Marital Status, Education, Religious Affiliation, and Field of Combat

PCL-5			*SS*	*df*	*F*	*p*
Race	2	0.20	.818			
15.91						
Marital Status			12.57	2	0.01	.988
Education			3938.62	4	1.87	.117
Religious Affiliation			873.17	5	0.32	.898
Field of Combat			3632.53	4	1.78	.135
Generalized Self-Efficacy						
Race			63.54	2	0.73	.485
Marital Status			51.09	2	0.58	.559
Education			448.40	4	2.65	.035*
Religious Affiliation			259.61	5	1.19	.315
Field of Combat			36.36	4	0.20	.937
Daily Spiritual Experiences						
Race			3701.38	2	5.49	.005**

Marital Status	113.72	2	.16	.852
Education	1960.44	4	1.42	.231
Religious Affiliation	6291.93	5	3.81	.003**
Field of Combat	1906.81	4	1.34	.258

Note: *$p < .05$, **$p < .01$

Table 9

Frequencies and Percentages for Recoded Variables

Variable	*n*	*%*
Race		
Black	88	44.9
White	79	40.3
Other	29	14.8
Marital Status		
Single	26	14.3
Married	128	65.3
Divorced/Separated/Widowed	42	21.4
Religious Affiliation		
Baptist	68	34.7
Catholic	30	15.3
Other Protestant	52	26.5
Spiritual	21	10.7
None	13	6.6
Other	11	5.6
Missing	*1*	
Field of Combat		
Gulf War	47	24.0
Vietnam	54	27.6
War on Terror	44	22.5
More than one	28	14.3
Other	18	9.2
Missing	*5*	2.6

Table 10

Summary Statistics for Study Variables

Variable	*M*	*SD*	Median	*n*	Scale Range	Sample Range	Cronbach's α
PCL5	34.56	23.09	38	196	0 – 80	0 – 77	.97
Generalized Self-Efficacy	29.20	6.60	30	196	10 – 40	10 – 40	.92
Daily Spiritual Experiences	48.11	18.79	52	196	0 – 75	1 – 75	.96

Table 11

Variance Inflation Factors

Variable	VIF
Gender	1.04
Length of Deployment	1.09
Injury Status	1.08
Generalized Self-Efficacy	1.04
Daily Spiritual Experiences	1.03

Table 12

Results for Linear Regression with Length of Deployment, Injury Status, Generalized Self-Efficacy, and Daily Spiritual Experiences Predicting PCL-5 Scores

Variable	*B*	*SE*	β	*t*	*p*
(Intercept)	76.28	7.68	0.00	9.93	< .001
Gender (ref: Female)	7.30	3.54	0.13	2.06	.041
Length of Deployment	0.01	0.00	0.12	1.96	.052
Injury Status	5.24	2.93	0.11	1.79	.075
Generalized Self-Efficacy	-1.78	0.21	-0.52	-8.38	< .001
Daily Spiritual Experiences	-0.01	0.07	-0.01	-0.08	.932

Overall Model: F (4, 176) = 22.17, $p < .001$, $R^2 = 0.34$. Injury status coded 0 = No, 1 = Yes.

Table 13

Variance Inflation Factors

Variable	VIF
Years in the Military	1.20
Education	1.23
Injury Status	1.02
Daily Spiritual Experiences	1.04

Table 14

Results for Linear Regression with Years in the Military, Education, Injury Status, and Daily Spiritual Experiences predicting Generalized Self-Efficacy

Variable	*B*	*SE*	*t*	*p*
(Intercept)	27.18	1.88	14.49	< .001
Years in the Military	0.07	0.06	1.26	.210
Education (High School)	-1.84	1.46	-1.26	.210
Education (Some College)	-0.69	1.26	-0.54	.587
Education (Grad school)	2.62	2.00	1.31	.193
Education (Post grad)	2.45	2.55	0.96	.338
Injury Status	-1.93	1.00	-1.94	.054
Daily Spiritual Experiences	0.04	0.03	1.70	.090

Note. Results: F (7,171) = 2.78, p = .009, R^2 = 0.10. For the variable Education, "College Grad" was selected as the reference category. Injury Status was coded as 0 = No, 1 = Yes.

Demographic Survey

Gender: o Male o Female

Age (now): _____ **Age** (when served)_____

Military Branch: _____ Rank: _____ Grade: _____

Number of years in military: _____ Drafted (yes/no): _____

Home of record upon entering the military: _____

Race: o White o Black o Hispanic o Native American o Asian o Pacific Islander o Other: _____

Marital Status: o Single o Married o Separated o Divorced o Widowed

Highest level of education completed: o High school o Some college o College graduate o Graduate school o Post graduate

Religious Affiliation: o Baptist o Buddhist o Catholic o Hindu o Jewish o Muslim o Protestant o Other: _____ o None

In what field of combat did you serve?

oWWII o Korea o Gulf War o War on Terrorism o other

Did you deploy? o Yes o No

If yes, how many times? _____

Time 1: How long were you deployed?_____

Time 2: How long were you deployed?_____

Time 3: How long were you deployed?_____

Time 4: How long were you deployed?_____

Time 5: How long were you deployed?_____

>5: How long were you deployed?_____

Were you physically injured during deployment (required medical attention)?

____Yes ____No

Figure 4: Demographic Survey

PCL-5

Instructions: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

In the past month, how much were you bothered by:	**Not at all**	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8. Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4

13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

PCL-5 (14 August 2013) National Center for PTSD

Figure 5. The PTSD Checklist for DSM-5 (PCL-5) – Standard
From "*The PTSD Checklist for DSM-5 (PCL-5) – Standard* [Measurement instrument]," by F.W. Weathers, B.T. Litz, T.M. Keane, P.A. Palmieri, B.P. Marx, & P.P. Schnurr, 2013. Available from http://www.ptsd.va.gov/professional/

GENERALIZED SELF-EFFICACY SCALE

GL assessment
the measure of potential

Name: .....

Date: ..... **Record Number:** .....

		Not at all true	Barely true	Moderately true	Exactly true
1.	I can always manage to solve difficult problems if I try hard enough.	1	2	3	4
2.	If someone opposes me, I can find means and ways to get what I want.	1	2	3	4
3.	It is easy for me to stick to my aims and accomplish my goals.	1	2	3	4
4.	I am confident that I could deal efficiently with unexpected events.	1	2	3	4
5.	Thanks to my resourcefulness, I know how to handle unforeseen situations.	1	2	3	4
6.	I can solve most problems if I invest the necessary effort.	1	2	3	4
7.	I can remain calm when facing difficulties because I can rely on my coping abilities.	1	2	3	4
8.	When I am confronted with a problem, I can usually find several solutions.	1	2	3	4
9.	If I am in a bind, I can usually think of something to do.	1	2	3	4
10.	No matter what comes my way, I'm usually able to handle it.	1	2	3	4

Figure 6. Generalized Self-Efficacy Scale

Daily Spiritual Experience Scale

The list that follows includes items you may or may not experience. Please consider how often you directly have this experience, and try to disregard whether you feel you should or should not have these experiences. A number of items use the word 'God.' If this word is not a comfortable one for you, please substitute another word that calls to mind the divine or holy for you.

	Many times a day	Every day	Most days	Some days	Once in a while	Never
I feel God's presence.						
I experience a connection to all of life.						
During worship, or at other times when connecting with God, I feel joy which lifts me out of my daily concerns.						
I find strength in my religion or spirituality.						
I find comfort in my religion or spirituality.						
I feel deep inner peace or harmony.						
I ask for God's help in the midst of daily activities.						
I feel guided by God in the midst of daily activities.						
I feel God's love for me, directly.						
I feel God's love for me, through others.						
I am spiritually touched by the beauty of creation.						
I feel thankful for my blessings.						
I feel a selfless caring for others.						
I accept others even when they do things I think are wrong.						
I desire to be closer to God or in union with the divine.						

	Not at all	Somewhat close	Very close	As close as possible
In general, how close do you feel to God?				

Figure 7.

Underwood, LG. 2006. Ordinary Spiritual Experience: Qualitative Research, Interpretive Guidelines, and Population Distribution for the Daily Spiritual Experience Scale. *Archive for the Psychology of Religion/ Archiv für Religionspsychologie,* 28:1 181-218.

UNIVERSITY of VIRGINIA

cheryl major-cooper <cm7ax@virginia.edu>

The Daily Spiritual Experience Scale

Lynn Underwood <lynnunderwood@researchintegration.org> Sat, Jun 10, 2017 at 6:33 AM

To: cheryl major-cooper <cm7ax@virginia.edu>

Dear Cheryl Major-Cooper,
You have my permission to use the Daily Spiritual Experience Scale for non-profit use if you return the attached registration form to me and agree to the terms of use.

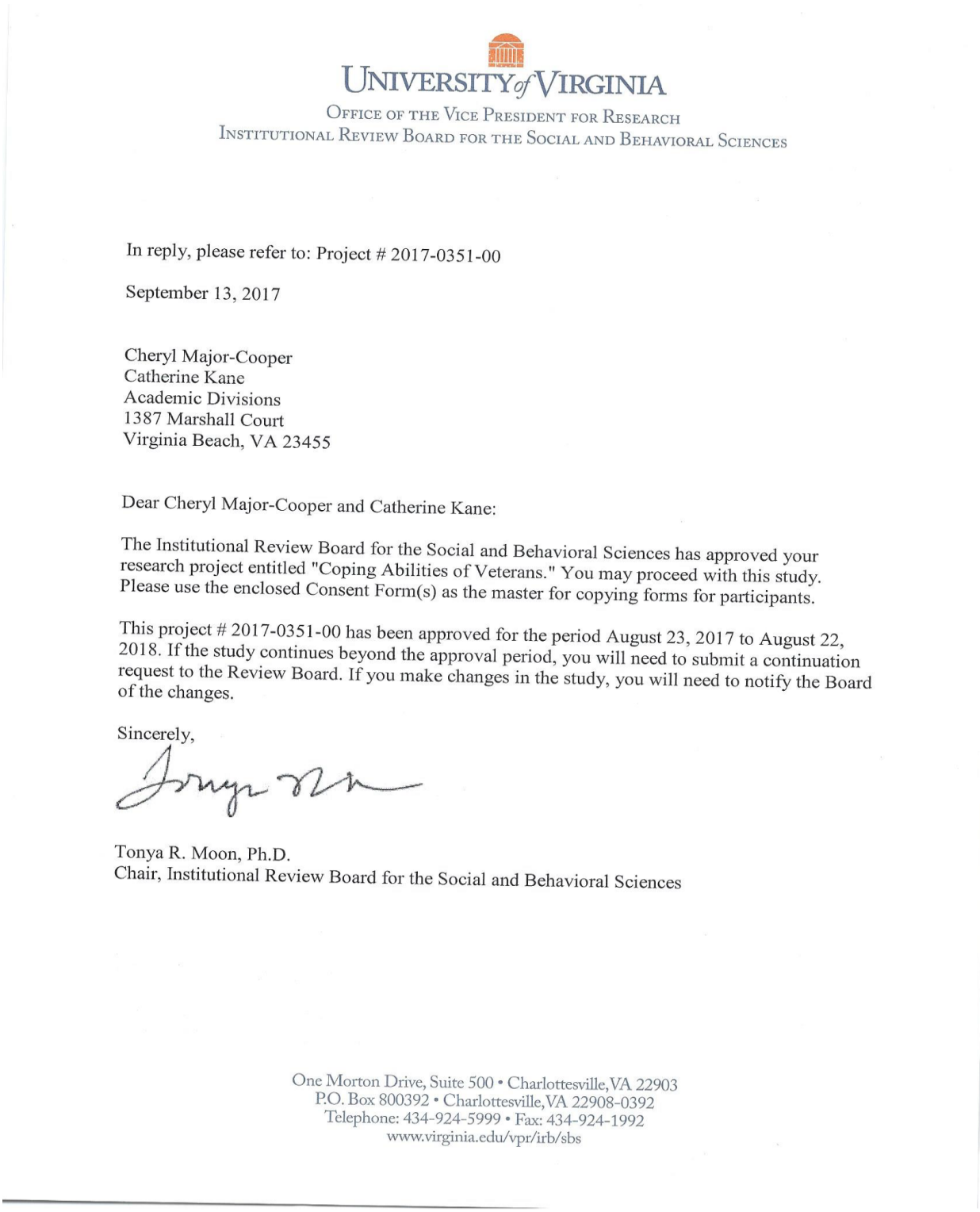
I have written a book on the scale designed for personal and professional use, *Spiritual Connection in Daily Life: 16 Little Questions That Can Make a Big Difference,* and it has been published in paperback.
Information on it can be found at www.lynnunderwood.com/book
I think it would be helpful in your work with the scale. It is not expensive, and is on Amazon and in bookstores. In 2016 an international ebook is now available on Amazon international sites.

There was a recent radio interview on the scale
http://www.abc.net.au/radionational/programs/spiritofthings/are-you-spiritually-connected/8376242
You might find it of interest.

Best wishes to you in your life and in your work,

Lynn Underwood PhD
Senior Research Associate
Inamori International Center for Ethics,
Case Western Reserve University

Figure 8. Permission to use The Daily Spiritual Experience Scale.



UNIVERSITY of VIRGINIA

OFFICE OF THE VICE PRESIDENT FOR RESEARCH
INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2017-0351-00

September 13, 2017

Cheryl Major-Cooper
Catherine Kane
Academic Divisions
1387 Marshall Court
Virginia Beach, VA 23455

Dear Cheryl Major-Cooper and Catherine Kane:

The Institutional Review Board for the Social and Behavioral Sciences has approved your research project entitled "Coping Abilities of Veterans." You may proceed with this study. Please use the enclosed Consent Form(s) as the master for copying forms for participants.

This project # 2017-0351-00 has been approved for the period August 23, 2017 to August 22, 2018. If the study continues beyond the approval period, you will need to submit a continuation request to the Review Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,

Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences

One Morton Drive, Suite 500 • Charlottesville, VA 22903
P.O. Box 800392 • Charlottesville, VA 22908-0392
Telephone: 434-924-5999 • Fax: 434-924-1992
www.virginia.edu/vpr/irb/sbs

Figure 9 UVA IRB Approval

Project Title: **Coping Abilities of Veterans**

Informed Consent Agreement

Please read this consent agreement carefully before you decide to participate in the study.

Purpose of the research study: The purpose of the study is to better understand how spirituality and self-confidence can inform interventions to reduce symptoms of Post-Traumatic Stress Disorder (PTSD).

What you will do in the study: You will complete paper and pencil questionnaires anonymously. The questionnaires are: Demographic data sheet; PTSD - (M) Checklist; Daily Spiritual Experience Scale, and the Self Efficacy Scale.

Time required: This study will require about 30 minutes of your time.

Risks: There are no anticipated risks. Some of the questions may cause you to become upset. You may skip any questions you are not comfortable answering. As I am answering research instruments, that are not requiring detailed responses, there is minimal risk involved. In the event you need immediate assistance, some will be provided to you via the professional staff present.

Benefits: There are no direct benefits. This study has the potential to assist with creating ongoing treatment regimens for veterans with PTSD. In addition, it has the potential to provide Nursing Implications that allow for a holistic approach to care for the veterans which includes promoting Spirituality and Self-efficacy.

Confidentiality: The data will be stored in compliance with UVA's information technology policies and with any other IT protocol that is considered best practice. For the long-term storage: The paper questionnaires will be kept in a locked box and destroyed at the end of the study. Upon completion, the data stored by computer will be maintained as guided by the UVA information technology policies. For reports and publications, the data will be reported in group format.

Data linked with identifying information: The information provided in the study will be handled confidentially. When the study is completed and the data have been analyzed, data will be destroyed. Your name will not be used in any report.

Voluntary participation: Your participation in the study is voluntary. Your treatment or service will not be affected by participation in the study in anyway.

IRB-SBS Office Use Only				
Protocol #	2017-0351-00			
Approved	from:	8/23/17	to:	8/22/18
SBS Staff	SMG			

Project Title: **Coping Abilities of Veterans**

Right to withdraw from the study: You have the right to withdraw from the study at any time without penalty.

How to withdraw from the study: You may withdraw from the study at any time by informing the PI that you no longer want to participate or by just leaving the room. There is no penalty for withdrawing.

Payment: This is no payment for participating in the study.

If you have questions about the study, contact:
Cheryl Major-Cooper, DNP Student Researcher
Claude Moore Nursing Education Building
UVA School of Nursing
P.O. Box 800826
Charlottesville VA 22908-0782
Email address: majcoop18@gmail.com

Faculty Advisor: Catherine Kane, PhD, FAAN
Claude Moore Nursing Education Building, UVA School of Nursing
P.O. Box 800826
Charlottesville VA 22908-0782
Telephone: (434) 924-0141
Email address: cfk9m@virginia.edu

If you have questions about your rights in the study, contact:
Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences
One Morton Dr Suite 500
University of Virginia, P.O. Box 800392
Charlottesville, VA 22908-0392
Telephone: (434) 924-5999
Email: irbsbshelp@virginia.edu
Website: www.virginia.edu/vpr/irb/sbs

Agreement:
I agree to participate in the research study described above.

Signature: _____ **Date:** _____

You will receive a copy of this form for your records.

Revision date: 11/01/11
Page 2

IRB-SBS Office Use Only	
Protocol #	2017-0351-00
Approved	from: 8/23/17 to: 8/22/18
SBS Staff	SMG

Figure 10 Consent Form

Figure 11

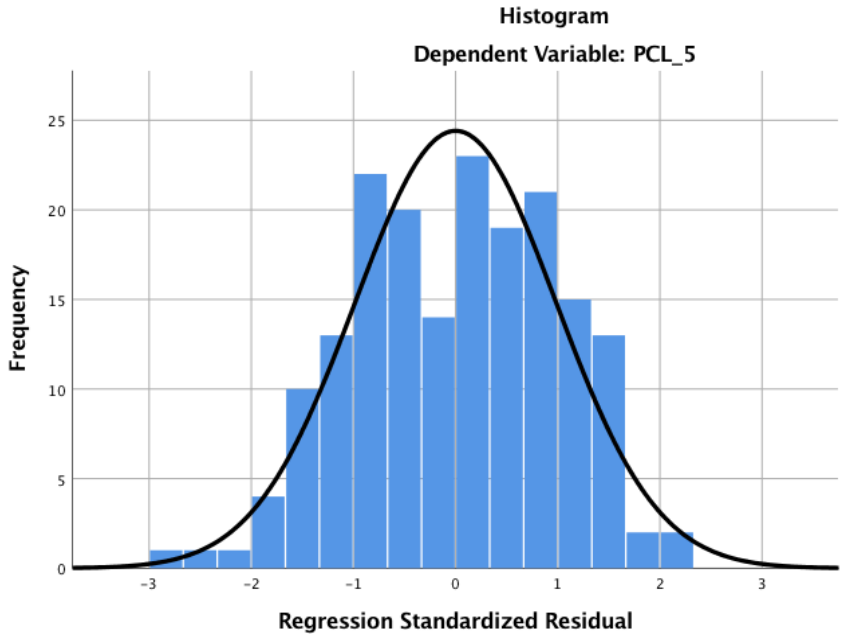


Figure 12

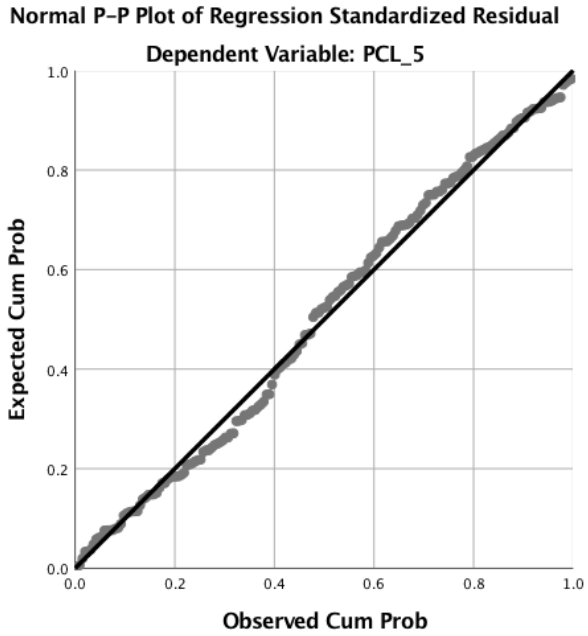


Figure 13

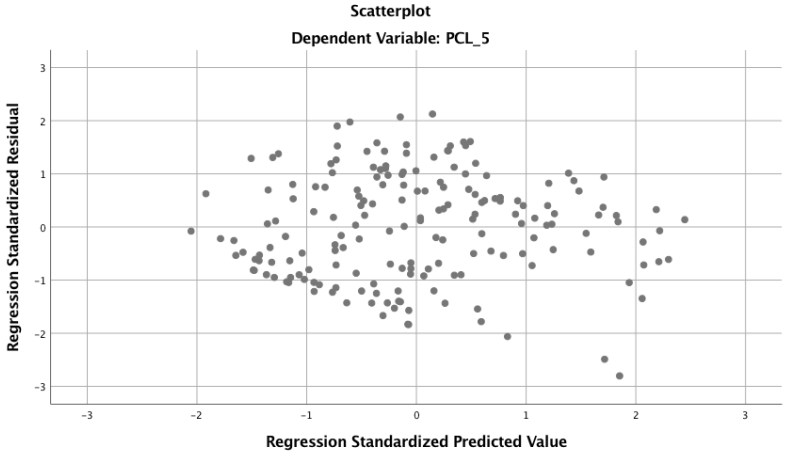


Figure 14

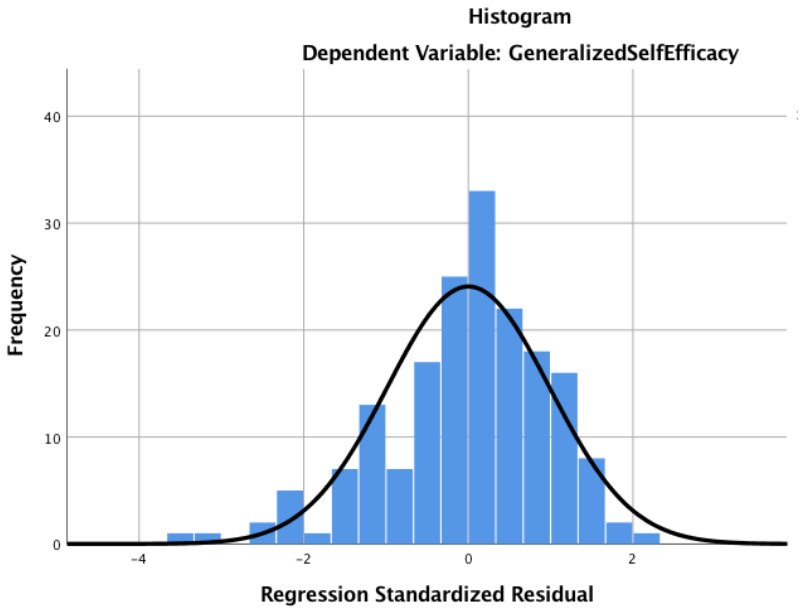


Figure 15

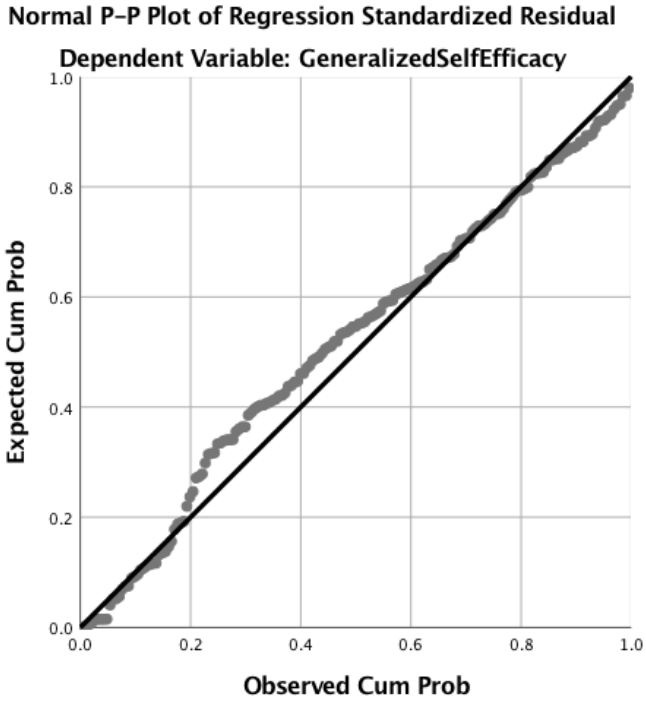
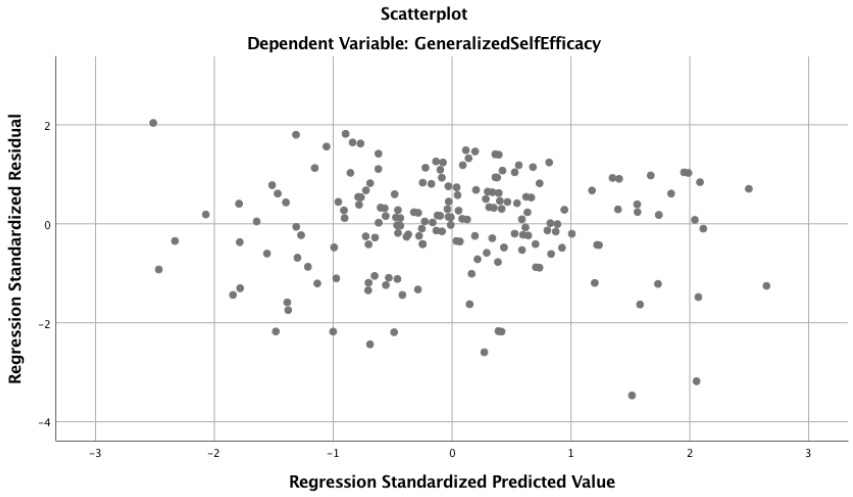


Figure 16



Dr. W. Richard Cowling, III, RN, PhD, ANHN-BC, FAAN, ANEF
Editor
Journal of Holistic Nursing

March 19, 2018

Dear Dr. Cowling,

I would like to submit the manuscript, "Coping Abilities of Military Veterans: Spirituality and Self-Efficacy" by authors Cheryl Major-Cooper, DNP, RN, PMHNP-BC; Catherine F. Kane, PhD, RN, FAAN; Virginia Rovnyak, PhD, Senior Scientist; Ivora Hinton, PhD, Coordinator, Data Analyses and Interpretation, to be considered for publication as original research in the *Journal of Holistic Nursing*.

We declare that this manuscript is original and has not been published or submitted for publication in whole or part to any other source.

We know of no conflicts of interest associated with this publication, and there has been no financial support for this work that could have influenced its outcome.

As Corresponding Author, I confirm the manuscript has been read and approved for submission by all the named authors.

Thank you and the reviewers, in advance, for your assessment of this work.

Sincerely,

Cheryl Major-Cooper, MSN, RN, PMHNP-BC
University of Virginia, DNP Student