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Factors Associated with Suicide Risk
in Female Service Members and Veterans

by

Christine F. McDonough, B.S.

MSW Clinical Research Paper

Presented to the Faculty of the
School of Social Work
St. Catherine University and the University of St. Thomas
St. Paul, Minnesota
in Partial fulfillment of the Requirements for the Degree of
Master of Social

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The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University – University of St. Thomas School of Social Work in St Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Abstract

In an effort to understand suicide risk among female veterans, this research sought to examine any associations between suicide risk with possible risk and protective factors. The study included sixty self-identified female veterans and service members ($n = 60$). Participants identified primarily as Caucasian/White (76.7%) but included participants who identified as African-American/Black, Latino, Asian, American Indian/Alaskan Native, and Bi-Racial/Multi-Racial; ages ranged from 24 to 64 ($M = 37.51$). All types of service and branches of service, excluding U.S. Coast Guard, were represented. This study utilized an anonymous online survey which was primarily quantitative but also included two qualitative questions to gain a better understanding of participant perceptions of mental health care and their coping strategies. Results revealed a sample population with high rates of suicidal ideation (71.7% endorsed SI) and attempts (23.3% endorsed a history of suicide attempts). No statistical significance was identified within original study questions, however, statistical significance was identified between feelings of shame or guilt in regards to military service and both sexual assault and harassment during service. This high-risk sample combined with limited statistically significant findings suggests that service providers need to increase suicide screening with female veterans and a need for additional research.

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Suicide among military service members and veterans has become of increasing concern to those who have served, the public, and policy makers. “The US Department of the Army reported that the suicide rates in soldiers almost doubled between 2005 and 2009. Before the Iraq and Afghanistan wars, the suicide rates among active duty and former military personnel had been 20% to 30% lower than that of the US general population” (Kang et al., 2015, p. 96). According to a report from the Department of Veterans Affairs Office of Suicide Prevention (2016), “in 2014, veterans were 21 percent more likely to die by suicide when compared to their adult civilian peers, adjusting for age and gender” (*Suicide Among Veterans and Other Americans 2001-2014*, p. 24). Recently, the Department of Veterans Affairs (VA) also published a study reporting that the rate of suicide among veterans overall is decreasing; veterans accounted for 18% of all suicide deaths in 2014, an average of twenty veterans took their own lives each day that year (VA Suicide Prevention Program, *Facts about Veteran Suicide*, 2016, p. 1). Despite this overall decrease, the rate of suicide among female veterans continues to increase. Suicide among male veterans was 18% higher than men in the US general population; in comparison, female veterans were 240% more likely to die by suicide than women in the US general population (VA Suicide Prevention Program, *Facts about Veteran Suicide*, 2016, p. 1). In 2015, Caitlin Thompson, the VA’s deputy director for suicide prevention reported that this risk was highest among female veterans age 18 to 29, in which they “were nearly 12 times more likely than other women to take their lives” (Wax-Thibodeaux, 2015, n.p.).

According to Military OneSource, in 2014 women comprised 16.5% of the total US military force (2014 Demographics Report), a number that has increased since removing the cap on the number of women in the service and surged during Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). With more women serving in the military, the need for

proper understanding of their mental and physical health increases. According to the VA, since 2005 they have seen a “154 percent increase in the number of women veterans accessing [Veterans Health Administration] mental health services” (VA Suicide Prevention Program, *Facts about Veteran Suicide*, 2016, p. 3). Despite this increase there is still less data regarding female veterans specifically than male alone or both male and female, historically and still today.

The Department of Defense (DOD) is responsible for tracking suicide among active duty members, however, following an exit from military service, the DOD is unable to continue to track the ongoing mental health of past service members. Instead, the VA is expected to begin to track these statistics for those who are no longer in active military service. The primary resource for research regarding the health of veterans comes from the VA or is funded by the VA. As a result of this structure, the literature often uses samples of veterans who utilize VA services. Given that the VA is the organization responsible for tracking these statistics it is understandable that they would be the primary research body. However, “only 25% of veterans use VHA services” (McCarten et al., 2015, p. 360) which ignores a huge percentage of the population and may skew the data surrounding veteran mental health. Additionally, according to the National Center for Veterans Analysis and Statistics (2016), female veterans only make up 9% of the veterans served by the VA, which may influence the focus of research to be geared towards male veterans rather than female or both. For this reason, this study seeks to focus on women who may or may not receive services from the VA.

Women are dying by their own hand after serving their country and attention is not being brought to this sub-population of veterans. Suicide among female veterans needs to be more directly addressed, there is currently limited research specific to female veterans and it is time for research to be expanded. This study seeks to expand the knowledge regarding suicidality among

this sub-population and identify predictive factors for suicidal ideation among the female veteran population.

Literature Review

As the wars in Iraq and Afghanistan surged mental health had become of increasing concern. Mental health concerns continue today as the wars draw closer to the end of active operations. “In late 2005, mental health experts warned that the intensity of warfare in Iraq and Afghanistan could cause more than 15% of service members returning from those conflicts to develop posttraumatic stress disorder (PTSD), with a total of nearly 30% needing some kind of mental health treatment” (Akaka, p. 72, 2007). A study conducted by RAND Corporation, published in April 2008 reports, “nearly 20 percent of military service members who have returned from Iraq or Afghanistan – 300,000 in all – report symptoms of post-traumatic stress disorder or major depression”. This indicated high level of veterans with PTSD and major depressive symptoms is especially concerning due to the research regarding suicide attempts among veterans with these diagnoses.

Warrior Ethos and Mental Health Stigma

The stigma surrounding mental health is something that is present in most of American society, however, this stigma is magnified among the ranks due to military values and what is known as the warrior ethos internalized by its members. The warrior ethos is a code of conduct that embodies a life where integrity, loyalty, selflessness, and courage are one’s guide. This code of conduct is instilled early on in a military career and shape the ways in which military members devote their lives. While this ethos produces a superior fighting force, it also produces a culture that sees mental health issues as a source of weakness. This weakness is something that

prevents military veterans from seeking supports in addressing these issues and is evidenced in a study conducted by Bryan & Morrow (2011) which reports

up to one in five veterans of OIF screened positive for either depression, anxiety, or acute stress; however, less than half sought help for their mental health problems, due primarily to concerns that leaders would treat them differently, that peers would view them as weak and have less confidence in their abilities, and that seeking mental health assistance would negatively impact their career (p. 16).

The warrior ethos is a piece of military culture that must be understood and taken into consideration when working with the veteran population. This allows professionals to be both culturally competent but also prepared for the possible stigma a veteran may be facing internally and externally when deciding whether or not to seek help. In a study conducted by Pietrzak et al. (2010); researchers found that suicidal ideation was associated with increased stigma (p. 105); this may be in part affected by the warrior ethos.

Suicide Among Veterans

According to the American Foundation for Suicide Prevention (AFSP), suicide is the tenth leading cause of death in the United States (AFSP, 2015). In striking contrast, the Pentagon reports that while war was the leading cause of death for military members between 2004 and 2011; in 2012 and 2013 suicide became the leading cause of death surpassing war, heart disease, and unintentional injury (Corr, 2014, p. 2). Increased attention was brought to this issue in 2014 when the aforementioned data was published. Suicide among military members and veterans has been increasingly studied since the mid-2000s when suicide rates doubled according to the Department of the Army. Some studies have found that suicide among OIF and OEF veterans

“mirror past studies with Vietnam veterans that have also found a relationship between mental health symptoms and level of risk for suicide” (Maguen et al., 2015, p. 120).

Access to firearms among veterans and the use of firearms for suicide completion is of particular concern when seeking to understand suicide among this population. According to McCarten et al. (2015), “firearms have been shown to account for a disproportionate number of veteran suicides”, accounting for “69% of suicides among men” and “38% of suicides among women” (p. 360) or 53.5% of veteran suicides overall, compared to 55.6% of suicides among men, 30.5% among women, and 49.8% of all suicides in the United States (Centers for Disease Control, 2016). In a study of suicide rates among veterans, the rates “increased significantly from 2001-2002 to 2009-2010” with suicide rates higher among men. However, of note, “a larger increase was observed for female veterans during the study period. Specifically, the rate of suicide among men increased by 15% between the years 2001 and 2010, while the rate among women increased by 35%” the suicide rate for women involving firearms “increased by 75% during the project period” (McCarten et al., 2015, p. 361).

Gender Differences

While suicide is most common in male veterans over the age of 50 (VA, 2016), there is a lack of literature focusing on the female sub-population of US military veterans. Many studies, due to sample population, have not been able to describe the gender differences with confidence. There has been a reliance mostly on data from male veterans likely due to the overwhelming male demographic within the overall population. However, some studies have sought to explore gender differences finding that women report higher rates of depression symptoms than their male counterparts but report lower rates of hazardous alcohol consumption “consistent with the internalizing/externalizing theories of mental health diagnoses” (Maguen et al., 2012, p. 314).

The higher rates of depression were significantly associated with reports of “being injured, exposure to death, witnessing killing, and [military sexual trauma]” (p. 314). Additionally, “comparing suicide rates between male and female veterans, female rate was about a third that of male veterans. However, in comparison with their respective US gender-specific population, the magnitude of suicide risk was higher among female veterans than male veterans” (Kang et al., 2015, p. 97-98). Furthermore, in a study conducted by the VA assessing suicide risk following separation from active duty military service, “for males, suicides decreased by 6.1% on average per year. Among females, the pattern varied, with a hazard rate of 9.1 in the first year following separation, 6.1 in the second year, 15.0 in the fourth year, and 9.9 in the seventh year” (VA, 2015). This suggests that while suicide risk decreases for men, it remains a prevalent problem for female veterans and needs to be continually assessed and addressed among the population.

Risk Factors

In order to understand suicidality among female veterans, it is important to understand the existing research regarding risk factors associated with suicidal ideation. “Research on suicidality has revealed that increased combat exposure, active duty versus Reserve/National Guard service, depression, PTSD, substance use problems, psychosocial difficulties, and stigma are associated with increased suicidal ideation and/or attempts” (Pietrzak et al., 2010, p. 102).

Depression, PTSD, and alcohol abuse. Given the high rates of suicide among active duty members and veterans, several studies have sought to explore and identify the risk factors associated with suicidal ideation. One study identified several modifiable risk factors: time between deployment and seeking care, alcohol abuse, distance from their VA hospital, and some wartime traumas associated with suicidal thoughts and a plan for suicide. Similar results have

been replicated in other studies revealing a correlation between suicidal ideation and PTSD (Lemaire et al., 2011) and/or depression diagnoses (Maguen et al, 2011; Pietrzak et al., 2010).

Recent research revealed that veterans who screened positive for PTSD were more than 4 times as likely as veterans who did not screen positive to endorse suicidal ideation, and that the risk for suicidal ideation was 5.7 times greater in veterans who screened positive for two or more comorbid disorders relative to veterans with PTSD only (Surís et al., 2011, p. 605).

Despite this knowledge regarding the impact of PTSD, depression, and alcohol use disorders on veterans, there is little research regarding the association between these disorders and suicidal ideation in female veterans specifically.

Sexual abuse and military sexual trauma. Sexual abuse is discussed throughout the literature as a risk factor for suicidal ideation. In a study conducted by Bryan et al. (2015), results indicated that survivors of premilitary sexual trauma were significantly more likely to report suicide ideation, suicide planning, and suicide attempts... military sexual trauma was not significantly associated with suicidal thoughts and behaviors when adjusting for premilitary sexual trauma.

This, however, does not discount the impact military sexual trauma (MST) can have on its victims. MST is defined by the VA as “experiences of sexual assault or repeated, threatening sexual harassment that a veteran experienced during his or her military service” (Center for PTSD, 2015). In addition to sexual assault and sexual harassment, experiences of unwanted

sexual attention or talk, as well as unwanted sexual touching are considered MST experiences. “Sexual trauma increases the risk of [PTSD], and these experiences have been associated with comorbid depression, anxiety, alcohol abuse, eating disorder diagnoses, and suicidal behavior” (Millegan et al., 2015, p. 299).

Additionally, data “suggests that military sexual trauma is 20 times more common among female than male veterans” (Bryan et al., 2015, p. 247). Despite little being known regarding the association between MST and suicidal thinking (Bryan et al., 2015, p. 247), MST is an important factor to consider when seeking to understand the factors impacting female veterans given the prevalence among the population and the known psychiatric impacts involved. “The risk for PTSD is nine times higher in women who experienced military sexual assault compared to those without any history of sexual trauma” (Surís et al, 2011, p. 605). Given the previously discussed association between PTSD and suicidal ideation, MST is a critical factor to consider when assessing for factors associated with suicidal ideation among female veterans.

More broadly, the research also seeks to understand basic mental functioning and well-being of MST survivors; “women who reported either sexual harassment or assault were proportionally more likely to score in the lowest 15th percentile for mental and physical functioning” (Millegan et al., 2015, p 302). In a 1999 study by Davis & Wood regarding the association of sexual trauma and substance use disorders, “88.9% of the women who had ever abused substances reported they had been sexually abused” (p. 125).

Moral injury. Moral injury is a phenomenon that has been considered as a predictive factor for PTSD recently in evaluations and has increasing literature to support it. Litz et al. (2009) offered a preliminary definition of a morally injurious experience as “perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs

and expectations” (p. 700). Given the high levels of violence experienced by veterans in Iraq and Afghanistan, they are likely to have experienced situations that could be a serious breach of their personal moral code and have lasting effects on their functioning.

In 2003, 52% of soldiers and Marines surveyed reported shooting or directing fire at the enemy, and 32% reported being directly responsible for the death of an enemy combatant. Additionally, 65% of those surveyed reported seeing dead bodies or human remains, 31% reported handling or uncovering human remains, and 60% reports having seen ill/wounded women and children who they were unable to help (Litz et al., 2009, p. 696).

Moral injury has been researched among Vietnam veterans as well as OIF and OEF veterans with many similarities observed between the two populations; this is likely due to the similarities in style of warfare and that non-uniformed enemy combatants lack distinction from the civilian population. “For example, in 2003, 20% of soldiers and Marines surveyed endorsed responsibility for the death of a non-combatant, arguably due to the ambiguity of the enemy” (Litz et al., 2009, p. 696). Additionally, Fontana et al. (1992) “found that more active roles related to killing were more strongly related to PTSD, other psychiatric symptoms, and suicide than passive roles” (Litz et al., 2009, p. 697). Recent research found that “that veterans who reported killing in war had twice the odds of suicidal ideation, even after controlling for PTSD, depression, and substance use disorders” (Maguen et al., 2015, p. 122). Suicidality is an important consideration when attempting to understand the impacts of moral injury, “among a large sample of OIF veterans, killing in combat was indirectly associated with a desire for self-harm and suicidal ideation” (Frankfurt & Frasier, 2016, p. 323).

Protective Factors

Social connectedness is a widely studied and verified protective factor for suicidal ideation across the general population and has been assessed among the veteran population as well. According to Pietrzak et al. (2010), “greater psychological resilience and social support may protect against the development of traumatic stress and depressive symptoms, and may serve as psychological buffers of suicidality” (p. 102-103). Using the Connor-Davidson Resilience Scale (CD-RISC), the Unit Support Scale (USS), and Postdeployment Social Support Scale (PSSS) they examined the psychological resilience and social support among 272 OIF and OEF veterans; they found that higher perceived accessibility of friends and family, unit support, and resilience was associated with lower rates of suicidal ideation (p. 105).

Overall, the current literature provides little information specifically regarding female veterans and suicidal ideation. Some inferences can be made utilizing studies of male veterans and the female general population; the research literature regarding the mental health effects of military sexual trauma are suggestive of long-term physical and mental health consequences, including suicide. This small body of research combined with the current rates of veteran suicide, especially among females when compared to their civilian counterparts, illustrates the need for more research in this area. This study seeks to expand the knowledge regarding suicidal ideation among female veterans and hopes to help inform future prevention and intervention strategies.

Conceptual Framework

To understand what influences the mental health of female veterans and service members this study used three lenses: the warrior ethos, a feminist lens, and the trauma-informed practice

framework. These lenses allow the reader to examine the societal and cultural impact on the study population as well as a well-rounded understanding of the impact of trauma.

The Warrior Ethos

As previously discussed, the warrior ethos is a cultural concept within the military that puts honor, integrity, loyalty, and courage above one's self. This is a concept that is instilled early on in a military career and helps to shape military members into an effective force. This concept is something that has melded to become part of the reason why injury, including mental injury, is seen as weakness. This leads to veterans not asking for help or being afraid to ask for help which may impact the suicidal ideation of service members.

Feminist Theory

The feminist theory was born out of critical race theory with a focus on gender inequality. Using a feminist lens, we can understand the forces that impact female veterans specifically and differentially from their male counterparts. Until recently women were kept from officially occupying combat roles despite the dissolution of a frontline in Iraq and Afghanistan, leading to increased combat exposure for women. Despite this increased exposure there has been little research specific to women to understand the impact of combat exposure on female veterans. By viewing this issue through a feminist lens it becomes apparent that oppression and patriarchy still impact our female service members. Additionally, this theory helps to illustrate the objectivism of women among the ranks by highlighting the disproportionate rate of military sexual trauma among this sub-population.

Trauma-Informed Practice Framework

In understanding suicidal ideation among female veterans, it is important to understand the impact of trauma on a person. By utilizing a trauma-informed practice framework, this study seeks to be mindful of and understand further the impact of trauma on female veterans. According to the Substance Abuse and Mental Health Services Administration (SAMHSA) to be trauma-informed, “a program, organization, or system: 1. *Realizes* the widespread impact of trauma and understands potential paths for recovery; 2. *Recognizes* the signs and symptoms of trauma; 3. *Responds* by fully integrating knowledge about trauma into policies, procedures, and practices; and 4. Seeks to actively resist *re-traumatization*.” Additionally, SAMHSA identifies six key principles for a trauma-informed approach: “1. Safety; 2. Trustworthiness and transparency; 3. Peer support; 4. Collaboration and mutuality; 5. Empowerment, voice, and choice; 6. Cultural, historical, and gender issues” (2015, n.p.). Being mindful of the impact of trauma, this study seeks to identify and illustrate this impact while also working to minimize the effect of the study on its participants and reduce the risk of re-traumatization.

Methods

Research Design

In this study, a survey (Appendix A) was conducted among female veterans to explore the following question: What factors are associated with suicide risk among female veterans? To gain a better understanding of this question, suicide risk will be operationalized using a scale score combining the following survey questions: 1. Have you ever experienced suicidal thoughts? 2. In the past month, how often have you wished you were dead or would not wake up? 3. In the past month, how often have you thought about killing yourself? 4. In the past month, how often have you thought about harming yourself? 5. Have you attempted to end your

life at any time since beginning your military service? 6. Have you engaged in self-harm since beginning your military service?

Using this scale score, differences were analyzed between groups to answer the following sub-questions: 1. Is there an association between perceived lack of social support and suicide risk? 2. Is there an association between lack of service seeking/utilization and suicide risk? 3. Is there an association between combat deployment and suicide risk? 4. Is there an association between exposure to suicide and suicide risk? 5. Is moral injury or witnessing the death of a comrade associated with suicide risk? 5b. And is there a significant difference between the factors that are assessed as moral injury in their association with suicidal thinking? 6. What are the group differences in suicide risk in regards to respondents' branch of service, type of service, race, and source of healthcare? 7. What reported mental health diagnoses are associated with suicide risk? and 8. What reported abuse experiences are associated with suicide risk?

The study aims to highlight the importance of understanding mental health among this sub-population of military veterans and service members by identifying the risk and protective factors for suicidal ideation or behavior among the population. This study is primarily quantitative in design but does include two qualitative survey questions to better understand the experiences of female veterans.

Sample

This survey recruited self-identified female veterans who identified as female at the time of their military service to respond to questions regarding demographics, mental health history, military experience, and both actual and perceived presence of risk and protective factors for suicide. Participants must have identified as female and have current or prior military service

experience to complete the survey. The study did not limit respondents beyond identified gender at time of service and military service to allow for a more generalizable sample.

The survey was created using Qualtrics and administered anonymously online. This study will use convenience and snowball sampling procedure by sharing on social media and asking others to share the survey as well. The survey was shared on the Defend Our Defenders social media sites, the researcher's personal Facebook, and on the "Beauties in Boots" Facebook group for female veterans. Additionally, participants were recruited by sharing recruitment flyers (see Appendix B) at a Women Veterans event at the Minneapolis VA Medical Center.

Protection of Human Subjects

In order to protect the participants, the researcher completed a Collaborative Institutional Training Initiative (CITI) providing specific instruction on the protection of human subjects. The research proposal was designed with sensitivity to the protection of human subjects and presented the Institutional Review Board (IRB) for approval prior to recruitment of participants. An informed consent was developed and presented to all participants prior to beginning the online survey. For a participant to consent; they must read the informed consent (see Appendix C) and select 'Agree', if a respondent selected 'Disagree' they were sent a thank you page. Once a participant read and agreed to the consent, they were permitted to complete the survey. Participants were all voluntary and informed that they were allowed to skip non-exclusionary survey items or exit the survey at any time. Additionally, protection is offered to participants via confidentiality; the survey was anonymous and no personally identifying information was be collected.

Due to the sensitive nature of some of the survey questions (see Appendix A for full list of survey questions) and potential for bringing up disturbing history and emotions, the survey

included phone numbers and direct links to resources for mental health and domestic violence, including the National Suicide Prevention Lifeline, Veterans Crisis Line, and the National Domestic Violence Hotline.

Data Collection Procedures and Instruments

This study used a mixed-methods online survey developed using Qualtrics. The survey took approximately fifteen to twenty minutes to complete but was not time limited. The survey consisted of 36 questions (see Appendix A), beginning with basic demographic information to provide context and determine inclusion in the study. This was followed by questions regarding participants' mental health, life experiences, military experiences, and potential risk/protective factors known from the literature regarding suicide among veterans and the general population.

The development of survey questions was informed by a review of current literature regarding mental health and suicidality among veterans. The questions centered on the participant's' mental health and the factors that affect it. If a participant was interested in completing the study they were first shown an informed consent, and must have agreed to before continuing to be assessed for eligibility to participate. The inclusion criterion was that participants, 1. Had military service experience, and 2. Identified as female while in the military.

Data Analysis

Following the data collection period, survey data was analyzed using SPSS (Version 22.0; IBM, 2013) to identify any relationship between suicidal ideation, attempts, and risk or protective factors. Additionally, short answer responses were coded by the researcher to identify common themes among participants' responses and experiences and allowing connection of themes across participants for further exploration of the female veteran experience regarding mental health and suicidality.

In order quantify suicidal ideation based on participants' responses, survey questions 18-24 were adjusted into a scale score to represent relative suicide risk: low, medium, or high. Using this scale score (suicide risk scale score S1), inferential statistical analysis was conducted using chi-squares, independent samples t-tests, and ANOVAs.

Table 1.

Descriptive Statistics: Service History

		Frequency	Percent
Branch	Air Force	22	36.7
	Army	22	36.7
	Coast Guard	0	0.0
	Marine Corps	4	6.7
	Navy	11	18.3
	Multiple	1	1.7
Type of Service	Active Duty	36	60.0
	Reserves	3	5.0
	National Guard	4	6.7
	Multiple	17	28.3
Deployment History	Yes	27	45.0
	No	33	55.0

Results

Sample

In total of 63 persons began the survey, however, three (3) subjects were determined to be ineligible for the survey based on previously identified exclusion criteria (do not identify as female and/or no history of military service). For the purposes of data analysis and understanding of the sample, 60 responses (n=60) were analyzed using SPSS. The majority of respondents identified as White/Caucasian (n=46, 76.7%), but included 4 African American (6.7%), 1 Latino (1.7%), 1 American Indian (1.7%), 3 Bi-racial/Multi-racial (5.0%) respondents, and 4 respondents who identified as having multiple races (6.7%); one respondent did not provide a

response. Respondents represented women between the ages of 24 and 64, $M=37.51$.

Respondents represented all identified relationship statuses: 6 single (10.0%), 38 married (63.3%), 1 widowed (1.7%), 10 divorced (16.7%), and 5 in a committed relationship (8.3%).

Table 2.

Descriptive Statistics: Trauma, Moral Injury, and Suicide

			Frequency	Percent	
Trauma Experiences	Military Sexual Assault	Yes	26	43.3	
		No	32	53.3	
	Military Sexual Harassment	Yes	44	73.3	
		No	15	25.0	
	Domestic/Intimate Partner Violence	Yes	23	38.3	
		No	36	60.0	
	Abuse Prior to Service	Yes	31	51.7	
		No	28	46.7	
	<hr/>				
	Moral Injury	Engage	Yes	20	33.3
			No	36	60.0
		Witness	Yes	24	40.0
No			32	53.3	
Comrade Death		Yes	5	8.3	
		No	51	85.0	
Comrade Injury		Yes	20	33.3	
		No	36	60.0	
Combatant Death/Injury		Yes	9	15.0	
		No	47	78.3	
Civilian Death/Injury		Yes	6	10.0	
		No	50	83.3	
<hr/>					
Suicide		Suicidal Ideation	Yes	43	71.7
	No		16	26.7	
	Suicide Attempt	Yes	14	23.3	
		No	45	75.0	

Findings

The study sample included 22 Soldiers (36.7%), 22 Airmen (36.7%), 4 Marines (6.7%), 11 Sailors (18.3%), and 1 respondent who identified multiple branches (1.7%). The sample included respondents with all types of service, 36 Active Duty (60.0%), 3 Reservists (5.0%), 4 National Guardsmen (6.7%), and 17 (28.3%) with multiple types of service experiences. Twenty-seven ($n = 27$) respondents (45.0%) reported a history of combat deployment with a history of 1 to 4 deployments ($M=1.56$) (See Table 1). Twenty-six respondents (43.3%) identified having a permanent physical injury as the result of military service; 15.0% receive health care from the Department of Veterans Affairs ($n=9$), 15.0% through private insurance and/or provider ($n=9$), 35.0% through Tricare ($n=21$), and 31.7% ($n=9$) through multiple sources.

Additionally, descriptive statistical analysis was conducted to understand the sample population in terms of trauma history, moral injury, suicidal ideation, and suicide attempts; this analysis can be viewed in Table 2 above.

Chi-Square. A chi-square goodness-of-fit test indicates that there was no significant difference in the proportion of high-risk respondents identified in a population who identifies having social support than those who do not.

Correlation. The relationship between the number of deployments and suicide risk was investigated using Pearson product-moment correlation coefficient. There was a weak, positive correlation between the two variables, $r = .010$, $n = 27$, indicating that when the number of deployments increased the level of suicide risk increased; however, the data was not statistically significant.

T-Test. An independent-samples t-test assessing the difference in suicide risk between participants with a history of deployment and those without revealed no statistical significance.

An independent-samples t-test was also conducted to compare the difference between respondents who have been exposed to suicide by family or comrades. There was no significant difference in scores for those who have been exposed to suicide and those who have not.

Additionally, an independent-samples t-test was conducted to compare the impact of moral injury on suicide risk among respondents. There was no significant difference in scores for respondents who reported experiencing situations that are often identified as moral injury.

However, while there was no statistical significance between suicide risk and shame or guilt associated with military service or sexual assault, there was statistical significance identified between guilt or shame experienced by respondents and sexual assault ($p = .046$) as well as sexual harassment ($p < .001$) (see Table 3 below).

Table 3.

T-Tests for Sexual Assault and Sexual Harassment with Guilt/Shame and Suicide Risk

	Sexual Assault Yes		Sexual Assault No	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Guilt/Shame	1.1538	.36795	1.7813	.42001
	Sexual Harassment Yes		Sexual Harassment No	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	1.4091	.49735	1.7333	.45774
Suicide Risk	Sexual Assault Yes		Sexual Assault No	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	12.4615	2.76016	11.7500	1.43684
	Sexual Harassment Yes		Sexual Harassment No	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	11.9773	2.41592	12.2000	1.01419

ANOVA. In order to analyze the differences in suicide risk as related to basic demographic variances among respondents, one-way between-groups analyses of variance were conducted. The data showed no statistical significance for race, age, branch of service, type of

service, or healthcare source. An ANOVA was also conducted to analyze the differences between participants reported mental health and the suicide risk of respondents, the data showed no statistical significance.

In an effort to understand the variance between types of abuse and suicide risk among participants, an ANOVA was conducted. There was no statistical significance determined from the data for experiences of abuse prior to military service, intimate partner or domestic violence, sexual assault during military service, or sexual harassment during military service. Additionally, in order to analyze the differences in suicide risk in respondents with multiple reported traumas, one-way between-groups analyses of variance were conducted identifying no statistically significant differences.

Table 4.

Means and Standard Deviations on the Measure of Faith and Spirituality on Suicide Risk

Group	<i>n</i>	Inventory score	
		<i>M</i>	<i>SD</i>
Never	13	13.3846	3.12353
Rarely	7	12.4286	1.61835
Sometimes	12	11.6667	1.07309
Frequently	15	11.8667	2.09989
Always	12	10.9167	1.24011

Note: Post-hoc analysis indicates statistically significant difference in means between the group who identified “Never” using faith and spirituality as a coping mechanism and the group who identified “Always”, $p=.030$

Finally, a one-way between-groups analysis of variance was conducted to explore the impact of spirituality on levels of suicide risk. Participants were divided into five groups according to their identified level of spiritual reliance for coping (Group 1: Never, Group 2: Rarely, Group 3: Sometimes, Group 4: Frequently, Group 5: Always). There was no identified statistical significance between groups, however, the significance does reach towards statistical

significance ($p=.052$) which suggests that with a larger sample there is likely to be statistical significance (see Table 4 above).

Qualitative Findings. In an effort to understand the experiences of female veterans and service members who have sought mental health services an open-ended question was presented asking about their experiences. This data was coded by the researcher and revealed themes of mental health stigma, mixed experiences, services that leave more to be desired, and a lack of cultural competence. These findings help contextualize the quantitative findings reported above.

Discussion

The findings provided above serve as an exploratory answer to the original research question: What factors are associated with suicide risk in female veterans and service members? This study illuminates a critical issue within military mental health, female veterans and service members need to be recognized as a unique and at-risk population. Nearly twenty-five percent of the sample population reported past attempts to end their own lives, even more report having thought about it.

Suicide Risk

Much of the data regarding suicidal ideation and attempts is limited to the general population as the primary data source for suicide statistics. The most recent data from the Centers for Disease Control and Prevention reveal a suicide rate of 6.04 per 100,000 among females in 2015 (Centers for Disease Control and Prevention Data and Statistics Fatal Injury Report for 2015); this contrasted with the rate of suicide among female veterans in 2014, 18.9 per 100,000 (VA Suicide Prevention Program, *Facts about Veteran Suicide*, 2016, p. 2) highlights the disparity between veterans and civilians.

Comparing past data with the data from the present study regarding participants' endorsement of suicidal ideation and attempts demands attention for this high-risk population. This study had a sample population that was very high-risk; 23.3% of respondents endorsing a past suicide attempt and 71.7% endorsing suicidal ideation. Research evaluating suicidal ideation and attempts is limited, especially among veterans. Compared to the limited data available from past studies, the present sample reported a higher rate of lifetime suicidal ideation and attempts than other available data; one study reported 35.1% of participants reporting "a lifetime history of suicide ideation... and 6.8% reported a lifetime history of suicide attempt" (Bryan et al., 2015, p. 249).

Trauma History

Sexual trauma is a key factor studied throughout past literature in regards to suicide risk among female veterans and service members. Past research identifies a significantly higher risk for suicide among veterans who endorse a history of sexual trauma as well as an increased risk of depression, PTSD, anxiety, and substance use disorders which are also associated with higher suicide risk. While the present study does not identify a statistically significant association between premilitary trauma or sexual harassment or assault during military service with suicide risk it does reveal a high occurrence of these experiences among female service members and veterans. Over half (52.5%) of participants endorsed a history of abuse prior to military service, 43.3% endorsed a history of military sexual assault, and 73.3% reported experiencing sexual harassment while in the military. While this was not statistically associated with suicide risk, it was statistically associated with feelings of shame and/or guilt around their military service. Shame and guilt is a common emotion associated with sexual trauma, coupled with avoidant behaviors common to trauma survivors, it becomes decreasingly likely that these women will

seek mental health services or identify as a veteran and consequently may never receive the services they need. The data from the present study reveals just how imperative it is that this sub-population be understood and provided with culturally sensitive and appropriate interventions. It is also important to note, that among those participants who endorsed a lifetime history of suicidal ideation, 54.54% ($n = 24$) report experiencing military sexual assault, and 81.81% ($n = 36$) report a history of lifetime trauma. This suggests the important role trauma plays in risk among this population and the need to screen for lifetime trauma experiences.

Military Specific Experiences

Litz et al. (2009) offered a preliminary definition of a morally injurious experience as “perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations” (p. 700). Within past literature, it has been suggested that moral injury could be a significant risk factor for suicidal thinking and attempts as well as PTSD, depression, and other psychiatric conditions. While the present study did not find a statistical significance to moral injury as it relates to suicide risk, it remains an important factor to consider when working with veterans and service members, including women. 35.71% of respondents identified engaging in actions they feel violated their moral or ethical code and 42.86% identified witnessing such an event; of those participants who identified a lifetime history of suicidal ideation, 47.72% ($n = 21$) identified moral injury and 70.45% ($n = 31$) identified witnessing events that have been identified in previous literature as possible morally injurious events. This suggests that while prior research has focused on moral injury in male veterans, it is an important factor to consider among this sub-population. With increased combat engagement by female service members and changing military roles this incidence has the potential to increase and should be further monitored as a possible warning sign.

The Centers for Disease Control identify local epidemics of suicide and loss as possible risk factors for suicide (CDC, 2016, *Suicide: Risk and Protective Factors*). Among this population, this continues to be an important factor to consider. Among the military population, these two risk factors can easily play into one another. While suicide is the tenth leading cause of death among the general population, in 2012 suicide became the leading cause of death among military members. This is a community epidemic, but it also increases the chances of loss experienced by military service members and veterans, because now not only are they losing their friends and comrades to war and other previously common causes of death but also suicide. Presently many mental health providers screen for a familial history of suicide, however, that does not extend to friends or the families of creation that many service members have out of necessity due to isolation from their families of origin or biological creation. For this population, it could be a very important factor to consider additionally to standard considerations as relationships forged in the military can be greatly impactful and important for the service member or veteran.

Protective Factors

The Centers for Disease Control identify both cultural or religious supports, and family and community support as protective factors in preventing suicide (CDC, 2016, *Suicide: Risk and Protective Factors*) which led this researcher to explore social connectedness as well as faith and spirituality as possible protective factors among the female veteran and service member population. While there was not a statistically significant difference between respondents who identified having social support and those who did not relative to their suicide risk as operationalized in this study, it may have been influenced by the high rate of respondents who identified having social support compared to the few who did not. Only four respondents

reported not feeling as if they had social support; this may be influenced by the high rate of reported marriage or serious romantic relationships among survey respondents compared to the general population. Among respondents 63.33% ($n = 38$) reported being married with an additional 8.33% ($n = 5$) in a committed relationship and only 16.67% ($n = 10$) reporting divorced. Compared to data from the Bureau of Labor Statistics (2013) reporting that in a longitudinal study that “approximately 44.2 percent of first marriage” ended in divorce. This, as a result, suggests that social connection, including connection creating through romantic partnerships, could be a mediating factor in suicide risk and should continue to be studied and assessed when working with this population.

Help-Seeking Behaviors

This study shows that female veterans are willing to seek help when it is needed, with 81.7% of survey participants reporting having sought mental health services, before, during, and following their military service. This suggests that while the population is high risk, there is an opportunity for intervention to alleviate the overall risk. However, this study also illuminates the problems that female veterans have experienced when seeking the help and care that they need. One respondent stating “When I was [active duty] they [doctors] would ask if you just wanted medication versus listening to you. After [active duty] it was for [domestic violence] related trauma and they had as [little] of an idea [of how] to handle my situation as I did. Both times I [quit] after the second session.” This highlights the ways in which many female veterans and service members feel misunderstood and unseen; leaving them to feel as if seeking help is not worth it. Another respondent reported, “the second time, I contacted Military OneSource and got my own counselor. It was easy and I received care from a very competent doctor. I just wish there were more women in the psychiatric services who had been in the military because I spent

a lot of time explaining what things were military wise.” This reveals the positive impact that providers can have for female veterans seeking services but also the impact of military cultural competence the way in which lack of military competence can impede the therapeutic process.

Additionally, the responses from survey participants show the effect stigma surrounding mental health issues has on mental health care seeking behaviors with a consistent theme of stigma impeding their choice to ask for help emerging throughout the responses given by participants. One respondent saying “while in [the military], I was degraded for seeking help due to being in a male-dominated career field. After I got out, the mindset still hasn’t changed in me.” Similarly, another respondent reported, “[I] don’t trust it” while another reported the importance of being able to seek care off base where her unit and comrades would not know and thus prevent the stigma from impacting her career. Stigma is an additional risk factor identified by the CDC for suicide and may be amplified among this sub-population due to the cultural norms and warrior ethos. This highlights the importance of providing sensitive and supportive care to veterans and service members in an effort to combat this stigma and create meaningful change for those seeking mental health support.

Not all the experiences reported were negative, with many survey participants reporting that seeking help was beneficial and supportive, including “they saved my life,” and “I can’t handle life and fall apart. This, I’ve had to seek mental health services to stay sane and alive.” Another respondent highlighted both the positive impacts of mental health services and the cultural misunderstandings previously discussed, stating

[I had a] positive [experience] at the VA women’s clinic. Though not a veteran, I found the practitioner to be understanding and knowledgeable about the military experience. In the community, I found it difficult to connect with the two providers I sought services

from. There seemed to be a substantial lack of basic knowledge about the military experience, especially the female veteran experience.

This statement joins the other themes identified within the data to highlight the ways in which cultural competence and understanding of the unique experiences of female veterans are critical to reaching and positively impacting this population. This is something that needs to be understood and considered when working in social work or other mental health fields to provide good services to the women who have served our country.

As illustrated by the experiences reported by survey respondents, the impact of mental health services can vary between individuals and service providers. Some women reported having positive experiences right away, other not until the second, third, or fourth time seeking services and many who had negative experiences and never seeking services again. This emphasizes the need for mental health workers, including social workers, to be competent and supportive clinicians when working with this population.

Implications for Social Work Practice

The National Association of Social Workers (NASW) Code of Ethics charges social workers to be culturally competent and continue to increase their cultural knowledge about the clients they serve. From this study, it appears that one of the biggest challenges for female veterans and service members seeking mental health services is a lack of cultural competence and understanding of the female military experience, especially from other female providers. This is something that social workers can and should address in their practice settings, regardless of the known population of female veterans and service members for which they may be caring.

Additionally, with the shame associated with their military service, female veterans may not outwardly identify their military experience which is why it is important for social workers to

ask about military history and connections when working with new clients. Anecdotally, this researcher has observed the impact of shame on female veterans identifying as such, instead, refusing to acknowledge their military service or seeking veteran services due to the urge to avoid triggers for previous trauma experiences associated with military service. This includes experiences of sexual assault, but also combat experiences and shame in actions taken in a war they do not morally support for a country that may be losing its honor, respect, and worthiness in their eyes. Additionally, PTSD tends to make people avoid things that remind them or trigger memories about their trauma, this may be one of the ways in which female veterans avoid re-traumatization by avoiding systems and supports available for military service members.

The findings of this study identify additional implications for social work, including the challenge of screening for and assessing for risk among this population. The findings suggest that of the variables considered in the present study as possible risk or protective factors are not enough to screen and assess female veterans and service members for suicide risk. There is a need for social workers who work with female veterans and service members to be mindful of this high-risk population and have a thorough understanding of the nuances of shame and how to work with it when working with this population. It is also critical that social workers and other service providers ask explicitly about suicidal ideation, attempts, and self-injurious behaviors. Without explicit assessment for these things, clients could feel unable to speak up when feeling misunderstood and remain silent to a deadly end.

Implications for Policy

Policy is similarly impacted by the findings of this study as social work practice. These findings suggest the importance of screening for suicide risk with all female veterans and service members, not only those with trauma histories or combat deployments. Additionally, this study

suggests that organizations should also ask new clients about military service history in an effort to identify and provide culturally sensitive care.

Additionally, the findings of the present study suggest that more attention should be given to this sub-population when considering safety and suicide risk. The VA has programs in place for suicide prevention which has reportedly lowered the overall rate of suicide among veterans, however the rate among female veterans continues to increase. The present sample highlights the high-risk nature of this population and suggests that more needs to be done to understand this sub-population and create effective prevention strategies as well and appropriate intervention strategies.

Implications for Future Research

The present study implores future research to be conducted in an effort to expand the understanding of female veterans, service members, and their mental health needs. This study had a sample population that self-reported as high-risk, this is similar to the research regarding suicide completion but expands on the knowledge regarding suicide risk.

As noted previously, the present study population reported higher rates of suicidal ideation and attempts than other comparable studies; this may suggest that risk for suicide may be higher than is believed and reveals a moral imperative to expand the knowledge regarding suicide risk among female veterans. This high-risk sample demands to be further studied and understood to make meaningful change to the suicide completion rate among female service members and veterans. Additionally, continued research regarding this population using different data analysis techniques may provide a broadened or clearer picture of this sub-population and its needs.

Strengths and Limitations

It is necessary to address the strengths and limitations of this study in order to put perspective to the findings. A primary strength was the high-risk sample population used in the study. This allowed for meaningful statistical analyses to be conducted in an effort to better understand the impact of the study's risk and protective variables on suicide risk. This suggests an additional strength of this study; the high-risk sample highlights the critical need for studying and understanding this population. With a sample population in many ways reflective of prior research but also in some ways higher-risk it becomes increasingly apparent that this population cannot continue to be ignored in social work and mental health research. This study builds on past research and suggests a direction for future research and improvements to mental health care for female veterans and service members. Additionally, this study has strength in the representation within the sample population which racially is reflective of current military demographic data. This helps to improve the generalizability of this study to the population this study seeks to understand.

While this study is perceived to have strengths, there are also limitations that must be discussed. One hindrance is that this study is limited due to sample size ($n=60$); with a limited study sample, the results may not be generalizable to the intended population of study. Additionally, as a nonprobability sample, the findings may not be generalizable to the overall female veteran population. Finally, while the survey was created by the researcher and was informed by the research and previously used scales, it was not tested for validity or reliability.

Additionally, although the research was disseminated via social media and had the potential for national responses, recruitment flyers were only distributed in Minnesota and may sway the data based on the type of service as Minnesota has one of the largest National Guard presence in the country. This research highlights areas for potential future research or replication.

Conducting similar research with a larger and potentially more diverse population may yield different results.

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Appendix A

Survey

Section 1: Inclusion/Exclusion

1. What gender did you identify with at your time of service? ‘Male’, ‘Female’, ‘Other’
 - a. If participant responds with ‘Male’ or ‘Other’ they will be sent to the thank you page
2. Have you ever served in the United States military? ‘Yes’, ‘No’
 - a. If participant responds with ‘No’ they will be sent to the thank you page

Section 2: Demographic Questions – *The following section consists of 8 questions regarding basic demographic information about you, your military service history, service connected disabilities, and healthcare source. You may choose to continue to the questions, skip to the next section, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

3. Branch of Service: ‘Army’, ‘Air Force’, ‘Marines’, ‘Navy’, ‘Coast Guard’
4. Type of Service: ‘Active’, ‘Reserve’, ‘National Guard’
5. Current Age: [enter a number]
6. Race [select all that apply]: ‘White/Caucasian (non-Hispanic)’, ‘African American’, ‘Latino’, ‘American Indian/Alaskan Native’, ‘Asian’, ‘Bi-racial/Multi-racial’
7. Relationship status: ‘Single (never married)’, ‘Married’, ‘Divorced’, ‘In a committed relationship’
8. During your time in service were you ever deployed to a combat zone? ‘Yes’, ‘No’
 - a. If yes, how many times? [enter a number]
9. Do you have a permanent physical injury as a result of military service? ‘Yes’, ‘No’
10. What programs do you use to access health care (physical and behavioral)? [select all that apply] ‘VA’, ‘Private provider/insurer’, ‘Tricare’

Section 3: Mental Health Seeking Experiences – *The following section consists of 2 questions regarding your personal history of seeking mental health supports. You may choose to continue to the questions, skip to the next section, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

11. Have you ever sought out mental health support? ‘Yes’, ‘No’
 - a. If yes, have you sought mental health support before, during, or after military service?
12. How would you describe your experiences in seeking services for mental health support? [short answer]

Section 4: Emotional, Physical, and Sexual Trauma Experiences – *The following section consists of 4 questions regarding your personal history physical, emotional, and sexual trauma and harassment experiences. You may choose to continue to the questions, skip to the next section, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

13. Did you experience physical, sexual, or emotional abuse prior to your military service? 'Yes', 'No'
14. Have you been the victim of intimate partner violence or domestic violence since beginning military service? 'No', 'Yes'
15. During your military service were you ever subjected to sexual assault? 'Yes', 'No'
16. During your military service were you ever subjected to sexual harassment? 'Yes', 'No'

Section 5: Mental Health and Suicide Experiences – *The following section consists of 2 questions regarding experience of losing someone to suicide as well as 7 questions regarding your personal history of suicidal thoughts and attempts. You may choose to continue to the questions, skip to the next section, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

17. Has anyone in your family ever attempted or completed suicide? 'Yes', 'No'
18. Has any fellow service member you've known during your time in service completed suicide? 'Yes', 'No'
19. Have you ever experienced suicidal thoughts? 'Yes', 'No'
 - a. If yes, did those thoughts occur before, during, or after military service?
20. Have you ever attempted to end your own life? 'Yes', 'No'
 - a. If yes, did the attempts occur before, during, or after military service?
21. In the past month, how often have you wished you were dead or would not wake up? 1: Never, 2: Occasionally, 3: Sometimes, 4: Frequently, 5: Almost constantly
22. In the past month, how often have you thought about killing yourself? 1: Never, 2: Occasionally, 3: Sometimes, 4: Frequently, 5: Almost constantly
23. In the past month, how often have you thought about harming yourself? (i.e. cutting, burning) 1: Never, 2: Occasionally, 3: Sometimes, 4: Frequently, 5: Almost constantly
24. I have engaged in self-injury since the beginning of my military service: 'True', 'False'
25. Please select all diagnoses that you have received: 'Depression', 'PTSD', 'Bi-polar Disorder', 'Anxiety', 'Other (please indicate)'

Section 6: Combat Experiences – *The following section consists of 6 questions regarding experiences you may have had in a combat zone such as doing something or witnessing something you feel compromised you morally or witnessing the severe injury or death of comrades, civilians, or enemy combatants. You may choose to continue to the questions, skip to the next section, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

26. During your time in service did you engage in any actions that you feel compromised your moral or ethical code? 'Yes', 'No'
27. During your time in service, did you witness any event which you feel compromised your moral or ethical code? 'Yes', 'No'
28. During your time in service did you witness the death of a comrade? 'Yes', 'No'
29. During your time in service did you witness the severe injury of a comrade? 'Yes', 'No'

30. During your time in service did you witness the severe injury or death of civilians? ‘Yes’, ‘No’
31. During your time in service did you witness the severe injury or death of enemy combatants? ‘Yes’, ‘No’

Section 7: Impact and Resilience – *The following section consists of 5 questions regarding your feelings and emotions regarding your service, social/familial supports, faith/spiritual supports, and coping strategies. You may choose to continue to the questions, skip to the conclusion of the survey, or leave the survey. You may choose to decline an answer to any questions you choose if you choose to continue.*

32. Do you feel you hold any guilt or shame due to any experience you had while in the military? ‘Definitely yes’, ‘Probably yes’, ‘Might or might not’, ‘Probably not’, ‘Definitely not’
33. I believe that I have family and/or friends whom I can rely on: 1: Never, 2: Rarely, 3: Sometimes, 4: Frequently, 5: Always
34. I rely on spiritual/faith based beliefs in difficult times: 1: Never, 2: Rarely, 3: Sometimes, 4: Frequently, 5: Always
35. I take pride in being a service to my country: ‘Yes’, ‘No’, ‘Sometimes’
36. Are there other things that help you to get through tough times? ‘Yes’, ‘No’
- a. If yes, please describe:

The following header will be included on each subsection description/opt-in page where participants are given an explanation of types of questions that will be asked in the following section: *If you are in crisis/in need of support following participation in this survey contact the Veterans Crisis Line at 1-800-273-8255 and press 1, text 838255, or visit www.veteranscrisisline.net to chat online. For support/crisis regarding domestic violence contact the Domestic Violence Hotline at 1-800-799-7233 or visit www.thehotline.org.*

Appendix B
Recruitment Flyer for Women Veterans Event

FEMALE VETERAN MENTAL HEALTH RESEARCH

Recently attention has begun to focus on the mental health and suicide prevalence of veterans, but there is very little research focused on the female veteran population despite that female veterans are 2.4 times more likely to complete suicide than their civilian counterparts. As a female veteran I find this shocking and heartbreaking. Women are dying by their own hand after serving their country and attention is not being brought to this sub-population of veterans. Suicide among female veterans can no longer be ignored, it is time for mental health to become better understood for this population.

I am seeking volunteers to participate in a brief online survey regarding mental health, life, and military experiences. The results of this study will be used to expand the knowledge regarding female veteran mental health and to help inform more appropriate intervention for the population.

WARNING: The content of the survey may be triggering. Please take measures to take care of yourself. Your participation is greatly appreciated.

ELIGIBILITY TO PARTICIPATE

- At least 18 years old
- Female
- Have a history of military service

WAYS TO PARTICIPATE

- Go to: https://stthomas.az1.qualtrics.com/jfe/form/SV_3mzksgyPW5SX3Dv
- Scan QR Code

CONTACT INFORMATION

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This research has been reviewed and approved by the St Catherine University Institutional Review Board (IRB) and is in no way affiliated with the Department of Veterans Affairs (VA).

Appendix C

Informed Consent

You are invited to participate in this project because you are a female US military veteran. This project is being conducted by Christine McDonough, student in the Master of Social Work program at St. Catherine University and University of St. Thomas. The purpose of this survey is to explore the associations of risk and protective factors with suicidal ideation and mental health outcomes among female US military veterans. The survey includes items about experiences during military service and mental health. It will take approximately 15-20 minutes to complete.

Given that some survey questions regard sensitive subjects there is a risk of unpleasant and/or disturbing memories or thoughts developing during or after completion of the survey. The survey will include questions regarding past trauma experiences both in and out of combat, such as “Did you experience physical, sexual, or emotional abuse prior to your military service?” or “During your time in service did you witness the death of a comrade?” Additionally, the survey will ask about mental health experiences, suicidal ideation, and suicide attempts, such as “In the past month, how often have you wished you were dead or would not wake up?” or “Has anyone in your family ever attempted or completed suicide?” The survey will be divided into sections with descriptions prior to the questions about the nature of the questions to allow you to self-select what types of questions you are comfortable being asked and answering. If at any time, you are uncomfortable with the questions you may skip them or decline to finish the survey if you wish. Due the content of the survey having the potential to trigger disturbing memories or experiences, please take measures to take care of yourself. If you are in crisis/in need of support

following participation in this survey contact the Veterans Crisis Line at 1-800-273-8255 and press 1, text 838255, or visit www.veteranscrisisline.net to chat online. For support/crisis regarding domestic violence contact the Domestic Violence Hotline at 1-800-799-7233 or visit www.thehotline.org.

Your responses to this survey will be anonymous and results will be presented in a way that no one will be identifiable. Confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties.

Your decision whether or not to participate will not affect your relationships with the researchers, your instructors, or St. Catherine University. If you decided to stop at any time you may do so. You may also skip any item that you do not want to answer. If you have any questions about this project, please contact Christine McDonough (cfmcdonough@stkate.edu). By responding to items on this survey you are giving us your consent to allow us to use your responses for research and educational purposes.