

RESILIENCE AMONG VETERANS:
AN ARCHIVAL STUDY

by

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THESIS ABSTRACT

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Title: Resilience Among Veterans: An Archival Study

To investigate resilience against combat stress, 175 interviews from the Veterans' History Project were coded using the Deployment Risk and Resiliency Inventory and analyzed using the Linguistic Inventory and Word Count. Contrary to hypotheses, higher levels of social support did not predict psychological outcomes, nor did social support differ between wars. Low variance in the social support measure likely contributed to the null results. The amount of combat experiences the veteran discussed did significantly predict psychological outcomes, replicating previous findings. This indicates that the LIWC measures are good indicators of psychological outcome.

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For my family, who have always encouraged me to follow my dreams and supported me throughout my pursuit.

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CHAPTER I

INTRODUCTION

Since the terrorist attacks of September 11th, 2001, more than two million soldiers have been deployed to Iraq and Afghanistan through Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Many have been returning with mental illness. Hoge, Auchterlonie, and Milliken (2006) found that 35% of Iraqi war veterans accessed mental health services within a year of returning to the United States. When examining rates of post-traumatic stress disorder (PTSD) alone, a number of studies have indicated that approximately 20% of soldiers returning from Iraq met the Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for PTSD (Engelhard, Huijdin, van den Hout, & de Jong, 2007; Giordano & Walter, 2007; Hoge et al., 2006).

These rates have not been seen since the Vietnam era in which estimates of PTSD range from 15-20% (Centers for Disease Control Vietnam Experience Study, 1988; Kulka et al., 1990). Unfortunately, rates of comparable trauma-related psychological injury in World War II and the Korean War were not found in a search of the literature. This difficulty in comparison may be due to the ever-changing presentation of traumatic stress symptoms (Kirkwood, 2007; Krippner, 2007). The current study attempts to compare psychological outcomes between these wars and how factors like combat exposure and social support may affect these outcomes.

Combat Exposure

Of all the demands placed on soldiers during deployment, none has been more consistently linked to negative psychological outcomes than combat exposure. Examples of combat exposure include engaging in firefights, being attacked or ambushed, seeing

dead bodies or human remains, being wounded, witnessing someone being seriously injured or killed, and being directly responsible for the death of an enemy combatant. Multiple studies of World War II, Korean, and Vietnam veterans have linked higher levels of combat exposure to negative psychological outcomes (Centers for Disease Control Vietnam Experience Study, 1988; Fontana & Rosenheck, 1994; Kulka et al., 1990) and this finding seems to be maintained in current studies of Iraq and Afghanistan veterans (Castro & McGurk, 2007; Operation Iraqi Freedom Mental Health Advisory Team, 2003, Smith et al., 2008).

Social Support

The warfighter's social support network has been shown to be a crucial part of resilience to post-traumatic stress disorder (King, King, Fairbank, Keane, & Adams, 1998). In a 2001 study, Bliese & Britt found that positive social environments interrupted both the positive relationship between stress levels and depression, and the negative relationship between stress levels and morale among deployed U.S. Army troops. Social support factors such as leadership climate and unit cohesion have also been shown to ameliorate the negative effects of stress in general (Halverson, Bliese, Moore, & Castro, 1995). In addition, a stronger sense of unit cohesion predicted fewer post-traumatic stress disorder (PTSD) symptoms (Brailey, Vasterling, Proctor, Constans, & Friedman, 2007). Not only does a strong social support network serve to protect against the deleterious effects of stress, but difficulties in a soldier's social support network also predict negative outcomes. Among soldiers returning home from the Persian Gulf War, reported troubles with a coworker or the chain of command consistently predicted PTSD symptoms (Adler, Vaitkus, & Martin, 1996). The link between social support and psychological outcomes

has been so well established that a number of recent papers have called for military training processes to include a socialization component in order to improve psychological health (Bates et al., 2010; Greenberg & Jones, 2011).

Current Study

The current study attempts to examine levels of social support and combat exposure among soldiers from each of the major conflicts in which the United States has been involved in the last seventy years, and to discern if differences in social support and combat exposure have led to different psychological outcomes by war. Combat exposure is hypothesized to predict psychological outcomes, consistent with previous findings, and social support is predicted to moderate this effect. These results would indicate that the soldiers' social support system had helped build resilience to the demands placed on them during combat. The exploratory nature of this study will also hopefully help delineate differences in combat exposure, social support, and psychological outcomes between wars such that new hypotheses may arise as to whether the current wars are somehow different than past wars.

CHAPTER II

METHOD

Data Source

The Veterans' History Project is an online database maintained by the Library of Congress that collects first-hand accounts of U.S. veterans from World War I, World War II, the Korean War, the Vietnam War, the Persian Gulf War, and the Iraq and Afghanistan conflicts. At the time of writing, the collection had approximately 74,000 veterans' accounts of their wartime experiences, of which approximately 11,000 had been digitized and made available to the public through the Veterans' History Project website (<http://www.loc.gov/vets/>). The current study used transcripts from this database in order to code for social support, combat exposure, and psychological outcomes.

Thirty-five transcripts were selected at random from each of the five following conflicts: World War II – European Theater, World War II – Pacific Theater, Korean War, Vietnam War, and Iraq/Afghanistan (comprised of both the Persian Gulf War and the current conflicts). The European and Pacific theaters of World War II were separated because of the very different nature of the two theaters. The European theater was a slow, progressive fight across Europe, whereas the Pacific theater consisted of island-hopping and short bursts of combat activity. It seemed plausible that combat exposure or social support might differ between the two styles of warfare. The Persian Gulf War and the current Iraq and Afghanistan conflicts were combined for two reasons: first, the conflicts are very similar in both style of fighting and locale, and second, compared to other wars, there was limited data for veterans of these three wars. Transcripts were set aside and replaced for the purposes of the current study if the veteran served in multiple wars, or

did not actively deploy to the combat zone. Veterans of multiple wars were ruled out because of potential confounds between the emotions expressed about each individual war.

Measures

Deployment Risk and Resilience Inventory

Social support and combat exposure were measured using the Deployment Risk and Resilience Inventory (DRRI; King, King, & Vogt, 2003). The DRRI is a self-report measure with 14 sections, each of which focuses on a different aspect of a soldier's experience pre-, during, and post-deployment. Each section has between seven and twenty items. This measure has high internal reliability (King, King, Vogt, Knight, & Samper, 2006) as well as criterion-related validity and discriminative validity (Vogt, Proctor, King, King, & Vasterling, 2008). Although this inventory was developed as a self-report measure, the items were specific enough to allow it to be used as a coding scheme with some modifications. Possible responses were altered to reflect a coder's perspective rather than a first-person perspective. For example, an original DRRI item read, "I went on combat patrols or missions," with the option of selecting either "Yes," or "No," as a response. In the modified version of the DRRI, this item was changed to, "The veteran went on combat patrols or missions," with the potential codes of "Unknown," "No," or "Yes" (for the original DRRI and the modified version used for coding in this study, please see appendices A and B, respectively).

The author and several research assistants completed the coding using the modified version of the DRRI. To ensure reliability, research assistants coded five "training" transcripts and had to achieve 90% agreement with the author's coding on

three consecutive transcripts to code transcripts on their own. If this criterion was not met, research assistants coded additional “training” transcripts until they reached 90% agreement.

Linguistic Inquiry and Word Count

Soldiers’ psychological outcomes were assessed using the Linguistic Inquiry and Word Count (LIWC; Pennebaker, Francis, & Booth, 2001) text analysis software. The LIWC computes the percentage of words in each text that fit within categories such as positive emotion, negative emotion, cognitive mechanisms, and perceptions. It has been well validated, and is especially good at detecting emotion within texts (Bantum & Owen, 2009; Tausczik & Pennebaker, 2010). For the purpose of the current study a transcript high in positive emotion and low in negative emotion indicated a positive psychological outcome; a transcript low in positive emotion and high in negative emotion indicated a negative psychological outcome. Transcripts that were equally high or low in both emotion categories indicated a neutral outcome. Negative emotion scores were subtracted from positive emotion scores for each transcript to create an overall measure of psychological outcome. A positive score represents a positive psychological outcome and vice versa. Although previous studies have shown that positive emotion and negative emotion are based in two separate systems (Cacioppo & Berntson, 1999; Cacioppo, Berntson, Larsen, Poehlmann, & Ito, 2000), the composite measure is more applicable to overall psychological outcomes. Studies have also demonstrated that individuals can feel both positive and negative emotions concurrently (Larsen, McGraw, & Cacioppo, 2001), which may be particularly relevant to veterans reflecting on wartime experiences. Before running transcripts through the LIWC, extraneous information such as speaker

identification and interviewer's questions were removed, leaving only the veterans' words.

Data Analysis

Of the modified DRRI, three items from the "Unit Support" section and all fifteen items from the "Combat Experiences" section were used in analysis. All other items were excluded if less than 10% of coded transcripts had valid responses to that item (non-unknown). The three items from Unit Support were summed to make a composite social support measure, and the items from the Combat Experiences section were summed to make a combat exposure measure (for the DRRI items used in data analysis, see Appendix C).

Based on a number of significant correlations between variables, a MANOVA to determine whether social support or psychological outcomes differed by war. War was used as the independent factor, and social support and psychological outcome were used as dependent variables. A regression was used to predict psychological outcome from combat experience to confirm previous findings, and to serve as a manipulation check that our coding scheme had effectively captured combat experience. Social support was then added to this regression to determine if it predicted psychological outcome outside of combat experience, and an interaction term was also included to determine if moderation was present. For all statistical tests, an alpha level of .05 was used.

CHAPTER III

RESULTS

A significant correlation was found between psychological outcome and combat exposure, $r = -.40, p < .001$. Neither psychological outcome nor combat exposure had significant correlations with social support (See Table 1). A MANOVA revealed that combat exposure differed by war, $F(4,170) = 8.48, p < .001, \eta^2 = .17$, with the World War II – European Theater group driving the significant finding. Bonferroni post-hoc tests showed that veterans from the European Theater of World War II ($M = 4.89, SD = 2.60$) saw more combat than World War II veterans from the Pacific Theater ($M = 2.97, SD = 2.53$), Korean War veterans ($M = 3.14, SD = 2.96$), Vietnam veterans ($M = 2.23, SD = 1.85$), and Iraq/Afghanistan veterans ($M = 1.77, SD = 2.00$), $p = .01, p = .03, p < .001$, and $p < .001$ respectively. No other significant differences were found in combat exposure between wars (See Figure 1). The combat exposure means by war indicated that veterans of earlier wars reported more combat exposure and veterans of recent wars reported less, so a simple regression was run on war predicting combat exposure. The war in which the veteran participated was coded by time such that recent wars had higher numbers. This regression was significant such that more recent wars reported significantly less combat exposure, $b = -.75, t(1) = -4.66, p < .001, r^2 = .11$.

The MANOVA also showed significant differences in psychological outcome by war, $F(4,170) = 3.10, p = .017, \eta^2 = 0.07$. Although a significant overall effect was found, Bonferroni post-hoc tests did not show significant differences between any two wars individually, likely due to the conservative nature of the post-hoc test. Iraq/Afghanistan veterans ($M = 1.00, SD = 0.76$) had the best psychological outcome compared to the other

wars, and veterans of the European theater of World War II ($M = 0.55$, $SD = 0.47$) had the worst, but this difference was non-significant, $p = .08$ (see Figure 2). The psychological outcome means by war indicated that veterans of earlier wars reported worse psychological outcome as compared to veterans of later wars, so a simple regression was run on war predicting psychological outcome. This regression was significant such that more recent wars reported significantly better psychological outcome, $b = .16$, $t(1) = 3.43$, $p = .001$, $r^2 = .064$. Social support did not significantly differ by war, $F(4,170) = 0.164$, ns (see Figure 3).

A regression was used to examine predictors of psychological outcome and the moderation hypothesis. Regressions were used to predict both positive and negative emotion from combat exposure, and both were found to be significant, $b = .043$, $t(1) = 3.49$, $p = .001$, $r^2 = .066$, and $b = -.067$, $t(1) = -4.14$, $p < .001$, $r^2 = .09$, respectively (See Figure 4 and Figure 5). A simple regression revealed that combat exposure significantly predicted psychological outcome such that as combat exposure increased, psychological outcome decreased, $b = -0.11$, $t(1) = -5.80$, $p < .001$, $r^2 = .16$ (see Figure 6). Social support was then added to this model, but it did not explain a significant amount of variance beyond combat exposure, $b = 0.02$, $t(2) = .48$, ns . An interaction between combat exposure and social support was included in the third model to examine moderation effects, but this was also non-significant, $b = .005$, $t(3) = .30$, ns .

CHAPTER IV

DISCUSSION

The hypothesized result of combat exposure predicting psychological outcomes was found in the current study, which replicates previous findings of combat exposure predicting psychological outcomes (e.g., Centers for Disease Control Vietnam Experience Study, 1988; Operation Iraqi Freedom Mental Health Advisory Team, 2003). This provides some confidence in the modified DRRI coding for combat exposure and the positive and negative emotion LIWC scores as representative of psychological outcomes.

The relationship between social support and psychological outcomes, however, was not found. Social support neither predicted psychological outcomes nor did it moderate the relationship between combat exposure and outcomes. Although this contradicts previous findings, it appears to be a failure in the DRRI coding measurement of social support rather than a rejection of the hypotheses, as there was minimal variance in the social support measure overall (see Figure 7). This also may have led to the lack of social support differences found between wars.

Although few significant differences were found in combat exposure or psychological outcome between wars, the results that did appear demonstrate interesting patterns. The tendency for veterans of more recent wars to describe less combat exposure and better psychological outcomes than veterans of past wars could be explained by a number of factors. Older veterans may be more open with their combat experiences because they have had more time to process and make meaning of the things they experienced. This distance from their experiences may allow older veterans to speak

more openly and honestly about the negative experiences they had. Younger veterans may not have had this opportunity, and this may be compounded by the lack of public support for the Vietnam or Iraq/Afghanistan wars. Lack of public support may have caused some veterans to withhold some details of their experiences and be hesitant to share these stories with others.

Another possible explanation for this difference is a change in the proportion of soldiers that experience combat. With the increased de-personalization of the battlefield through expanded use of airplanes, long-range weaponry, and unmanned drones, the proportion of soldiers experiencing actual combat may be decreasing. The current study selected transcripts based on deployment to the theater of war, not on whether a soldier saw combat, so these differences could reflect a larger proportion of soldiers in theater that are not combat troops.

The finding of soldiers from recent wars having better psychological outcomes is also interesting because of the focus and attention that psychological problems in the military have received by both the national media and the military itself in the past decade. In 2010, the Department of Defense presented a new program for soldier wellness entitled “Total Force Fitness” in response to rising suicide rates and large numbers of soldiers returning to the United States with psychological problems (Casey Jr., 2011; Hoge et al., 2004; Jonas et al., 2010). Its well-intentioned goal of building resilience among soldiers to reduce psychological problems may not be as necessary as suggested based on historical context.

Limitations and Future Directions

Problems with the social support measure were key limitations in the current study, allowing no clear conclusions about the role that social support plays in predicting psychological outcomes. Clearly, a more sensitive measure of social support is needed.

Another key limitation to this study is the generalizability of findings to all veterans. The Veterans' History Project is a compilation of interviews conducted since 2000, meaning that any veterans who passed away before that time were not included in the collection. The Veterans' History Project also only includes interviews that have been conducted and donated by citizens, meaning that there has been no systematic sampling of all veterans. These methods may underrepresent institutionalized and homeless veterans, some of whom may have the poorest psychological outcomes based on findings that psychological trauma leads to increased illness and mortality (Boscarino, 1997; Centers for Disease Control Vietnam Experience Study, 1988; Kulka et al., 1990; Spitzer et al., 2009). The Veterans' History Project sampling limitations may mean that veterans with the worst psychological outcomes may not have been included in the current study.

A third limitation is the relatively low number of transcripts analyzed in each group. Future studies should include more participants in the hopes of replicating these findings and providing more power to the data analyses. Not only would this allow for more conclusive results involving the link between combat exposure and psychological outcomes, but, combined with a new social support measure, it could also provide results regarding how social support moderates this effect.

Although the current study had several limitations, it provided useful findings in two specific domains. First, combat experiences play a very significant part in

determining psychological outcomes, explaining approximately 16% of the variation in psychological outcomes. This implies that the coding scheme and LIWC provided adequate measurement of both variables. Second, this study provides evidence that analysis of written text can be used to assess psychological outcomes. This implies that a simple monitoring system involving soldiers writing about their experiences can be a useful tool in targeting soldiers for interventions.

APPENDIX A

DEPLOYMENT RISK AND RESILIENCE INVENTORY



A Survey of
Experiences
Before, During,
and After
Military
Deployment

This survey contains questions regarding your experiences before, during, and after military deployment. No one has had exactly the same experiences that you have had, so your input is very important. There are no right or wrong answers.

Be sure to answer every statement, and press firmly on the page when circling your responses. If you want to change your response, please place an "X" over your original answer, and then circle the more appropriate response.

The survey was prepared with support from the Department of Defense and the Department of Veterans Affairs (PG Grant DoD-87), Drs. Daniel W. King and Lynda A. King, Co-Principal Investigators, Dr. Dawne Vogt, Project Coordinator. For inquiries or further information, please contact Dr. Dawne Vogt at NCPTSD, 116B-5, VA Boston, 150 S. Huntington Ave., Boston, MA 02130; Phone: 617-232-9500, ext. 5976; Email: Dawne.Vogt@med.va.gov

DRRI

SECTION A: PRE-DEPLOYMENT LIFE EVENTS

The statements below refer to events you may have experienced BEFORE YOU WERE DEPLOYED. Please circle "yes" or "no" for each item below.

Before I was deployed, I experienced...

1. ...a natural disaster (for example, a flood or hurricane), a fire, or an accident in which I was hurt or my property was damaged.	Yes	No
2. ...exposure to a toxic substance (such as dangerous chemicals, radiation).	Yes	No
3. ...combat or exposure to a war zone (in the military or as a civilian).	Yes	No
4. ...the mental illness (for example, clinical depression, anxiety disorder), or life-threatening physical illness (for example, cancer or heart disease) of someone close to me.	Yes	No
5. ...a parent who had a problem with drugs or alcohol.	Yes	No
6. ...the death of someone close to me.	Yes	No

Before I was deployed, I had...

7. ...been through a divorce or been left by a partner or significant other.	Yes	No
8. ...witnessed someone being assaulted or violently killed.	Yes	No
9. ...been robbed or had my home broken into.	Yes	No
10. ...lost my job.	Yes	No
11. ...been emotionally mistreated (for example, shamed, embarrassed, ignored, or repeatedly told I was no good).	Yes	No
12. ...seen or heard physical fighting between my parents or caregivers.	Yes	No
13. ...been physically punished by a parent or primary caregiver.	Yes	No
14. ...been physically injured by another person (for example, hit, kicked, beaten up).	Yes	No
14a. [IF YES] did this occur (circle all that apply):	in childhood	in adulthood
15. ...experienced unwanted sexual activity as a result of force, threat of harm, or manipulation.	Yes	No
15a. [IF YES] did this occur (circle all that apply):	in childhood	in adulthood

SECTION B: CHILDHOOD EXPERIENCES

The sentences below refer to your family when you were growing up. Please read each statement and decide how often it was true for your family by circling the number below the appropriate response. If you spent time in more than one family setting, please answer these questions about the family in which you spent the greatest part of your childhood.

	Almost none of the time	A few times	Some of the time	Most of the time	Almost all of the time
1. People in my family did things together.	1	2	3	4	5
2. Family members got on each other's nerves (annoyed each other).	1	2	3	4	5
3. Family members felt uncomfortable with each other.	1	2	3	4	5
4. Family members were there for each other during difficult times.	1	2	3	4	5
5. Family members felt very close to each other.	1	2	3	4	5
6. Family members avoided each other.	1	2	3	4	5
7. When problems arose, family members compromised.	1	2	3	4	5
8. Family members were afraid to say what was on their minds.	1	2	3	4	5
9. There was fighting among family members.	1	2	3	4	5
10. Family members yelled when they were angry with each other.	1	2	3	4	5
11. Family members discussed their personal problems with each other.	1	2	3	4	5
12. Family members shared household responsibilities.	1	2	3	4	5
13. Family members were affectionate with each other.	1	2	3	4	5
14. Family members insulted or swore at each other.	1	2	3	4	5
15. Family members were critical of each other.	1	2	3	4	5

SECTION C: TRAINING AND DEPLOYMENT PREPARATION

Below are several statements about how well prepared you were by the military for your deployment. Please describe how much you agree or disagree with each statement by circling the number that best fits your answer.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. I had all the supplies and equipment needed to get my job done.	1	2	3	4	5
2. The equipment I was given functioned the way it was supposed to.	1	2	3	4	5
3. I received adequate training on how to use my equipment.	1	2	3	4	5
4. I knew how to treat animal bites, insect stings, or allergic reactions to plants in the region.	1	2	3	4	5
5. I received adequate training on what to do in case of a nuclear, biological, or chemical (NBC) attack.	1	2	3	4	5
6. I had enough gear to protect myself in case of a nuclear, biological, or chemical (NBC) attack.	1	2	3	4	5
7. I received adequate training on how to perform daily life activities while wearing nuclear, biological, or chemical (NBC) protective gear.	1	2	3	4	5
8. I was adequately prepared to deal with the region's climate.	1	2	3	4	5
9. I was accurately informed about what to expect from the enemy.	1	2	3	4	5
10. I saw as much combat as I expected.	1	2	3	4	5
11. I was informed about the role my unit was expected to play in the deployment.	1	2	3	4	5
12. When I was deployed I had a pretty good idea of how long the mission would take to complete.	1	2	3	4	5
13. I was accurately informed of what daily life would be like during my deployment.	1	2	3	4	5
14. I was adequately trained to work the shifts required of me during my deployment.	1	2	3	4	5

SECTION D: DEPLOYMENT ENVIRONMENT

The next set of statements is about the conditions of day-to-day life during your deployment. Please read each statement and decide what amount of time you were exposed to each condition over the course of the entire time you were deployed. Circle the number below the appropriate response.

	Almost none of the time	A few times	Some of the time	Most of the time	Almost all of the time
1. The climate was extremely uncomfortable.	1	2	3	4	5
2. I had to deal with annoying animals, insects, or plants during my deployment.	1	2	3	4	5
3. I had access to clean clothing when I needed it.	1	2	3	4	5
4. I could get a cold drink (for example, water, juice, etc.) when I wanted one.	1	2	3	4	5
5. The food I had to eat was of very poor quality (for example, bad or old MREs).	1	2	3	4	5
6. The conditions I lived in were extremely unsanitary.	1	2	3	4	5
7. I had access to bathrooms or showers when I needed them.	1	2	3	4	5
8. I got as much sleep as I needed.	1	2	3	4	5
9. The living space was too crowded.	1	2	3	4	5
10. I was able to get enough privacy.	1	2	3	4	5
11. The workdays were too long.	1	2	3	4	5
12. I got the R&R (rest and relaxation) that I needed.	1	2	3	4	5
13. I got my mail in a timely manner.	1	2	3	4	5
14. I was exposed to awful smells.	1	2	3	4	5
15. I was subjected to loud noises.	1	2	3	4	5
16. I had to hassle with putting on and taking off NBC equipment.	1	2	3	4	5
17. I had the equipment or supplies to do what I needed to do.	1	2	3	4	5
18. My daily activities were restricted because of local religious or ethnic customs.	1	2	3	4	5
19. I felt comfortable living in the culture or cultures where I was deployed.	1	2	3	4	5
20. Pressure to conform to the local culture made it difficult for me to do my job.	1	2	3	4	5

SECTION E: LIFE & FAMILY CONCERNS

The following set of statements refers to concerns you may have had related to your life and family back home while you were deployed. These questions do not ask if these events actually occurred, but only how concerned you were that they might happen while you were deployed. Please describe how concerned you were for each item by circling the number that best fits your answer.

While I was deployed, I was concerned about...	Not applicable	Not at all	A little	Moderately	A great deal
1. ...missing out on a promotion at my job back home.	0	1	2	3	4
2. ...missing out on opportunities to start a career while I was away.	0	1	2	3	4
3. ...damaging my career because I was overseas for a long time.	0	1	2	3	4
4. ...losing touch with my co-workers or supervisors back home.	0	1	2	3	4
5. ...being unable to financially support my family while I was away.	0	1	2	3	4
6. ...harming my relationship with my spouse/significant other.	0	1	2	3	4
7. ...being left by my spouse/significant other.	0	1	2	3	4
8. ...missing out on my children's growth and development while I was away.	0	1	2	3	4
9. ...losing touch with my friends.	0	1	2	3	4
10. ...missing important events at home such as birthdays, weddings, funerals, graduations, etc.	0	1	2	3	4
11. ...the well-being of my family or friends while I was away.	0	1	2	3	4
12. ...my inability to help my family or friends if they had some type of problem.	0	1	2	3	4
13. ...my inability to directly manage or control family affairs.	0	1	2	3	4
14. ...the care that my children were receiving while I was away.	0	1	2	3	4

SECTION F: UNIT SUPPORT

The statements below are about your relationships with other military personnel while you were deployed. Please read each statement and describe how much you agree or disagree by circling the number that best fits your answer.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. My unit was like family to me.	1	2	3	4	5
2. I felt a sense of camaraderie between myself and other soldiers in my unit.	1	2	3	4	5
3. Members of my unit understood me.	1	2	3	4	5
4. Most people in my unit were trustworthy.	1	2	3	4	5
5. I could go to most people in my unit for help when I had a personal problem.	1	2	3	4	5
6. My commanding officer(s) were interested in what I thought and how I felt about things.	1	2	3	4	5
7. I was impressed by the quality of leadership in my unit.	1	2	3	4	5
8. My superiors made a real attempt to treat me as a person.	1	2	3	4	5
9. The commanding officer(s) in my unit were supportive of my efforts.	1	2	3	4	5
10. I felt like my efforts really counted to the military.	1	2	3	4	5
11. The military appreciated my service.	1	2	3	4	5
12. I was supported by the military.	1	2	3	4	5

SECTION G: RELATIONSHIPS WITHIN UNIT

The next set of questions is also about your relationships with other military personnel while deployed. Please describe how often you experienced each circumstance by circling the number that best fits your answer.

While I was deployed, unit leaders or other unit members:	Never	Once or twice	Sometimes	Many times
1. ...treated me in an overly critical way.	1	2	3	4
2. ...behaved in a way that was uncooperative when working with me.	1	2	3	4
3. ... treated me as if I had to work harder than others to prove myself.	1	2	3	4
4. ... questioned my abilities or commitment to perform my job effectively.	1	2	3	4
5. ... acted as though my mistakes were worse than others.	1	2	3	4

While I was deployed, unit leaders or other unit members:	Never	Once or twice	Sometimes	Many times
6. ...tried to make my job more difficult to do.	1	2	3	4
7. ..."put me down" or treated me in a condescending way.	1	2	3	4
8. ...gossiped about my sex life or spread rumors about my sexual activities.	1	2	3	4
9. ...made crude and offensive sexual remarks directed at me, either publicly or privately.	1	2	3	4
10. ...offered me some sort of reward or special treatment to take part in sexual behavior.	1	2	3	4
11. ...threatened me with some sort of retaliation for not being sexually cooperative (for example, the threat of a negative review, physical violence, or to ruin my reputation).	1	2	3	4
12. ...made unwanted attempts to stroke or fondle me (for example, stroking my leg or neck).	1	2	3	4
13. ...made unwanted attempts to have sex with me.	1	2	3	4
14. ...forced me to have sex.	1	2	3	4

SECTION H: DEPLOYMENT CONCERNS

The statements below are about the amount of danger you felt you were exposed to while you were deployed. Please read each statement and describe how much you agree or disagree with each statement by circling the number in the column that best fits your answer.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. I thought I would never survive.	1	2	3	4	5
2. I felt safe.	1	2	3	4	5
3. I was extremely concerned that the enemy would use nuclear, biological, chemical agents (NBCs) against me.	1	2	3	4	5
4. I felt that I was in great danger of being killed or wounded.	1	2	3	4	5
5. I was concerned that my unit would be attacked by the enemy.	1	2	3	4	5
6. I worried about the possibility of accidents (for example, friendly fire or training injuries in my unit).	1	2	3	4	5
7. I was afraid I would encounter a mine or booby trap.	1	2	3	4	5

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
8. I felt secure that I would be coming home after the war.	1	2	3	4	5
9. I thought that vaccinations I received would actually cause me to be sick.	1	2	3	4	5
10. I was concerned that the tablets I took to protect me would make me sick.	1	2	3	4	5
11. I felt that I would become sick from the pesticides or other routinely used chemicals.	1	2	3	4	5
12. I was concerned about the health effects of breathing bad air.	1	2	3	4	5
13. I thought that exposure to depleted uranium would negatively affect my health.	1	2	3	4	5
14. I was afraid that the equipment I was given to protect me from nuclear, biological, chemical agents (NBCs) would not work.	1	2	3	4	5
15. I worried about getting an infectious disease.	1	2	3	4	5
SECTION I: COMBAT EXPERIENCES					
The statements below are about your combat experiences during deployment. Please circle "yes" if the statement is true or "no" if the statement is false.					
While deployed:					
1. I went on combat patrols or missions.				Yes	No
2. I or members of my unit encountered land or water mines and/or booby traps.				Yes	No
3. I or members of my unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs.				Yes	No
4. I or members of my unit received "friendly" incoming fire from small arms, artillery, rockets, mortars, or bombs.				Yes	No
5. I was in a vehicle (for example, a truck, tank, APC, helicopter, plane, or boat) that was under fire.				Yes	No
6. I or members of my unit were attacked by terrorists or civilians.				Yes	No
7. I was part of a land or naval artillery unit that fired on the enemy.				Yes	No
8. I was part of an assault on entrenched or fortified positions.				Yes	No
9. I took part in an invasion that involved naval and/or land forces.				Yes	No
10. My unit engaged in battle in which it suffered casualties.				Yes	No
11. I personally witnessed someone from my unit or an ally unit being seriously wounded or killed.				Yes	No

12. I personally witnessed soldiers from enemy troops being seriously wounded or killed.	Yes	No
13. I was wounded or injured in combat.	Yes	No
14. I fired my weapon at the enemy.	Yes	No
15. I killed or think I killed someone in combat.	Yes	No

SECTION J: POST-BATTLE EXPERIENCES

Next are statements about your experiences AFTER battle. Please indicate if you ever experienced the following events anytime while you were deployed by circling either “yes” or “no.”

1. I observed homes or villages that had been destroyed.	Yes	No
2. I saw refugees who had lost their homes and belongings as a result of battle.	Yes	No
3. I saw people begging for food.	Yes	No
4. I or my unit took prisoners of war.	Yes	No
5. I interacted with enemy soldiers who were taken as prisoners of war.	Yes	No
6. I was exposed to the sight, sound, or smell of animals that had been wounded or killed from war-related causes.	Yes	No
7. I took care of injured or dying people.	Yes	No
8. I was involved in removing dead bodies after battle.	Yes	No
9. I was exposed to the sight, sound, or smell of dying men and women.	Yes	No
10. I saw enemy soldiers after they had been severely wounded or disfigured in combat.	Yes	No
11. I saw the bodies of dead enemy soldiers.	Yes	No
12. I saw civilians after they had been severely wounded or disfigured.	Yes	No
13. I saw the bodies of dead civilians.	Yes	No
14. I saw Americans or allies after they had been severely wounded or disfigured in combat.	Yes	No
15. I saw the bodies of dead Americans or allies.	Yes	No

SECTION K: EXPOSURE TO NUCLEAR, BIOLOGICAL, CHEMICAL AGENTS

Next are some statements about nuclear, biological, and chemical agents (NBCs) that you may have been exposed to during the time you were preparing for deployment or during your deployment. For each statement, circle "yes," "no," or "I don't know."

Either in preparation for or during my deployment...

1. ...I took pyridostigmine or little white pills in foil packets, sometimes called NAPPs, which are used to protect against nerve gas.	Yes	No	Don't know
2. ...I received preventative vaccinations by injection (for example, to prevent anthrax or botulism). [Note: for women, preventative vaccinations may include deprovera (birth control).]	Yes	No	Don't know

While I was deployed, I was exposed to...

3. ...nerve gas agents (for example, sarin).	Yes	No	Don't know
4. ...mustard gas or other blistering agents.	Yes	No	Don't know
5. ...environmental pesticides (for example, from "fogger" trucks).	Yes	No	Don't know
6. ...pesticides in uniforms.	Yes	No	Don't know
7. ...pesticides in flea collars.	Yes	No	Don't know
8. ...government-issued DEET-containing insect repellents.	Yes	No	Don't know
9. ...non-government issued insect repellents (for example, Avon Skin-So-Soft, Off).	Yes	No	Don't know
10. ...smoke or other air pollution.	Yes	No	Don't know
11. ...diesel or other petrochemical fuel on my skin.	Yes	No	Don't know
12. ...fumes or exhaust from heaters or generators, including heaters in tents.	Yes	No	Don't know
13. ...depleted uranium in munitions.	Yes	No	Don't know
14. ...burning trash or burning feces.	Yes	No	Don't know
15. ...local food other than that provided by the Armed Forces.	Yes	No	Don't know

While I was deployed...

16. ...I was within 1 km of an exploding artillery shell.	Yes	No	Don't know
17. ...I was within 5 km of an exploding missile.	Yes	No	Don't know
18. ...I entered an enemy bunker or military facility.	Yes	No	Don't know
19. ...I climbed inside an enemy tank that had been abandoned or burned out.	Yes	No	Don't know
20. ...I was exposed to chemical or biological weapons.	Yes	No	Don't know

SECTION L: POST-DEPLOYMENT SUPPORT

You have completed the questions about your deployment. The next set of statements refers to social support after deployment. Please decide how much you agree or disagree with each statement and circle the number that best fits your choice.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. The reception I received when I returned from my deployment made me feel appreciated for my efforts.	1	2	3	4	5
2. The American people made me feel at home when I returned.	1	2	3	4	5
3. When I returned, people made me feel proud to have served my country in the Armed Forces.	1	2	3	4	5
4. I am carefully listened to and understood by family members or friends.	1	2	3	4	5
5. Among my friends or relatives, there is someone who makes me feel better when I am feeling down.	1	2	3	4	5
6. I have problems that I can't discuss with family or friends.	1	2	3	4	5
7. Among my friends or relatives, there is someone I go to when I need good advice.	1	2	3	4	5
8. People at home just don't understand what I have been through while in the Armed Forces.	1	2	3	4	5
9. There are people to whom I can talk about my deployment experiences.	1	2	3	4	5
10. The people I work with respect the fact that I am a veteran.	1	2	3	4	5
11. My supervisor understands when I need time off to take care of personal matters.	1	2	3	4	5
12. My friends or relatives would lend me money if I needed it.	1	2	3	4	5
13. My friends or relatives would help me move my belongings if I needed to.	1	2	3	4	5
14. When I am unable to attend to daily chores, there is someone who will help me with these tasks.	1	2	3	4	5
15. When I am ill, friends or family members will help out until I am well.	1	2	3	4	5

SECTION M: POST-DEPLOYMENT LIFE EVENTS

The next statements refer to events you may have experienced SINCE RETURNING FROM YOUR DEPLOYMENT. These questions are similar to the items you've answered previously about events before your deployment. For this page, please circle "yes" or "no" for each of the items below.

Since returning home, I have experienced...

1. ...a natural disaster (for example, a flood or hurricane), a fire, or an accident in which I was hurt or my property was damaged.	Yes	No
2. ...exposure to a toxic substance (such as dangerous chemicals or radiation).	Yes	No
3. ...combat or exposure to a war-zone (in the military or as a civilian).	Yes	No
4. ...a serious operation.	Yes	No
5. ...a mental illness (for example, clinical depression or anxiety disorder), or life-threatening physical illness (for example, cancer or heart disease) of someone close to me.	Yes	No
6. ...the death of someone close to me.	Yes	No

Since returning home, I have...

7. ...experienced stressful legal problems (for example, being sued or suing someone else).	Yes	No
8. ...witnessed someone being assaulted or violently killed.	Yes	No
9. ...been robbed or had my home broken into.	Yes	No
10. ...had a family member with a serious drug or alcohol problem.	Yes	No
11. ...been unemployed and seeking employment for at least 3 months.	Yes	No
12. ...been emotionally mistreated (for example, shamed, embarrassed, ignored, or repeatedly told I was no good).	Yes	No
13. ...experienced unwanted sexual activity as a result of force, threat of harm, or manipulation.	Yes	No
14. ...been physically injured by another person (for example, hit, kicked, or beaten up).	Yes	No
15. ...lost my job.	Yes	No
16. ...gone through a divorce or been left by a partner or significant other.	Yes	No
17. ...had problems getting access to adequate healthcare.	Yes	No

APPENDIX B

MODIFIED DEPLOYMENT RISK AND

RESILIENCE INVENTORY FOR CODING

Please enter all coded information into a DRRI Excel Spreadsheet.

Demographic Info:

If any information below cannot be determined, please mark a 9 for “Unknown” in the appropriate box in the Excel spreadsheet.

Name: Last name, First name Middle name

Date of Birth: Year only

Gender: Female = 0, Male = 1

Date Entered Service: Year

Date Left Service: Year

Branch of Service:

- 1 = Air Force
- 2 = Army
- 3 = Army Air Forces/Corps
- 4 = Coast Guard
- 5 = Marine Corps
- 6 = Merchant Marine
- 7 = Navy
- 9 = Other

Modified DRRI

SECTION A: PRE-DEPLOYMENT LIFE EVENTS

The statements below refer to events the veteran may have experienced BEFORE HE/SHE WAS DEPLOYED. If no mention is made of the type of event described, please code as “Unknown” = 9. If the veteran mentions this type of event please code “No”=0 if it is clear that the veterans did *not* have this experience [For example: No one close to me has ever died] or “Yes”=1 if that veteran did experience the event [Ex: My mom died when I was a teenager.]
Before deployment, the veteran experienced...

A1. ...a natural disaster (for example, a flood or hurricane), a fire, or an accident in which the veteran was hurt or property was damaged.

Unknown = 9 No = 0 Yes = 1

A2. ...combat or exposure to a war zone (in the military or as a civilian).

Unknown = 9 No = 0 Yes = 1

A3. ...the mental illness (for example, clinical depression, anxiety disorder), or life-threatening physical illness (for example, cancer or heart disease) of someone close to the veteran.

Unknown = 9 No = 0 Yes = 1

A4. ...a parent who had a problem with drugs or alcohol.

Unknown = 9 No = 0 Yes = 1

A5. ...the death of someone close to the veteran.

Unknown = 9 No = 0 Yes = 1

Before deployment, the veteran had...

A6. ...been through a divorce or been left by a partner or significant other.

Unknown = 9 No = 0 Yes = 1

A7. ...witnessed someone being assaulted or violently killed.

Unknown = 9 No = 0 Yes = 1

A8. ...been robbed or had his/her home broken into.

Unknown = 9 No = 0 Yes = 1

A9. ...lost his/her job.

Unknown = 9 No = 0 Yes = 1

A10. ...been emotionally mistreated (for example, shamed, embarrassed, ignored, or repeatedly told he/she was no good).

Unknown = 9 No = 0 Yes = 1

A11. ...seen or heard physical fighting between parents or caregivers.

Unknown = 9 No = 0 Yes = 1

A12. ...been physically punished by a parent or primary caregiver.

Unknown = 9 No = 0 Yes = 1

A13. ...been physically injured by another person (for example, hit, kicked, beaten up).

Unknown = 9 No = 0 Yes = 1

A14. ...experienced unwanted sexual activity as a result of force, threat of harm, or manipulation.

Unknown = 9

No = 0

Yes = 1

SECTION B: CHILDHOOD EXPERIENCES

B0. Did the veteran talk about childhood experiences in the transcript?

No= 0

Yes =1

If [NO], proceed on to Section C, leaving the corresponding B cells blank in Excel.

If YES, code items 1-15 below.

The statements below refer to the childhood experiences of the veteran. If no mention is made of the type of event described, please code as “Unknown” = 9. If the veteran mentions this type of event please code “No” = 0 if it is clear that the veterans did *not* have this experience or “Yes” = 1 if that veteran did experience the event.

B1. People in my family did not do things together.

Unknown = 9

No = 0

Yes = 1

B2. Family members got on each other’s nerves (annoyed each other).

Unknown = 9

No = 0

Yes = 1

B3. Family members felt uncomfortable with each other.

Unknown = 9

No = 0

Yes = 1

B4. Family members were not there for each other during difficult times.

Unknown = 9

No = 0

Yes = 1

B5. Family members did not feel very close to each other.

Unknown = 9

No = 0

Yes = 1

B6. Family members avoided each other.

Unknown = 9

No = 0

Yes = 1

B7. When problems arose, family members did not compromise.

Unknown = 9

No = 0

Yes = 1

- B8. Family members were afraid to say what was on their minds.
Unknown = 9 **No = 0** **Yes = 1**
- B9. There was fighting among family members.
Unknown = 9 **No = 0** **Yes = 1**
- B10. Family members yelled when they were angry with each other.
Unknown = 9 **No = 0** **Yes = 1**
- B11. Family members did not discuss personal problems with each other.
Unknown = 9 **No = 0** **Yes = 1**
- B12. Family members did not share household responsibilities.
Unknown = 9 **No = 0** **Yes = 1**
- B13. Family members were not affectionate with each other.
Unknown = 9 **No = 0** **Yes = 1**
- B14. Family members insulted or swore at each other.
Unknown = 9 **No = 0** **Yes = 1**
- B15. Family members were critical of each other.
Unknown = 9 **No = 0** **Yes = 1**

SECTION C: TRAINING AND DEPLOYMENT PREPARATION

Below are several statements about how well prepared the veteran was by the military for deployment. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

- C1. The veteran had all the supplies and equipment needed to get the job done.
Unknown = 9 **No = 0** **Yes = 1**

- C2. The veteran was adequately prepared to deal with the region's climate.
Unknown = 9 No = 0 Yes = 1
- C3. The veteran was accurately informed about what to expect from the enemy.
Unknown = 9 No = 0 Yes = 1
- C4. The veteran saw as much combat as expected.
Unknown = 9 No = 0 Yes = 1
- C5. The veteran was informed about the role his/her unit was expected to play in the deployment.
Unknown = 9 No = 0 Yes = 1
- C6. The veteran was accurately informed of what daily life would be like during deployment.
Unknown = 9 No = 0 Yes = 1

SECTION D: DEPLOYMENT ENVIRONMENT

The next set of statements is about the conditions of day-to-day life during the veteran's deployment. If no mention is made of the topic described, code as "Unknown" = 9. If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen. If the veteran says this did happen, please count the number of times he/she mentions the topic and code according to the number of times the topic is mentioned.

- D1. The climate was extremely uncomfortable.
Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3
- D2. The veteran had to deal with annoying animals, insects, or plants during deployment.
Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3
- D3. The food the veteran had to eat was of very poor quality (for example, bad or old MREs).
Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3
- D4. The conditions the veteran lived in were extremely unsanitary.
Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D5. The veteran did not get enough sleep.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D6. The living space was too crowded.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D7. The veteran did not have enough privacy.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D8. The workdays were too long.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D9. The veteran did not get enough R & R (rest and relaxation).

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D10. The veteran was exposed to awful smells.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D11. The veteran was subjected to loud noises.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D12. The veteran's daily activities were restricted because of local religious or ethnic customs.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D13. The veteran felt uncomfortable living in the culture or cultures where I was deployed.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

D14. Pressure to conform to the local culture made it difficult for the veteran to do his/her job.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

SECTION E: LIFE & FAMILY CONCERNS

The following set of statements refers to concerns the veteran may have had related to life and family back home during deployment. These questions do NOT ask if these events actually occurred, but only how concerned the veteran was that they might happen while he/she was deployed. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

While the veteran was deployed, he/she was concerned about...

E1. ...missing out on a promotion at the his/her job back home.

Unknown = 9 **No = 0** **Yes = 1**

E2. ...missing out on opportunities to start a career while the veteran was away.

Unknown = 9 **No = 0** **Yes = 1**

E3. ...damaging my career because I was overseas for a long time.

Unknown = 9 **No = 0** **Yes = 1**

E4. ...being unable to financially support family while the veteran was away.

Unknown = 9 **No = 0** **Yes = 1**

E5. ...harming my relationship with a spouse/significant other.

Unknown = 9 **No = 0** **Yes = 1**

E6. ...being left by a spouse/significant other.

Unknown = 9 **No = 0** **Yes = 1**

E7. ...missing out on his/her children's growth and development while he/she was away.

Unknown = 9 **No = 0** **Yes = 1**

E8. ...losing touch with his/her friends.

Unknown = 9 **No = 0** **Yes = 1**

E9. ...missing important events at home such as birthdays, weddings, funerals, graduations, etc.

Unknown = 9 **No = 0** **Yes = 1**

E10. ...the well-being of my family or friends while he/she was away.

Unknown = 9 No = 0 Yes = 1

E11. ...his/her inability to help family or friends if they had some type of problem.

Unknown = 9 No = 0 Yes = 1

SECTION F: UNIT SUPPORT

The statements below are about the veteran's relationships with other military personnel during deployment. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen. If the veteran says this did happen, please count the number of times he/she mentions the topic and code according to the number of times the topic is mentioned.

F1. The veteran's unit was like family.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F2. The veteran felt a sense of camaraderie between him- or herself and other soldiers in the unit.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F3. Members of the unit understood the veteran.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F4. Most people in the unit were trustworthy.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F5. The veteran could go to most people in the unit for help when he/she had a personal problem.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F6. The commanding officer(s) was interested in what the veteran thought and how he/she felt about things.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F7. The veteran was impressed by the quality of leadership in the unit.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F8. The veteran's superiors made a real attempt to treat him/her as a person.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F9. The commanding officer(s) in the veteran's unit were supportive of his/her efforts.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F10. The veteran felt like his/her efforts really counted to the military.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F11. The military appreciated the veteran's service.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F12. The veteran was supported by the military.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

SECTION G: RELATIONSHIPS WITHIN UNIT

The next set of questions is also about the veteran's relationships with other military personnel while deployed. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

While the veteran was deployed, unit leaders or other unit members:

G1. ...treated him/her in an overly critical way.

Unknown = 9 No = 0 Yes = 1

G2. ...behaved in a way that was uncooperative when working with him/her.

Unknown = 9 No = 0 Yes = 1

G3. ...questioned the veteran's abilities or commitment to perform his/her job effectively.

Unknown = 9 No = 0 Yes = 1

G4. ...tried to make the veteran's job more difficult to do.

Unknown = 9 No = 0 Yes = 1

G5. ..."put the veteran down" or treated him/her in a condescending way.

Unknown = 9

No = 0

Yes = 1

SECTION H: DEPLOYMENT CONCERNS

The statements below are about the amount of danger the veteran felt he/she was exposed to during deployment. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

H1. The veteran thought he/she would never survive.

Unknown = 9

No = 0

Yes = 1

H2. The veteran felt that he/she was in great danger of being killed or wounded.

Unknown = 9

No = 0

Yes = 1

H3. The veteran was concerned that his/her unit would be attacked by the enemy.

Unknown = 9

No = 0

Yes = 1

H4. The veteran worried about the possibility of accidents (for example, friendly fire or training injuries in the unit).

Unknown = 9

No = 0

Yes = 1

H5. The veteran was afraid he/she would encounter a mine or booby trap.

Unknown = 9

No = 0

Yes = 1

SECTION I: COMBAT EXPERIENCES

The statements below are about the veteran's combat experiences during deployment. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

While deployed:

I1. The veteran went on combat patrols or missions.

Unknown = 9

No = 0

Yes = 1

12. The veteran or members of his/her unit encountered land or water mines and/or booby traps.
- Unknown = 9** **No = 0** **Yes = 1**
13. The veteran or members of his/her unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs.
- Unknown = 9** **No = 0** **Yes = 1**
14. The veteran or members of his/her unit received "friendly" incoming fire from small arms, artillery, rockets, mortars, or bombs.
- Unknown = 9** **No = 0** **Yes = 1**
15. The veteran was in a vehicle (for example, a truck, tank, APC, helicopter, plane, or boat) that was under fire.
- Unknown = 9** **No = 0** **Yes = 1**
16. The veteran or members of his/her unit were attacked by terrorists or civilians.
- Unknown = 9** **No = 0** **Yes = 1**
17. The veteran was part of a land or naval artillery unit that fired on the enemy.
- Unknown = 9** **No = 0** **Yes = 1**
18. The veteran was part of an assault on entrenched or fortified positions.
- Unknown = 9** **No = 0** **Yes = 1**
19. The veteran took part in an invasion that involved naval and/or land forces.
- Unknown = 9** **No = 0** **Yes = 1**
110. The veteran's unit engaged in battle in which it suffered casualties.
- Unknown = 9** **No = 0** **Yes = 1**
111. The veteran personally witnessed someone from his/her unit or an ally unit being seriously wounded or killed.
- Unknown = 9** **No = 0** **Yes = 1**

I12. The veteran personally witnessed soldiers from enemy troops being seriously wounded or killed.

Unknown = 9 **No = 0** **Yes = 1**

I13. The veteran was wounded or injured in combat.

Unknown = 9 **No = 0** **Yes = 1**

I14. The veteran fired his/her weapon at the enemy.

Unknown = 9 **No = 0** **Yes = 1**

I15. The veteran killed or thinks he/she killed someone in combat.

Unknown = 9 **No = 0** **Yes = 1**

SECTION J: POST-BATTLE EXPERIENCES

These are statements about the veteran's experiences AFTER battle. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

J1. The veteran observed homes or villages that had been destroyed.

Unknown = 9 **No = 0** **Yes = 1**

J2. The veteran saw refugees who had lost their homes and belongings as a result of battle.

Unknown = 9 **No = 0** **Yes = 1**

J3. The veteran saw people begging for food.

Unknown = 9 **No = 0** **Yes = 1**

J4. The veteran or his/her unit took prisoners of war.

Unknown = 9 **No = 0** **Yes = 1**

J5. The veteran interacted with enemy soldiers who were taken as prisoners of war.

Unknown = 9 **No = 0** **Yes = 1**

J6. The veteran was exposed to the sight, sound, or smell of animals that had been wounded or killed from war-related causes.

Unknown = 9 **No = 0** **Yes = 1**

J7. The veteran took care of injured or dying people.

Unknown = 9 **No = 0** **Yes = 1**

J8. The veteran was involved in removing dead bodies after battle.

Unknown = 9 **No = 0** **Yes = 1**

J9. The veteran was exposed to the sight, sound, or smell of dying men and women.

Unknown = 9 **No = 0** **Yes = 1**

J10. The veteran saw enemy soldiers after they had been severely wounded or disfigured in combat.

Unknown = 9 **No = 0** **Yes = 1**

J11. The veteran saw the bodies of dead enemy soldiers.

Unknown = 9 **No = 0** **Yes = 1**

J12. The veteran saw civilians after they had been severely wounded or disfigured.

Unknown = 9 **No = 0** **Yes = 1**

J13. The veteran saw the bodies of dead civilians.

Unknown = 9 **No = 0** **Yes = 1**

J14. The veteran saw Americans or allies after they had been severely wounded or disfigured in combat.

Unknown = 9 **No = 0** **Yes = 1**

J15. The veteran saw the bodies of dead Americans or allies.

Unknown = 9 **No = 0** **Yes = 1**

SECTION L: POST-DEPLOYMENT SUPPORT

The next set of statements refers to social support after deployment. If no mention is made of the topic described, code as “Unknown” = 9.

If the veteran mentions this topic described, code “No” = 0 if the veteran said that this did not happen or was *NOT* true and “Yes”=1 if the veteran indicates this was true for him or her.

L1. The reception the veteran received when he/she returned from deployment made him/her feel appreciated for his/her efforts.

Unknown = 9 No = 0 Yes = 1

L2. The American people made the veteran feel at home when he/she returned.

Unknown = 9 No = 0 Yes = 1

L3. When the veteran returned, people made him/her feel proud to have served his/her country in the Armed Forces.

Unknown = 9 No = 0 Yes = 1

L4. The veteran was carefully listened to and understood by family members or friends.

Unknown = 9 No = 0 Yes = 1

L5. Among friends or relatives, there is someone who makes the veteran feel better when he/she is feeling down.

Unknown = 9 No = 0 Yes = 1

L6. The veteran has problems that he/she can't discuss with family or friends.

Unknown = 9 No = 0 Yes = 1

L7. Among the veteran's friends or relatives, there is someone he/she goes to when he/she needs good advice.

Unknown = 9 No = 0 Yes = 1

L8. People at home just don't understand what the veteran has been through while in the Armed Forces.

Unknown = 9 No = 0 Yes = 1

L9. There are people to whom the veteran can talk with about deployment experiences.

Unknown = 9 No = 0 Yes = 1

SECTION M: POST-DEPLOYMENT LIFE EVENTS

The next statements refer to events the veteran may have experienced SINCE RETURNING FROM DEPLOYMENT. If no mention is made of the topic described, code as “Unknown” = 9.

If the veteran mentions this topic described, code “No” = 0 if the veteran said that this did not happen or was *NOT* true and “Yes”=1 if the veteran indicates this was true for him or her.

Since returning home, the veteran experienced...

M1. ...a natural disaster (for example, a flood or hurricane), a fire, or an accident in which he/she was hurt or property was damaged.

Unknown = 9 No = 0 Yes = 1

M2. ...combat or exposure to a war-zone (in the military or as a civilian).

Unknown = 9 No = 0 Yes = 1

M3. ...a serious operation.

Unknown = 9 No = 0 Yes = 1

M4. ...a mental illness (for example, clinical depression or anxiety disorder), or life- threatening physical illness (for example, cancer or heart disease) of someone close to him/her.

Unknown = 9 No = 0 Yes = 1

M5. ...the death of someone close to him/her.

Unknown = 9 No = 0 Yes = 1

Since returning home, the veteran has...

M6. ...experienced stressful legal problems (for example, being sued or suing someone else).

Unknown = 9 No = 0 Yes = 1

M7. ...witnessed someone being assaulted or violently killed.

Unknown = 9 No = 0 Yes = 1

M8. ...been robbed or had his/her home broken into.

Unknown = 9 No = 0 Yes = 1

M9. ...had a family member with a serious drug or alcohol problem.

Unknown = 9 No = 0 Yes = 1

M10. ...been emotionally mistreated (for example, shamed, embarrassed, ignored, or repeatedly told he/she was no good).

Unknown = 9 **No = 0** **Yes = 1**

M11. ...experienced unwanted sexual activity as a result of force, threat of harm, or manipulation.

Unknown = 9 **No = 0** **Yes = 1**

M12. ...been physically injured by another person (for example, hit, kicked, or beaten up).

Unknown = 9 **No = 0** **Yes = 1**

SECTION N: MISCELLANEOUS

The next statements refer to events the veteran may have experienced that were not covered in other sections. If no mention is made of the topic described, code as "Unknown" = 9.

If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

N1. The veteran keeps in contact with members of his/her unit.

Unknown = 9 **No = 0** **Yes = 1**

N2. The veteran has attended reunion events with other members of his/her unit.

Unknown = 9 **No = 0** **Yes = 1**

N3. The veteran belongs to a veterans' organization (VFW, American Legion, etc.).

Unknown = 9 **No = 0** **Yes = 1**

N4. The veteran used the words "hero" or "heroism" in the interview.

Unknown = 9 **No = 0** **Yes = 1**

N4a. If YES, please mark the line number in the Excel spreadsheet. If multiple uses are made, please put them all in one cell, with each line number separated by a comma.

APPENDIX C

DEPLOYMENT RISK AND RESILIENCE INVENTORY

ITEMS USED IN DATA ANALYSIS

Modified DRRI

SECTION F: UNIT SUPPORT

The statements below are about the veteran's relationships with other military personnel during deployment. If no mention is made of the topic described, code as "Unknown" = 9. If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen. If the veteran says this did happen, please count the number of times he/she mentions the topic and code according to the number of times the topic is mentioned.

F1. The veteran's unit was like family.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F2. The veteran felt a sense of camaraderie between him- or herself and other soldiers in the unit.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

F7. The veteran was impressed by the quality of leadership in the unit.

Unknown = 9 No = 0 Mentioned once = 1 Mentioned 2-3 times = 2 Mentioned 4+ times = 3

SECTION I: COMBAT EXPERIENCES

The statements below are about the veteran's combat experiences during deployment. If no mention is made of the topic described, code as "Unknown" = 9. If the veteran mentions this topic described, code "No" = 0 if the veteran said that this did not happen or was *NOT* true and "Yes"=1 if the veteran indicates this was true for him or her.

While deployed:

I1. The veteran went on combat patrols or missions.

Unknown = 9 No = 0 Yes = 1

I2. The veteran or members of his/her unit encountered land or water mines and/or booby traps.

Unknown = 9 No = 0 Yes = 1

I3. The veteran or members of his/her unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs.

Unknown = 9 No = 0 Yes = 1

I4. The veteran or members of his/her unit received "friendly" incoming fire from small arms, artillery,

rockets, mortars, or bombs.

Unknown = 9 **No = 0** **Yes = 1**

15. The veteran was in a vehicle (for example, a truck, tank, APC, helicopter, plane, or boat) that was under fire.

Unknown = 9 **No = 0** **Yes = 1**

16. The veteran or members of his/her unit were attacked by terrorists or civilians.

Unknown = 9 **No = 0** **Yes = 1**

17. The veteran was part of a land or naval artillery (weapons that operate beyond the scope of handheld weapons; this could include guns that fire large shells or mortars, for example) unit that fired on the enemy.

Unknown = 9 **No = 0** **Yes = 1**

18. The veteran was part of an assault on entrenched or fortified positions.

Unknown = 9 **No = 0** **Yes = 1**

19. The veteran took part in an invasion that involved naval and/or land forces.

Unknown = 9 **No = 0** **Yes = 1**

- I10. The veteran's unit engaged in battle in which it suffered casualties.

Unknown = 9 **No = 0** **Yes = 1**

- I11. The veteran personally witnessed someone from his/her unit or an ally unit being seriously wounded or killed.

Unknown = 9 **No = 0** **Yes = 1**

- I12. The veteran personally witnessed soldiers from enemy troops being seriously wounded or killed.

Unknown = 9 **No = 0** **Yes = 1**

- I13. The veteran was wounded or injured in combat (the easiest way to find this is by looking at the veterans' demographic information on his/her Veterans' History Project page).

Unknown = 9 **No = 0** **Yes = 1**

- I14. The veteran fired his/her weapon at the enemy.

Unknown = 9 **No = 0** **Yes = 1**

I15. The veteran killed or thinks he/she killed someone in combat.

Unknown = 9 **No = 0** **Yes = 1**

APPENDIX D

TABLE AND FIGURES

Table 1

Correlations Between Psychological Outcome, Social Support, and Combat Exposure

Variable	Psychological Outcome	Social Support	Combat Exposure
Psychological Outcome	--		
Social Support	-.007	--	
Combat Exposure	-.404*	.098	--

* $p < .01$

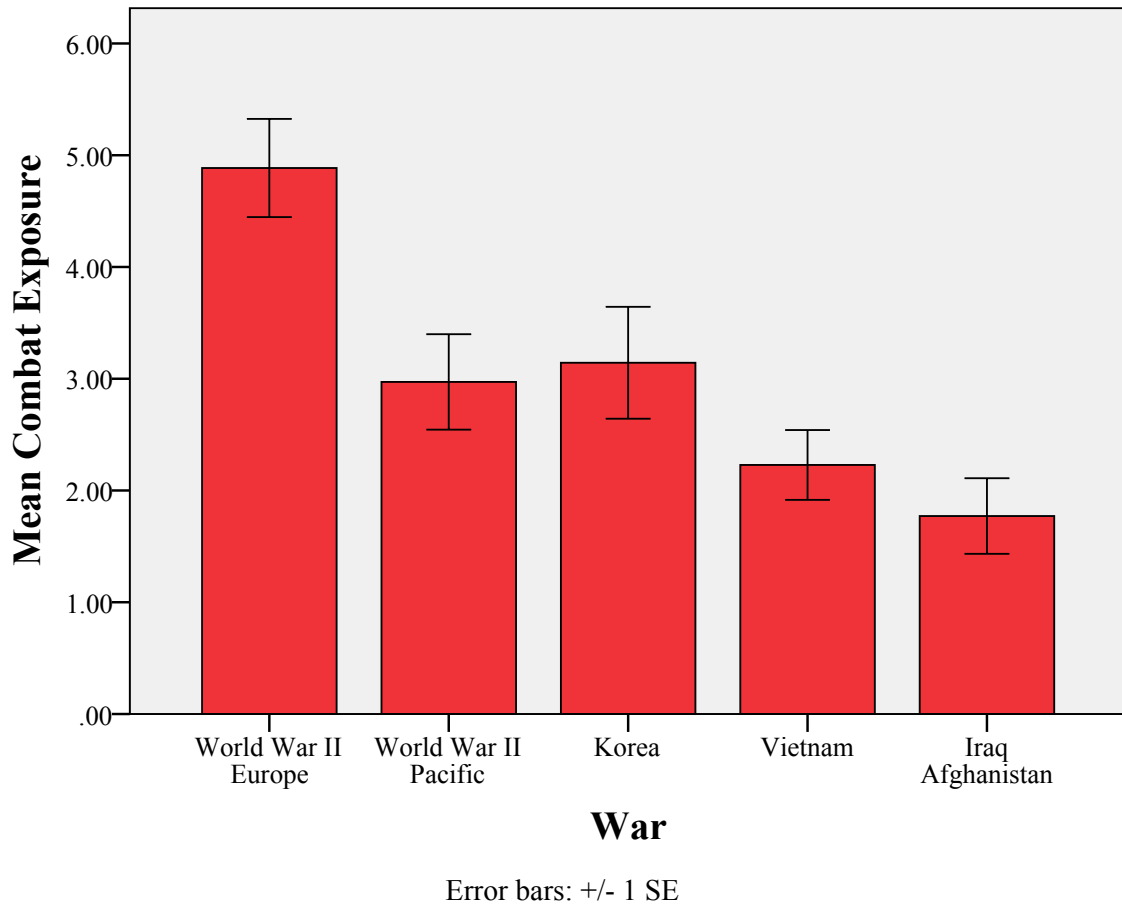


Figure 1. Combat exposure means separated by war.

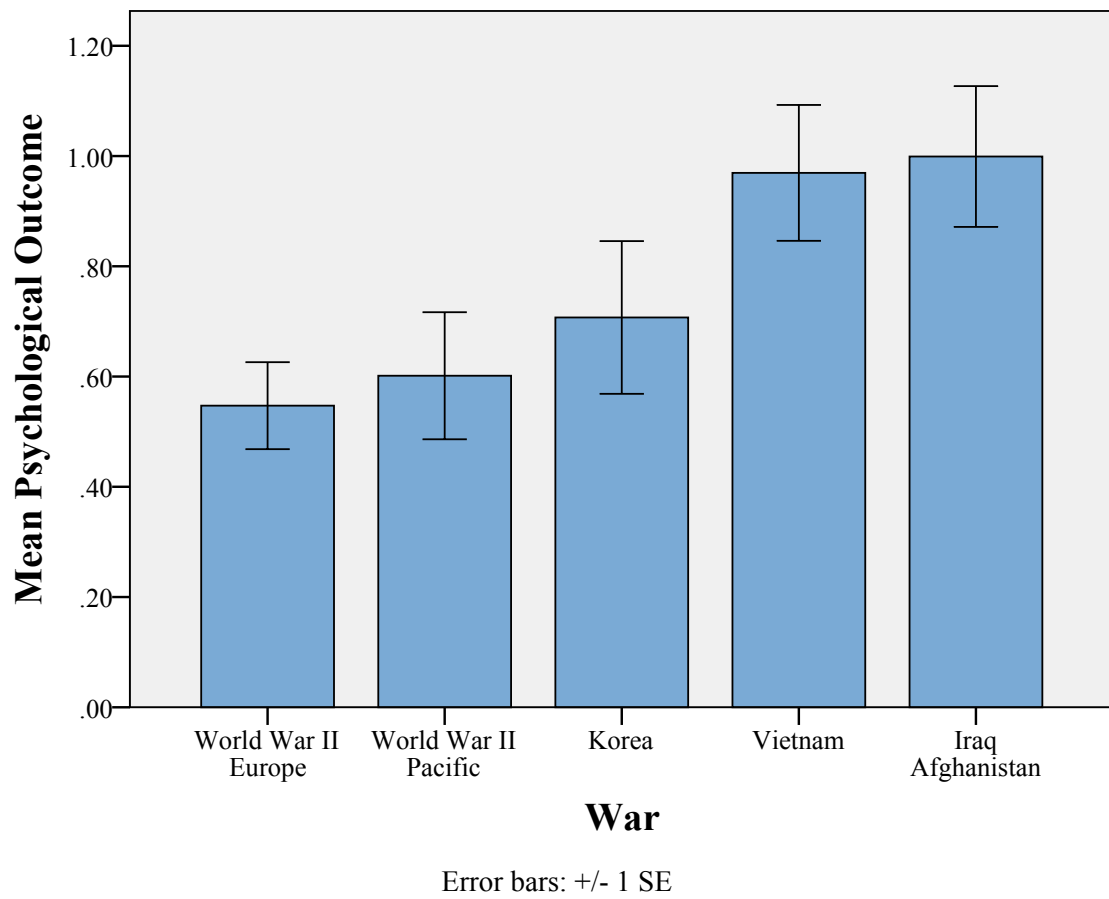


Figure 2. Psychological outcome means separated by war.

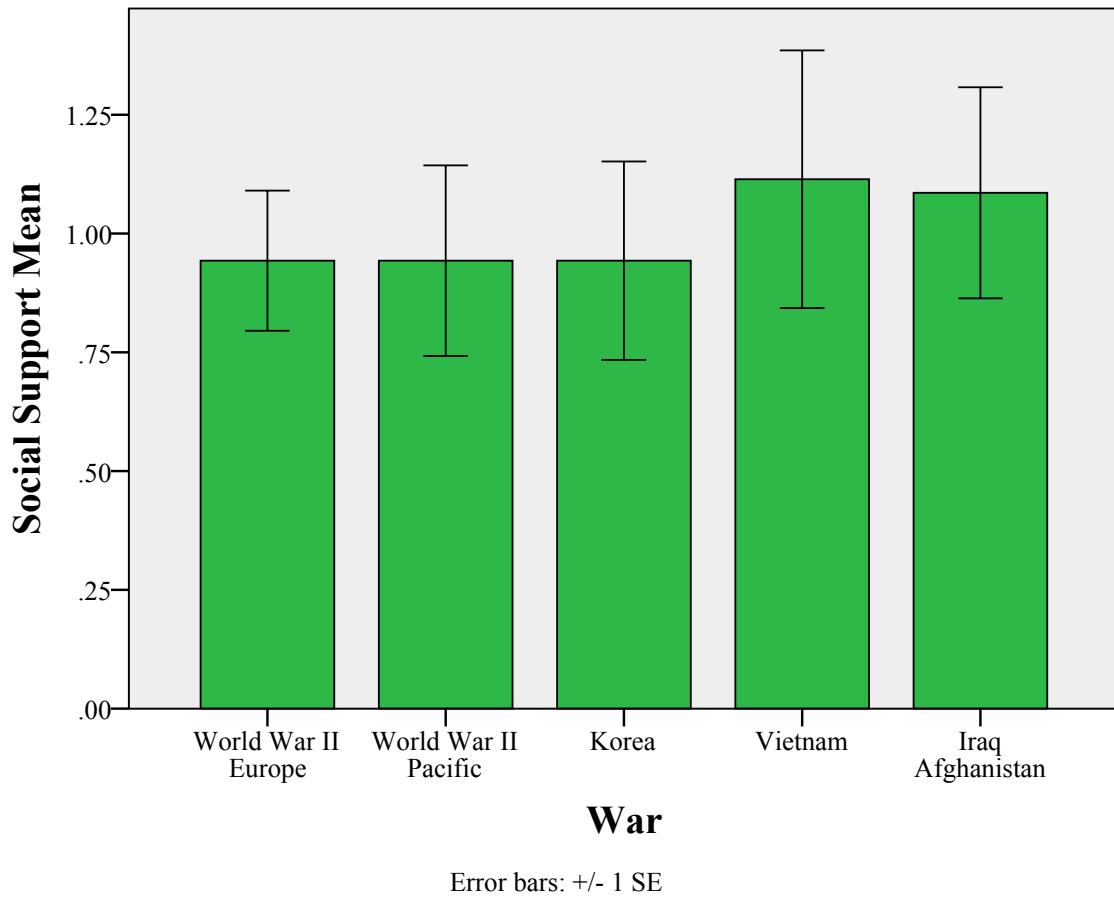


Figure 3. Social support means separated by war.

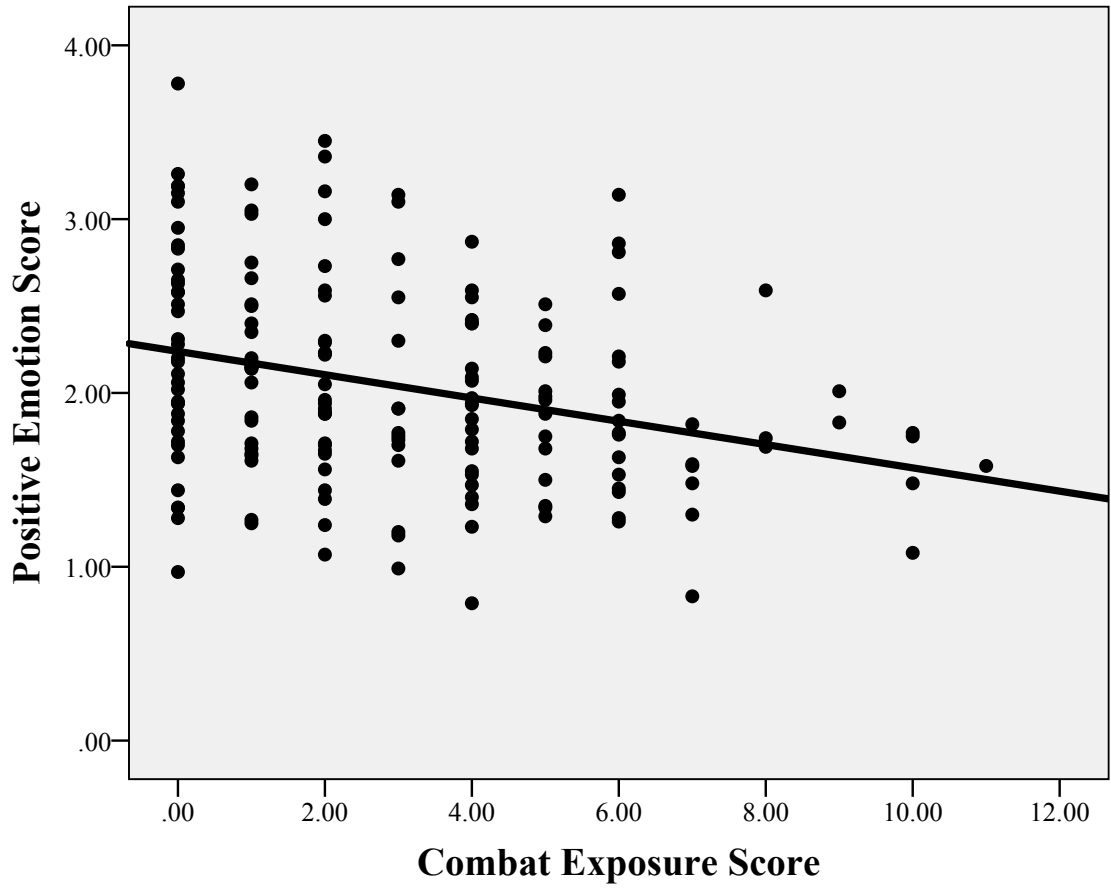


Figure 4. Regression of combat exposure on positive emotion.

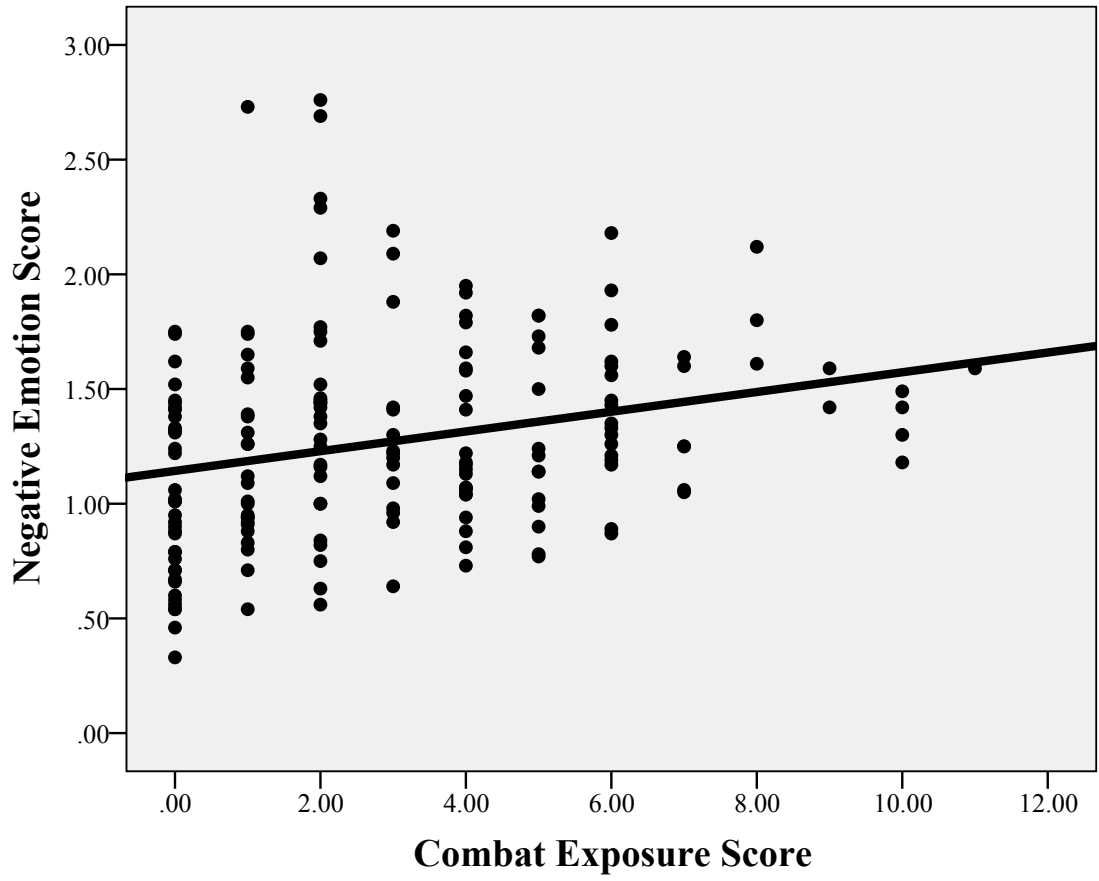


Figure 5. Regression of combat exposure on negative emotion.

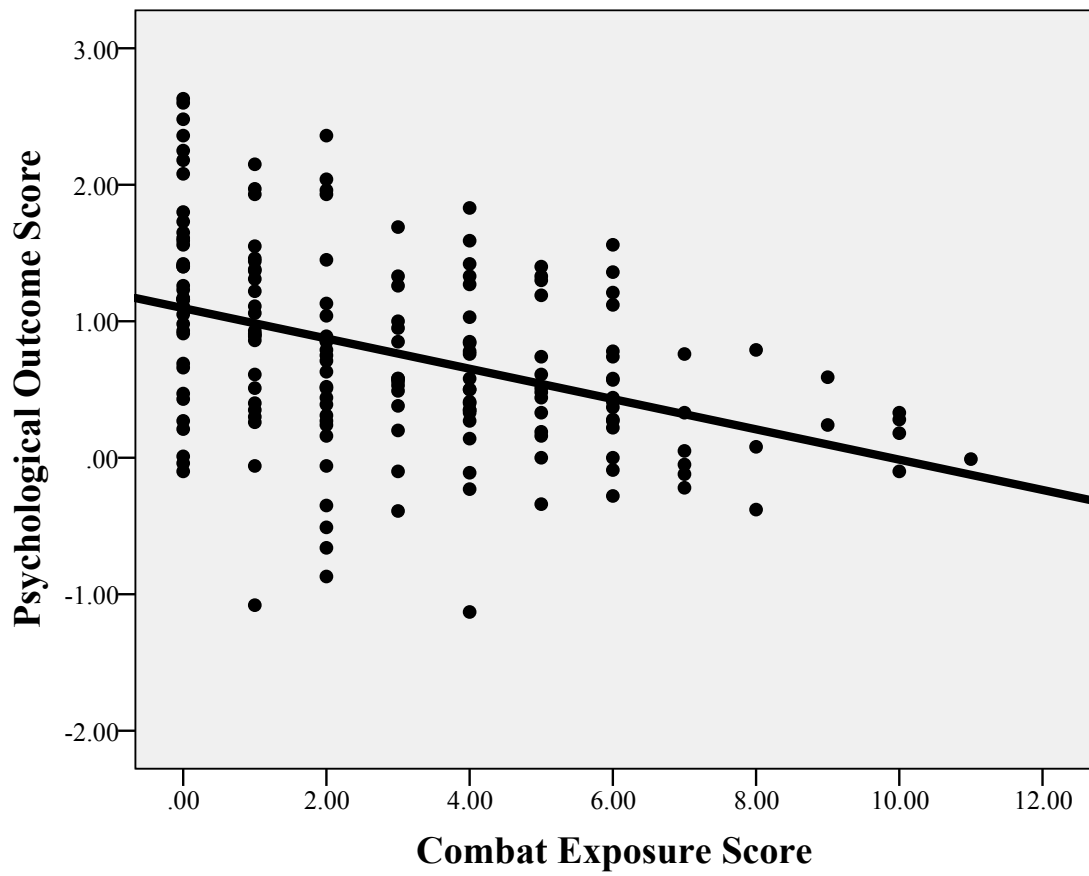


Figure 6. Regression of combat exposure on psychological outcome.

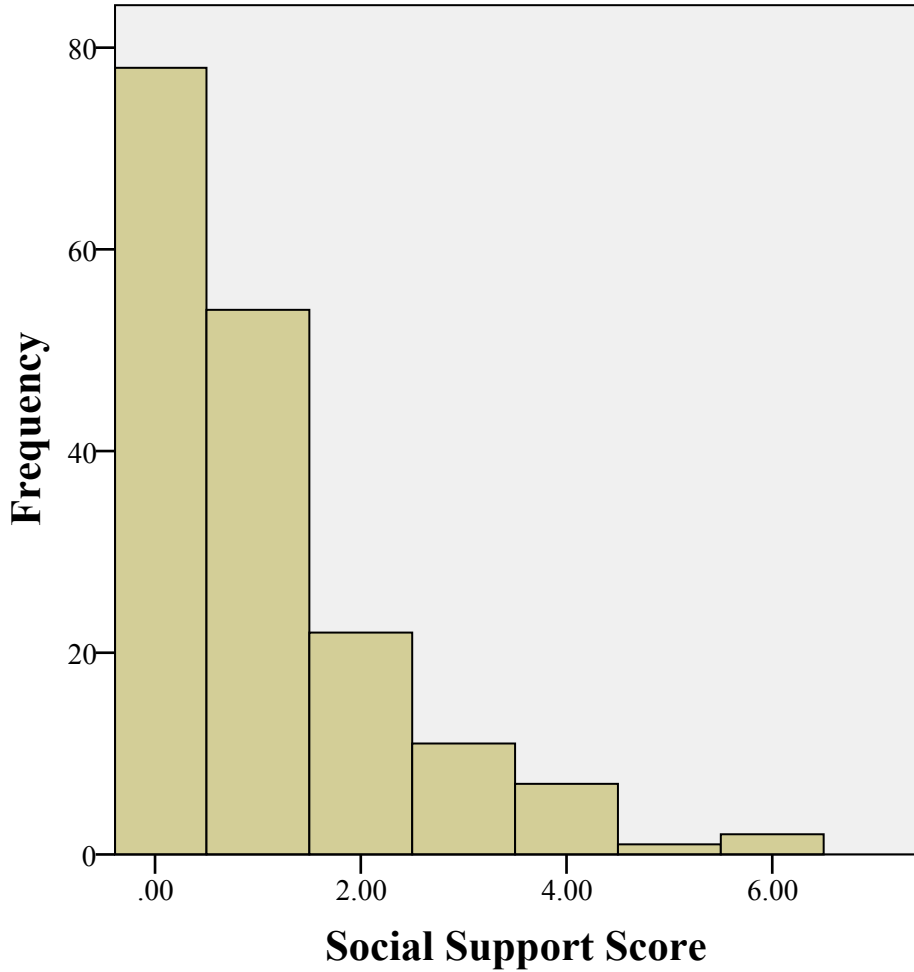


Figure 7. Social support histogram.

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