Title: Prevalence of Posttraumatic Stress Disorder in Aging Vietnam-era Veterans: VA Cooperative Study #569, The Course and Consequences of Posttraumatic Stress Disorder in Vietnam-era Veteran Twins

Short Running Title: Prevalence of PTSD in Aging Vietnam-era Veterans

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ABSTRACT

Objectives: The prevalence of PTSD among aging Vietnam-era Veterans is not well characterized.

Design: Cross-sectional study.

Setting and Participants: 5,598 male Vietnam-era Veterans who are members of the Vietnam Era Twin (VET) Registry.

Measurements: PTSD assessed according to the DSM-IV-based structured interview (CIDI); current symptoms were measured with the PTSD Checklist (PCL). PTSD estimated according to age (<60 or ≥60) and Vietnam theater service.

Results: The lifetime prevalence of PTSD in theater Veterans age ≥60 was 16.9% (95% CI 13.9 – 20.5) and higher than the 5.5% (95% CI 4.3 – 7.0) among non-theater Veterans. The comparable prevalence among age <60 Vietnam-era Veterans was 22.0%, (95% CI 16.7 – 28.4) for theater and 15.7%, (95% CI, 13.4 – 18.2) for non-theater Veterans. Similar results were found for theater service and current PTSD prevalence (past 12 months). PCL scores were significantly higher in theater compared to non-theater Veterans in both younger and older cohorts. In both the younger and older cohorts significant differences in lifetime and current PTSD prevalence and PCL scores persisted in theater service discordant twin pairs.

Conclusions: Vietnam service is related to elevated PTSD prevalence and current symptom burden in aging Veterans. More than 30 years after the end of the Vietnam conflict many Veterans continue to suffer from PTSD and point to the need for continuing outreach throughout the life-course.
INTRODUCTION

The Vietnam War impacted the lives of nearly three million US Veterans. A particularly insidious consequence of the war is posttraumatic stress disorder (PTSD) (1). In 1990, the National Vietnam Veterans Readjustment Study (NVVRS) estimated the prevalence of current and lifetime PTSD in Vietnam-era Veterans (2). These cross-sectional findings reflected the status of Vietnam-era Veterans when they were in their 30s and 40s. Now, more than 20 years later, Vietnam-era Veterans are in late middle age, and the prevalence of PTSD in these Veterans is not well characterized.

A recent paper in the *AJGP* for the first time provided prevalence estimates for PTSD in the older (>60) U.S. population (3). For older males they estimated that 7.4% had a lifetime history of full or partial PTSD among individuals exposed to a traumatic event. PTSD continues to be a common diagnosis among Vietnam-era Veterans within the VA health system. In the time period 2007-2009 a total of 366,317 Vietnam-era Veterans had a diagnosis of PTSD within the Department of Veterans Affairs health system (4); this represents a treated prevalence of 15.8% of all Vietnam-era Veterans seen in the system. However, there are currently no estimates of the prevalence in the larger community of aging Vietnam-era Veterans. This is important because there may be Veterans who are either not receiving treatment or receiving treatment outside the VA system.

The purpose of this study was to estimate the prevalence of PTSD in younger (<60) and older (≥60) Vietnam-era Veterans. We evaluated PTSD in Veterans in the Vietnam Era
Twin (VET) Registry, which was constructed from military discharge records in the mid-1980s (5). We assessed lifetime and current prevalence in 2011-2012 according to age cohort, service in the Vietnam theater of operations, and combat exposure.
MATERIALS AND METHODS

Setting
The VET Registry is the source of Vietnam-era Veterans (military service between 1964-1975) for this study. The VET Registry is a national sample of male twins assembled in the 1980s and has been used as a platform for physical and mental health research (5-7). Members of the VET Registry were born from 1939 through 1957.

Design
The Course and Consequences of PTSD in Vietnam Era Twins (VA Cooperative Study #569) is an observational study of PTSD among Veterans. A mailed questionnaire obtained general health information and PTSD symptoms; a telephone interview used a structured psychiatric interview to diagnose PTSD.

Subjects
All members of the VET Registry who had entered military service in 1965 or later and who were known to be alive and had not withdrawn from the Registry were recruited to participate in this study. We employed the enlistment year restriction because the Registry was assembled based on computerized military discharge records that did not become available until 1968. Study-specific informed consent was obtained from all participating VET Registry members, and the VA Central Institutional Review Board approved the study’s protocol.

Data Collection
We mailed all eligible twins an initial contact letter describing the project and inviting participation. Twins were requested to complete and return a physical and mental health questionnaire by mail. For twins who did not send back a questionnaire, we attempted to call them directly. Because of the size and scope of the study, all mail and telephone fieldwork was done under contract by Abt SRBI, Inc., a large survey research organization.

**Measures**

*PTSD Diagnosis:* PTSD was assessed by a telephone administration of the Composite International Diagnostic Interview (CIDI) according to the 4th edition of the *Diagnostic and Statistical Manual (DSM-IV)* (1). The CIDI is a structured instrument designed for administration by trained lay interviewers; it is the most widely used tool for the evaluation of psychiatric disorders in epidemiologic studies (8). A recent study demonstrated that relative to the Clinician Administered PTSD Scale (9) the CIDI had sensitivity of 0.71 and specificity of 0.85 for past-year PTSD and sensitivity of 0.61 and specificity of 0.91 for lifetime PTSD (10). Interview training was done by CIDI-certified trainers at the start of the study and continuously monitored during the course of data collection.

*Assessment of PTSD Symptom Burden:* As part of the mailed questionnaire, we included the PTSD Checklist (PCL) (11). The PCL includes a list of 17 PTSD items derived from the *DSM-IV* diagnostic criteria and is widely used in studies of traumatically exposed individuals (12). The psychometric properties of the scale are
excellent, with a high internal consistency and criterion validity when compared to the formal diagnosis of PTSD (13, 14).

*Socio-demographic and Military Service Factors:* Information about socio-demographic and military service factors was previously culled from the military service records and interviews. These data include: date of birth, race, zygosity, marital status at enlistment, educational attainment in years at the time of enlistment, date of enlistment, branch of service, and rank at enlistment.

In most instances, we determined Vietnam theater service and combat exposure based on a response to a mailed questionnaire administered from 1985 through 1990. For less than 10% of the Veterans who did not have this information, we used the military records to assign theater of service. We used a combat exposure index based on the sum of 18 specific combat experiences that has excellent reliability and validity (15). For the current analysis we grouped combat exposure among Vietnam theater Veterans into two categories divided at the approximate median: no or low combat (combat score of 0-2) and medium to high combat (combat scores ≥ 2).

**Statistical analysis**

*Weighting:* Descriptive analyses characterized the distribution of socio-demographic and military service factors among respondents to the mailed questionnaire and the telephone interview. We then used a model-based weighting procedure that adjusted prevalence estimates for both non-response and the current population of living

**Prevalence Estimates:** We estimated the weighted lifetime and current (past 12 months) prevalence of PTSD in theater and non-theater Veterans. Analysis stratified the sample into a younger (<60) and older (>60) age cohort at the time of the survey. Statistical testing examined PTSD prevalence estimates for differences by theater service within age cohort. Among those who served in Vietnam we estimated adjusted odds ratios (OR) and mean differences in the PCL for combat exposure.

**Within-pair analyses:** We used a matched-pair analysis that directly compared PTSD and PCL scores in twin pairs discordant for theater military service. In this co-twin control analysis one member of the pair did not serve in theater while their co-twin served in theater. In this within-pair twin analysis we estimated the theater service associated odds ratios and 95% confidence intervals using matched pair logistic regression; a parallel analysis was conducted using within-pair differences in PCL scores (17).

In all analyses, significance levels were 2-sided and set at p = .05. All statistical testing and confidence intervals accounted for the clustered data structure represented by twin pairs in the VET Registry using robust variance estimators (18). Data analyses were performed with Stata 13.1 (19).
RESULTS

Sample characteristics

From our original sample of 14,736 individuals in the VET Registry, 2,969 (20%) individuals had died or had withdrawn from the VET Registry at the time we initiated our study. An additional 925 individuals were not locatable and 303 individuals were excluded because they had enlisted prior to 1965 (Figure 1). Of those who were alive and eligible (n = 10,539), we obtained completed mailed questionnaires from 7,079 Veterans (67.2%) and telephone psychiatric interviews from 5,862 Veterans (55.6%). In total our final analytic sample consisted of 1,534 Veterans aged <60 and 4,064 aged ≥60 who responded to both the mailed questionnaire and the telephone interview.

The distribution of military service and demographic characteristics is presented among respondents (unweighted) and then after weighting for non-response and population characteristics; the 2010 National Survey of Veterans population distributions are also presented (Supplemental Table S1). Weighting increased the percent of those who served in the Army and Marines and increased both early and late enlistment and discharge years. Demographic characteristics were also altered by the weighting with increases among the percent of those who were older, non-white, divorced or never married, obtained a high school degree or less, and had a lower income. A quarter of the weighted sample were <60 years old at the time of interview. The weighted estimates for military service and demographic characteristics were similar to the population values for living Vietnam-era Veterans derived from the 2010 National Survey of Veterans. Supplemental Table S2 displays the weighted distribution of
demographic and military service factors according to age group and PTSD diagnosis. In general, within each age cohort those with a diagnosis of lifetime PTSD were more likely to have served in the Army or Marines, younger at enlistment, more likely to be non-white, and less likely to have attended college.

**PTSD Prevalence and Mean PCL**

*Theater Service:* Overall the lifetime prevalence of PTSD among theater Veterans was 17.6% (95% CI 14.8 – 20.8) and in non-theater Veterans it was 8.9% (95% CI 7.8 – 10.2) \((t(5596) = 7.76, p < 0.001)\); similarly the current, 12 month prevalence was greater in theater compared with non-theater Veterans (12.8%, 95% CI 10.2 – 16.0 in theater vs. 5.6%, 95% CI 4.7 – 6.8 in non-theater, \((t(5591) = 7.98, p < 0.001)\) (Table 1). The lifetime prevalence of PTSD differed by age at the time of interview. Among those < 60 years old the lifetime PTSD prevalence was 22.0% (95% CI 16.7 – 28.4) in theater Veterans and was higher than the 15.7% (95% CI 13.4 – 18.2) prevalence among non-theater Veterans \((t(1532) = 2.12, p < 0.034)\). For those \(\geq 60\) years old there were also differences in PTSD prevalence between theater and non-theater Veterans (16.9% versus 5.5%, \((t(4062) = 9.61, p < 0.001)\). The differences in PTSD lifetime prevalence associated with theater service were significantly larger among the older than younger Veterans \((t(5594) = 3.24, p = 0.001\) interaction by age cohort). Similarly, there were differences in current PTSD prevalence associated with theater service in both younger and older cohorts \((t(5589) = 3.56, p < 0.001\) interaction by age cohort). Mean PCL scores were significantly higher in theater Veterans than non-theater Veterans \((t(5570) = 8.77, p < 0.001)\) and this was found for both age cohorts.
Combat Exposure: Combat exposure was strongly associated with the lifetime prevalence of PTSD in the younger and older cohorts (t(274) = 4.18, p < 0.001 for <60 age and t(1834) = 7.34, p < 0.001 for ≥60 age) (Figure 2). In the <60 age cohort the lifetime prevalence of PTSD was 12.1% in Veterans with a history of no/low combat exposure and 37.8% for Veterans with medium/high combat exposure. The comparable PTSD prevalences in the ≥60 age cohort were 6.8% among those with no/low combat exposure and 25.6% in those with medium/high combat exposure. Similarly, medium/high combat exposure was associated with a significant increase in the unadjusted current prevalence in both the younger (t(273) = 3.60, p < 0.001) and older (t(1831) = 6.92 p < 0.001) age cohorts. Adjusted logistic regression analysis found that medium/high combat exposed Veterans were at 4 times the odds of lifetime PTSD in both the younger and older cohorts (Table 2). In the adjusted analysis medium/high combat was also associated with significantly increased mean PCL scores (t(273) = 4.65 p < 0.001 for <60 age and t(1826) = 8.86, p < 0.001 for ≥60 age); the mean difference comparing no/low combat to medium/high combat was more than 9 PCL points in the younger cohort and nearly 7 PCL points in the old cohort.

Within-Pair Analysis: In the younger cohort the lifetime prevalence of PTSD was 27.0% in theater twins compared to 13.1% in non-theater service co-twins (t(180) = 2.27, p = 0.023) (Table 3). Among Veterans age ≥60 the lifetime prevalence of PTSD in non-theater twins was 6.9% compared to 13.8% in theater co-twins (t(1050) = 2.80, p = 0.005). The results for the within-pair analysis of current PTSD prevalence were very
similar, though of slightly smaller magnitude, to those observed for lifetime PTSD. The pattern of association of within-pair differences in PTSD prevalence by theater service was not significantly different by age cohort \((t(1200) = 0.33, p = 0.74)\) interaction by age cohort for lifetime and \(t(1194) = 0.55, p = 0.58\) interaction by age cohort for current). We found no evidence of differential theater service effects by zygosity for either current \((t(1194) = 1.39, p = 0.16\) for zygosity interaction) or lifetime PTSD \((t(1200) = 0.67, p = 0.50\) for zygosity interaction). Among theater service discordant twin pairs the within-pair analysis of mean PCL scores was significantly different in both age cohorts with higher scores in twins who served in theater \((t(178)=2.78, p < 0.01\) for <60 age and \(t(1010)=7.45, p < 0.005\) for age \(\geq 60\)). The association of theater service with PCL was larger, but not significantly different in the younger compared to the older cohort \((t(1188) = 0.68, p = 0.50\) for interaction by age cohort). Further there was no significant interaction by zygosity in either age cohort \((t(176)=0.40, p = 0.69\) for <60 age and \(t(1008) = 0.18, p = 0.86\) for age \(\geq 60\)).
CONCLUSIONS

More than 35 years after the end of the Vietnam conflict, the prevalence of lifetime PTSD and current symptom burden is substantial in Vietnam-era Veterans who served in the theater of operations. Consistent with prior research, the prevalence of PTSD was particularly marked among Veterans with a history of combat exposure. For non-theater Veterans, however, those age <60 years had a higher prevalence of PTSD compared with older Veterans ≥60.

Comparison to other Prevalence Estimates

There are no estimates of the current prevalence of PTSD among older Vietnam-era Veterans, but there are estimates from the period from 1985-1995 when these men—on average—were 40 years old. The NVVRS used a random probability sample of military records that identified Vietnam-era Veterans and used a complex multi-step process to make a diagnosis of PTSD according to DSM-III-R criteria (2). The NVVRS reported that among theater Veterans the 6-month (current) prevalence was 15.2% and the lifetime prevalence was 30.9%. A re-analysis of NVVRS primary data sources in 2007 reported lower PTSD estimates: 9.1% for current and 18.7% for lifetime diagnoses (20). Another estimate of PTSD prevalence in Veterans was obtained from the Centers for Disease Control and Prevention (CDC) Vietnam Experience Study project conducted in 1986 (21). This study included a sample of Veterans who served one tour of duty in the Army derived from a random sample of military records. Based on in-person interviews using the DIS with DSM-III criteria, the CDC estimated a lifetime PTSD prevalence of 14.7% and a one-month prevalence of 2.2% among theater Veterans; however, in the
CDC study, a PTSD diagnosis required a specific war-related traumatic index event (Vietnam theater Veterans only) (21). Boscarino re-analyzed the CDC data and reported a one-year prevalence of 12% for theater Veterans (22). The prevalence estimate reported by Boscarino included both combat and non-combat related PTSD and a broadening of the diagnostic criterion for PTSD. In a previous psychiatric study of the VET Registry, based on a telephone administration of the DIS in 1992 with DSM-III-R criteria, the estimated prevalence of lifetime PTSD was 15.0% among theater Veterans and 6.1% in non-theater Veterans (23). A study among Australian male Vietnam theater army Veterans in 1990-1993 found a lifetime prevalence of PTSD of 18.7% using the DIS with DSM-III-R criteria (24). Findings from the current study shows that PTSD continues to be highly prevalent among those exposed to combat.

There are few studies of PTSD in the general population of older adults. A recent report by Pietrzak and colleagues in the AJGP represents the most detailed national assessment of PTSD in the older population using Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions conducted between 2004 and 2005 (3). A diagnosis of PTSD was based on an in-person fully structured instrument administered by lay interviewers (25). Among males 60 years and older (age range 60-99) the lifetime prevalence of PTSD was 3.1% which is smaller than the 5.5% prevalence we found in non-theater Vietnam-era Veterans who were ≥60 (age range 60-71). An important difference between the two estimates is the definition of the denominator: in our study we included all participants in the denominator while the Pietrzak et al study only included individuals who reported experiencing a traumatic
event. Had we restricted our denominator to only those with a history of a traumatic event the prevalence among non-theater Veterans would have been higher. Their national estimate is also lower than what we observed among Vietnam theater Veterans, many of whom were exposed to combat trauma. Other potential reasons for the differences in prevalence estimates include the differences in age range, PTSD assessment instruments and the timing of measurement.

Public Health Implications
The results of this study show differences in PTSD prevalence by age cohort and theater service. It is interesting that there was an increase in PTSD among Veterans who did not serve in theater in the younger vs older cohort. The reasons for this result are not obvious though we can hypothesize that differences in exposure to non-combat traumatic exposures might play a role. Vietnam theater Veterans carry a substantial burden of PTSD over the life-course. The volume of care-seeking Vietnam-era Veterans with a diagnosis of PTSD continues to increase within the VA and makes up an increasing proportion of the total VA caseload. For example, Vietnam-era Veterans with a diagnosis of PTSD in the VA increased by 22.2% from 2004–2006 to 2007-2009 (4). Although the VA has expanded its outreach to war Veterans and its PTSD treatment resources since the Vietnam War, our results suggest that it is important to find ways to continue to address PTSD across the life-span. This might entail paying closer attention to the after-care challenges of Veterans in therapy for PTSD, the reduction of relapse and recurrence, and shifting to a rehabilitation model of care for some. The impact of PTSD among aging Veterans is complex and recent papers in the AJGP point to the
effects of the waxing and waning nature of PTSD on mental health across the life-course (26) and the potential adverse impact that PTSD has on physical health (27, 28). The VA should consider specialized outreach to Vietnam Veterans suffering from PTSD that have never been treated.

**Limitations and Strengths**

Our study does have a number of limitations. The VET Registry is a sample of twin pairs, and it is possible that being a twin might influence the later-life prevalence of PTSD. Data from carefully done studies in Scandinavian twin registries, however, suggest that adult twins are at similar risk to the general population for most physical and mental health disorders (29, 30). Our study did not include female Veterans because the VET Registry was restricted to male twins when it was created (5). Our response rate of 53% is of concern. If the non-respondents have a different PTSD prevalence than respondents, and especially if this difference in non-respondent prevalence is related to theater service, then our estimated prevalence might be biased. However, we used the extensive information on socio-demographic and military service from all VET Registry members to reweight our prevalence estimates. We further adjusted our final estimates to mirror the demographic and military service characteristics of Vietnam-era Veterans using population-level data. The VET Registry was constructed using computerized military discharge records and these records have known gaps during the Vietnam era. In particular, the Registry did not include individuals who were enlisted prior to 1965; we estimated that only 4 to 5 million records were available to construct the Registry while the total number of Vietnam-era Veterans
is closer to 9 million (5). Thus our prevalence estimates do not refer to the whole of the Vietnam-era Veteran population. Concerning our measure of PTSD, we used the CIDI while the gold standard for PTSD assessment is the Clinician Administered PTSD Scale (31). However, the CIDI has been used extensively in large population studies of PTSD. The psychometric properties of the PTSD CIDI module were evaluated as part of the World Health Organization’s (WHO) World Mental Health Surveys initiative (32). When compared with a clinical assessment using the Structured Clinical Interview for DSM-IV the CIDI PTSD diagnosis had a kappa of 0.49 and a sensitivity of 38.3% (32, 33). We also used the PCL to more broadly capture current symptom burden. Regardless of how we measured PTSD, our results were consistent with an elevation of PTSD associated with war-zone service. Another issue relates to how PTSD symptom reporting might vary across the life-course. Our findings that younger Veterans, even those who did not serve in theater, have an increased prevalence of PTSD may reflect differences in patterns of symptom reporting that vary inversely with age. Alternatively, current prevalence could in part reflect the effects of treatment on reducing symptoms. These topics need further investigation in longitudinal cohorts of individuals exposed to traumatic events and various PTSD treatment regimens. Finally, our analysis focuses on differences in PTSD prevalence according to service in the Vietnam theater; in this study we do not examine the potential of non-war zone traumatic events that might trigger PTSD.

A major strength of the current study is that it is based on the VET Registry sample which is large, includes all branches and ranks, is national in scope, and is unselected
with respect to treatment seeking. We diagnosed PTSD with the CIDI which is widely used for studies of PTSD in the community (8, 34). Further, we capitalized on our twin sample to compare PTSD within pairs, which controls perfectly for age and numerous unmeasured familial and genetic factors (35).

**Summary**

PTSD is prevalent among aging Vietnam-era Veterans who served in the Vietnam theater. The prevalence of PTSD among men who served in combat is of particular concern and points to the need for continuing outreach and intervention programs targeted to these aging Vietnam Veterans.
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REFERENCES


