How Reminders of Prior Combat Affect PTSD Symptoms

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Do terrorism and subsequent war exacerbate symptoms of chronic posttraumatic stress disorder? In this study of Vietnam veterans, investigators examined whether symptom severity increased significantly with the start of Operation Iraqi Freedom.

In order to respond effectively to the needs of military personnel and veterans with posttraumatic stress disorder (PTSD), federal practitioners must understand the impact that subsequent war and terrorism may have on such patients—particularly in light of ongoing events in Afghanistan, Iraq, and elsewhere in the world. Clinical wisdom and theories concerning PTSD suggest that exposure to an event reminiscent of a past trauma is likely to exacerbate symptoms of preexisting PTSD. Although this sentiment resonates with many clinicians who work with individuals who have PTSD, there has been minimal empiric investigation into whether PTSD symptoms fluctuate following exposure to subsequent trauma. The few published studies and reports that have focused on the potential retraumatizing effect of subsequent war on combat veterans with PTSD have generated conflicting results, demonstrating a need for additional investigation.[1-9]

In this article, we'll briefly describe the findings of previously published studies that have addressed the retraumatization effect of subsequent war or terrorism. We'll also discuss the methods, findings, and implications of our own study of Vietnam veterans with chronic PTSD and explain how they responded to the start of Operation Iraqi Freedom (OIF).

RETRAUMATIZATION: PREVIOUS FINDINGS

In the first published study of the retraumatization effect, Israeli veterans with chronic PTSD exhibited intensified combat-related PTSD symptomology following subsequent combat exposure.[1] The study's authors suggested that exposure to subsequent war reactivated combat-related PTSD symptoms and impeded recovery from chronic PTSD. Consistent with this finding, investigators documented development or exacerbation of PTSD symptoms in Vietnam veterans during the 1991 Gulf War—both those who were still active in the military and anticipated deployment to the Gulf[2] and those who no longer served in the military.[3,4] These studies suggest that combat veterans, especially those with PTSD, may be retraumatized by reminders of their own combat experiences and by the threat of war.

In that acts of terrorism and war have similarities, both might be expected to exacerbate veterans' symptoms of PTSD. Following the Oklahoma City bombing of 1995, there was anecdotal evidence of an increase in trauma reexperiencing and hyperarousal symptoms reported by combat veterans partici-

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pating in a PTSD support group.[5] Studies of veterans' responses to the September 11, 2001 terrorist attacks yielded mixed results. Within the context of an ongoing longitudinal investigation of symptom fluctuation in chronic PTSD, our research group systematically compared symptom levels reported by combat veterans with PTSD in the weeks before and after September 11.[6] In the weeks following the terrorist attacks, we observed a significant increase in PTSD symptomology and a subsequent return to baseline. Other examinations of symptom level and service utilization data in samples of veterans with PTSD failed to show elevated PTSD symptom levels or an increase in the use of mental health services after September 11.[7-9]

The limited number of studies examining veterans' responses to subsequent war and the inconsistent results prompted the current investigation. Based on data drawn from a larger, longitudinal study of chronic PTSD, we prospectively examined symptom severity in Vietnam veterans with combat-related PTSD before and after OIF began with the decapitation strike on March 19, 2003.

OUR METHODS

Participants

As part of an ongoing, two-year, longitudinal study of chronic PTSD at the VA Boston Healthcare System (VABHS), 34 Vietnam veterans with PTSD completed an assessment every two weeks between April 2000 and June 2004. Of these, 16 were active in the study when the war began in March 2003 when the United States invaded Iraq and, therefore, were included in the present study of the effects of OIF on PTSD symptomology. The mean age of these 16 veterans was 54 years (range, 51 to 59 years), and they had been enrolled in the longitudinal study for an average of 66.4 weeks (range, 30 to 90 weeks) at the beginning of the six-week period preceding the start of the war (that is, at the earliest data point used in the current study). The majority were white (75%) and married (69%). Over half (56%) were enrolled in individual or group therapy, and most (75%) received compensation for service-connected disabilities.

Using diagnostic criteria outlined in the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition *(DSM-IV)*,[10] 13 participants (81%) met the criteria for current PTSD; those who did not meet full criteria at the time of study enrollment acknowledged having significant current PTSD symptoms and met the criteria for lifetime PTSD related to their combat experiences. None of the participants met *DSM-IV* criteria for alcohol or drug dependence in the six months prior to enrollment in the ongoing, longitudinal study.

Procedure

After the 16 active study participants provided informed consent, a trained clinician conducted a baseline interview, the Clinician-Administered PTSD Scale.[11] Subsequently, a trained clinician administered the PTSD Checklist—Military Version (PCL-M),[12] every two weeks, through a brief telephone interview.

The PCL-M is a psychometrically sound measure[13] on which individuals use a five-point Likert scale to indicate the extent to which they have been disturbed by each of 17 PTSD symptoms over the past month. For the current study, however, we asked veterans to report on their symptoms over the past two weeks. We summed items on the PCL-M to create subscale scores for each of the three PTSD symptom clusters (reexperiencing, avoidance/numbing, and hyperarousal) and a total PTSD score.

The institutional review board of the VABHS approved the design and all procedures used in both the larger, longitudinal study and the current investigation. Participants were compensated for their time.

Statistical analyses

For the two six-week intervals preceding and following the start of the war, we calculated the mean of each participant's PCL-M scores and compared them using matched-pair *t*-tests. We calculated mean scores rather than looking at individual data points in order to minimize the number of participants excluded from the analyses due to missing data. This method also reduced random variability and assured more stable estimates of PTSD symptomology.

SIGNIFICANT WORSENING

The results of matched pair *t*-tests showed significant increases in overall PTSD severity and in reexperiencing symptoms after the start of OIF (Table). In item-level analyses examining the nature of the reexperiencing symptom exacerbation, *t*-test results reflect significant ($P < .05$) increases in four of the five reexperiencing symptoms with the remaining symptom demonstrating a similar trend ($P = .054$).

STUDY IMPLICATIONS

Previous reports have yielded conflicting results regarding a possible exacerbation of PTSD symptoms in

Table. PTSD* symptom severity in the two six-week periods preceding and following the start of OIF†

Parameter	Mean prewar PCL-M‡ scores (SD)	Mean postwar PCL-M scores (SD)	*t* value	*df*	*P* value	Effect size
Overall PTSD severity	57.55 (14.89)	61.04 (15.88)	−3.03	15	.008	.23
Reexperiencing symptoms	16.16 (5.71)	18.40 (5.05)	−2.79	15	.014	.42
Avoidance/numbing symptoms	23.56 (5.82)	24.18 (6.24)	−1.78	15	.100	.10
Hyperarousal symptoms	17.83 (4.87)	18.45 (5.39)	−1.66	15	.120	.12

*PTSD = posttraumatic stress disorder. †OIF = Operation Iraqi Freedom. ‡PCL-M = PTSD Checklist—Military Version.

veterans following exposure to subsequent war and terrorist activity reminiscent of previous combat exposure. We hypothesized that veterans with significant levels of combat-related PTSD would experience an exacerbation of PTSD symptoms in response to military operations in Iraq. As expected, we observed a significant increase in PTSD symptoms—particularly reexperiencing symptoms—immediately following the beginning of the war. Interestingly, we did not observe a significant increase in symptoms in the months leading up to the start of the war. (Since the larger, longitudinal study actually began in 2000, we had several months' worth of prewar data, which is not presented here.) This finding suggests that symptoms of chronic PTSD are relatively stable and that a dramatic event is required in order to observe group changes in symptom reports.

These results must be considered preliminary for several methodologic reasons, including the small number of participants and the demographic restriction of the sample. In addition, many participants' baseline scores on the PCL-M were extremely high, leaving little room to detect an increase in symptom reports. While this may have led us to underestimate the effect of the war, the fact that we were able to detect significant increases in PTSD symptoms despite the ceiling effect and small sample size speaks to the significance of the war in the lives of combat veterans with preexisting PTSD. This conclusion is supported by our effect size estimates, which are unhindered by our small sample size and indicate modest but meaningful increases in PTSD symptomology following the start of war.

The current study fills an important gap in health care literature with regard to the psychological impact of war on a population considered vulnerable by virtue of their previous combat exposure and chronic symptoms of PTSD. In the context of an ongoing longitudinal investigation of the course of chronic PTSD, we were in a unique position to evaluate the psychological effects of the war on combat veterans with symptoms of PTSD.

Similar to our findings following the September 11 terrorist attacks,[6] the results of the current study reveal an exacerbation of chronic PTSD symptoms following a trauma reminiscent of participants' combat experiences. Given the large number of war veterans with chronic PTSD symptoms and the range of current events that may serve as reminders of combat trauma, these are important preliminary results. To enhance the ability of federal practitioners to intervene effectively with this vulnerable population, further investigation is required. ●

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The opinions expressed herein are those of the authors and do not necessarily reflect those of Federal Practitioner, *Quadrant HealthCom Inc., the U.S. government, or any of its agencies. This article may*

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