



PTSD Among Combat Veterans

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Posttraumatic Stress Disorder (PTSD) is one of the “signature wounds” of the wars in Iraq (OIF) and Afghanistan (OEF), according to the House Committee on Veterans Affairs. To date, 1.6 million men and women have served in these wars, and it is estimated that at least 20% will struggle with symptoms of PTSD at some point in their lives. This article briefly describes what PTSD is, how it is manifested on a day-to-day basis among veterans, and current empirically supported treatments for the disorder.

What is PTSD

PTSD is a particular presentation following exposure to a traumatic event. The event (or events) can involve combat, assault, childhood abuse, or motor vehicle accident (for example) and must involve “actual or threatened death or serious injury, or other threat to one’s physical integrity,” according to the DSM. Common examples of traumatic events among OIF/OEF veterans include being wounded or seriously threatened during raids or patrols involving contact with snipers or improvised explosive devices (IEDs), witnessing the death of a friend during a raid or patrol (which can include having to help clean up the direct aftermath), and observing (or accidentally causing) the death of civilians. The symptoms of PTSD, which cause significant impairment, are natural responses to trauma that do not remit after one month post-trauma; empirically supported treatments for the disorder address the hypothesized mechanisms through which these natural (and usually only temporary) responses are sustained over time.

Symptoms of PTSD

The first symptom cluster is called **re-experiencing** and entails having unpleasant and unwanted images, thoughts, or memories about the traumatic event. Re-experiencing symptoms (e.g., intrusive thoughts, nightmares, flashbacks) are strongly associated with suicide among individuals with PTSD, which speaks to their highly anxiety-provoking nature; these symptoms also can lead to avoidant coping strategies such as drug/alcohol abuse or isolation.

The second symptom cluster, **arousal**, involves fairly persistent anxiety, which is due to an overactive sympathetic nervous system (the part of the nervous system associated with the “fight or flight” response to

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perceived danger) and/or an underactive parasympathetic nervous system (the part that calms the body down after the perceived danger has passed). This heightened sympathetic nervous system functioning is manifested in everyday life by the ease at which individuals become upset, and the subsequent difficulty in calming down; interrupted sleep; difficulty concentrating; and exaggerated startle response. The arousal most often is accompanied by hypervigilance (e.g., extreme attention paid to what is occurring in the surroundings), along with the tendencies to interpret ambiguous situations as threatening and to ruminate about the most appropriate responses to potential threats.

The third symptom cluster, **avoidance**, initially serves as an attempt to manage symptoms but ultimately (and unfortunately) maintains PTSD and causes other difficulties. Individuals with PTSD will attempt to avoid thinking about the incident or having feelings about it, which requires them also to avoid reminders of the incident, along with situations that are anxiety provoking. Avoidance strategies can involve drug/alcohol abuse, isolation, keeping busy, distraction, and emotional numbing; these strategies work in the short-term but in the long-term can engender depression, lead to the loss of social support, and maintain the symptoms of PTSD.

While all of the symptoms of PTSD are troublesome and can negatively impact an individual's everyday life, anger is reported by combat veterans with PTSD, and by their wives, as the biggest concern. The expression of anger, or the over-controlling of it by various means (e.g., emotional numbing, isolation), often lead to relationship and occupational difficulties, but this does not necessarily translate into an increased risk for serious criminal behavior. Statistics released by the US Department of Justice in 1998, and replicated in 2004, indicate that male veterans are incarcerated at less than half the rate of adult male non-veterans. And while incarcerated male veterans are more likely than incarcerated male non-veterans to be in prison for a violent crime, with the target of said violent crime more likely to be people they know, only 1 in 5 incarcerated veterans saw combat in the military, suggesting that combat-related PTSD is not likely the cause of this discrepancy.

The symptoms associated with PTSD are common responses to trauma (e.g., being reminded of unpleasant experiences, despite not wanting to be; feeling on edge, especially when reminded of the trauma; trying to avoid thinking about the trauma); however, not everyone who experiences a trauma will develop PTSD. Risk factors for developing the disorder include the severity of the experience, prior traumatic experiences, previous mental health concerns, or a family history of psychiatric concerns. Given the serious nature of combat in Iraq and Afghanistan, along with servicemen tending to be deployed multiple times (and hence more likely to have traumatic experiences), OIF/OEF veterans carry serious risk factors for developing PTSD.

Social support post-trauma can promote resilience; unfortunately the symptoms of PTSD often serve to disrupt natural support systems. In addition, more than three-quarters of individuals with a diagnosis of PTSD also carry another mental health diagnosis, most often substance abuse or depression, which can be ramifications of the avoidant strategies common to PTSD. Combat-related PTSD also increases the risk for suicide, as well as a variety of serious medical conditions, for example, cardiac disease (likely related to the

disorder's effect on nervous system functioning).

Rates of PTSD

Rates of PTSD among the American public are estimated at 10.4% among women and 5.0% among men. Early estimates of PTSD among OIF/OEF veterans were approximately 12%, although this likely is an underestimate. Among Vietnam War combat veterans, 20% have struggled with symptoms of PTSD within 20 years of their military service, suggesting that PTSD can be a chronic condition. Recent studies suggest increasing numbers of OIF/OEF veterans will struggle with PTSD over time. A study by the Department of Defense examining the records of 88,235 OIF/OEF servicemen found that immediately following deployment 12% of veterans scored positive on a PTSD screen. Six months later, 16-24% scored positive. The study concluded that surveys immediately post-deployment “substantially underestimate the MH burden” with respect to PTSD. Currently approximately 40% of the 1.6 million OIF/OEF veterans are receiving some sort of healthcare through the VA system. Based on a review of 289,328 records from the Department of Health, 37% of these veterans have received a mental health diagnosis; of these veterans, 22% have a diagnosis of PTSD, 17% depression, and 7% alcohol abuse (which is likely a gross underestimate). In addition, one-third of these veterans have more than one mental health diagnosis. And as reflected in the previous study, mental health diagnosis rose steadily over time, with 14.6% of veterans having one diagnosis one-year post-deployment and 27.5% after 4 years.

How to Explain (and Treat) PTSD

Some symptoms of PTSD have been labeled by the military as Battlemind, basically residuals of learned behavior that were strongly reinforced during military training and integral to survival while in combat, and therefore difficult to change. As Grossman outlined meticulously in his book *On Killing*, military training vastly changed after WW2 when it was discovered that the majority of servicemen (much less than 50%) either did not discharge their weapons or did not directly aim at the enemy even when fired upon; the subsequent change in training has been reflected by much higher direct firing rates among servicemen (up to 95% in Vietnam, and 99% in Iraq and Afghanistan). While necessary and beneficial to the military, this change nevertheless has serious ramifications on the mental health of veterans, and likely contributes to PTSD, especially emotional numbing. And in general, many symptoms of PTSD (arousal, vigilance, shallow sleep, emotional numbing – with the exception of anger) are integral to being effective in a combat zone; the question then becomes how an individual lets go of characteristics that are not so well-suited to civilian life, when those same characteristics served to protect themselves (and others) in combat.

Therapeutic Approaches to PTSD

In general, symptoms of PTSD are natural responses to trauma that do not remit over time, although the responses do naturally remit for the majority of individuals who experience traumas. Different therapeutic approaches stem from hypotheses regarding the specific mechanisms that maintain what usually are only temporary symptoms. For example, behavioral/learning approaches posit that the avoidance characteristic

of PTSD does not allow for disconfirmation of fears or habituation to anxiety; therefore exposure to feared situations (which includes engaging with memories) will be helpful. Meanwhile, cognitive approaches suggest that maladaptive thoughts shaped by traumatic experiences maintain anxiety; therefore, identification of said thoughts and learning to challenge them will be helpful. And finally, biological models suggest that physiological components (e.g., brain morphology, neurochemical levels) maintain symptoms, or place an individual at risk for developing PTSD; therefore, psychopharmacology will be helpful.

Behavioral/Learning Approach

The behavioral/learning model posits that avoidance of thoughts or situations, which is common in PTSD, maintains anxiety because avoidance prevents corrective experiences (e.g., experiences that disconfirm fears). Avoidance also prevents an individual from habituating to anxiety, or realizing that over time anxiety in response to uncomfortable situations naturally lessens. Prolonged Exposure (PE), an empirically supported treatment for PTSD, counters avoidance by having individuals engage with feared situations in the real world (in vivo exposure) and distressing memories during therapy sessions (imaginal exposure). Common in vivo exposures for veterans with PTSD involve spending time in public places (e.g., grocery stores, malls), positioning themselves in a public place with their backs to the door (or other people), or spending time among a crowd; the typical imaginal exposure for veterans involves recounting a horrifying combat experience multiple times until anxiety experienced during the recounting lessens. As individuals engage in these exposure assignments, they experience habituation (e.g., their anxiety eventually declines) and subsequently do not have to rely solely on avoidance to deal with distressing situations/memories, which paradoxically lessens the impact the situations/memories have on them. EMDR, a popular therapeutic approach, is a form of exposure with distraction. And virtual reality, computer software that incorporates visual, aural, olfactory and physical sensations associated w/ traumatic experiences, is a tool to facilitate emotional engagement during PE. Currently, the Madison VA is one of the few VA's in the country with this cutting-edge technology.

Cognitive Approach

Meanwhile, the cognitive model posits that the way we think about things influences how we feel and ultimately how we behave. Unfortunately, traumatic experiences often result in maladaptive thoughts that are inappropriately applied, regardless of context (e.g., the world is a dangerous place, therefore I must always be on guard); trauma-related thoughts such as this can lead individuals to feel anxious and possibly curtail certain activities. Cognitive Processing Therapy (CPT), another empirically supported treatment for PTSD, addresses this by teaching individuals how to identify and challenge maladaptive trauma-related thoughts. The therapy focused on five areas of thought often affected by traumatic experiences: safety, trust, power and control, self-esteem, and intimacy. CPT also involves a small exposure component, in that individuals write about a traumatic experience. Multiple well-designed treatment outcome studies indicate that both PE and CPT are effective in addressing symptoms of PTSD, more so than other treatments or no treatment; these studies also suggest that there is no difference in treatment outcome when comparing PE and CPT.

Biological Approach

And finally, the biological model posits that PTSD results in abnormal brain morphology and/or neurochemical levels (or is the result of pre-existing morphology and/or levels in the face of traumatic experiences); scientific ethics prohibit designing research to examine the direction of these relationships, although long-term and large-scale longitudinal research likely could illuminate this. Nevertheless, studies have indicated that PTSD is associated with an over-activation of the amygdala, the part of the brain responsible for emotional activation in the face of any potential danger, along with an under-activation of the prefrontal cortex, the part of the brain responsible for rationale thought and analysis, and a relatively small hippocampus, which is responsible (in part) for forwarding information to the cortex; the hippocampus also has a role in short-term memory. Taken together, brain functioning in this fashion leads to the amygdala taking a greater role in deciding whether it is reasonable to become aroused in a given situation, which explains the easy arousal (and difficulty calming down) common among individuals with PTSD. There are also noradrenergic abnormalities associated with PTSD; for example, high levels of norepinephrine, the primary neurotransmitter released by the sympathetic nervous system to mediate the fight-or-flight response, could lead to an over-consolidation of trauma-related memories and help to partially explain re-experiencing symptoms. In light of these (and other) biological findings, it is not surprising that there is evidence to suggest using SSRI's, adrenergic meds, atypical antipsychotics, and anticonvulsants can be helpful, although often a single medication is not enough. Research is ongoing to determine how these medications help address symptoms of PTSD; for example, they likely promote hippocampal neurogenesis and/or modulate neurotransmitter levels.

Conclusion

Although use of the label "PTSD" originated in the 1980's, it is clear that symptoms of PTSD following traumatic experiences have been around long before that. While there are plenty of good books describing combat experiences, and also subsequent struggles with PTSD symptoms, an excellent book about how combat-related PTSD has been reflected in literature for centuries, and how it affects an individual's character (versus being merely "symptoms") is Jonathan Shay's *Achilles in Vietnam: Combat Trauma and the Undoing of Character*. This book, along with Dave Grossman's *On Killing: The Psychological Cost of Learning to Kill in War and Society*, provide a thoughtful meditation on how military training and combat experiences can "undo" an individual. ■