

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

Diana Feczer, MA, RN, PMHNP-BC, and Pamela Bjorklund, PhD, RN, CS, PMHNP-BC

PURPOSE. *This paper examines the experience of posttraumatic stress disorder (PTSD) in a female veteran of Operation Iraqi Freedom, including the barriers to treatment she encountered in an outpatient psychiatry clinic.*

DESIGN AND METHODS. *Case report data were obtained through review of records and interviews with a veteran combat nurse diagnosed with chronic PTSD.*

CONCLUSIONS. *Sex differences in PTSD are controversial, but PTSD in female military veterans is a significant problem. Gender may complicate diagnosis and treatment. This case report discusses these issues and invites further research.*

PRACTICE IMPLICATIONS. *Advanced practice psychiatric nurses increasingly will see female veterans with PTSD in their practices.*

Search terms: *Female veterans, Iraq War, military nurses, OEF, OIF, PTSD*

Diana Feczer, MA, RN, PMHNP-BC, is U.S. Army Reserve, Retired, Sauk Rapids, Minnesota, USA; and Pamela Bjorklund, PhD, RN, CS, PMHNP-BC, is Associate Professor, Department of Graduate Nursing, The College of St. Scholastica, Duluth, Minnesota, USA.

[W]e deny that war changes its participants forever . . . America claims innocence and goodness as fundamental traits. We believe that our young men and women should be able to go to war, get the job done, and return home blameless and well. (Tick, 2005, p. 155)

Purpose

This paper examines the experience of posttraumatic stress disorder (PTSD) in a female veteran of Operation Iraqi Freedom (OIF), including the barriers to treatment she encountered in a Veterans Administration (VA) outpatient psychiatry clinic and her individual role in her own recovery. *Jennifer* illustrates a case of chronic PTSD, with recovery through resilience, in a now-retired OIF combat nurse who was deployed to Iraq for 19 months during the years 2003 and 2004, including service inside the prison at Abu Ghraib. To further contextualize her experience, the paper provides a clinical perspective on PTSD in female veterans as well as a brief historical perspective on PTSD in military nurses. Case report data were obtained through review of records and interviews with the participant, whose privacy is maintained through the use of a pseudonym and exclusion or minor alteration of other identifying information.

Background

PTSD is an anxiety disorder characterized by a triad of symptoms following exposure to trauma, including persistent re-experiencing of the traumatic stressor(s) through flashbacks, nightmares, and/or intrusive thoughts; avoidance of stimuli associated with the

First received December 15, 2008; Revision received June 2, 2009; Accepted for publication June 14, 2009.

trauma, along with the numbing of general responsiveness; and persistent symptoms of increased arousal (American Psychiatric Association [APA], 2000). Prevalence rates for PTSD in returning veterans are as high as 19.1% of soldiers returning from OIF, 11.3% from Operation Enduring Freedom (OEF), and 8.5% from other conflict areas (Hoge, Auchterlonie, & Milliken, 2006). Many of these returning soldiers have been women, who were deployed to OEF/OIF in official combat roles for the first time in U.S. military history. Through March 2007, 160,500 women had served in OEF/OIF; 3,800 OEF/OIF veterans had been diagnosed with PTSD; and female veterans with PTSD outnumbered male veterans by a ratio of 2 : 1 (Fisher, 2008).

Several large epidemiological studies also show that women develop PTSD at twice the rate of men (Breslau et al., 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Perkonig et al., 2005), and a meta-analysis of 25 years of PTSD research supports those findings (Tolin & Foa, 2006). However, active duty military men and women exposed to combat do not consistently show this disparity (Hoge et al., 2006). Still controversial, the sex differences in PTSD are not due solely to women's higher risk of assaultive and sexual trauma (Tolin & Breslau, 2007). Yet the psychological risks of exposure to trauma are proportional to the magnitude or severity of exposure and the degree of life threat or perceived life threat. There is a direct correlation between frequency of exposure (multiple traumatic events) and length of exposure (extended or multiple deployments) and the risk of developing PTSD (Breslau, Chilcoat, Kessler, & Davis, 1999; Litz & Orsillo, 2004). While the pathogenic effects of combat stress may diminish after a veteran returns home (demobilization), in some cases, prolonged and profound distress endures (Solomon, Laor, & McFarlane, 2007). At times, disabling symptoms are delayed until demobilization (Gabriel & Neal, 2002). Primary care and psychiatry clinics alike sometimes fail initially to detect PTSD in female veterans.

Posttraumatic Stress Disorder

PTSD and Comorbidity

PTSD is highly comorbid with other psychiatric disorders, including depression, social phobia, panic disorder, substance-related disorders, and other mood and anxiety disorders (Bell & Nye, 2007; Campbell et al., 2007; Erbes, Westermeyer, Engdahl, & Johnsen, 2007; Keane, Street, & Orcutt, 2000; Liebschutz et al., 2007; Sareen et al., 2007). It is often comorbid with traumatic brain injury in returning soldiers (Kennedy et al., 2007). PTSD with comorbid depression is more likely in active duty soldiers with a history of adverse childhood experiences than in soldiers without such history, and female soldiers have higher rates of comorbid depression than males (Gahm, Lucenko, Retzlaff, & Fukuda, 2007). The incidence of comorbid depression in Guard and Active Guard soldiers, who are more likely to meet PTSD criteria than other types of soldiers, is second only to that in Active Duty Army soldiers (Gahm et al.). PTSD is also associated with increased suicide rates in veterans. In Vietnam veterans with chronic PTSD, re-experiencing symptoms significantly predicted more severe suicide ideation (Bell & Nye). Among the depressed VA treatment population, suicide rates are 7–8 times higher than among the depressed general population (Zivin et al., 2007). PTSD has a clear association with anger, hostility, and aggression among OEF and OIF veterans (Jakupcak et al., 2007), and veterans with PTSD and comorbid dysphoric disorders evidence especially high levels of aggression (Taft, Vogt, Marshall, Panuzio, & Niles, 2007). As PTSD comorbidity is so common, clinicians must carefully assess whether treatment of comorbid disorders should proceed concurrently or sequentially (Keane et al.).

PTSD and Barriers to Treatment

Military training can inculcate idealistic views in soldiers about their capabilities and the meaning of

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

physical and emotional injury (Friedman, 2004; Ruzek et al., 2009). Physical injuries not associated with combat are often viewed as weakness and are not formally recognized with awards like the Purple Heart even when the injuries are traumatic and severe. Most soldiers with minor injuries do not seek medical treatment unless physically unable to perform their military duties. If minor physical injury is not acceptable, mental illness is less so. Psychiatric symptoms indicate weakness of character or cowardice (Friedman). Many Iraq War veterans simply will not seek mental health care for their PTSD symptoms as they are reluctant to acknowledge such weakness, certainly are reluctant to consider having a psychiatric disorder, and are realistically fearful of stigmatization and the possible impact on military career prospects or type of military discharge (Friedman; Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007; Pols & Oak, 2007; Ruzek et al.). Health information is sometimes shared with unit commanders, which inhibits help-seeking (Ruzek et al.). Soldiers with histories of psychiatric symptoms are twice as likely to report such fears (Hoge et al., 2004), and their rate of attrition from military service is higher (Milliken et al., 2007).

A Canadian study of 8,441 soldiers showed that 35.2% of those with PTSD symptoms never sought mental health treatment in their lifetimes, although those with comorbid depression were more likely to obtain it (Fikretoglu, Brunet, Guay, & Pedlar, 2007). A recent survey of OEF/OIF veterans found that 12–20% met screening criteria for PTSD, but only 56% of symptomatic veterans received psychiatric services (Hoge et al., 2006). Even when sought, treatment within or outside the VA system may be unavailable, especially in rural and underserved geographic areas. In VA and private sector clinics alike, gender bias may limit diagnosis of PTSD in female veterans, especially those not exposed to direct combat (Benda & House, 2003; Pereira, 2002); VA disability policies may complicate diagnosis and treatment (Frueh, Grubaugh, Elhai, & Buckley, 2007; Spont, Sayer, Nelson, & Nugent, 2007), or existing VA resources, like

many community mental health resources, simply may be overwhelmed. Recently, the Office of the Assistant Secretary of Defense (Health Affairs) surveyed civilian mental health providers to determine where the private sector might fill the gap (T.V. Williams, personal communication, December 23, 2008).

PTSD and VA Mental Health Care for Women

Research suggests there may be gender bias in the diagnosis of PTSD within the VA healthcare system. Pereira (2002) found that male veterans received a PTSD diagnosis 3.4 times more often than female veterans even though the females evidenced more PTSD symptoms than the males. Among 225 male and 232 female veterans receiving treatment at a VA Medical Center, only 19.8% of the 40.1% of women who met criteria for PTSD were actually diagnosed, while 59.1% of the 62.7% of men who met criteria for PTSD received the diagnosis (Benda & House, 2003). While combat injury in both men and women almost guaranteed PTSD claim approval (90%), women who developed PTSD symptoms from a sexual assault during their military service were far less likely to receive a PTSD diagnosis (Murdoch et al., 2003).

This is especially significant because sexual stress and trauma among female veterans is common. Dobie et al. (2002) found that 99% of the female veterans diagnosed with PTSD had a history of physical assault, and 51% had been sexually assaulted during their military service. Among 327 women receiving treatment in a VA women's clinical program for stress disorders, Fontana and Rosenheck (1998) found that 93% had been exposed to some kind of sexual stress during their military service, 63% had been sexually harassed, and 43.1% had been sexually assaulted. While only 11.9% of the female veterans had direct combat exposure (e.g., mortar attacks, enemy fire), 58.4% met criteria for PTSD. Sexual stress was apparently a more toxic factor in the development of PTSD than combat exposure and must be recognized within

the VA system as such (Fontana & Rosenheck). Prior stress strongly predicts PTSD symptoms (Brailey, Vasterling, Proctor, Constans, & Friedman, 2007), and it is widely believed that previous trauma predisposes an individual to develop PTSD (Dobie et al., 2002; Herman, 1997; Litz & Orsillo, 2004; Regehr, LeBlanc, Jelley, Barath, & Daciuk, 2007).

PTSD in Military Nurses

Women have always had roles to play in war theaters, especially as nurses. Since the Revolutionary War, the U.S. military has employed women in combat zones to provide nursing and other supportive services (Holm, 1982). In combat zones, exposure to trauma is inevitable; and PTSD in military nurses is well documented, starting with Florence Nightingale, who, if not actually a combat nurse in the Crimean War, certainly suffered the consequences of combat nursing, returning with anxiety-related symptoms that included self-isolation, anger, and irritability (Woodham-Smith, 1951). During WWII, nurses were traumatized as prisoners of war (POW) for the first time in U.S. military history, with 67 military nurses held in German prison camps, 5 Navy nurses imprisoned in Guam, and 66 Army and 11 Navy nurses held captive by the Japanese for 37 months on the island of Bataan (Holm, 1982; Norman, 1999; Schorer, 2000; Skaine, 1999). Nurses made up the majority of females stationed in Vietnam, where the distinctions between combatants and noncombatants, war zones and safe zones all but disappeared. The conflict had no front lines; any zone was a potential combat zone (Holm, 1982; Kulka et al., 1990). Neither men nor women serving in noncombat specialties arrived in Vietnam with combat gear, yet most of them were exposed to mortar attacks and sniper fire upon landing. Nurses arrived in dress uniforms—"a two-piece suit, hat, high-heeled shoes, gloves, and a pocketbook" (Norman, 1999, p. 18)—and found themselves in situations for which their military training simply had not adequately prepared them (Breuder, 1997).

Norman (1988) surveyed 50 Vietnam nurses and found that 75% had developed subthreshold levels of PTSD symptoms in connection to their military service. Forty percent of the nurses reported high levels of PTSD symptoms (avoidance and intrusive memories) within the first year home from the war. After the first year, 26% of the nurses still exhibited high levels of PTSD symptoms, and 22% experienced persistent symptoms. For them, "war memories remained alive and potent and uncontrollable" (Norman, 1988, p. 200). Moreover, military nurses' memories are remarkably similar across conflicts and war zones. A qualitative study of military nurses' images and sensations of war showed that from WWII on, nurses provided similar accounts—for example, of difficult living conditions (adverse climates, inadequate facilities) and horrific sights (death, traumatic injury), sounds (generators, aircraft, gunshots, explosions), and smells (infected wounds, blood, sweat; Dittmar, Stanton, Jezewski, & Dickerson, 1996). Caring for the dying and wounded seemed central to military nurses' traumatic exposure and was identified as the "root cause" of PTSD symptoms in one Vietnam-era cohort (Carson et al., 2007, p. 662). Due to improved medical technologies and more efficient care delivery systems, survival rates in OEF and OIF now exceed 90% (Hyer, 2006). However, soldiers are living with devastating injuries, and military healthcare workers of all stripes are exposed to horrific trauma, including severe amputations, burns, and multiple fragment wounds.

**Medics, nurses, chaplains, psychiatrists,
psychologists, and others whose job it is to
bear witness to this unimaginable
suffering pay an enormous price.**

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

Medics, nurses, chaplains, psychiatrists, psychologists, and others whose job it is to bear witness to this unimaginable suffering pay an enormous price.

Most published research on military nurses has been retrospective, occurring many years after the veterans' combat experiences. As yet, there are few studies focused on military healthcare workers after deployment for OIF and OEF. One recent study administered an Internet-based, anonymous questionnaire to a small sample of active duty U.S. Navy healthcare personnel to investigate correlations between healthcare duty in a war zone and the development of PTSD and depressive symptoms (Kolkow, Spira, Morse, & Grieger, 2007). While 9% of the surveyed soldiers met criteria for a PTSD diagnosis, one of the most interesting findings was that frequent exposure to seriously wounded or dead soldiers and civilians was *not* a significant factor in the development of PTSD or depressive symptoms. Nor did these military healthcare workers perceive the utilization of mental healthcare services as stigmatizing. The investigators suggested their findings supported earlier research (Hoge et al., 2004) showing that simulated training before deployment to combat areas may be a protective factor against subsequent psychological distress (Kolkow et al.).

Two recently published memoirs described the experiences of healthcare providers deployed to Iraq for OIF. Along with the difficulties of separation from her family, Germain (Germain & Lounsbury, 2007) documented her experiences as a nurse in the combat support hospital at Abu Ghraib prison:

The horrible smells are hard to describe and harder to forget. Someone later told me that they were from the bodies buried in the landfill in Saddam's day. I heard speculation about numbers—hundreds, thousands—who knew? Or it could have been the lingering smell from the stacks of bodies that had been piled high in the shower room after the mortar attack only days ago. Old bodies plus new bodies—a smell of death invaded my nose. Get a grip! Learn to deal with this! (p. 41)

As she listened to her patients, bore witness to their suffering, felt increasingly helpless, and was repeatedly traumatized herself, Germain eventually grew numb.

Similarly, Kraft (2007) detailed the mental trauma she had to process in her role as a psychologist assigned to a Marine Corps surgical unit in Iraq. She had heard about the rules of war Henry had shared with Hawkeye during an episode of *M*A*S*H*: "Rule number one is that young men die. Rule number two is that doctors can't change rule number one" (Kraft, p. 133). Kraft reformulated those rules for her own traumatic experience:

With body armor that often protected our warriors from fatal torso injuries, perhaps Henry's line to Hawkeye would be slightly different today. Rule number one might now state that war damages people. Rule number two, of course, would be unchanged. I was certain of one truth... War damages doctors, too. They are damaged by rule number two. (p. 134)

Jennifer's Case

Conceptual Frameworks

Atrocities . . . refuse to be buried. Equally as powerful as the desire to deny atrocities is the conviction that denial does not work." (Herman, 1997, p. 1)

Trauma and Recovery. Herman's (1997) definitive work on trauma and recovery provides a solid conceptual framework for understanding the nature of trauma and how survivors cope with their painful realities. Her analysis connects the disparate experiences of battered women, sexually abused children, rape victims, POWs, and military veterans with acute and chronic stress disorders. Her ideas illuminate the path to recovery and healing, which are deeply rooted in the empowerment of the survivor, the establishment of a psychotherapeutic relationship, and the value of a support system that includes family and friends. Con-

sistent with Wheeler's (2008) Treatment Hierarchy (p. 20), which moves from safety and stabilization through processing (narrative reconstruction) to future visioning, the essential tasks and goals of Herman's recovery model are "safety, reconstructing the trauma story, and restoring the connection between survivors and their community" (p. 3). The multiple symptoms of PTSD, including disruptions in affect, identity, and relationships, are conceptualized as a normative response to extraordinary stress.

Resilience. Understood within Herman's (1997) umbrella framework, which can be elaborated by multiple neurophysiologic, cognitive, and interpersonal models that are usefully integrated, for example, in Wheeler's (2008) framework for reprocessing trauma (Briere & Scott, 2006; Horowitz, 2003; Scaer, 2005; Shapiro, 2001), Jennifer's case illustrates not only the posttraumatic syndrome and recovery process but also the concept of resilience. Resilience may explain how some traumatized individuals like Jennifer can continue to develop and thrive in the face of significant adversity. Originating in the field of child development (Garmezy, 1971; Garmezy, Masten, & Tellegen, 1984; Masten, 2001; Masten, Best, & Garmezy, 1990), the concept of resilience has been studied more recently as a protective factor against PTSD in adult populations, including military personnel (Agaibi & Wilson, 2005; Bonnano, 2004; Connor, 2006; Hoge, Austin, & Pollack, 2007; King, King, Fairbank, Keane, & Adams, 1998; King, King, Foy, Keane, & Fairbank, 1999; Lukey & Tepe, 2008; Voges & Romney, 2003; Yehuda, 2004). While there is no doubt resilience mitigates the negative effects of exposure to extreme trauma, its precise nature, the mechanism(s) by which it operates, and the factors that promote or optimize it are not well understood. It is conceptualized variously as a trait, an adaptive process, a positive outcome, or a characteristic set of coping behaviors (Lukey & Tepe). At a minimum, however, it is a key ingredient in mental health. Currently, resilience is inferred *post hoc* from posttraumatic growth (Harvey, 2007) or from the absence of posttraumatic

stress in those presumed to be at high risk for it (Lukey & Tepe). Jennifer's posttraumatic growth and recovery, for example, is a sign of resilience. Clearly, resilience counters vulnerability and is not only protective in terms of PTSD development but is also relevant to recovery.

Exposure and Mastery. Exposure is a central component of effective cognitive-behavioral treatment (CBT) for all the anxiety disorders (Cahill, Foa, Hembree, Marshall, & Nacash, 2006). Exposure is particularly important in the treatment of PTSD, which represents a failure of natural recovery following traumatic stress and commonly leads not only to negative thoughts about the self, others, and the future but also to avoidance of situations that evoke memory of the trauma (Foa, Stein, & McFarlane, 2006). Avoidance reinforces perception of the world as dangerous and of the self as deficient and ineffective, preventing recovery by limiting exposure to experiences that both correct those negative perceptions and reintegrate traumatic memory into a more coherent life narrative (Foa et al., 2006). Avoidance, in other words, prevents the consignment of trauma to the past, keeping it alive and insidiously active in the present. As a set of therapeutic techniques to help PTSD clients safely confront and master feared situations, memories, or images, exposure effectively counters avoidance, which allows those with PTSD to rebuild routine into their previously restricted daily lives (Foa, 2006). As a therapy, prolonged exposure constitutes a highly effective treatment for PTSD (Cahill et al., 2006; Foa et al., 2005; Foa, Keane, & Friedman, 2000), including PTSD in female veterans and active-duty military personnel (Schnurr et al., 2007).

Neurobiology. Although beneficial in the short-term, physiological adaptations to acute stress impose a load on the individual that can result in psychiatric illness if stress is prolonged (Foa et al., 2006). Advances in neurobiological research increasingly show that PTSD is not merely a normal response to extraordinary stress. Rather, it is mediated by specific neurobiological dysfunctions, particularly over-activation of the

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

amygdala, the activator of the fear response, alterations in the hypothalamus-pituitary-adrenal axis, structural changes in the hippocampus, and increased numbers and sensitivity of glucocorticosteroid receptors in brain areas involved in both memory and the control of fear and arousal responses (Heim & Nemeroff, 2009; McEwen, 2000; Nemeroff et al., 2006; Weiss, 2007; Yehuda, 2002). Treatment of PTSD with medication or psychotherapy may reverse these structural and functional changes and normalize the stress response (Albucher & Liberzon, 2002; Foa et al., 2006; Golier, Legge, & Yehuda, 2007). Neurobiological changes may relate to PTSD symptom reduction. Because genetic variability, sex differences, and developmental exposures to stress influence neurobiological systems and moderate PTSD risk, further neurobiological research is likely to focus on identifying subjects at risk, promoting resilience, and developing targeted treatment to prevent PTSD in those exposed to trauma (Heim & Nemeroff).

Life Pre-Deployment

Before deployment to Iraq, Jennifer was a 45-year-old woman with no significant psychiatric history. She lived with her two children and spouse of 21 years in a picturesque, rural community. Jennifer was a career military nurse who had been raised in a military family. She had served 13 years in the active duty U.S. Army and 11 years in the U.S. Army Reserves. She had spent 7 months on active duty during the Gulf War (Desert Storm/Desert Shield). Like so many others who developed PTSD, Jennifer had a previous history of trauma. At age 20, an unknown assailant sexually assaulted her in a random, daylight attack on a busy street in a rural community. A few weeks after the attack, Jennifer moved from California to Louisiana to live with her parents and "start a new life." However, her father was traveling frequently with the military, her mother could not even acknowledge the assault, and Jennifer never talked with anyone about the incident. Pre-deployment to OIF, Jennifer viewed

herself as courageous, self-assured, and resilient. She believed she was well equipped to manage any kind of stress.

Life During Deployment

Jennifer's OIF assignment entailed a 19-month overseas deployment to Kuwait and Iraq, including 4 months at the Abu Ghraib prison. Her mission was to provide nursing care to American soldiers, international soldiers, Iraqi civilians, detainees, and militant extremists. She was to have served for only 1 year. Much to her distress, her deployment was extended several times. The last extension occurred while waiting to clear customs for departure to the United States. Subsequently, the medical team with whom Jennifer had worked so closely over the course of 11 months was split up, and they were sent back to Iraq to different combat support hospitals. The reassignment to a different unit, entailing the loss of her closest support system, was devastating.

Jennifer was reassigned to the prison at Abu Ghraib a few weeks after media exposure of prisoner mistreatment. At that time the road from Baghdad to Abu Ghraib was the most treacherous in Iraq for convoys, and the journey was daunting. She was filled with dread on arrival. Close to the hospital and her living area were hanging galleys, gas chambers, and execution walls. She saw a few scattered human bones in the dirt from executions that had taken place before the American invasion. The prison had just been hit with a major mortar attack, and the hospital had received over 120 wounded, most of them Iraqi prisoners. She went to work immediately on shifts that stretched 12 to 14 hr long. The prison continued to receive regular mortar fire, which often hit buildings and detainee areas, resulting in mass casualties. Disaster was routine. Everyday life consisted of tending to the horrifically wounded and witnessing death, while avoiding the incessant mortar attacks. At times, she heard the whistling sounds of incoming rounds directly over her head: "There never was any warning before the first

mortar hit; you could be the one it fell on. You just tried not to think about it." Sleep was a precious commodity and was almost impossible to obtain even off duty because incoming mortar fire meant everyone in the unit had to report to the hospital after the "all clear" signal.

Despite the chaos, life at the prison presented the most extreme isolation Jennifer had ever experienced. The environment was harsh with 120-degree temperatures and ubiquitous sand. Due to the prison scandal, government officials and media organizations closely scrutinized her work, which compounded the stress. Like many soldiers, she eventually acquired the ability to dissociate herself from it. However, some traumatic events jolted her back to the brutal reality of her situation, especially the death of a severely wounded soldier during her shift. Her most disturbing recollections focused on the never-ending flow, day in, day out, of "young, mangled bodies":

One evening, we were notified that a vehicle in a convoy during a routine mission was hit by an improvised explosive device (IED.) Our hospital was to receive three wounded and one dead soldier. The dead soldier was being processed for Mortuary Affairs by two medics in the back room. I needed to get the information for the Commander's status report in the morning. I was standing at the foot of the dead soldier lying on the cot. The smell of burned flesh was strong. I was staring at the body and wondering what was different about this body. Eventually, I realized it was because he was missing his entire upper chest and head. An hour later, we received his head.

Despite the repetitive trauma, Jennifer adapted fairly well to her circumstances until the 14th month of her 19-month deployment. She sensed her capacity to manage stress was being overwhelmed. She lost interest in music and reading, began to withdraw from coworkers, and felt numb. She also disengaged

from her family. E-mails and phone calls diminished. The extended time away from her spouse and children made it difficult to sustain them in memory: "It was as if that life was a different life—or someone else's life." Her daughter and son had been living in the house when she left for war. During her deployment, they moved out. Her daughter graduated from high school and was attending college. Her son enlisted in the Air Force and was now married. She had missed it all and would return home to an "empty nest." She celebrated her 20th wedding anniversary separated from her husband and started to reevaluate her family relationships and her role in their lives. Back home, her family moved at a normal pace without her, while her own life seemed to have stopped in time.

Life After Redeployment

Once redeployed, Jennifer experienced her life as "boring" and empty. She could not tolerate crowds, shoppers coming up behind her in stores, or people standing behind her in checkout lines. If a trusted person did not accompany her in public, she experienced panic attacks. She did not enjoy any occasions outside the home, including gatherings of extended family. A back injury from her military service prevented her return to work, leading to feelings of ineffectiveness and profound distress. While she tried to see this as a time to self-reflect and heal, images of war emerged as intrusive memories during the day and bad dreams during the night. She took more than 2 hr to fall asleep, averaged only 4 to 5 hr of restless sleep, and woke up a couple times each night from nightmares about the events she had found most traumatic—dying or wounded soldiers with multiple amputations. The sound of a helicopter, which had meant incoming wounded, evoked increased anxiety. Exposure to the sight of blood or the smell of meat cooking triggered intrusive memories and stomach upset; she could no longer eat meat. Feeling detached from her family, her relationships with her spouse

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

and children suffered. Alienated from the world, she was certain others experienced *her* as "alien," and she could not talk about her military experiences, traumatic or otherwise, with anyone. Finally, unable to envision a future, she began to experience intermittent suicide ideation: "I just felt like I was going insane."

Recovery and Re-engagement in Life

Stage 1: Empowerment. For Jennifer, with no current plans to retire, the often-experienced stigma in the military associated with mental disorder posed a significant barrier to seeking help. In her culture, "nurses are trained to deal with war." In addition, she saw herself as undeserving of help, "a broken, unworthy human being," who had survived for no good reason when others had not. Nevertheless, 3 months after her return, she self-referred to a VA outpatient psychiatric clinic. When she did, it was challenging to self-disclose. Indeed, Herman (1997) recognized that "traumatized people are often reluctant to ask for help of any kind, let alone psychotherapy" (p. 134). Prolonged, intense trauma "damages the patient's ability to enter into a trusting relationship" (Herman, p. 136). At the VA clinic, the initial psychiatric evaluation resulted in a diagnosis of major depression with panic attacks, and Jennifer was treated with citalopram for depressive symptoms, trazodone for insomnia, and minimal cognitive-behavioral therapy over the course of four appointments with a psychiatrist and one session with a clinical nurse specialist. Despite her history of exposure to trauma, PTSD as a comorbid diagnosis was not considered until the third appointment when the PTSD Checklist, a 17-item PTSD screening tool, showed mild to moderate symptomatology.

Stage 2: Narrative Reconstruction. After some of Jennifer's symptoms were relieved with medication, she felt more empowered to talk openly about her experiences in Iraq. Empowerment means that a survivor can choose to "speak the unspeakable," remember, and mourn (Herman, 1997, p. 175). Safety is

prerequisite to such processing. In this stage of recovery, the changed life narrative is reconstructed in a process that transforms (reprocesses) traumatic memory into tolerable forms (Herman). With a goal simply to put words to her experience, Jennifer expressed guilt at having a PTSD diagnosis and losing her connections to family and friends. As Herman notes, "Even those who are lucky enough to escape physically unscathed still lose the internal psychological structures of a self securely attached to others" (p. 188). Sadly, Jennifer had only limited success in psychotherapy due to her psychiatrist's retirement after her fourth appointment. Safety issues re-emerged. Not only did it feel too difficult to establish a new therapeutic relationship, but her psychiatrist had openly discussed the VA's increased patient load and shortage of mental health providers: "He had been told to do group sessions." Jennifer did not feel she could continue treatment if forced to continue treatment in a group setting with a new provider and "two to three other male veterans." She did continue medications for 1 year through a primary care provider outside the federal system. Narrative reconstruction continued in bits and pieces in conversation with family and friends.

Stage 3: Reconnection. Ideally, in the third stage of recovery, having confronted the traumatic past and the now-changed self, the survivor re-engages with the world and actively recreates a future: "Her relationships have been tested and forever changed by the trauma; now she must develop new [ones]" (Herman, 1997, p. 196). Although Jennifer felt she might have recovered more quickly had she continued psychotherapy, given her resilience and determination, she continued to heal with a good support system and her insight into the nature of recovery: "I had to learn to live in the regular world again." Thus, Jennifer chose not to return to work but to go back to school. Ultimately, she chose to retire from the military. Her reconnection to a new future in a new career was a crucial step in her recovery.

The recovery process for veterans is linked to psychotherapy, symptom management, and a strong social support system including both family and military units.

Discussion

The recovery process for veterans is linked to psychotherapy, symptom management, and a strong social support system including both family and military units.

As psychiatric symptoms improve, veterans can look forward to an improved quality of life. While the majority of veterans receiving care in the VA system have been male, more female veterans are seeking mental health services than ever before. It is important to remember that females in noncombat roles are often exposed to direct combat (e.g., mortar attacks, sniper fire) and that exposure to vicarious trauma (e.g., bearing witness to tales of atrocity) also can lead to PTSD. While Kolkow et al. (2007) suggested that simulated training before deployment may protect medical personnel from PTSD, those participants were in the field less than 6 months. In Jennifer's case, a long deployment overwhelmed training and psychological defenses. No matter how realistic the simulation, it is not the real thing. Veterans serving in war zones know at what point they start to have difficulty modulating traumatic exposure (Tick, 2005). For Jennifer, it occurred in the 14th month of a 19-month deployment marked by multiple extensions. As unit cohesion may mitigate PTSD (Brailey et al., 2007), it may be unfortunate that, after serving together overseas for 11 months, her unit was split up and reassigned in Iraq to different combat support hospitals.

The growing population of male and female veterans exposed to both direct and vicarious trauma during their military service is overwhelming current VA resources. Many are seeking treatment in primary care clinics and community mental health centers, which both challenges and expands opportunities for advanced practice psychiatric nurses (APPNs) to provide veterans with informed, compassionate, theory- and evidence-based education and treatment. Over the past decade, rapid advances in effective treatments have expanded both pharmacotherapeutic and psychotherapeutic options. Antidepressants, especially the selective serotonin reuptake inhibitors, are the first-line pharmacological treatment for chronic PTSD (Golier et al., 2007; Nathan & Gorman, 2007). Research has shown that the tricyclic antidepressants and monoamine oxidase inhibitors also are efficacious. Prazosin is a beneficial adjunctive treatment for PTSD-related sleep disturbances, and the atypical antipsychotics have efficacy in treating a broad range of PTSD symptoms, although their potential for metabolic side effects limits their use (Golier et al.; Nathan & Gorman). Present- and past-focused psychotherapies, which are equally effective and much better than no treatment at all, include CBT, several varieties of exposure therapy including prolonged exposure therapy, stress inoculation training, and eye movement desensitization and reprocessing (Najavits, 2007; Nathan & Gorman, 2007; Roth & Fonagy, 2005). Veterans can challenge external providers unfamiliar with military culture, but APPNs can deepen their understanding of their clients by learning more about combat experiences and combat-related PTSD. Table 1 lists some of the excellent resources available to APPNs and veterans. The war memoirs in particular might serve as places to join around veterans' unique experiences.

Conclusion

The mortar fire blasts loudly, and I awaken with a start and reach for my weapon. Then I realize it is only the crack and rumble of a Minnesota thunder-

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

Table 1. Book, Documentary Film, and Internet Resources

Book Resources

1. *A Half Acre of Hell: A Combat Nurse in WWII* (Schorer, 2000)
2. *A Nurse at Abu Ghraib: Reaching Past the Wire* (Germain & Lounsbury, 2007)
3. *Down Range to Iraq and Back* (Cantrell & Dean, 2005)
4. *Mobilizing Minerva: American Women in the First World War* (Jensen, 2008)
5. *Moving a Nation to Care: Post Traumatic Stress Disorder and America's Returning Troops* (Meagher, 2007)
6. *Rule Number Two: Lessons I Learned in a Combat Hospital* (Kraft, 2007)
7. *Traumatic Stress: The Effects of Overwhelming Experience on Mind, Body, and Society* (van der Kolk, McFarlane, & Weisaeth, 2006)
8. *War and American Women: Heroism, Deeds, and Controversy* (Breuder, 1997)
9. *War and the Soul: Healing Our Nation's Veterans from Post Traumatic Stress Disorder* (Tick, 2005)
10. *We Band of Angels: The Untold Story of American Nurses Trapped on Bataan by the Japanese* (Norman, 1988; 1999)
11. *Women at War: Gender Issues of Americans in Combat* (Skaine, 1999)
12. *Women in the Military* (Holm, 1982)

Documentary Film Resource

13. *Vietnam Nurses with Dana Delany* (Smith, 2007)

Clinician's Resources

14. Institute of Medicine of the National Academies. Available at: <http://www.iom.edu/>
15. National Center for Post-Traumatic Stress Disorder. Available at: <http://www.ncptsd.org/>
16. National Veterans Foundation. Available at: <http://www.nvf.org>
17. PTSD Alliance. Available at: <http://www.ptsdalliance.org/>
18. *The Iraq War Clinician Guide: For Mental Health Care Providers*, 2nd ed. (National Center for PTSD). Available at: www.ncptsd.va.gov

storm. I lie back down in bed, bring the blankets back over me, and fight with the movie in my head to be still and quiet . . . I feel a profound sadness that will not let me close my eyes. (Germain & Lounsbury, 2007, p. 210)

Tick (2005) has said "the severity and extent to which veterans suffer with post-traumatic stress disorder is in direct response to our culture's blindness about [war's] true cost" (pp. 169–170). This case report attempts to shed light on those costs and stresses the importance to APPNs of early recognition, diagnosis, and treatment of female veterans with PTSD to help them improve their quality of life. Not all men and women return from war blameless and well (Tick). Many of them return disillusioned and damaged if not also disfigured, having lived through the unimaginable and incomprehensible. During deployment, avoid-

ance, numbing, and dissociation are adaptive defenses; but they do not obliterate memories with all their power for good and ill. Even when traumatic memories are successfully reprocessed, lives are still forever changed. "I'm not the same person I was," said Jennifer, "and it makes me sad."

Although the sadness lingers and she, too, startles at the crack and rumble of thunder, Jennifer is increasingly well, productive, grateful, and enjoying her new career. We thank her for her service, and we hope her case inspires the many APPNs who increasingly see female veterans with PTSD in their practices to further study their unique experiences. Differences between males and females in PTSD rates and risk factors are not understood completely, but PTSD in female military veterans is a significant problem and warrants further investigation. Qualitative research to illuminate the uniqueness of that experience might be important.

Other areas for research include the effects of extended and multiple deployments on incidence or severity of PTSD among women versus men, differential effects of combat stress versus sexual stress in female military veterans, differences in coping, resiliency, or other protective factors among service men and women at risk for PTSD, and differences in suicide rates and risk factors between male and female military veterans.

Author contact: feczer@yahoo.com, with a copy to the Editor: pearsong@psychiatry.uchc.edu

References

- Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse, 6*, 195–216.
- Albucher, R. C., & Liberzon, I. (2002). Psychopharmacological treatment in PTSD: A critical review. *Journal of Psychiatric Research, 36*, 355–367.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR* (4th ed., text revision). Washington, DC: Author.
- Bell, J. B., & Nye, E. C. (2007). Specific symptoms predict suicidal ideation in Vietnam combat veterans with chronic post-traumatic stress disorder. *Military Medicine, 172*, 1144–1147.
- Benda, B. B., & House, H. A. (2003). Does PTSD differ according to gender among military veterans? *Journal of Family Social Work, 7*(1), 15–34.
- Bonnano, G. A. (2004). Loss, trauma, and human resilience. Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59*, 20–28.
- Brailey, K., Vasterling, J. J., Proctor, S. P., Constans, J. I., & Friedman, M. J. (2007). PTSD symptoms, life events, and unit cohesion in U.S. soldiers: Baseline findings from the Neurocognition Deployment Health Study. *Journal of Traumatic Stress, 20*(4), 495–503.
- Breslau, N., Chilcoat, H. D., Kessler, R. C., & Davis, G. C. (1999). Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit area Survey of Trauma. *American Journal of Psychiatry, 156*(6), 902–907.
- Breslau, N., Kessler, R. C., Chilcoat, H. D., Schultz, L. R., Davis, G. C., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit area survey of trauma. *Archives of General Psychiatry, 53*, 626–632.
- Breuder, W. B. (1997). *War and American women: Heroism, deeds, and controversy*. Westport, CT: Praeger.
- Briere, J., & Scott, C. (2006). *Principles of trauma therapy: A guide to symptoms, evaluation, and treatment*. Thousand Oaks, CA: Sage.
- Cahill, S. P., Foa, E. B., Hembree, E. A., Marshall, R. D., & Nacash, N. (2006). Dissemination of exposure therapy in the treatment of posttraumatic stress disorder. *Journal of Traumatic Stress, 19*(5), 597–610.
- Campbell, D. G., Felker, B. L., Liu, C.-F., Yan, E. M., Kirchner, J. E., Chan, D., et al. (2007). Prevalence of depression-PTSD comorbidity: Implications for clinical practice guidelines and primary care-based interventions. *Journal of General Internal Medicine, 22*, 711–718.
- Cantrell, B. C., & Dean, C. (2005). *Down range to Iraq and back*. Seattle: WordSmith.
- Carson, M. A., Metzger, L. J., Lasko, N. B., Paulus, L. A., Morse, A. E., Pitman, R. K., et al. (2007). Physiologic reactivity to startling tones in female Vietnam nurse veterans with PTSD. *Journal of Traumatic Stress, 20*(5), 657–666.
- Connor, K. M. (2006). Assessment of resilience in the aftermath of trauma. *Journal of Clinical Psychiatry, 67*, 46–49.
- Dittmar, S. S., Stanton, M. P., Jezewski, M. A., & Dickerson, S. S. (1996). Images and sensations of war: A common theme in the history of military nursing. *Health Care for Women International, 17*, 69–80.
- Dobie, D. J., Kivlahan, D. R., Maynard, C., Bush, K. R., McFall, M., Epler, A. J., et al. (2002). Screening for post-traumatic stress disorder in female Veteran's Affairs patients: Validation of the PTSD checklist. *General Hospital Psychiatry, 24*(6), 367–374.
- Erbes, C., Westermeyer, J., Engdahl, B., & Johnsen, E. (2007). Post-traumatic stress disorder and service utilization in a sample of service members from Iraq and Afghanistan. *Military Medicine, 172*, 359–463.
- Fikretoglu, D., Brunet, A., Guay, S., & Pedlar, D. (2007). Mental health treatment seeking by military members with posttraumatic stress disorder: Findings on rates, characteristics, and predictors from a Nationally Representative Canadian military sample. *The Canadian Journal of Psychiatry, 52*(2), 103–110.
- Fisher, H. (2008). *United States military casualty statistics: Operation Iraqi Freedom and Operation Enduring Freedom*. Congressional Research Service Report for Congress (CRS Report RS22452). Washington, DC: The Library of Congress.
- Foa, E. B. (2006). Psychosocial therapy for posttraumatic stress disorder. *Journal of Clinical Psychiatry, 67*(Suppl. 2), 40–45.
- Foa, E. B., Hembree, E. A., Cahill, S. P., Rauch, A. M., Riggs, D. S., Feeny, N. C., et al. (2005). Randomized trial of prolonged exposure for posttraumatic stress disorder with and without cognitive restructuring: Outcome at academic and community clinics. *Journal of Consulting and Clinical Psychology, 73*(5), 953–964.
- Foa, E. B., Keane, T. J., & Friedman, M. J. (2000). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. New York: Guilford Press.
- Foa, E. B., Stein, D. J., & McFarlane, A. C. (2006). Symptomatology and psychopathology of mental health problems after disaster. *Journal of Clinical Psychiatry, 67*(Suppl. 2), 15–25.
- Fontana, A., & Rosenheck, R. (1998). Focus on women: Duty-related and sexual stress in the etiology of PTSD among women veterans who seek treatment. *Psychiatric Services, 49*, 658–662.
- Friedman, M. J. (2004). Acknowledging the psychiatric cost of war. *New England Journal of Medicine, 351*, 75–77.
- Frueh, B. C., Grubaugh, A. L., Elhai, J. D., & Buckley, T. C. (2007). U.S. Department of Veterans Affairs disability policies for post-traumatic stress disorder: Administrative trends and implications

Forever Changed: Posttraumatic Stress Disorder in Female Military Veterans, A Case Report

- for treatment, rehabilitation, and research. *American Journal of Public Health*, 97(12), 2143–2145.
- Gabriel, R., & Neal, L. A. (2002). Post-traumatic stress disorder following military combat or peace keeping: Psychological or somatic dysfunction after military conflict may hide post-traumatic disorder. *British Medical Journal*, 324, 340–342.
- Gahm, G. A., Lucenko, B. A., Retzlaff, P., & Fukuda, S. (2007). Relative impact of adverse events and screened symptoms of post-traumatic stress disorder and depression among active duty soldiers seeking mental health care. *Journal of Clinical Psychology*, 63(3), 199–211.
- Garmezy, N. (1971). Vulnerability research and the issue of primary prevention. *American Journal of Orthopsychiatry*, 41, 101–116.
- Garmezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopathology. *Child Development*, 55, 97–111.
- Germain, D., & Lounsbury, C. (2007). *A nurse at Abu Ghraib: Reaching past the wire*. St. Paul: Borealis Books.
- Golier, J. A., Legge, J., & Yehuda, R. (2007). Pharmacological treatment of posttraumatic stress disorder. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work* (3rd ed., pp. 475–512). New York: Oxford University Press.
- Harvey, M. R. (2007). Towards an ecological understanding of resilience in trauma survivors: Implications for theory, research, and practice. *Journal of Aggression, Maltreatment & Trauma*, 14(1/2), 9–32.
- Heim, C., & Nemeroff, C. B. (2009). Neurobiology of posttraumatic stress disorder. *CNS Spectrums: International Journal of Neuropsychiatric Medicine*, 14(1 Suppl. 1), 13–14.
- Herman, J. (1997). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror* (2nd ed.). New York: Basic Books.
- Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association*, 295(9), 1023–1032.
- Hoge, E. A., Austin, E. D., & Pollack, M. H. (2007). Resilience: Research evidence and conceptual considerations for posttraumatic stress disorder. *Depression and Anxiety*, 24, 139–152.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13–22.
- Holm, J. (1982). *Women in the military*. Novato, CA: Presidio Press.
- Horowitz, M. J. (2003). *Treatment of stress response syndromes*. Washington, DC: American Psychiatric Publishing.
- Hyer, R. (2006). *Iraq and Afghanistan producing new pattern of extremity war injuries*. Medscape Medical News. Retrieved June 22, 2009, from <http://www.medscape.com/viewarticle/528624>
- Jakupcak, M., Conybeare, D., Phelps, L., Hunt, S., Holmes, H. A., Felker, B., et al. (2007). Anger, hostility, and aggression among Iraq and Afghanistan War veterans reporting PTSD and sub-threshold PTSD. *Journal of Traumatic Stress*, 20(6), 945–954.
- Jensen, K. (2008). *Mobilizing Minerva: American women in the First World War*. Champaign, IL: University of Illinois Press.
- Keane, T. M., Street, A. E., & Orcutt, H. K. (2000). Posttraumatic stress disorder. In M. Hersen & M. Biaggio (Eds.), *Effective brief therapies: A clinician's guide* (pp. 140–155). New York: Academic Press.
- Kennedy, J. E., Jaffee, M. S., Leskin, G. A., Stokes, J. W., Leal, F. O., & Fitzpatrick, P. J. (2007). Posttraumatic stress disorder and post-traumatic stress disorder-like symptoms and mild traumatic brain injury. *Journal of Rehabilitation Research and Development*, 44(7), 895–919.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, 52, 1048–1060.
- King, D. W., King, L. A., Foy, D. W., Keane, T. M., & Fairbank, J. A. (1999). Posttraumatic stress disorder in a national sample of female and male Vietnam veterans: Risk factors, war-zone stressors, and resilience-recovery variables. *Journal of Abnormal Psychology*, 108, 164–170.
- King, L. A., King, D. W., Fairbank, J. A., Keane, T. M., & Adams, G. A. (1998). Resilience-recovery factors in posttraumatic stress disorder among female and male Vietnam veterans. *Journal of Personality and Social Psychology*, 74, 420–434.
- Kraft, H. S. (2007). *Rule number two: Lessons I learned in a combat hospital*. London: Little, Brown.
- Kolkow, T. T., Spira, J. L., Morse, J. S., & Grieger, T. A. (2007). Post-traumatic stress disorder and depression in health care providers returning from deployment to Iraq and Afghanistan. *Military Medicine*, 172, 451–455.
- Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., et al. (1990). *Trauma and the Vietnam war generation: Report of finding from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.
- Liebschutz, J., Saitz, R., Brower, V., Keane, T. M., Lloyd-Travaglini, C., Averbuch, T., et al. (2007). PTSD in urban primary care: High prevalence and low physician recognition. *Journal of General Internal Medicine*, 22, 719–726.
- Litz, B., & Orsillo, S. M. (2004). The returning veteran of the Iraq War: Background issues and assessment guidelines. In National Center for PTSD (Eds.), *The Iraq War clinician guide: For mental health care providers* (2nd ed., pp. 21–32). Retrieved June 22, 2009, from http://www.ncptsd.va.gov/ncmain/ncdocs/manuals/iraq_clinician_guide_v2.pdf
- Lukey, B. J., & Tepe, V. (2008). *Biobehavioral resilience to stress*. Boca Raton, FL: CRC Press.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56, 227–238.
- Masten, A. S., Best, K., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2, 425–444.
- Meagher, I. (2007). *Moving a nation to care: Posttraumatic stress disorder and America's returning troops*. Brooklyn, NY: Ig Publishing.
- McEwen, B. S. (2000). The neurobiology of stress: From serendipity to clinical relevance. *Brain Research*, 886, 172–189.
- Milliken, C. S., Auchterlonie, J. L., & Hoge, C. W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq War. *Journal of the American Medical Association*, 298(18), 2141–2148.

- Murdoch, M., Hodges, J., Hunt, C., Cowper, D., Kressin, N., & O'Brien, N. (2003). Gender differences in service connection for PTSD. *Medical Care, 41*(8), 950-961.
- Najavits, L. M. (2007). Psychosocial treatments for posttraumatic stress disorder. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work* (3rd ed., pp. 513-530). New York: Oxford University Press.
- Nathan, P. E., & Gorman, J. M. (2007). *A guide to treatments that work* (3rd ed.) New York: Oxford University Press.
- Nemeroff, C. B., Bremner, J. D., Foa, E. B., Mayberg, H. S., North, C. S., & Stein, M. B. (2006). Posttraumatic stress disorder: A state-of-the-science review. *Journal of Psychiatric Research, 40*, 1-21.
- Norman, E. M. (1988). Post-traumatic disorder in military nurses who served in Vietnam during the war years 1965-1973. *Military Medicine, 153*, 192-200.
- Norman, E. M. (1999). *We band of angels: The untold story of American nurses trapped on Bataan by the Japanese*. New York: Random House.
- Pereira, A. (2002). Combat trauma and the diagnosis of post-traumatic stress disorder in female and male veterans. *Military Medicine, 167*(1), 23-28.
- Perkonig, A., Pfister, H., Stein, M. B., Hofler, M., Lieb, R., Maercker, A., et al. (2005). Longitudinal course of posttraumatic stress disorder and posttraumatic stress disorder symptoms in a community sample of adolescents and young adults. *American Journal of Psychiatry, 162*, 1320-1327.
- Pols, H., & Oak, S. (2007). War & military mental health: The U.S. psychiatric response in the 20th century. *American Journal of Public Health, 97*(12), 2132-2142.
- Regehr, C., LeBlanc, V., Jelley, B., Barath, I., & Daciuk, J. (2007). Previous trauma exposure and PTSD symptoms as predictors of subjective and biological response to stress. *The Canadian Journal of Psychiatry, 52*(10), 675-683.
- Roth, A., & Fonagy, P. (2005). *What works for whom? (2nd ed.): A critical review of psychotherapy research*. New York: Guilford Press.
- Ruzek, J. I., Curran, E., Friedman, M. J., Gusman, F. D., Southwick, S. M., Swales, P., et al. (2009). *Treatment of the returning Iraq War veteran*. National Center for PTSD Factsheet. United States Department of Veterans Affairs. Retrieved June 22, 2009, from http://www.ncptsd.va.gov/ncmain/ncdocs/fact_shts/treatment_ret_iraq.html
- Sareen, J., Cox, B. J., Afifi, T. O., Stein, M. B., Belik, S.-L., Meadows, G., et al. (2007). Combat and peacekeeping operations in relation to prevalence of mental disorders and perceived need for mental health care. *Archives of General Psychiatry, 64*(7), 843-852.
- Scaer, R. (2005). *The trauma spectrum: Hidden wounds and human resiliency*. New York: W.W. Norton.
- Schorer, A. D. (2000). *A half acre of hell: A combat nurse in WWII*. Lakeville, MN: Galde Press.
- Schnurr, P. P., Friedman, M. J., Engel, C. C., Foa, E. B., Shea, M. T., Chow, B. K., et al. (2007). Cognitive behavioral therapy for post-traumatic stress disorder in women: A randomized controlled trial. *Journal of the American Medical Association, 297*(8), 820-830.
- Shapiro, F. (2001). *Eye movement desensitization and reprocessing (EMDR)*. New York: Basic Books.
- Skaine, R. (1999). *Women at war: Gender issues of Americans in combat*. Jefferson, NC: McFarland.
- Smith, D. H. (Director). (2007). *Vietnam nurses with Dana Delany* [DVD]. Indianapolis: Creative Street Media Group.
- Solomon, Z., Laor, N., & McFarlane, A. (2007). Acute posttraumatic reactions in soldiers and civilians. In B. A. van der Kolk, A. C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 102-114). New York: Guilford Press.
- Spoont, M. R., Sayer, N. A., Nelson, D. B., & Nugent, S. (2007). Does filing a post-traumatic stress disorder disability claim promote mental health care participation among veterans? *Military Medicine, 172*, 572-575.
- Taft, C. T., Vogt, D. S., Marshall, A. D., Panuzio, J., & Niles, B. L. (2007). Aggression among combat veterans: Relationships with combat exposure and symptoms of posttraumatic stress disorder, dysphoria, and anxiety. *Journal of Traumatic Stress, 20*(2), 135-145.
- Tick, E. (2005). *War and the soul: Healing our nation's veterans from post-traumatic stress disorder*. Wheaton, IL: Quest Books.
- Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and post-traumatic stress disorder: A quantitative review of 25 years of research. *Psychological Bulletin, 132*, 959-992.
- Tolin, D. F., & Breslau, N. (2007). Sex differences in risk of PTSD. *PTSD Research Quarterly, 18*(2), 1-8.
- van der Kolk, B. A., McFarlane, A. C., & Weisaeth, L. (2006). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: Guilford Publications, Inc.
- Voges, M. A., & Romney, D. M. (2003). Risk and resiliency factors in posttraumatic stress disorder. *Annals of General Hospital Psychiatry, 2*, 4.
- Weiss, S. J. (2007). Neurobiological alterations associated with traumatic stress. *Perspectives in Psychiatric Care, 43*(3), 114-122.
- Wheeler, K. (2008). *Psychotherapy for the advanced practice psychiatric nurse*. St. Louis: Mosby.
- Woodham-Smith, C. (1951). *Florence Nightingale: 1820-1910*. New York: McGraw-Hill.
- Yehuda, R. (2004). Risk and resilience in posttraumatic stress disorder. *Journal of Clinical Psychiatry, 65*, 29-36.
- Yehuda, R. (2002). Clinical relevance of biologic findings in PTSD. *Psychiatric Quarterly, 73*(2), 123-133.
- Zivin, K., Kim, H. M., McCarthy, J. F., Austin, K. L., Hoggatt, K. J., Walters, H., et al. (2007). Suicide mortality among individuals receiving treatment for depression in the Veterans Affairs Health System: Associations with patient and treatment setting characteristics. *American Journal of Public Health, 97*(12), 2193-2198.