
Modern History of Military and Veteran Mental Health Care

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Introduction

The past century has seen vast changes in the nature of warfare, the selection of service members, and the nature and delivery of health-care services to active duty members and veterans. In the first half of the twentieth century, the USA entered into two world wars with the massive mobilization of citizen soldiers. By the end of the century, an all-volunteer force was in place. The nature of warfare evolved with the introduction of automatic weapons, highly accurate artillery, mechanized and armored units, aircraft, long-range missiles, “smart” bombs, drones, and satellites. The nature of mental health care for active duty members and veterans evolved as well. Psychiatrists at the beginning of the twentieth century were a rarity and practiced almost exclusively in institutional settings. Over time their direct role in combat theaters became commonplace. The Veterans Administration was created and grew with each war to become what is now the largest health-care operation in the USA. Our understanding of traumatic responses to war and deployment led to the development of

a new category of psychiatric diagnosis. Research on patterns and treatments of war-related illness has fostered effective and evidence-based approaches.

World War I

In the early years of the twentieth century, modern psychiatric concepts had not been established. There was no system of diagnostic classification, no psychiatric pharmacological treatments, no specific psychotherapies tailored to specific disorders, and no system charged with care of returning war veterans. For the most part, the few psychiatrists practicing at the time were relegated to institutional settings housing severely ill patients. Lessons from World War I paved the way for advances in each of these areas.

Active Duty

As hostilities persisted in Europe, the USA prepared to enter into war. The Selective Service Act was passed on May 18, 1917. The draft began, and by the end of the war, 19 months later, 25% of males between the ages of 18 and 31 were in military service. The Army grew from 189,674 to 3,664,000. Casualties were high with 53,160 deaths and 179,625 wounded. The Army had 80

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fully equipped hospitals in the USA and 135 hospitals in Europe. The stateside hospitals cared for 1,407,191 patients and those in Europe, 755,354 patients. Nineteen hospitals provided rehabilitation to the wounded with Walter Reed Hospital specializing in prosthetic limbs for amputees much as it does to this day (United States War Department 1918; DeBruyne and Leland 2015). Returning veterans were treated primarily in military and state hospitals (United States Department of Veteran Affairs).

WWI saw the first large-scale use of modern artillery, automatic weapons, armored vehicles, and the physical and psychological threat of chemical weapons. What is now known as post-traumatic stress disorder (PTSD) was at that time labeled “shell shock” or “neurasthenia” and for a time was thought to be a concussion-like disorder caused by the close proximity of artillery explosions. Later in the war, physicians developed the understanding that the symptoms were the result of exposure to terrifying or prolonged combat (Jones and Wessely 2014; Pols and Oak 2007).

High attrition rates for psychiatric disorders motivated the principle of “forward psychiatry,” designed to restore soldiers to service in theater and, if possible, in combat roles. The concept did not provide for medications or psychotherapy. Rather, fatigued and fearful soldiers could be restored to duty through basic temporary rest, food, respite, and light duties. Ultimately this concept was described as treatment in *proximity* to the front, *immediately* following the trauma, with an attitude of *expectation* of return to duty, and using only *simple* supportive methods (a concept often referred to as PIES). These principles have persisted to this day. As will be discussed later in this chapter, the ultimate effects of this approach on retention at the front lines, and later on veteran health, have been the subject of debate since its inception. Its overall goal was to maintain forward combat strength. Success at the time was measured in terms of retention at the front in comparison to return to the front for soldiers who had previously been evacuated to the rear. Experience showed that once service members were evacuated to a safe, warm, and friendly hospital environment, they had an incentive to maintain

active symptoms to avoid returning to the harsh and dangerous front lines. Subsequent analysis of the outcome of forward treatment during World War I revealed that only 16.9% of such soldiers returned to their original units. Others were placed in supportive roles away from combat (Jones and Wessely 2014). The concept of forward treatment is taught to military mental health professionals and lay support personnel to this day.

Since posttraumatic symptoms were not well understood at the time, psychiatrists and military leaders believed that there must be some pre-existing personality profile, such as “a heavy incidence of those varieties of mental shipwreck that we call psychoses and neuroses” (Army Medical Command 1929). The understanding was that vulnerable individuals would show a pattern of limited adaptive capacity and that such a profile could be screened out. Medical leaders therefore developed a plan to detect such personality features. All newly inducted service members were to be screened at entry, and those already on active service would be evaluated when showing signs of a mental disorder. Screening was conducted at many of the training camps, but the logistics of screening large numbers of personnel and the lack of clear screening criteria produced a negligible effect on wartime casualties (Pols and Oak 2007; Jones and Wessely 2014; Jones et al. 2003; Army Medical Department 1929; Army Medical Department n.d.). In fact, by 1927, nearly 47% of ex-service men in Veterans Administration hospitals had neuropsychiatric illnesses (Army Medical Department 1929).

The Army Surgeon General’s “Division of Sanitation” organized the planning and management of psychiatric matters. This division solidified the beginning of modern military psychiatry. The Army Medical Department published Volume X Neuropsychiatry in 1929 (Army Medical Department 1929), which details the medical personnel, provision of care, detection of mental diseases, observation and treatment, and disposition of mental cases. Chapter V lays out a detailed assessment capturing the soldier’s past history, family background, preservice adaptation, history of present illness, and detailed

mental status and neurological examinations. This diagnostic approach, as described, closely matches diagnostic intakes conducted today. Chapter IX of the report includes 51 tables including details such as presence of a family history of disorders, age of onset, education level, time of onset of illness, state of residence, and racial distribution. Lack of standardized diagnostic criteria makes the data difficult to assess in terms of modern diagnoses.

Veterans

At the beginning of the war, services to veterans were divided among three agencies, the Veterans Bureau, Bureau of Pensions, and the National Home for Disabled Volunteer Soldiers. A number of states also had state-run veteran hospitals. The concept that the Federal government should handle the medical needs of all war-disabled veterans did not exist prior to World War I. The first consolidation of veterans programs was in 1921 when the Veterans Health Bureau was established. Former Public Health Service hospitals were turned over to the bureau, and new hospitals for veterans were constructed. Public Law 384 provided \$18.6 million for constructing new and remodeling existing facilities. By the end of 1932, amazingly, 64 hospitals for veterans had been established, and some 30,000 veterans were hospitalized at government expense (Department of Veterans Affairs). Prior to this time, hospitalization was primarily a matter of warehousing the disabled, but that practice began to shift to a focus on cures. This in turn spurred the development of research to clarify diagnoses and treatment approaches, including treatment of psychiatric patients. Veterans Administration medical research reports at the time were primarily case reports or case series reports. That early entry into research set the stage for an extensive Veterans Administration research network that is still active in assessing pharmacological and psychotherapeutic treatments for trauma-related disorders as well as a myriad of other medical conditions (Hays 2010).

World War II

World War II in some ways ushered in the modern era of psychiatry. Faced with thousands of psychiatric casualties, the services needed some means of better classifying them in order to determine proper disposition. The services concluded that all diagnoses should include type of disturbance, precipitating stressors, extent of predisposition, and degree of impairment. This multiaxial diagnosis scheme paralleled that of the future *Diagnostic and Statistical Manuals (DSM)*. General Menninger further developed Technical Bulletin 203, which further elaborated on disease characteristics; this was adopted by all services and the Veterans Administration and formed the foundation for Diagnostic and Statistical Manual, DSM I (Committee on Nomenclature and Statistics 1952).

Active Duty

World War II was a massive endeavor, with 16,112,566 service members on duty, 291,557 battle deaths, and 670,846 nonfatal wounds (DeBruyne and Leland 2015). The Army's account of the war, "Neuropsychiatry in World War II" (Army Medical Department n.d.), outlines the lessons learned from World War I and then describes the distribution of medical personnel, special education and training, use of psychiatric consultants, liaison with other agencies, public relations, and selection and induction. Part III presents Military Psychiatry in Practice with chapters on hospitalization and disposition, regional and general hospitals, troops in transit, mental hygiene consultation, preventative psychiatry, women's health, forensic psychiatry, and psychiatry in the correctional system. Perhaps the most interesting is Chapter XXVIII, "Lessons Learned" by Colonel Albert Glass, not actually added to the volume until 1965. With the benefit of hindsight, Colonel Glass outlined the conceptual errors in understanding the effects of war on service members and the impracticality and limited effectiveness of screening efforts.

Medical planners still believed that pre-entry screening was a viable means of reducing psychiatric casualties in war. Their belief was that the screening done during World War I was simply not adequate to achieve the goals. Dr. Harry Stack Sullivan was appointed as psychiatric consultant to the Selective Service. On November 7, 1940, Medical Circular No. 1 of the Selective Service outlined "Minimum Psychiatric Inspection" to aid the medical examiners of the 6043 local draft boards (Army Medical Department [n.d.](#)). Subsequent review indicated that 1,750,000 men, 12% of all examined, were rejected due to neuropsychiatric conditions (Appel 1946). Psychiatric casualties from combat were not lessened, and there is some evidence that many who were screened out could actually function at an effective level if allowed to serve (Jones et al. 2003). As war broke out, most of these screening programs were abandoned due to the high throughput of inductees into active service and the limited number of examiners. By the end of the war, it was clear that screening had limited value, that "normal" men would succumb to stress under extreme conditions, that psychiatric casualties closely paralleled other battle casualties, and that severity and duration of combat were directly associated with casualty rates (Ferrell and Appel 1994). It was also recognized that the long duration and high intensity of the war overall contributed to the increasing psychiatric casualties (Appel et al. 1946).

In 1940 there were only 20 Regular Army physicians with some training and experience in psychiatry. When the possibility of entry into another war became evident, the American Psychiatric Association formed a committee on military mobilization and met with the Surgeons General of the Army and Navy. The committee contacted 100 physicians certified by the American Board of Psychiatry and Neurology, but no psychiatrists were actually brought into service. There were so few qualified psychiatrists at the onset of war that those with any training were classed into four groups, ranging from "outstanding specialist" to "required constant supervision" with associated grades of potential assignment. At the end of 1942, there were 1235 listed psychiatrists on active duty, but only 194

held certification in psychiatry or psychiatry and neurology (Army Medical Department [n.d.](#)). To meet the shortage, the School of Military Neuropsychiatry enrolled its first class on December 20, 1942, and by the end of the war, it had graduated 1000 physicians. The training consisted of 190 h of instruction delivered over 4 weeks, similar to a rotation in psychiatry in the third or fourth year of medical school. It was not advertised as providing sufficient training for board certification but was considered "adequate for its purpose." Due to the lack of practical clinical experience, new graduates of the school required extensive supervision from experienced psychiatrists (Army Medical Department [n.d.](#); Porter 1943). By 1944 the Army Surgeon General was authorized to redistribute physicians by qualifications between commands, which brought about the use of the psychiatric consultants in personnel assignments, a practice still in effect today. Further attempts were made to procure (induct by draft) more civilian psychiatrists into active service; such efforts met with little success.

It was common for a psychiatrist to be responsible for 100 or more patients on his wards at any given time. General medical officers were often forced to designate inexperienced medical officers as the division psychiatrist. Other units and facilities were similarly understaffed with psychiatrists. A survey in November 1944 found 1885 psychiatrists on duty, but fewer than 400 were capable of independent or supervisor status. At the end of hostilities in Europe, there were 55,000 psychiatric patients in Army hospitals, in comparison to 250,000 surgical patients and 254,000 medical patients.

Forward treatment (PIES principles as previously outlined) was again employed as a means to maintain adequate forces at or near the front. In the theater of battle, roughly 40% of neuropsychiatric casualties were actually returned to forward duty, according to Army records. Only 35% of such frontline admissions were evacuated away from the front lines, and only 1 man in 10 was sent stateside. Those kept in theater who were not sent back to the line were placed in support positions (Ferrell and Appel 1994; Appel et al. 1946).

During early periods of mobilization, psychiatric treatments were for the most part absent. If a soldier did not adjust to duty, they were referred to hospital for evaluation and disposition. Problems paralleled those seen in civilian settings, ranging from psychosis to more “neurotic” disorders (adjustment and mood disorders), immaturity, “mentally defective” (presumably intellectually impaired), and personality or character disorders. Similar to today’s practice of military psychiatry, distinctions had to be made between “mental disease” and personality or intellectual disorders. Those with “illness” were given medical discharges; others were separated through administrative means by line commanders. The distinction between “neurotic symptoms” and simple lack of adjustment was not always clear.

As the war progressed, an increasing number of soldiers were evacuated who were “not as cooperative... irritable ... tense and restless, subject to emotional outbursts, and admittedly unwilling to continue to serve.” There was no consensus about whether such soldiers suffered from “illness” or were “maladjusted” (Army Medical Department *n.d.*). Among psychiatrists there was a general sense that “poor motivation and morale” were important factors in determining rates of neuropsychiatric casualties (Appel et al. 1946). The term “psychoneurosis” was poorly defined, and there was little inter-rater reliability with regard to the diagnosis.

The problem of “disposing” of noneffective personnel plagued the Army during the entire duration of the war. The infamous Section VIII of Army Regulation 615-360 (“Section Eight Discharges”) proved problematic for line commanders who were not familiar with the administrative procedure or felt that it represented an acknowledgment of their failure to rehabilitate such individuals. Line commanders often pressured medical officers to medically separate individuals with primarily personality or character problems. This tension between line commanders and medical officers and between behavioral versus “medical” discharges exists to this day.

In December 1942 another category of discharge emerged, “Discharge for the Convenience of the Government,” outlined in Section X of

Army Regulation 615-360. That section described discharge for being physically incapable of performing skilled military work, having insufficient intelligence to absorb instructions, or being incapable of performing manual labor day after day. Complaints arose from overseas commanders that too many men were arriving “mentally unsuited for ordinary military duties.” Directives were issued in March and April of 1943 requiring “greater care ... to do everything possible ... to prevent all individuals predisposed” to mental illness from entering military service and to “increase their efforts to detect individuals ... with a view to the discharge of those who cannot be expected to render full military duty” (Army Medical Department *n.d.*).

By 1943 there were increasing numbers of “limited duty” personnel who were rated as incapable of deployed duty. In July 1943 the War Department eliminated the category “limited service,” and all such men were to be discharged. Total discharges due to psychiatric disorders were 8.8 per thousand in 1942; this number peaked at 21.9 per thousand in 1943 and dropped to 17.9 per thousand by 1945. The peak discharge rate was 35.6 per thousand in September 1943. This pattern of discharges and impact on available manpower did not go unnoticed, and in November 1943 all previous instructions were rescinded, and men were reassigned to any useful service in an overseas theater (Army Medical Department *n.d.*).

The pendulum again swung by June 1944 when commanding officers reported that, among men returned to forward service, 26% presented excellent adjustment, while 42% presented as adequately adjusted and 32% as poorly adjusted. By September 1944, any degree of psychoneurosis was considered below minimum induction standards. There was pressure to discharge “for the convenience of the Government” rather than with a certificate of disability. Behind this pressure was a concern that disability ratings encouraged service members to “stay sick” because of disability payments.

Much of the problem with selecting the most appropriate discharge can be attributed to the fact that the psychiatric and psychological impact of warfare was not fully understood and

often attributed to a lack of “moral conviction” or resentment of being forced into service. The range of treatments, even in major hospitals, was limited to rest, light duty, exercise, and “activities” therapies. The posttraumatic syndrome had not yet been recognized, there were no effective medications, and psychotherapies were not routinely practiced and were clearly not available on a mass scale (Army Medical Department *n.d.*).

With the advantage of 20 years of hindsight, Colonel Glass outlined the major limitations of military psychiatry during World War II. In his view military and medical leaders failed to appreciate the inevitability of large-scale psychiatric disorders under conditions of modern warfare. There was too much faith in psychiatric screening at entry with no reliably proven methods or outcome measures. Hospitalization, rather than ambulatory care, perpetuated illness and disability. Most importantly, the lack of trained and experienced military psychiatrists during the war perpetuated the problem. Glass’ summary is supported by a postwar report from the Surgeon General’s Office that cited 1,750,000 men rejected for service—and yet there were approximately 1,000,000 psychiatric admissions to military hospitals. That report demonstrated that most of those admitted would not have met admission criteria for civilian hospitalization but that, without an appropriate ambulatory treatment setting, service members simply could not return to their units; hospitals became the only available option (Appel 1946).

Veterans

The Veterans Administration (VA) greatly expanded during and following World War II. In the 1930s there were 60 Veteran Administration hospitals in operation. By the end of World War II, there were 34 new facilities in operation, and 43 military hospitals were transferred to the Veterans Administration from the armed services. In 1944, 76 new hospitals were authorized for construction (Office of Construction and Facilities Management *n.d.*). The postwar transformation was even more remarkable. Much of

the modernization was driven by the newly appointed Administrator of Veterans Affairs, General Omar Bradley. At the time of his selection, the VA was in dismal condition; in January 1946 there were fewer than 1000 physicians to take care of 100,000 hospitalized patients. Following the passage of Public Law 293, the ability to hire physicians became less tedious, and within 6 months the VA physician staffing grew to over 4000 physicians. VA hospitals soon established affiliations with civilian medical schools, and by 1947, 1000 residents staffed these newly designated teaching hospitals. In their role as faculty of medical schools, VA physicians were encouraged to engage in research. Dr. Paul Magnuson became the first Assistant Chief Medical Director for Research and Education. By 1952 the VA had research programs at 66 hospitals, and the Chicago VA Research Hospital was built (Hays 2010). In addition to the hospitals, the VA also opened free-standing mental hygiene clinics across the country. The staffing of these clinics was similar to that of current interdisciplinary clinics with psychiatrists, psychologists, and psychiatric social workers in a ratio of 1:1:2. Screening intakes were conducted by the social workers, and the psychiatrist assigned providers to new patients (Futterman et al. 1947).

One of these veteran clinics reported on a case series of patients with war neuroses. The syndrome they observed included “intense anxiety, recurrent battle dreams, startle reaction to sudden or loud noises, and a tendency to sudden, explosive, aggressive reactions.” They also experienced “a tendency to avoid people, fear of exposure to any type of criticism, difficulty in making decisions, and various types of sleep disturbances.” They viewed this pattern as a result of “the threat of annihilation and destruction ... under combat conditions” and noted that “the patient reacts to seemingly minor stimuli and seemingly innocuous situations in civilian life as if he were still under combat conditions.” In addition to the description that aligns with current diagnostic criteria for post-traumatic stress disorder (PTSD), their treatments also closely approximated the current

approach of prolonged exposure psychotherapy: “The monotonous repetition of the traumatic events is so characteristic of the true traumatic war neurosis. ... We have also noted in many cases that after numerous repetitions, the character of the account has subtly changed so that it tends to become less devastating to the patient” (Futterman and Pumpian-Mindlin 1951).

Korean War

Active Duty

The USA had little time to settle from World War II before the onset of hostilities in Korea in 1950. At this time, the draft was still in place, and nearly 6 million served during the period between 1950 and 1953. There were 33,739 battle deaths and 103,284 non-mortal wounds (DeBrune and Leland 2015). The Korean War was challenging for combatants and for the delivery of medical and psychiatric care. The climate and geography ranged from hot and humid rice paddies to bitterly cold and barren mountainous regions. The lines of combat were constantly shifting along with the locations of frontline medical facilities. At times, the number of psychiatric casualties rose to 250 men per thousand, per annum. To some advantage, the lessons of WWII had not been completely forgotten. Once again, very low return rates from the soldiers and marines who were sent to the comforts and safety of hospital ships and nearby hospitals in Japan demonstrated the problem of evacuation away from theater (Ritchie 2002). Division psychiatrists held the responsibility for “rigid economy” in preserving fighting forces at the line. Their role was now much more sophisticated than it had been previously. In addition to providing diagnosis and treatment, they were expected to educate other medical officers and commanders regarding psychiatric principles in a combat setting and to make specific recommendations that could mitigate emergence of psychiatric problems (Edwards and Peterson 1954).

Veterans

By 1953 the workload at the Veterans Administration had greatly expanded, and the agency was reorganized into the three departments: Medicine and Surgery, Veterans Benefits, and Department of Insurance. By 1956 there were 70,000 neuropsychiatric patients in VA hospitals. There were still no “evidence-based” treatments for combat-related psychiatric conditions, but the VA began to conduct research in psychopharmacology and electroconvulsive therapy in veteran patients. During the 1950s new classes of medications, including chlorpromazine, barbiturates, benzodiazepines, tricyclic antidepressants, and monoamine oxidase inhibitors, were coming into use. Surgical treatments were still being explored, and one early “randomized-control” study involved a demonstration of the effectiveness of the lobotomy and included 188 surgical subjects and 185 controls. The value of that research to future studies included the use of matched controls and the use of the Multidimensional Patient Rating Scale as a measure of outcome. A multicenter VA study in 1956 demonstrated superiority of chlorpromazine over other agents and placebo in patients with schizophrenia. By 1957 half of all VA patients with schizophrenia were receiving tranquilizing medications, and of these the majority was prescribed chlorpromazine (Hays 2010).

Vietnam War

Active Duty

The Vietnam conflict spanned more years than any prior United States war, beginning in 1964 and extending into 1973. Roughly 8,744,000 persons served overall, with approximately half in the army. Fewer than 1 million marines fought and the navy and air force totaled 3.5 million. There were 58,220 deaths and 153,303 non-mortal casualties requiring hospitalizations (DeBruyne and Leleand 2015). Early reports indicated that the rates of psychiatric casualties

from combat exposure were low, similar to those seen in stateside forces. Only 6% of all medical evacuations were for psychiatric reasons. Attribution for such low numbers includes better command planning, better training and equipment, periods of recuperation, and the “1-year tour.” It has also been suggested that the availability of material goods and bars provided mitigation for the effects of combat (Bourne 1970). The concepts of proximity care in theater were still in practice but later called into question on ethical grounds (Camp 1993). The long-term psychiatric outcomes did not align with early findings.

The end of the Vietnam War in 1973 also ended the draft. The USA now relied on a totally voluntary force that included routine use of reserve forces and the National Guard. The experience of Vietnam left a bad taste for warfare among the American people. In essence, it was a war that pulled young men from their families and lives and sent them to fight in a distant land, potentially to die for theoretical strategic political goals that most people never understood or agreed with. The 1970’s drawdown in forces was massive, of similar proportions to that following World War I.

Ethics of the “PIES” Concept

By the end, the war in Vietnam was extremely unpopular among the general population in the USA and also among psychiatrists, some whom had served in Vietnam. They believed the war to be unethical and, by extension, any physician who participated in promoting its execution similarly to be unethical. Ambulatory treatment near the front lines clearly met its objective of maintaining troop strength, but did it meet the psychiatric needs of the individual? To summarize the ethical debate, some argued that sending a soldier from safety to a danger zone violated general medical ethics. A balanced consideration is more complex. Is it better to send a recently exhausted but recovered, well-experienced soldier back to his unit or to send an inexperienced replacement to a strange unit? There has been no prospective

study of outcomes of these two scenarios, and no such study could be conducted. Therefore, there is no way to know definitively if the evacuated soldier would fare better in the long run or if the inexperienced replacement would be at greater risk of death (Camp 1993; Grieger 1994). One small naturalistic study among Israeli Defense Force personnel provides some insight into this question. In a 20-year follow-up of several hundred soldiers, researchers found that, among soldiers with combat stress reactions, those who received classic PIES treatment fared slightly better psychologically than similar soldiers with combat stress reactions treated in a rear echelon (Solomon et al. 2005).

Post-Vietnam War Period

Veterans and Posttraumatic Stress Disorder

From 1960 to 1980, there were remarkable advances in psychiatry that influenced treatment of veterans as well as the general population. In addition to the pharmacological advances that began in the 1950s, there were unprecedented efforts to better characterize and define psychiatric illness. The *Diagnostic and Statistical Manual, Second Edition (DSM-II)*, was published in 1968. It was 136 pages in length, with 11 chapters on categories of illness. The neurosis chapter discussed categories ranging from phobias and anxiety to depression, but there was no mention of any disorder related to trauma (Committee on Nomenclature and Statistics of the American Psychiatric Association 1968). In contrast, *DSM-III*, published in 1980, was 507 pages in length and included very specific diagnostic criteria for each disorder. It was also the first classification manual to employ field trials to assess usefulness and discrimination between diagnoses. It was the first diagnostic manual to outline the diagnosis of posttraumatic stress disorder (PTSD) in its chapter on anxiety disorders (Committee on Nomenclature and Statistics of the American Psychiatric Association 1980). The criteria are remarkably similar to those described by VA

psychiatrists 30 years previously (Futterman and Pumpian-Mindlin 1951). In the pre-internet era, new revisions to the DSM were not as open to public and professional scrutiny. The inclusion of this new (and yet old) diagnostic category was seemingly not based on recently published scientific reports or field trials. Dr. Spitzer published a review of the changes to *DSM* just prior to the release of *DSM-III*. In discussing PTSD he references only a book chapter dating back to 1968 (Spitzer et al. 1980). Despite the lack of prior systematic study, criteria have remained relatively stable during the following 35 years of research.

The National Vietnam Veterans Readjustment Study and the VA National Center for PTSD

Public Law 98–160 ordered a study of the problems facing veterans of the Vietnam War. As part of the mandate, the Veterans Administration contracted a consortium of researchers to study the causes, manifestations, and long-term impact of wartime experiences (Congress of the United States 1983). Their report of the National Vietnam Veterans Readjustment Study was published in November 1988 (Kulka et al. 1998). Using a complex technique of interlinking databases, they were able to identify and interview a representative sample of 3016 Vietnam-era veterans using a combination of well-established diagnostic instruments. Researchers found that 15.2% of all male and 8.5% of all female Vietnam theater veterans suffered from PTSD at the time of the study. An additional 11.1% of male and 7.8% of female theater veterans experienced “partial PTSD” symptoms at the time of the study. That is, they had clinically significant stress reaction symptoms but did not meet full diagnostic criteria. Analysis of lifetime prevalence of PTSD was 30.6% for men and 26.9% for women among those who served in theater.

The National Center for PTSD was created in 1989 within the Department of Veteran Affairs in response to Public Law 98–528 to address the needs of veterans and other trauma survivors with

PTSD (Congress of the United States 1984). Its current organization includes Headquarters in White River Junction, VT, and a research division in Boston, MA; West Haven, CT; Palo Alto, CA; and Honolulu, HI. The center maintains and makes available to clinicians, veterans, family members, and the general public a vast array of research, educational, and clinical materials as well as a treatment referral guide. One of their major achievements is the compilation of Published International Literature on Traumatic Stress (PILOTS).

Desert Shield/Desert Storm

In an effort to shape the role of war for the USA, Secretary of Defense for President Reagan, Casper Weinberger, used the lessons of the Vietnam War to develop a “doctrine for warfare.” In summary, it examined the following factors: whether vital national interests are at stake, entering war with the intent of winning, force must be decisive and with clear intents, Congress and the public sentiment should be in support, entering warfare should be only done as a last resort, and such efforts should be constantly reassessed. The Iraq invasion of Kuwait met the criteria (Dubois 1991). It was determined that the USA and its allies had the force needed to overcome an adversary on foreign soil, a steady supply of oil from an ally was in the nation’s interest, there were clear endpoints to the use of force, and the American people were supportive.

In contrast to World War I, World War II, and the Korean and Vietnam Wars, the war in Kuwait was of much smaller scale and duration. Roughly 2,225,000 service members were involved, with 148 battle deaths and 467 nonlethal wounds (Debruyne and Leland 2015). As the USA prepared for war, there were many uncertainties: the Iraqi Army had a reputation of ferocious performance during its battles with Iran, there was a threat of widespread use of chemical weapons (previously used against its own population during periods of unrest), and the USA’s tactics and forces had not been battle-tested in 20 years. Some estimates called for tens of thousands of

American battle casualties. In contrast to prior wars, there had been considerable planning prior to the consideration of entry into war. Public Law 97-174 called for establishment of the Department of Defense-Department of Veterans Affairs Contingency Plan. Under this plan, the VA would provide up to 25,000 receiving beds at 77 primary receiving and 82 secondary receiving hospitals (Blank and Lehmann 1996). The plan was never activated.

In view of limited exposure to combat and the short duration of the war, there were few reports of posttraumatic stress symptoms and no broad-scale population studies. Some small studies among demobilized reserve units showed very low levels of PTSD symptoms in about 10% of those sampled (Southwick et al. 1993). In contrast to clear psychological disorders, veterans began to present with a multitude of physical symptoms following the completion of Desert Shield/Desert Storm. The complaints that were initially referred to as “Gulf War Syndrome,” the VA now categorizes as “chronic multi-symptom illness” and approves presumptive service connection and compensation for the following: chronic fatigue syndrome, fibromyalgia, functional gastrointestinal disorders, and several other undiagnosed illnesses with symptoms (Veterans Administration n.d.).

Operations Iraqi Freedom and Enduring Freedom

In 2001 the USA was attacked on its own soil without warning, and calls for retaliation became common. In contrast with the liberation of Kuwait a decade before, the public backing and ultimate goals of the conflicts that ensued were less uniform. Much like the legacy of the Vietnam War, the American public has become highly divided about the USA’s goals in the conflict and its role in the region. In contrast to Desert Shield/Desert Storm, there have been over 2300 American deaths in Afghanistan and its surrounds and over 4000 deaths in Iraq with ongoing deaths at the time of this writing (DeBruyne and Leleand 2015).

In advance of ground hostilities, the Veterans Administration and the Services planned jointly for the assessment and management of psychiatric casualties. The Iraq War Clinician Guide, first published in 2004, is an invaluable tool for anyone working with combat veterans and was written and compiled by the National Center for Posttraumatic Stress Disorder and the Walter Reed Army Medical Center (2004).

Early surveys of returning troops using well-validated screening tools showed rates of PTSD between 12% and 20% and presence of depression in roughly 15% (Hoge et al. 2004). In light of these findings, the services implemented the Post Deployment Health Assessment program to detect service members at risk at the time of return from deployment (Appenzeller et al. 2007). Subsequent programs provided for similar screening a few months later and again prior to the next deployment. In prior wars, reporting psychiatric symptoms provided “gain,” protection from return to combat. In a volunteer force, however, minimizing symptoms could preserve a career with attendant medical and retirement benefits. This logic was clearly demonstrated in one study in which screening was conducted with an “identifiable screener” and then repeated by the same individuals in an anonymous setting. The rates of PTSD and depression were nearly two to four times higher in the anonymous setting compared to the identifiable setting, presumably because of concern over career impact or other stigma (Warner et al. 2011). There is also evidence that some cases of PTSD develop months after return from combat, demonstrating the need for ongoing monitoring (Grieger et al. 2006).

Military suicide rates were traditionally lower than matched civilian suicides. This statistic began to change with the newest conflicts, and by 2008 the military rates exceeded civilian rates. The rates tripled among previously deployed members, increasing from roughly 13 per 100,000 person years in 2005 to roughly 33 per 100,000 person years in 2010. The causes for this trend are not clear but are now under close examination as part of a collaboration between the Army and the

National Institute of Health (Schoenbaum et al. 2014; Kessler et al. 2015). Increased rates of suicide in veterans have also become a concern, with rates of suicide death 60% higher than in nonveterans (Hoffmire et al. 2015).

Summary

Over the past century, each epoch of warfare has brought unique challenges and solutions. The casualties of war have forced psychiatrists, political leaders, and American society at large to recognize the terrible toll that combat has taken from some of those who fight for their country. The impact of war has pushed forward the development of systems of health-care delivery and even the very nature of diagnostic criteria and nomenclature. Stress reactions, once thought to be the physiologic products of explosive blast pressure, are now known to be complex disorders involving multiple neural networks. The unified network of Veterans Administration hospitals now provides a foundational substrate for research to develop better treatments. Service members and veterans provide naturalistic cohorts for observation over time; patterns of reactions and behaviors have been seen repeatedly following combat exposure. From these observations, the category of trauma-related disorders was born. The practice of psychiatry has gradually migrated from psychiatric institutions to general hospitals, community clinics, and the battlefield; much of this migration was born of necessity related to war casualties. Military psychiatrists have evolved beyond treatment of patients, as they now serve routinely as organizational consultants to command leaders, where they promote command actions to ameliorate the conditions that lead to psychological problems.

Key Concepts

1. Efforts to “screen out” those at risk for adverse psychological reactions to combat have proved to be minimally effective.
2. Psychiatric casualty rates correlate closely with the intensity and duration of combat

exposure, making the profile of casualties unique to each war.

3. Service members are not prone to report psychological problems if doing so may impact their career.
4. Suicide rates among active duty and veterans have increased dramatically during and following service in the recent conflicts.

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