PERSPECTIVE

Women and War

What Physicians Should Know

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Most of today's 1.7 million women veterans obtain all or most of their medical care outside the VA health care system, where their veteran status is rarely recognized or acknowledged. Several aspects of women's military service have been associated with adverse psychologic and physical outcomes, and failure to assess women's veteran status, their deployment status, and military trauma history could delay identifying or treating such conditions. Yet few clinicians know of women's military history—or of military service's impact on women's subsequent health and well being. Because an individual's military service may be best understood within the historical context in which it occurred, we provide a focused historical overview of women's military contributions and their steady integration into the Armed Forces since the War for Independence. We then describe some of the medical and psychiatric conditions associated with military service.

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Women veterans account for about 1 in every 100 adult female patients in the United States, the majority of whom are seen outside the VA health care system, where their veteran status is often unrecognized or unacknowledged. Regrettably few clinicians know of women's military history or of military service's potential impact on women's health and well being. Failure to assess women's veteran status, their deployment status, and military trauma history could delay identifying or treating conditions associated with military service. Conversely, routinely screening for veteran status could yield important clinical information. Physicians would therefore benefit from a better understanding of women's military contributions, as well as the historical context in which those contributions occurred. We provide a focused, brief historical overview of women's military history and describe some medical and psychiatric conditions associated with their military service.

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American Women in the Military: An Overview

Women have carried arms or engaged the enemy in virtually every conflict ever fought by the United States, including and beginning with the War for Independence. Many suffered grievous, permanent injury, while others were killed outright. Female prisoners of war (POW) have likewise been taken during most major United States conflicts. Even so-called "noncombatants," such as nurses, water couriers, and messengers have risked death or maiming every time they stepped onto the battlefield because smoke, dust, blood, and noise often precluded easy identification of friends or foes. Especially in later conflicts, "fluid" battle lines have engulfed support personnel, including women, placing them in the direct line of fire.

Military nurses' heroism is particularly noteworthy. For example, at considerable risk to themselves, nurses pioneered the strategy of bringing treatment to wounded soldiers on the battlefield (instead of evacuating them first). Annie Etheridge, a Civil War nurse renown for this strategy, received the Kearney Cross for her bravery under fire.[1] Because nurses are frequently deployed near front lines, they run special risks of being engulfed during shifting battles, perhaps explaining why they have historically accounted for the majority of female POWs.[2–4] In addition to risking death and injury on or near battlefields, nurses have risked (and often succumbed to) infection on the wards, particularly in the preantibiotic era.[5] Nurses have shown another kind of courage as well: their slow, often vehemently resisted, integration into the Armed Forces paved the way for other women's entry.

Integration of Women into the Armed Forces

Historically, women's integration into the Armed Forces has followed a series of advances and setbacks, with advances closely tied to shortages of qualified males, usually during wartimes. For example, despite revolutionary advances in nursing made by women during the Civil War, they were de-

mobilized at the war's end, and male enlistees of uncertain qualifications resumed responsibility for nursing ill soldiers. Women nurses were recruited back as civilian contractees, however, when a typhoid epidemic overwhelmed Army hospital corpsmen during the Spanish–American War.[5,6] This led to a more sustained gain, the establishment of the Army Nurse Corp in 1901 and the Navy Nurse Corps in 1908.[6] However, nurse corpswomen were denied military rank, commensurate pay, pensions, or other veterans benefits routinely provided to male military enlistees.

World War I

In 1917, Navy Secretary Josephus Daniels took advantage of a legal loophole to recruit women into Navy and Marine Corps Reserves. These "Yeomanettes" and "Marinettes" received the same wages, benefits, and rank as male enlisteds. By filling clerical, radio, draftsmen, translator, and other essential positions, women released men for more dangerous overseas duties.[6] The Army Signal Corps also recruited and enlisted 233 bilingual female telephone operators for duty overseas. Unlike the Yeomanettes and Marinettes, however, Signal Corpswomen were denied veteran status and benefits until 1978.[7] Despite the women's exemplary performance, Congress revised the Naval Reserve Act at war's end to limit eligibility to "male" citizens, thus preventing future recruitment of women without Congress' express approval.[8]

World War II (WWII) and the "Cold War"

Numerous new advances for women's military integration came just prior to WWII. Again anticipating critical manpower shortages, Congress established the Women's Army Auxiliary Corps (WAAC) and the Women's Naval Reserve (WAVES). In 1942, precursors of the Women Air Force Service Pilots (WASPS) were established to free up male combat pilots. Finally, in 1943, women were given full (opposed to auxiliary) military status in the Army with establishment of the Women's Army Corps (WAC). That year, Congresswoman Frances Payne Bolton also amended the Nurse Training Bill to bar racial bias in the Army, and soon 2,000 blacks were enrolled in the Cadet Nurse Corps.[9] The Navy did not drop its racial ban until 1945, however, and hence enrolled far fewer black women.

Although Congress again ordered a general demobilization of women after WWII (nurses were excepted), 2 years later they officially deemed the WAC a permanent part of the regular and reserve Army. Furthermore, the 1948 Women's Armed Services Integration Act made women permanent members of all uniformed services' regular and reserve forces; and Executive Order 9981 eliminated racial discrimination and segregation for black servicemen and women. Restrictions on women's roles, however, still existed. The Women's Armed Services Integration Act prevented women from commanding men or serving in combat roles and placed a 2% cap on the proportion of troops that could be women. Other provisions limited the allowable number of female mid-level officers and prohibited all women from attaining flag rank. Precisely 1 woman per service was allowed to serve as a temporary, 4-year full colonel/Navy commander at any time. The Act required automatic discharges for pregnant women and women with minor children.

The Korean Conflict

These restrictions combined with residuals of a 1943 "slander campaign" (to be described later) made the military a rather unattractive career option for most women. Pre-1948 racial quotas and caps, in particular, had prevented black women from reenlisting after WWII. Thus, when hostilities in the Korean Conflict commenced in 1950, just 22,000 women were in uniform. Of these, 4 officers and 121 enlisted women were black.[9] Despite goals to mobilize another 500,000 to 1 million women, recruitment efforts barely kept up with attrition.

Disillusioned military officers placed progressively more restrictions on the numbers and types of jobs available to women.[8] For example, during WWII, most women's training included full-kit (i.e., 4-pound steel helmets, combat boots, 30-pound packs, mess kit, and gas mask), 20-mile hikes; poison gas and lethal chemical identification; small-arms training; and basic combat survival skills, such as navigating obstacle courses under enemy fire, digging fox holes, and dismantling or detonating incendiary devices.[10] Except for nurses, most of this training was phased out during the Cold War. Where once women had served as airplane pilots and mechanics, control tower operators, truck drivers, aerial gunnery teachers, logistics chiefs, cryptographers, and intelligence officers, now they were increasingly restricted to clerical and nursing duties.

The Vietnam Conflict

Even when manpower needs related to the Vietnam Conflict became dire, the Department of Defense so resisted expanding women's roles, they authorized the enlistment of almost 300,000 men with low aptitude scores first.[8] After much contention, Congress finally authorized a new expansion in women's roles in 1968. Public Law 90-130, passed near the Vietnam Conflict's end, removed restrictions on rank attainment by women, eliminated the 2% cap on female troops, and slightly increased the allowable numbers of female mid-level officers.

When conscription ended in 1973, women's participation in the military increased exponentially. Goals to increase the number of uniformed women by 170% were met and quickly exceeded.[8] Women's selection criteria, previously more stringent than men's, were equalized, and their training and promotion lists were integrated with men's. In 1978, the WAC was dissolved. Pregnancy, marriage, or dependent children were no longer grounds for military discharge. By 1980, most restrictions on women's occupations (except for combat roles) had been lifted.

Gulf War

By the Gulf War's start in 1991, women comprised almost 11% of all active duty personnel, with fewer than half in administrative or medical specialties. Many worked beside men, accepting equal hardships and risks. Over 33,000 women served in key combat support functions, driving trucks, flying planes and helicopters, running POW facilities, directing artillery, and serving in port security and construction battalions.

Almost 4% of all Gulf War battlefield casualties were women,[11] and 71% of women in the Gulf during the air and ground war reported at least 1 combat exposure, compared with 70% of men.[12] Four Marine women received the Combat Action

Ribbon after being engaged by, and returning, enemy fire. Army Transportation Specialist-Sp4 Melissa Rathbun-Nealy and Flight Surgeon Major (now Colonel) Rhonda Cornum were captured and imprisoned.[13] (Col. Cornum currently commands Landstuhl Regional Medical Center in Germany, the primary medical treatment center for casualties of U.S. operations within Europe, Southwest Asia, and the Middle East.)

Modern technology and difficulties in defining battle lines during insurgencies have increasingly blurred distinctions between combat and combat-support roles. Consequently, most regulations restricting women from combat assignments were lifted or repealed after the Gulf War. Currently, women are prohibited from serving in infantry and artillery units, submarines, some smaller Navy ships, and a few other small units embedded within larger combat brigades.[14]

Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF)

Approximately 10% of troops currently stationed in Afghanistan (OEF) and Iraq (OIF) are women. Of the 31 women who died in OEF/OIF as of late 2004, most were victims of convoy bombs or mortar attacks; a few died in on-the-job accidents. PFC Jessica Lynch and Army Specialist Shoshana Johnson were captured, but later rescued, in the convoy ambush that killed PFC Lori Ann Piestewa, the first woman to die in OIF.[4] Sergeant Leigh Ann Hester recently became the first woman to receive the Silver Star medal since WWII, for her valor in engaging 40 to 50 insurgents that ambushed her convoy in Iraq. In recognition of the increasingly blurred differences between combatant and noncombatant roles, the Army recently created a Combat Action Badge, the first nonmedical combat distinction, to honor any eligible soldier—but women especially—exposed to perilous combat conditions, infantry or no.[15]

Societal and Troop Acceptance of Women

Societal and troops' acceptance of military women has tended to parallel women's legal progress. Thus, with few exceptions, women who bore arms or engaged the enemy during early American conflicts disguised themselves as men.[4–6,8,16–19] Dr. Mary Walker, the only female recipient of a Medal of Honor and the first female Army Surgeon, originally worked as a Civil War nurse because female physicians were not accepted.[8,20] Other female Civil War nurses described physical and verbal harassment from male surgeons and soldiers who did not want to work with them.[21] By the time hostilities commenced in WWII, however, female nurses' roles were firmly established. Hailed as "angels" by grateful troops,[22,23] WWII nurses received more than 1,600 medals, citations, and commendations—16 of them posthumous—for bravery and for performances beyond the call of duty.[24] Whereas WAC's, WAVES', Women Marines', and Women Coastguards' (SPARS) deployments were, much to the women's consternation, frequently constrained by safety considerations and a desire to keep them from combat zones,[6,8] nurses routinely served near front lines and aboard naval ships and evacuation flights.

Conversely, WWII troops often perceived women entering nonnursing military professions much as Civil War troops had once viewed nurses: as "deviant" or as having lax morals. Press conferences from the time trivialized and sexualized these servicewomen by focusing on their underwear, makeup, or dating patterns.[8] Major General Jeanne Holm (USAF, retired) describes a "vicious" and pernicious 1943 "slander campaign" involving "dirty jokes, snide remarks, obscenities, and cartoons" against servicewomen that almost derailed the women's WWII recruitment effort.[8] Certain the slander campaign was the act of enemy saboteurs, the President, First Lady, and Secretary of War launched FBI and Army Intelligence investigations, only to find that U.S. general officers and enlisted men were responsible.[8]

Today, women account for as many as 1 in 5 enlisted troops in some service branches.[25] Just as female nurses' role in the military is no longer questioned, other servicewomen's contributions to achieving and maintaining military readiness are increasingly recognized.[26,27] However, while women have made many gains since WWII in terms of troops' acceptance,[28] physical attacks and sexual assaults of women by comrades-in-arms far outstrip casualties incurred by enemy actions.[29–31] As many as a quarter of military women have been sexually assaulted,[29,32] and 80%, sexually harassed.[33,34] Sexual assaults and harassment that occur in a military setting may be more damaging than those that occur in other work settings,[35] in part because such events may emphasize women's "outsider" status.[36] These problems also pervade Service academies.[37] Despite military women's numerous accomplishments, the legacy of 1943's "scandal campaign" lingers, and many women report being stigmatized as "whores or lesbians" as a result of their service.[28,36,38]

IMPACT OF MILITARY SERVICE ON WOMEN'S HEALTH

As expected of a group selected for exceptional physical ability, most women veterans report good to excellent health, even as they age.[39] As with male veterans, their all-cause mortality is lower than age-matched female civilians.[40–42] Nonetheless, military service is associated with increased odds of having a variety of conditions and illnesses, and physicians should be aware of these associations.

For example, in-service sexual assaults and sexual harassment have several long-term health implications and are common in all female veteran cohorts, including WWII veterans.[43] Frequent psychosocial complications of sexual assault include increased suicide risk,[44] posttraumatic stress disorder,[45–50] major depression,[51,52] alcohol or drug abuse,[51,52] long-term sexual dysfunction, disrupted social networks, and employment difficulties.[53–58] In-service sexual harassment has also been associated with adverse psychiatric outcomes, including greater odds of depression, anxiety, and posttraumatic stress disorder.[35,59] Medical conditions associated with sexual assault include breast cancer,[60] heart attacks, obesity, and asthma.[29]

Exposures to combat and its horrific after-effects, prevalent among deployed nurses, are increasingly common among deployed women serving in nonmedical capacities.[12,38,50,61–63] Combat's effects on physical and mental health are similar to those described for sexual assault.[38,49,50,64–70] Thus, combat and military sexual trauma experiences, as well as other deployment-related stresses, could explain deployed female veterans' greater risks for drug-related disorders,[71] posttraumatic stress disorder,[63,72–75] accidental deaths,[42] higher levels of general psychiatric distress, and more frequent somatic

complaints[63,74,76,77] compared with nondeployed female veterans.

Military environmental exposures might also affect women veterans' health. For example, women exposed to oil well fire smoke during the Gulf War appear to have greater odds of asthma compared with other female Gulf War veterans,[78] and it is speculated that some as yet undefined environmental trigger may have increased some deployed Gulf War veterans' risk for amyotrophic lateral sclerosis.[79] Nurses deployed to Vietnam have higher than expected rates of pancreatic and uterine cancer death compared with the general population, and nondeployed Vietnam-era nurses have higher than expected lung cancer mortality.[40,41] Whether these cancers are related to specific environmental or occupational exposures incurred while in the military or result from some other risk factor confounded with military service is unknown, however.

RECOMMENDATIONS AND CONCLUSIONS

In our experience, women veterans are courageous, energetic individuals who were motivated to serve by patriotism and a desire for adventure and personal growth. Most have gone on to live useful lives in the civilian world. Knowing women's veteran status, their deployment status, military occupation (e.g., nurse vs other), and military trauma or exposure history could help physicians (and patients) place complicated presentations and behaviors into context and heighten diagnostic suspicion for some illnesses. Simply asking women about their military service could trigger a discussion that might provide much needed information for women's subsequent treatment. Demonstrating familiarity with and expressing appreciation for women's military history and experiences could promote empathy and build trust within the therapeutic relationship, and could perhaps shift any negative, service-related stereotypes or shame these women may have internalized.[38,39,80]

Women's importance in our country's defense cannot be adequately covered in these few pages. In fact, the many women and their colorful stories peppering our country's history would quickly populate a hagiographic narrative. We encourage readers to learn more. Recognition of the health challenges of female veterans is long overdue. We encourage physicians to ask about women's military service history and to take these histories into account when devising clinical plans.

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Voices of Women Veterans (continued)

VETERAN IDENTITY

``Unfortunately, the military still contains people (men) who don't think women should be a part of it. You can run into those who try to pigeonhole you into the sort of roles they think you should play as a woman in the military (i.e., cook, health specialist, or someone for the amusement of the men). However, it taught me how to be the strongest person I can possibly be, even if most of that knowledge derives from the fact that military men can be worse than a sewing circle. . .''

``I do not feel that I have earned the status of 'veteran' and it is difficult for me to justify. I try not to think about it much. I do not overtly tell others that I am a veteran although I may bring up my Iraqi puppy in casual conversation. I do not talk about military and political affairs in general because it is not in my character. I have been on active duty, as a reservist, for more days than I have been on the job as a civilian. I have had great unrest with my soldier/civilian role.''

``It has made me more patriotic and appreciative of the meaning behind the flag and our freedom. When I see the American flag my chest swells with pride. Being a vet has helped me find work quickly. I did not learn of VA health care until many years after active duty. I wish I had checked into it before. It has made a difference in my health.''