



REVIEW ARTICLE

Mothers in the Military: Violence and Negative Perinatal Outcomes

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ABSTRACT

The number of women serving in the United States (US) armed forces has more than tripled since 2000. The increased number of women highlights some areas of vulnerability, especially during the perinatal period, that are not currently being addressed. Compared to civilians, women in the military are more likely to have experienced adverse childhood experiences and intimate partner violence. They are also at higher risk for military sexual trauma than their male counterparts. For pregnant women, past or current violence increases the risk for adverse birth outcomes, such as preterm birth and low birth weight. During pregnancy and postpartum, military mothers are at higher risk for depression, anxiety, posttraumatic stress disorder (PTSD), and suicidal ideation than civilian mothers. The purpose of this review is to summarize recent studies on women in the military, examining rates of violence and adverse outcomes related to their experiences of violence. The findings do not allow us to understand underlying mechanisms but can describe associations. Overall, the findings are bleak but could become a call to action. With intervention, these outcomes can improve. However, we must first realize that a problem exists, which the present article highlights.

Keywords: Military, veterans, women, perinatal, pregnancy, postpartum, adverse childhood experiences (ACEs), intimate partner violence, and military sexual trauma.

Introduction

Violence can affect more woman, but some are at particularly high risk. Women in the armed services have experienced more violence before, during, and after their time in the military compared to civilian women. Military women report higher rates of adverse childhood experiences, severe adverse childhood experiences, and partner violence. Military-specific traumas include combat deployment, sexual harassment, and sexual assault during military service. Given this level of violence exposure, it is not surprising that military women have higher rates of posttraumatic stress disorder (PTSD), depression, anxiety, eating disorders, and suicide attempts compared to age-matched civilians^[1]. High rates of violence are particularly an issue for women in the perinatal period as they are associated with adverse outcomes for mothers and infants^[2]. Military mothers have higher rates of perinatal depression, anxiety, and PTSD compared to civilians, and their infants have higher rates of preterm birth and other complications.

Studies of violence in perinatal military women is relatively new, so the literature is not large. The findings we have so far, however, are concerning. Three types of violence disproportionally affect military women in general and during the perinatal period in particular: adverse childhood experiences, intimate partner violence, and military sexual trauma. This article is a narrative review that summarizes all recent research found on PubMed and PsychInfo regarding pregnant or postpartum women in the military. Some studies and review articles examining violence against civilian women and violence in general veteran populations were included for comparison.

Adverse Childhood Experiences

ADVERSE CHILDHOOD EXPERIENCES IN THE GENERAL POPULATION AND VETERANS

The Adverse Childhood Experiences (ACE) Study was the first to demonstrate the long-term effects of multiple types of childhood trauma. The original ACE Study included more than 17,000 patients in

the Kaiser Permanente system, a health maintenance organization in San Diego, California^[3]. The major findings were that ACEs were common (more than half the sample); that adversities have an additive effect: the more types someone experiences, the worse the adult outcomes; and that adversities in childhood increased the risk for serious adult physical health problems. Adverse childhood experiences (ACEs) include childhood physical and sexual abuse; emotional abuse; neglect (physical and emotional); and witnessing parental intimate partner violence; parental mental illness, substance use, and criminal activity^[4]. Participants who had 4 or more ACEs had higher risk for cardiovascular disease, diabetes, cancer, and other conditions, and were more likely to die prematurely. Subsequent studies have linked ACEs to many other conditions, including chronic pain syndromes^[5]. A more recent US study found that 64% of adults reported at least one ACE and 17% reported 4 or more^[6]. A study of 1,062 French college students had similar findings: 69% reported 1 or more ACEs, with 21% reporting 3 or more^[7].

Among veterans, women report more ACEs than men. A study of post-9/11 male and female veterans (N=9,566) found that 59% of female veterans and 39% of males had experienced at least one ACE^[8]. In addition, 25% of female veterans experienced 4 or more ACEs compared to 12% of males. The most common ACEs for women included emotional abuse, family history of mental illness or alcohol abuse, and emotional neglect. Combat exposure and ACEs were both associated with poor mental health in male and female veterans.

Another large study compared male and female veterans (n=38,633) to their age- and sex-matched civilian counterparts (n=16,483) on adverse childhood experiences and current suicidal ideation or attempts^[9]. Their conceptualization of ACEs differed from the original ACE study and included 22 traumatic events that occurred before age 18. Their study included the original list and added events such as food insecurity and

homelessness. Female veterans reported more ACEs than their civilian counterparts (3.1 vs 2.4). In addition, female veterans were more likely to report 6 or more ACEs (15% vs 9%) compared to civilian women.

CONSEQUENCES OF ADVERSE CHILDHOOD EXPERIENCES

Health problems caused by ACEs cost an estimated \$748 billion a year in North America and are associated with 5 of the 10 leading causes of death^[6]. In addition, ACEs increase the risk for depression, anxiety, PTSD, substance use, and high-risk behavior. For example, a study of 882 young women (age range=12-20) from an inner-city health practice found that 59% had experienced abuse or neglect and that all types of maltreatment increased the risk of depression, substance use, and high-risk sexual activity (unprotected sex, multiple partners, and partners 5+ years older).

Interestingly, one study found resilience in female veterans that they did not find in males: having a history of 1 to 2 ACEs did not increase women's risk of mental health disorders, but it did for men^[8]. The authors hypothesized that women's earlier experiences may have enhanced their ability to cope rather than diminishing it. Unfortunately, women who experienced 4 or more ACEs had higher risk for PTSD, depression, anxiety, and alcohol abuse than non-abused women^[8]. ACEs also compounded the negative effects of combat exposure.

Intimate Partner Violence

INTIMATE PARTNER VIOLENCE AND ITS SEQUELAE IN THE GENERAL POPULATION

Intimate partner violence (IPV) is also relatively common and neither pregnancy nor postpartum protects women from it. A recent meta-analysis of 201 studies (N=250, 099) examined the global prevalence of IPV^[10]. Perinatal women were the group most likely to have experienced lifetime IPV. Intimate partner violence can be physical, psychological, or sexual. All types lead to negative sequelae such as depression, anxiety, PTSD, and

suicidality. White et al.^[10] found a global prevalence of 37% for "any IPV," and 24% for IPV in the past year for women 15 to 44. Among those who experienced physical violence, perinatal and help-seeking women had the highest risk of depression.

Recent data from 31 sites of the US Pregnancy Risk Assessment Monitoring Systems (PRAMS) found that 13% of women were depressed at 3 to 4 months postpartum in the aggregate sample^[11]. However, the percentage dramatically increased (29% to 34%) if women were abused by their partners before or during pregnancy. The PRAMS data were consistent with previous studies on partner violence. For example, a New York study followed 884 women from their first prenatal visit to 6 weeks postpartum^[12]. The strongest predictors of postpartum depression were physical or sexual abuse during pregnancy, a history of psychiatric disorders, and a psychiatric diagnosis at the first prenatal visit.

Partner violence increases the risk of physical injury, including head injury, and can lead to death. Partner violence can also lead to mental health sequelae, such as depression, anxiety, and PTSD—symptoms that last long past physical injuries. Pregnancy is an especially dangerous time to experience partner violence; it increases the risk of serious harm for both mother and baby. Intimate partner violence during pregnancy increases the risk of low birth weight, preterm birth, small for gestational age, gestational diabetes, maternal and neonatal death. Women are also at risk for depression, anxiety, PTSD, and suicidal ideation^[13]. A review of 67 studies found that violence during pregnancy tripled the risk of postpartum depression^[15]. Partner violence also increased the risk of PTSD, and prenatal and postpartum anxiety.

Violence and depression also appear to have a bidirectional relationship: violence increases the risk of depression and depressed women are 3 to 5 times more likely to be beaten by their partners while pregnant^[15]. A study from Peru had similar findings; women with histories of childhood physical abuse had twice the rate for depression

during pregnancy and were 7 times more likely to experience partner violence^[16]. These findings are somewhat difficult to interpret. Women—depressed or not—are not responsible for their partners' actions. However, depression may lead to quarrels, which increases the risk of violence. This is a relationship that should be studied further.

INTIMATE PARTNER VIOLENCE IN VETERANS

Partner violence is also common among women veterans. One examination of Veterans Health Administration electronic medical records included a sample of 8,427 women who were screened for partner violence^[17]. Out of this sample, 8% screened positive. A recent meta-analysis of 31 studies (N=172,790) of predominantly US active-duty personnel and veterans found that 21% reported recent victimization, with psychological abuse being the most commonly reported^[18].

Intimate partner violence has also been studied with perinatal military women. A study conducted between 2007 and 2008 surveyed 1,162 pregnant women who received prenatal care at a US Naval hospital^[19]. Fifteen percent screened positive for past or current abuse and 1.5% reported abuse during their current pregnancy. Single or divorced women had significantly higher risk of physical or emotional abuse by their partners compared to married women. Their relationship status may reflect women leaving their abusive marriages /partnerships. In addition, a history of family abuse increased the risk of IPV in the past 12 months by almost 6 times (OR 5.99, 95% CI 2.99-11.99, $p < .001$). IPV was more common among enlisted personnel.

A study of 442 US veterans using Veterans Health Administration (VHA) maternity care benefits found that 14% reported IPV in the past year^[20]. Mothers were interviewed during pregnancy and were part of a larger cohort study. Within this sample, they found significantly higher rates of depression, PTSD, anxiety disorders, bipolar disorder, and eating disorders. They also found higher rates of military sexual trauma; risky behavior during pregnancy, such as smoking, drinking, and using drugs; and greater use of VHA mental health

services. Not surprisingly, they were significantly less likely to seek support from their spouse or partner. The women served predominantly in the army. The sample was 56% White, 27% Black, 21% Hispanic, and 18% "other." Fifty-five percent of women reporting IPV were living with their partners compared to 86% in the non-IPV group.

Suicide is a serious threat for all returning veterans. Combat exposure and partner violence increases the risk. A study of 8,427 women veterans found that 3% of the total sample reported suicidal ideation or self-harm behaviors^[17]. In contrast, women who screened positive for any type of IPV had double the risk for suicidal ideation or self-harm.

On a positive note, the Veterans Health Administration is screening more women for IPV. A recent retrospective study of VHA data from 2014 to 2020 found that only one agency was screening for IPV in 2014. By 2020, half of the agencies were. In 2014, 500 women screened positive for IPV, but in 2020, 35,000 did. The overall rate of IPV among female veterans was 7%. However, the rate was higher (8%) among women of childbearing age vs 6% of veterans in general. When using the more liberal scale cutoff of 6+ on the measure, the rates increased to 11% for women of childbearing age, and 7% for the general population of women in the Veterans Affairs (VA) health system^[21].

Military Sexual Trauma

OVERVIEW OF MILITARY SEXUAL TRAUMA

Military sexual trauma (MST) is psychological trauma that results from sexual harassment, battery, or assault that occurred while in the military^[22]. MST ranges from offensive or coercive remarks to rape and all types increase the risk for severe sequelae. Men and women who experience MST report feeling betrayed by individuals they trusted and the military as an institution^[1 23]. Betrayal is a particularly salient issue in the military. Military culture is unique because soldiers must depend on each other to survive. Soldiers are away from their normal sources of support, they move often, and are subject to a hierarchical command

structure, which limits their access to outside help^[24]. Women who deploy are more likely to report MST^[25]. Military sexual trauma survivors who report their abuse face possible demotion, loss of support and unit cohesion, and unwanted assignments. They do not have the option to simply leave and are also at risk for additional violence^[1].

A large retrospective study found that 23% of women veterans (n=123,417) reported a history of military sexual trauma^[26]. All women with a VA primary provider were included in the initial cohort. The mean age was 63 for the MST group and 67 in the no MST group, suggesting that MST is not a new problem in the military but one that has only recently come to prominence.

OUTCOMES

Military sexual trauma increases the risk of depression, anxiety, and PTSD. A study of 2,499 male and female veterans found that all types of military sexual trauma—harassment to assault—increased the severity of PTSD, depression, and suicidality above and beyond the effect of combat exposure. Harassment and assault combined caused more severe symptoms than harassment or assault alone^[24]. A review of 43 studies compared symptoms related to combat exposure vs military sexual trauma to determine whether MST had an effect independent of combat^[27]. Both combat and MST uniquely contributed to PTSD symptoms, but MST was more strongly related to depression and suicidality than combat. Combat, on the other hand, was more strongly related to alcohol use and other externalizing symptoms.

Military sexual trauma also increased the risk for chronic pain in a large, cohort study of female veterans^[26]. Women who reported MST also reported significantly more chronic pain diagnoses including headaches, chronic pelvic pain, chronic back pain, and fibromyalgia. Military sexual trauma also increased the risk of incident hypertension in post-9/11 male and female veterans (N=788,161) [28]. For women, MST resulted in a 20% greater risk, which was higher than it was for men. Risk was

calculated after controlling for demographics, lifestyle, cardiovascular risk factors, and psychiatric disorders.

MILITARY SEXUAL TRAUMA IN PREGNANT AND POSTPARTUM WOMEN

Military sexual trauma also affects childbearing women and increases the risk for postpartum depression and anxiety, emotional problems, and suicidal ideation. A recent review of 16 articles examined the impact of military trauma on pregnancy outcomes^[22]. Fourteen of the 16 studies found that military women were at higher risk for adverse pregnancy outcomes including preterm birth, low birth weight, gestational diabetes, hypertensive disorders of pregnancy, and perinatal mood and anxiety disorders. Black enlisted women had disproportionately higher rates of adverse pregnancy outcomes and PTSD compared to other military mothers.

A longitudinal study followed 620 U.S. female veterans during pregnancy and 452 postpartum^[29]. Fifty-two percent reported sexual harassment and 30% reported sexual assault. Seventy-one percent of women who were harassed were depressed compared to 41% of non-harassed women. Even the rates for non-harassed women are substantially higher than they are in civilian populations, but the rates for the harassed group are extraordinary^[30]. In addition, 56% had PTSD and 56% had an anxiety disorder compared to 24% of non-harassed women. Among women who were sexually assaulted, 77% were depressed (vs 48% of non-assaulted women), 65% had PTSD (vs 30%), and 60% had anxiety disorders (vs 41%). These results show very high rates of depression, anxiety, and PTSD for *all* women in the military, with exceedingly high rates for women who have been sexually assaulted.

Another study included 1,005 veterans who had recently given birth. These women were part of a multi-site, mixed-methods study. In this group, 32% reported military sexual trauma-rape, and 51% reported military sexual trauma-harassment^[31]. Forty percent reported PTSD (the US national rate for civilian women is 10%). Women who reported

MST and PTSD were more likely to describe their birth experiences negatively, but only 15% did. Depression was not related to birth experience. The sample was 57% White and 43% women of color. Fifty-nine percent reported military sexual trauma, 36% reported combat exposure, and 55% reported at least one violent childhood trauma in another study of 911 women who reported on 1,752 unique pregnancies^[25]. Fifty-two percent of the women identified as a racial/ethnic minority. During at least one pregnancy since entering the military, 29% reported a preterm birth (the US national average is 11%), 9% had a baby with low birth weight, and 45% had postpartum depression or anxiety. Military sexual trauma increased the risk of lower infant birth weight and postpartum depression, but only slightly increased the risk for preterm birth. For every one-unit increase on the sexual harassment scale, birth weight decreased by 17 g, odds of full-term birth decreased by 3%, and depression or anxiety increased by 9%. The effects of MST appeared after controlling for age at pregnancy, race/ethnicity, childhood trauma, and combat exposure. Combat exposure did not increase the risk of negative birth outcomes. Nor did warfare exposure or race or ethnicity.

In a sample of 697 pregnant US veterans, military sexual trauma negatively affected mother-infant bonding^[32]. Fifty-two percent reported harassment and 30% reported abuse or rape. Twenty-eight percent of women who experienced military sexual trauma were depressed. Military sexual trauma increased the risk of depression, which was related to poorer mother-infant bonding.

When women experience multiple types of violence

We can conclude from these studies that violence is common and pervasive for many military mothers. Several studies cited above noted considerable overlap between ACEs, partner violence, and military sexual trauma. This raises two important questions: Why are abuse survivors at higher risk for revictimization? And what is the

cumulative effect of these traumas? Based on the literature we have so far, we cannot answer these questions for women in the military.

Previous studies with civilians suggest that when women experience child abuse and partner violence, they have more severe symptoms. A review of 43 studies found that civilian women abused as children or adults had more lifetime depression, and more depression during pregnancy and postpartum than non-abused women^[33]. If women experienced abuse as both children and adults, their depression was more severe and lasted longer compared to women who experienced one type.

Another study included 239 low-income pregnant women who were part of a nurse home-visitation program following recent partner violence^[34]. Forty-three percent reported physical, sexual, and psychological abuse within the past year, and 40% had PTSD. Looking at these data, it is reasonable to assume that recent violence caused these women's PTSD. However, 65% of participants said that it was not partner violence, but other events that caused their symptoms. Interestingly, age was the strongest predictor of PTSD; 80% of women 30 or older had PTSD.

A military study also considered the overlap between partner violence and military sexual trauma. A study of 442 women who experienced partner violence (IPV women) had higher rates of MST-harassment than non-IPV women. But rates were high for both groups. Fifty percent of the non-IPV group experienced MST-harassment vs 65% of the IPV group. A similar pattern was observed for MST-rape: 29% for the non-IPV group vs 44% for the IPV group—shockingly high for both groups. Ninety-two percent had been deployed to the Gulf and 85% had a service-related disability (health conditions linked to their military service)^[20].

Childhood abuse increases women's vulnerability to the negative effects of military sexual trauma. A recent study included 268 treatment-seeking veterans (male and female)^[23]. All had experienced MST, child sexual trauma, or both. Controlling for

gender, MST survivors had higher PTSD and depression but not suicidality compared to child sexual abuse survivors. Those who experienced both types of trauma had significantly higher risk for PTSD, depression, and suicidality than those who experienced child sexual abuse alone.

A study of female veterans from Israel included combat veterans (n=885) and noncombat veterans (n=782)^[35]. Zerach found that combat veterans reported higher ACE scores than women not exposed to combat. Twenty-three to 30% of their female soldiers reported MST. Combat veterans also had higher prevalence of MST, more potentially morally injurious events, and more PTSD symptoms than non-combat veterans. Ten percent of combat veterans reported 3 or more ACEs compared to 6% of the non-combat veterans. Notably, a surprisingly high percentage of veterans reported 0 ACEs (64% to 65%), which is the opposite of rates in the US where 64% report at least one ACE^[6].

The results of the Zerach [35] study are difficult to interpret. Military service is mandatory in Israel for all men and women, and some will be exposed to combat. However, ACEs in no way should predict those who are exposed to combat, which seems more luck of the draw. The more reasonable hypothesis is that ACEs predict worse outcomes in women exposed to combat (i.e., ACEs + combat has an additive effect). The Zerach study cannot explain why more ACE survivors were exposed to combat, but the data are still of interest.

Research on overlapping types of violence raises many questions. Why are ACE survivors at higher risk for IPV or MST? When someone has experienced multiple types of abuse, is current or

past abuse more likely to cause symptoms? And the most salient question of all, how can we protect women who have experienced one type of violence from other types? Research on the needs of military women and military mothers continues apace. Future studies may be able answer these questions.

Conclusions

The recent studies presented in this review suggest that pregnant and postpartum women are at high risk for many serious complications due to past and current violence. Overall, they have experienced more adverse childhood experiences and partner violence than their civilian counterparts. In addition, they are exposed to trauma specific to the military: combat and military sexual trauma. As a result, their risk for PTSD, postpartum depression, and anxiety is much higher, in some cases double or even triple, compared to their civilian counterparts. Violence dramatically increases their risk for adverse birth outcomes. While this situation is alarming, the number of recent studies is a hopeful sign. I hope that research leads to policy changes that increase women's safety in the military and gives them the care they deserve as veterans.

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References:

1. Alpert E, Baier AL, Galovski TE. Psychiatric issues in women veterans. *Psychiatric Clinics of North America* 2023;46:621-33 doi: 10.1016/j.psc.2023.04.015.
2. Hugin M, Shaw JG. Obstetric outcomes in U.S. veterans: Emerging knowledge, considerations, and gaps. *Seminars in Reproductive Medicine* 2019;37(1):17-23 doi: 10.1055/s-0039-1692128.
3. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine* 1998;14(4):245-58 doi: S0749379798000178 [published Online First: 1998/06/23].
4. Anda RF, Dong M, Brown DW, et al. The relationship of adverse childhood experiences to a history of premature death of family members. *BMC Public Health* 2009;9:106 doi: 1471-2458-9-106 [pii] 10.1186/1471-2458-9-106 [published Online First: 2009/04/18].
5. Sachs-Ericsson N, Cromer K, Hernandez A, Kendall-Tackett KA. Childhood abuse, health and pain-related problems: The role of psychiatric disorders and current life stress. *Journal of Trauma & Dissociation* 2009;10:170-88.
6. National Center for Injury Prevention and Control. Fast facts: Preventing adverse childhood experiences. 2023.
<https://www.cdc.gov/violenceprevention/aces/fastfact.html>.
7. Schwartz A, Galera C, Kerbage H, Montagni I, Tzourio C. Adverse childhood experiences and ADHD symptoms among French college students. *Journal of Child and Adolescent Trauma* 2023; 16(4):1109-17 doi: 10.1007/s40653-023-00543-z.
8. Aronson KR, Perkins DF, Morgan NR, et al. The impact of adverse childhood experiences (ACEs) and combat exposure on mental health conditions among new post-9/11 veterans. *Psychological Trauma* 2020;12(7):698-706 doi: 10.1037/tra0000614.
9. Blossnich JR, Garfin DR, Maguen S, et al. Differences in childhood adversity, suicidal ideation, and suicide attempt among veterans and nonveterans. *American Psychologist* 2021;76(2):284-99 doi: 10.1037/amp0000755.
10. White SJ, Sin J, Sweeney A, et al. Global prevalence and mental health outcomes of intimate partner violence among women: A systematic review and meta-analysis. *Trauma, Violence, & Abuse* 2024;25(1):494-511 doi: 10.1177/15248380231155529.
11. Bauman BL, Ko JY, Cox S, et al. Postpartum depressive symptoms and provider discussions about perinatal depression: United States 2018. *Morbidity & Mortality Weekly Report* 2020;69(19):575-81.
12. Silverman ME, Loudon H. Antenatal reports of pre-pregnancy abuse is associated with symptoms of depression in the postpartum period. *Archives of Women's Mental Health* 2010;13:411-15.
13. Alhusen JL, Ray E, Sharps PW, Bullock L. Intimate partner violence during pregnancy: Maternal and neonatal outcomes. *Journal of Women's Health (Larchmont)* 2015;24(1):100-06 doi: 10.1089/jwh.2014.4872.
14. Tran TDT, Murray L, Vo TV. Intimate partner violence during pregnancy and maternal and child health outcomes: A scoping review of the literature from low-and-middle income countries from 2016-2021. *BMC Pregnancy and Childbirth* 2022;22(1) doi: 10.1186/s12884-022-04604-3.
15. Howard LM, Oram S, Galley H, Trevillion K, Feder G. Domestic violence and perinatal mental disorders: A systematic review and meta-analysis. *PLoS Medicine* 2013;10(5) doi:<https://doi.org/10.1371/journal.pmed.1001452>.
16. Barrios YV, Gelaye B, Zhong Q, et al. Association of childhood physical and sexual abuse with intimate partner violence, poor general health, and depressive symptoms. *PLoS One* 2015 doi: 10.1371/journal/pone.0116609.
17. Brignone E, Sorrentino A, Roberts CB, Dichter ME. Suicidal ideation and behaviors among women veterans with recent exposure to intimate partner violence. *General Hospital Psychiatry* 2018;55:60-64 doi: 10.1016/j.genhosppsych.2018.10.006.

18. Cowlshaw S, Freijah I, Kartal D, et al. Intimate partner violence (IPV) in military and veteran populations: A systematic review of population-based surveys and population screening studies. *International Journal of Environmental Research and Public Health* 2022;19 doi: 10.3390/ijerph19148853.
19. Lutgendorf MA, Busch JM, Doherty DA, Conza LA, Moone SO, Magann EF. Prevalence of domestic violence in a pregnant military population. *Obstetrics & Gynecology* 2009;113(4):866-72.
20. Creech SK, Pulverman CS, Kroll-Desrosiers AR, Kinney R, Dichter ME, Mattocks K. Intimate partner violence among pregnant veterans: Prevalence, associated mental health conditions, and health care utilization. *Journal of General Internal Medicine* 2021;36(10):2982-88 doi: 10.1007/s11606-020-06498-3.
21. Miller CJ, Stolzmann K, Dichter ME, et al. Intimate partner violence screening for women in the Veterans Health Administration: Temporal trends from the early years of implementation 2014-2020. *Journal of Aggression, Maltreatment, and Trauma* 2022;1-9 doi: 10.1080/10926771.2021.2019160.
22. Manzo LL, Dindinger RA, Batten J, Combellick JL, Basile-Ibrahim B. The impact of military trauma exposures on servicewomen's pregnancy outcomes: A scoping review. *Journal of Midwifery and Women's Health* 2024, online.
23. Baca SA, Crawford JN, Allard CB. PTSD, depression, and suicidality among survivors of child sexual trauma (CST), military sexual trauma (MST), and sexual revictimization (CST + MST). *Psychological Trauma* 2023;15(8):1271-79 doi: 10.1037/tra0001149.
24. Galovski TE, McSweeney LB, Wooley MG, Alpert E, Nillni YI. The relative impact of different types of military sexual trauma on long-term PTSD, depression, and suicidality. *Journal of Interpersonal Violence* 2023;38(15-16):9465-91 doi: 10.1177/08862605231168823.
25. Nillni YI, Fox AB, Cox K, Paul E, Vogt D, Galovski TE. The impact of military sexual trauma and warfare exposure on women veterans' perinatal outcomes. *Psychological Trauma* 2022;14(5):730-37 doi: 10.1037/tra0001095.
26. Cichowski SB, Rogers RG, Clark EA, Murata E, Murata A, Murata G. Military sexual trauma in female veterans is associated with chronic pain conditions. *Military Medicine* 2017;182(9/10) doi: 10.7205/MILMED-D-16-00393.
27. Yancey JR, Carson CN, McGlade EC, Yurgelun-Todd DA. A literature review of mental health symptom outcomes in US veterans and service members following combat exposure and military sexual trauma. *Trauma, Violence, & Abuse* 2024;25(2):1431-47 doi: 10.1177/15248380231178764.
28. Gaffey AE, Rosman L, Sico JJ, et al. Military sexual trauma and incident hypertension: A 16-year cohort study of young and middle-aged men and women. *Journal of Hypertension* 2022;40(11):2307-15 doi: 10.1097/HJH.0000000000003267.
29. Gross GM, Kroll-Desrosiers AR, Mattocks K. A longitudinal investigation of military sexual trauma and perinatal depression. *Journal of Women's Health* 2020;29(1):38-45 doi: 10.1089/jwh.2018.7628.
30. Kendall-Tackett KA. *Depression in new mothers: Causes, consequences, and risk factors*. Fourth edition ed. Abington UK: Routledge, 2023.
31. Schafer KM, Wallace KF, Kross-Desrosiers A, Mattocks K. Posttraumatic stress disorder, military sexual trauma, and birth experiences at the Veteran Health Administration. *Women's Health Issues* 2024;34(3):303-08 doi: 10.1016/j.whi.2023.11.006.
32. Creech SK, Kroll-Desrosiers AR, Benzer JK, Pulverman CS, Mattocks K. The impact of military sexual trauma on parent-infant bonding in a sample of perinatal women veterans. *Depression & Anxiety* 2022;39(3):201-10 doi: 10.1002/da.23218.
33. Alvarez-Segura M, Garcia-Esteve L, Torres A, et al. Are women with a history of abuse more vulnerable to perinatal depressive symptoms? A systematic review. *Archives of Women's Mental Health* 2014;17:343-57.
34. Castello JC, Jacobsen KH, Gaffney KF, Kodadek MP, Bullock LC, Sharps PW. Posttraumatic stress disorder among low-income women exposed to

perinatal intimate partner violence. Archives of Women's Mental Health 2016;19:521-28.

35. Zerach G. The contribution of childhood adversity and potentially traumatic events during military service to PTSD and Complex PTSD symptoms among Israeli women veterans. Psychological Trauma 2023;15(8):1259-170 doi: 10.1037/tra0001463.