Voluntary and involuntary childlessness in female veterans: associations with sexual assault

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Objective: To assess associations between lifetime sexual assault and childlessness in female veterans.
Design: Cross-sectional, computer-assisted telephone interview study.
Setting: Two Midwestern Veterans Administration (VA) medical centers.
Patient(s): A total of 1,004 women aged ≤52 years, VA-enrolled between 2000 and 2008.
Intervention(s): None.
Main Outcome Measure(s): Sociodemographic variables, reproductive history and care utilization, and mental health.
Result(s): A total of 620 veterans (62%) reported at least one attempted or completed sexual assault in their lifetime (LSA). Veterans with LSA more often self-reported a history of pregnancy termination (31% vs. 19%) and infertility (23% vs. 12%), as well as sexually transmitted infection (42% vs. 27%), posttraumatic stress disorder (32% vs. 10%), and postpartum dysphoria (62% vs. 44%). Lifetime sexual assault was independently associated with termination and infertility in multivariate models; sexually transmitted infection, posttraumatic stress disorder, and postpartum dysphoria were not. The LSA by period of life was as follows: 41% of participants in childhood, 15% in adulthood before the military, 33% in military, and 13% after the military (not mutually exclusive). Among the 511 who experienced a completed LSA, 23% self-reported delaying or foregoing pregnancy because of their assault.
Conclusion(s): This study demonstrated associations between sexual assault history and pregnancy termination, delay or avoidance (voluntary childlessness), and infertility (involuntary childlessness) among female veterans. Improved gender-specific veteran medical care must attend to these reproductive complexities. (Fertil Steril® 2014;■:■–■. ©2014 by American Society for Reproductive Medicine.)
Key Words: Female veterans, sexual assault, childbearing, infertility

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The lifetime risk of sexual assault for the general, nonmilitary population of women in the United States is between 15% and 20% (1–3), with incidence rates showing a significant decrease in recent years to 2.1 attempted, completed, or threatened rapes or sexual assaults per 1,000 women in the year 2010 (4). In contrast, studies have shown an emerging epidemic of sexual assault in the military. A May 2013 report, for example, detailed 6.1% of female active duty service members reporting unwanted sexual contact in 2012 alone (29 times the rate shown above in the general population) (5). On the basis of this report, officials estimate that as many as 26,000 military members may have been sexually assaulted in 2012, up 35% from 2011 (5). Other studies consistently show that military service is high risk for assault, with between 11% and 48% of female veterans reporting sexual

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trauma during this time (6–11). Women in the military are also at increased risk of having been sexually assaulted in childhood, with rates of 25%–46% (12, 13).

Although President Obama recently signed into law a defense bill that expands efforts to prevent military sexual assault and strengthen protections for victims (14), the Pentagon also announced early in 2013 that women would no longer be excluded from ground combat positions, with a goal of full integration by 2016 (15). Thus military service presents female service members with high sexual assault and increasing combat-related trauma risks, not to mention deployment-related family disruptions. All of these exposures may impact veterans' overall health, as well as reproductive health, choices, and outcomes. One study published by Frayne et al. in 1999 reported that women experiencing sexual assault during military service were 2.5 times more likely than their military colleagues to answer "yes" to the question, "Is there something about your military experience that interfered with your desire or ability to have children?" (16). In the same study, assaulted women were also more likely to report "a problem getting pregnant," miscarriage, chronic pelvic pain, dysmenorrhea, premenstrual syndrome, abnormal menses, and endometriosis. Compounding these risks, female veterans are more likely to develop posttraumatic stress disorder (PTSD) after traumatic exposures than their male counterparts (17), and in-military sexual assault may be particularly traumatizing owing to perpetration by trusted colleagues, use of weapons, and frustration with lack of military response (16).

A thorough understanding of female veterans' reproductive health concerns is vital given that there are more than 1.8 million female veterans in the United States, and women represent the fastest growing segment of military veterans in this country. With 14% of current active duty forces, 17% of Reserve and National Guard members, and a full 20% of all new military recruits being women, it is expected that 10.7% of all veterans will be women by the year 2020 (18–20). Congress has appropriately mandated that gender-specific services be made available for all female veterans, and this charge is being met by a number of initiatives led by the Women Veterans Health Strategic Health Care Group, including installation of Women Veterans Program Managers at each Veterans Health Administration (VA) facility. These managers coordinate a combination of services at local VA sites with fee-based referrals to non-VA providers because comprehensive reproductive health services are not currently available through the VA health system. One study, for example, revealed that 56 of 133 VA sites did not have a gynecologist available, and such sites were less likely to offer a full range of gynecologic services, such as intrauterine device placement and infertility evaluation (21). A more recent focus group analysis of female veterans suggested that perceived gender discrimination and knowledge gaps negatively impact VA-based reproductive health care seeking and that female veterans express a desire for better coverage for advanced infertility care (22).

The analysis presented here is part of a larger project whose goal was to assess the antecedent risks and subsequent reproductive health consequences of physical and sexual assault in premenopausal female veterans, as well as barriers to appropriate health services. The goal of this subanalysis was to follow up on Frayne's 1999 study (16) and further investigate associations between lifetime attempted or completed sexual assault (LSA) and voluntary and involuntary childlessness and related care seeking in female veterans.

MATERIALS AND METHODS

Participants and Procedures

This was a cross-sectional observational study approved by the institutional review boards of the University of Iowa and the Iowa City VA Medical Center. Subjects included women aged $\leq$52 years enrolled at one of two Midwestern VA Medical Centers or outlying clinics either in the 5 years preceding study interviews or during the study period (July 2005–August 2008). Potential participants were identified using electronic VA records. Enrollment in the VA could have been initiated to receive health care, complete a disability claim, enroll in a registry, or respond to Veteran outreach.

An introductory letter and consent forms with postage-paid, preaddressed return envelopes were mailed to potential subjects, providing them with a toll-free number through which to schedule interviews, ask questions, or refuse participation. Within 2 weeks after the introductory letter, eligible subjects who did not initiate contact were recruited into the study by telephone, with a maximum of eight call attempts. These mail and telephone protocols were repeated for potential subjects until contact was made or subjects were deemed unreachable. When address or telephone problems occurred, efforts were made to find current contact information using directory assistance, Internet "white pages," the VA's Computerized Record System, and Accurint (a confidential Lexis Nexis research tool) (2009). Women refusing participation were asked for reasons for their refusal and three questions related to the original purpose of the study (gynecologic health) to allow comparison with participants: [1] "In general, would you say your health is excellent, very good, good, fair, or poor?"; [2] "Have you ever been told you have had an abnormal Pap smear?"; [3] "In the last year, approximately how many times have you seen a doctor or health care provider for gynecologic health issues?"

For the purpose of the funded grant and primary goal of the larger study (to look at the reproductive health of premenopausal veterans at low risk of gynecologic malignancy), subjects were screened to reduce involvement of those at high risk of cervical dysplasia, genital malignancy, and/or natural menopause. Included participants completed a computer-assisted telephone interview that included questions related to demographics, lifetime sexual assault, gynecologic diagnoses and procedures, general and mental health history, health risk behaviors, and care seeking. Survey items came from multiple sources, including validated measures or prior published work, or were original to this study. The interviews took an average of 1 hour and 16 minutes, and the majority was completed in a single phone call (89%). Participants who completed the interview were reimbursed $30.00.

Measures

Standard demographic measures were assessed (Table 1). Current insurance status was assessed by asking subjects whether