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Intimate partner violence and disordered eating among male and female veterans

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ABSTRACT

Intimate partner violence (IPV) affects many women and men in the United States and has been associated with numerous mental health conditions, including disordered eating (DE). Veterans may be especially vulnerable to experiencing both of these serious problems given the unique aspects and stressors relevant to military culture, including high rates of trauma exposure. We aimed to estimate the prevalence of past-year IPV among independent samples of male (N = 642) and female (N = 198) veterans and to examine the association between past-year IPV and DE. Mplus 7.0 was used to estimate associations between multiple types of IPV and DE, controlling for age, body mass index, military sexual trauma, and other military trauma. Approximately 14.86% of male veterans and 12.79% of female veterans reported experiencing some form of past-year IPV. All forms of past-year IPV, including physical, sexual, and psychological/emotional, were significantly associated with DE in both samples, after adjusting for covariates. IPV was relatively common among male and female veterans, and those who experience IPV may be particularly vulnerable to DE. Findings extend the knowledge base regarding IPV and its health effects among an understudied population, and may be a catalyst for further research and clinical inquiry to target improving psychiatric care for male and female veterans who experience IPV.

1. Introduction

Intimate partner violence (IPV) affects approximately one in three women and one in four men in their lifetime (Breiding et al., 2014) and is a serious and costly public health problem in the United States (Black et al., 2011). Further, recent (past-year) physical IPV was reported by 4.0% of women and 4.8% of men in a nationally representative sample (Breiding et al., 2014). Physical, sexual, and psychological forms of IPV lead to and exacerbate many mental health conditions among both women and men, including depression, substance use disorders, suicidality, and posttraumatic stress disorder (Cerulli et al., 2014; Dillon et al., 2013; Golding, 1999; Iverson et al., 2013a; Reid et al., 2008; Rhodes et al., 2009; World Health Organization, 2013). A growing literature also suggests that IPV is associated with unhealthy eating habits and disordered eating (DE; Bundock et al., 2013). Relatedly, those who are exposed to trauma may engage in DE behaviors as a way to cope with negative affect, and sexual trauma may impact one's body image (Campbell and Soeken, 1999; Heatherton and Baumeister, 1991). The goal of this study was to evaluate these associations among veterans, a population that may be particularly at risk for IPV and DE, given their high rate of trauma exposure (Zinzow et al., 2007).

Much of the previous research regarding IPV among veterans has focused on male veterans' use of violence (Marshall et al., 2005; Rodrigues et al., 2014); however, several recent studies have examined IPV victimization among female veterans (Dichter et al., 2011; Gerber et al., 2014; Iverson et al., 2013b). Among a nationally representative sample, female veterans were more likely than non-veteran women to report lifetime IPV victimization (33.0% vs. 23.8%; Dichter et al., 2011). The prevalence of past-year IPV was 19.0% in a sample of female Veterans Healthcare Administration patients (Kimerling et al., 2016). In the only population-based study examining IPV victimization among male veterans, 9.5% of male veterans reported lifetime IPV compared to 12.5% of non-veteran men (Cerulli et al., 2014). To our knowledge, there are no published studies examining the prevalence of past-year IPV among male veterans. These findings highlight the need to further understand IPV among both male and female veterans.

Unique aspects and stressors of military life, including trauma exposure, as well as high rates of obesity among veterans, may predispose veterans to be at risk for DE, including symptoms of anorexia nervosa, bulimia nervosa, and binge eating disorder (Bartlett and Mitchell, 2015;

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Kimerling et al., 2007; Mattocks et al., 2012; Vieweg et al., 2007). Eating disorders have been associated with serious psychological and physical medical morbidities (i.e., depression, cardiovascular problems, gastrointestinal disturbance; Fairburn and Brownell, 2001; Zipfel et al., 2003) and represent a considerable economic burden to society (Simon et al., 2005). For example, a recent review found that annual costs per patient diagnosed with an eating disorder ranged from 1288 to 8042 U.S. dollars (Stuhldreher et al., 2012). Further, anorexia nervosa is associated with the highest mortality rate of any psychiatric disorder (Sullivan, 1995), underscoring the need to investigate these deadly conditions among veterans.

Prevalence estimates of eating disorders among veterans based on hospital records and in-person interview assessments vary widely and range from 0.0007% and 4.8% for women, and < 0.001% and 3.7% for men (Litwack et al., 2014; Maguen et al., 2010, 2012; Mitchell et al., 2014; Striegel-Moore et al., 1999). It is important to note that the lower rates are based on hospital records which likely underestimate eating disorders (Whitehouse et al., 1992). Further, veterans who have been exposed to IPV may be at a significantly higher risk for DE than those who have not been exposed to IPV, as suggested by results obtained from non-veteran samples (Bundock et al., 2013; Lucea et al., 2012). For example, a nationally representative sample found that lifetime rates of physical assault by an intimate partner were higher among men and women with lifetime bulimia nervosa and binge eating disorder compared to individuals without eating disorders (Mitchell et al., 2012).

Few studies have examined mechanisms of the IPV—DE relation; however, findings from investigations of other forms of interpersonal trauma, particularly sexual abuse, suggest several potential pathways. Sexual abuse has been associated with increased attentional bias towards body image (Dyer et al., 2013; Witthöft et al., 2015). Moreover, sexual abuse by an intimate partner has been shown to directly impact body image, with a history of sexual abuse among women leading to poorer views about one's body (Campbell and Soeken, 1999). A recent study found that psychological IPV was associated with body shame in a sample of women, both directly and indirectly via self- objectification and body surveillance (Gervais and Davidson, 2013). Self-objectification, or internalizing the belief that one's value is based on his or her physical appearance, and body shame, a negative response to perceiving one's body as not meeting the cultural ideal, have been associated with DE (McKinley and Hyde, 1996; Mitchell and Mazzeo, 2009). In addition, some individuals who experience IPV sustain acute and residual injuries as a result of the abuse. These appearance-related injuries may act as a palpable reminder of the abuse, which may negatively impact body-image satisfaction and self-esteem, and cause individuals to engage in DE as a means to cope with psychological distress (Weaver et al., 2007).

To our knowledge, this is not only the first examination of past-year prevalence of IPV victimization among male veterans, it is also the first study to examine the associations between IPV and DE among male and female veterans. We aimed to estimate the prevalence of past-year IPV and examine the associations between past-year IPV and DE among male and female veterans. We hypothesized that past-year IPV among both male and female veterans would be positively associated with DE behaviors.

2. Methods

The current study utilized two independent samples of male (n = 642) and female (n = 198) veterans. IPV among both samples was evaluated using similar, but non-identical measures that assessed exposure to several types of IPV. Please see below for more detail.

2.1. Study design and procedure – male veteran sample

A subset of 3157 veterans who participated in a prior survey in 2011 (Pietrzak and Cook, 2013) were resampled for a study focused on trauma-related psychiatric symptoms. Among the 2175 veterans who endorsed trauma exposure on the Trauma History Screen (Carlson et al., 2011), 1126 were randomly selected and asked to participate in this study. Of those invited, 860 completed the survey (76.38% response rate).

Of the 860 participants, 163 were excluded from analyses: 142 were omitted because they completed the survey either so quickly or so slowly that the validity of their assessments was called into question. An additional 23 participants had a T score of 90 or greater on the revised Infrequency Psychopathology (Fp-r) validity scale on the Minnesota Multiphasic Personality Inventory-2 Restructured Form (MMPI-2-RF; Tellegen and Ben-Porath, 2008), indicating symptom over-reporting (Goodwin et al., 2013). Two participants achieved an Fp-r T score of 90 or greater and took over 2 hours to complete the survey. The final sample included 697 individuals; only data from the male subsample (n = 642) were analyzed for this study. The majority of participants were White, non-Hispanic (85.51%). The remainder of the sample reported race and ethnicity as follows: 4.52% Black, 4.36% Hispanic, 3.43% mixed race, and 2.18% other race. Veterans were between the ages of 22 and 89 (M = 64.11; SD = 11.20) and the majority were married/cohabitating (81.78%). Participants were from all parts of the U.S.

As described elsewhere (Wolf et al., 2017), the data collection was performed by the research firm GfK Knowledge Networks, Inc. (GfK) through the use of an online research panel, which was created to be representative of the U.S. population. GfK is based on a unique sampling frame that selects households using random-digit dialing or address-based sampling. Selected households include both listed and unlisted numbers, as well as those without a landline telephone, and are not limited to only current internet users or computer owners. Participants were asked whether they had served on active duty in the U.S. Armed Forces, Military Reserves, or National Guard. The 2011 survey further assessed type, location, and duration of service for participants who reported that they had formerly served on active duty. Once a participant is recruited to the panel, they are contacted primarily by e-mail (and provided with internet access and hardware, if needed). Web-based surveys are administered to subsets of their panel based on the particular researcher's needs.

GfK provides point-based survey incentives, which can be exchanged for prizes, raffles, and cash rewards. This survey assessed an array of psychological symptoms, only a subset of which are the focus of this study. Participants were awarded an equivalent of $50 for participation. The survey was available online for approximately two weeks in 2013. This study was approved by the local IRB.

2.1.1. Measures – male veteran sample

The **Humiliation, Afraid, Rape, Kick (HARK)** screening instrument (Sohal et al., 2007) was used to assess past-year IPV. The HARK includes 4 dichotomous (yes/no) items that assess emotional/psychological violence (“Within the last year, have you been humiliated or emotionally abused in other ways by your partner or your ex-partner?”), fear of partner/ex-partner (“Within the last year, have you been afraid of your partner or ex-partner?”), sexual violence (“Within the last year, have you been raped or forced to have any kind of sexual activity by your partner or ex-partner?”), and physical violence (“Within the last year, have you been kicked, hit, slapped or otherwise physically hurt by your partner or ex-partner?”). The HARK is recommended by the Institute of Medicine (Institute of Medicine, 2014) for screening due to high levels of sensitivity and specificity for identification of IPV. Dichotomous variables (0/1) were used to indicate whether participants reported each type of IPV, as well as any form of IPV, within the past year.

The **Eating Disorder Diagnostic Scale (EDDS)** is a 21-item scale used to measure a broad range of anorexia nervosa, bulimia nervosa, and binge eating disorder symptoms (Stice et al., 2000). This measure