

ORIGINAL RESEARCH—MEN'S SEXUAL HEALTH

An Exploration of Returning Veterans' Sexual Health Issues Using a Brief Self-Report Measure

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ABSTRACT

Introduction. Sexual health is an integral aspect of quality of life with important implications for satisfaction with intimate relationships, emotional well-being, and life as a whole. Veterans returning from Iraq and Afghanistan frequently encounter a wide range of known risk factors for sexual health concerns.

Aim. This article seeks to examine the overall frequency, important covariates associated with sexual difficulties, and the relevant domains of sexual dysfunction among a group of recent US veterans of Iraq and Afghanistan.

Methods. This is a retrospective chart review of 247 veterans of conflicts in Iraq and Afghanistan evaluated for an initial visit at the post-deployment clinic of a large veterans affairs medical center (VAMC). Patient demographic and medical characteristics were calculated using descriptive statistics. The prevalence and burden of sexual health issues in our patient sample were calculated using descriptive statistics from these veterans' responses to a self-report measure of sexual functioning. Item-level regression analyses were then conducted between sexual functioning responses and other patient data.

Main Outcome Measures. The main outcome measures used were the responses to the Arizona Sexual Experience Scale (ASEX).

Results. Almost 18% of veterans screened positive for sexual functioning difficulties. Self-reported sexual dysfunction was most strongly associated with depression, posttraumatic stress disorder, female sex, and service connection rating. Co-occurring characteristics varied with specific areas of sexual functioning.

Conclusions. Screening using an empirically validated self-report instrument indicates that there is a high prevalence of reported sexual dysfunction among recently deployed veterans. Analyses indicated that there are specific characteristics associated with both overall self-reported sexual dysfunction and specific subtypes of sexual dysfunction. Active assessment of specific aspects of sexual dysfunction concerns may allow providers to identify and implement more precise sexual functioning interventions. **Beaulieu GR, Latini DM, Helmer DA, Powers-James C, Houlette C, and Kauth MR. An exploration of returning veterans sexual health issues using a brief self-report measure. Sex Med 2015;3:287–294.**

Key Words. Sexual Dysfunctions; Psychological; Sexual Dysfunction; Physiological; Sexual Behavior; Veterans; ASEX

Introduction

Sexual health is an integral aspect of quality of life. Prior research has established that sexual functioning has important implications for satisfaction with intimate relationships, emotional well-being, and life as a whole [1–3].

Problems with sexual functioning are common. Estimates of problems in sexual functioning of individuals in medical settings range from 25% to 63% of women and 10% to 52% of men [4–6]. Sexual functioning difficulties are most often observed in older adult populations or among those with medical and/or psychological difficulties [7].

One factor that can worsen the impact of sexual dysfunction is the discomfort that both patients and providers have in discussing sexual matters [8,9]. Moreira et al. [9] noted that the individual with whom sexual health was most commonly discussed was a romantic partner in a sample of 27,500 men and women age 40–80. The same study also found that only 9% of patients reported being asked about their sexual health by a provider in the three years prior to the survey. A systematic review of eight qualitative studies of healthcare providers yielded 19 interrelated themes related to providers' avoidance of discussing sexual health. These themes included lack of time, resources, and awareness of sexual issues, as well as providers' own discomfort with discussing sexual health concerns [10].

The underreporting and under-inquiring of sexual health are particularly problematic in light of prior research, which suggests that treatment of sexual health concerns may lead to improvements in well-being that transcend physiological functioning. For example, it was found that men who were successfully treated for erectile dysfunction with phosphodiesterase type 5 (PDE5) inhibitors reported subsequent improvement in self-esteem, confidence, and depressive symptoms [11].

Sexual dysfunction among veterans returning from Iraq and Afghanistan has only recently begun to be the subject of serious study. This population is relatively young, with approximately 74.7% of this cohort born after 1970 [12]. Yet members of this veteran cohort frequently encounter a wide range of known risk factors for sexual health concerns [13]. These risk factors include tobacco use, traumatic brain injury (TBI), posttraumatic stress disorder (PTSD), major depressive disorder, childhood and adult sexual trauma, and use of multiple medications [14,15]. Additionally, one study

reports that approximately 25% of army veterans met criteria for a mental illness under Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition prior to entering military service [16].

Previous research estimates of sexual health concerns among returning veterans range from 5.5% to 25% [17,18]. Importantly, Helmer et al. noted that estimating the frequency of sexual dysfunctions in returning veterans in primary care settings is made difficult by the fact that most issues are documented in the medical records, but not necessarily recorded as diagnosis codes or associated with medication prescriptions.

Aims

This article first examines the overall frequency of sexual dysfunction among a group of recent US veterans of Iraq and Afghanistan receiving initial primary care services at a large VA medical center in Houston, TX. This article then explores factors associated with sexual dysfunction in this cohort. Our goal was (i) to identify the most important covariates associated with sexual difficulties; and (ii) to provide a more nuanced understanding of domains of sexual dysfunction experienced by this sample of veterans by examining the individual items in our sexual dysfunction measure that describe different facets of the sexual experience. We test for associations between sexual dysfunction reported by recent combat veterans and known risk factors.

Methods

Design and Procedures

Setting

All veterans deployed to conflicts in Iraq and Afghanistan who present for an initial visit at the post-deployment clinic of a large veterans affairs (VA) medical center in Houston, TX, receive a variety of physical and mental health assessments. All veterans who attend the post-deployment clinic complete a clinical psychosocial screening that includes a brief self-report measure of sexual function, the Arizona Sexual Experience Scale (ASEX). Following these general assessments, patients' concerns are evaluated in more detail and they are referred for such additional and follow-up services as may be clinically indicated. Such services may include primary, specialty, and mental health care.

We conducted a retrospective chart review of 277 veterans receiving services in this clinic between December 1, 2011 and December 15, 2012. Patients were identified through the appointment scheduling software. Patients were included in the project if there was clear documentation of deployment to Iraq or Afghanistan, they had no primary care visit at the facility prior to presenting to the post-deployment clinic prior to the dates in question, and there was complete documentation of all of the routine physical and mental health screening instruments used in the clinic, including the Arizona Sexual Experience Scale (ASEX). Ultimately, 247 veterans met this inclusionary criteria. The study was reviewed and approved by the Baylor College of Medicine Institutional Review Board and the Research and Development Committee of the VA medical center.

Chart Review

This study uses the same chart review tool described in Helmer et al. [17]. The chart review was created by the third author (DAH) based on first-hand knowledge of the clinical setting and a review of relevant factors from the literature. Iterative pilot testing of the instrument and protocol led to a standardized approach which was replicated by all research assistants and investigators responsible for chart abstraction. Each veteran's chart was reviewed for the core components of the standard initial visit protocol to the post-deployment clinic, which consists of a physical and mental health assessment. We focused on the variables outlined later for the purposes of this study.

Measures

Arizona Sexual Experience Scale (ASEX)

The ASEX is a five-item questionnaire designed to offer patients a more comfortable, reliable method to quantify their subjective sense of overall sexual functioning [19]. The scale addresses libido, psychological arousal, vaginal lubrication/penile erection, ability to reach orgasm, and orgasm satisfaction. Items include (i) "How strong is your sex drive?"; (ii) "How easily are you sexually aroused (turned on)?"; (iii) "[FOR WOMEN] How easily does your vagina become moist or wet during sex?" or "[FOR MEN] Can you easily get and keep an erection?"; (iv) How easily can you reach an orgasm?"; and (v) "Are your orgasms satisfying?" The measure uses Likert-type ratings ranging from 1 to 6 with a rating of 1 indicating optimal functioning and 6 indicating maximum

impairment. Possible total scores range from 5 to 30, with higher scores indicating more sexual dysfunction.

A positive indication of sexual dysfunction is made if the total ASEX score is greater than 18, if any three items are rated 4 or higher, and/or if any single item is rated 5 or higher [19]. The first of these methods (i.e., score greater than 18) is useful for identifying general overall sexual dysfunction, whereas the other methods may identify respondents with more pronounced sexual difficulties in specific areas. None of the three ASEX scoring methods allow for identification of predictors of sexual dysfunction. As this study is exploratory in nature, the authors chose to treat total scores on the ASEX and other clinical screening instruments as continuous variables in order to maximize sensitivity to the identification of potential sexual functioning correlates.

Patient Factors

Age (in years) was calculated from the date of birth listed in the electronic medical record to the date of the initial visit to the post-deployment clinic. Age was treated as a continuous variable for analysis purposes. Sex, race, and ethnicity were determined from standard demographic fields in the medical record. Sexual orientation was recorded routinely at initial visit as part of a brief sexual history included in the template of the post-deployment clinic primary care assessment. Reported non-heterosexual orientations were substantially lower than expected based on rates established in extant literature [20]. Specifically, our sample included only one respondent who reported being gay. There were four individuals who declined to report sexual orientation. We therefore excluded sexual orientation from further analysis in this study. Service connection represents the overall level at which a veteran's total level of disability is rated by the veterans Benefits Administration for physical and mental health disabilities related to military service. This rating ranges from 0% to 100% with higher ratings indicating greater functional impairment because of disabilities directly and proximally related to military service. Veterans with no service connected disability receive no service connection rating.

All veterans receiving initial primary care services at the post-deployment clinic complete a series of mental health screenings including PTSD, depression, TBI, alcohol abuse, tobacco use, and military sexual trauma (MST). We abstracted the results from the PTSD screen and

coded patients as having a positive PTSD screen if they scored 2 or more out of a total possible score of 4 [21]. Veterans were coded as positive for depression symptoms if they scored 3 or higher on a widely used depression screening instrument, the Patient Health Questionnaire-2 [22]. Veterans who positively endorsed all four items in a brief TBI screen were coded as positive for a history of TBI [23]. Male veterans scoring 4 or higher and female veterans scoring 3 or higher were coded as positive for problem alcohol use using a brief screening measure for alcohol abuse [24]. All veterans were asked two standard questions about whether they experienced sexual harassment and/or were coerced into sexual activities. Those veterans answering in the affirmative to either question were coded as positive for a history of MST [25,26]. Current medications typically associated with sexual health difficulties were also recorded for each veteran.

Statistical Analysis

We summarize the sample's demographic and medical factors using descriptive statistics. We then summarize the sexual health issues according to the results of ASEX responses and report the prevalence and burden of sexual health issues in our patient sample. Finally, we present the results of ASEX item-specific level regression analyses to generate hypotheses for both intervention strategies and future research. The more conservative cutpoint for significance of $P < 0.01$ was chosen because of the number of comparisons and the possibility of greater experiment-wise error if a less conservative cutpoint were used. The multivariate regression models were fit using variables that were significantly related to the total ASEX score or the individual items in the bivariate analysis. Candidate predictors were allowed to enter the model in a stepwise fashion, with 0.05 as the entry criterion and 0.10 as the criterion for staying in the model. All analyses were carried out using SAS version 9.3 (SAS Institute, Inc., Cary, NC, USA).

Results

Sample Description

The mean age for patients in this sample was 31.0 (standard deviation 7.6) years (see Table 1). Patients were mostly men (89.5%) and mostly white (53.2%) or black (31.2%). The majority of veterans did not have a primary romantic partner (55.5%). Veterans reported living with a spouse or partner (41.3%), family members (32.8%), or

alone (20.2%). The largest proportion of participants reported educational achievement of high school graduation or its equivalent (55.1%), and most were either employed full time (40.4%) or were students (36.7%).

Many veterans screened positive for PTSD (55.9%), depression (31.2%), TBI (10.5%), and problem alcohol use (27.1%). A history of MST was reported by 3.3% of veterans. The majority of veterans screened negative for both tobacco use (60.2%) and a history of sexually transmitted diseases (88.7%).

We coded medications by class. The most commonly reported medication class was a selective serotonin reuptake inhibitor (SSRI; 29.6% of the sample), with 32.4% using either an SSRI or a serotonin-norepinephrine reuptake inhibitor. The prevalence of reported use of other medication classes include: other psychotropic (21.7%), alpha-blocker (8.5%), antipsychotic (7.7%), and benzodiazepine (1.6%). Only 6.1% of veterans reported use of a phosphodiesterase-5 inhibitor (e.g., vardenafil).

The three methods for identifying a positive screen for sexual health concerns using the ASEX outlined in the Methods section earlier. In the current sample, 17.8% of veterans had a total ASEX score greater than 18; 25.1% rated any single ASEX item as 5 or higher; and 24.3% rated any combination of three or more ASEX items as four or higher.

Bivariate Analyses

While treating total ASEX score as a continuous variable, the following variables were associated with greater sexual dysfunction at a level of $P < 0.01$ or greater: depression, PTSD, and higher service connection rating (see Table 2). Equally strong significant differences were also observed at the individual ASEX item level. Higher service connection rating, depression, and PTSD were associated with higher scores on ASEX item #1 (strength of sex drive). Higher scores on ASEX item #2 (ease of arousal) were associated with depression. Higher scores on ASEX item #3 (vaginal lubrication or erectile difficulties) were associated with higher service connection rating and depression. Higher ratings of difficulty achieving orgasm as measured by higher scores on ASEX item #4 were associated with problem alcohol use, history of MST, PTSD, and depression. Higher scores on ASEX item #5 (orgasm satisfaction) were associated with unemployment, higher service connection rating, and depression.

Table 1 Demographic characteristics of the analysis sample (N = 247)

	ASEX questions		Distribution Number (%)	ASEX questions Mean (SD)				
	Total ASEX score	Strength of sex drive		Arousal	Vaginal or erectile difficulties	Orgasm	Orgasm satisfaction	
Sex								
Male	14.1 (5.02)*	2.9 (1.39)*	221 (89.5%)	2.9 (1.12)**	2.7 (1.23)	2.9 (1.20)*	2.6 (1.17)	
Female	16.6 (6.30)*	3.6 (1.77)*	26 (10.5%)	3.6 (1.30)**	3.0 (1.80)	3.5 (1.33)*	2.8 (1.41)	
Ethnicity								
Black	14.2 (5.26)	2.9 (1.48)	74 (31.2%)	2.9 (1.21)	2.6 (1.33)	3.1 (1.26)	2.6 (1.35)	
Caucasian	14.7 (5.44)	3.1 (1.50)	126 (53.2%)	3.1 (1.18)	2.8 (1.36)	3.0 (1.23)	2.7 (1.13)	
Hispanic	14.2 (4.59)	3.2 (1.31)	25 (10.6%)	3.0 (1.01)	2.7 (1.14)	2.9 (1.05)	2.5 (0.96)	
Other	12.2 (4.41)	2.6 (1.08)	12 (5.1%)	2.7 (0.98)	2.3 (0.97)	2.5 (1.31)	2.2 (1.19)	
Primary partner								
Yes	14.0 (5.15)	3.0 (1.45)	110 (44.5%)	2.9 (1.21)	2.7 (1.34)	2.8 (1.16)*	2.5 (1.12)	
No	14.6 (5.26)	3.0 (1.44)	137 (55.5%)	3.1 (1.11)	2.7 (1.27)	3.1 (1.25)*	2.7 (1.26)	
Living situation								
Alone	13.8 (5.79)	2.8 (1.48)	50 (20.2%)	2.9 (1.24)	2.6 (1.43)	3.0 (1.28)	2.5 (1.40)	
Family	15.1 (4.86)	3.1 (1.41)	81 (32.8%)	3.2 (1.02)	2.9 (1.29)	3.2 (1.25)	2.8 (1.22)	
Spouse/partner	14.0 (5.22)	3.1 (1.46)	102 (41.3%)	2.9 (1.22)	2.7 (1.28)	2.8 (1.15)	2.5 (1.11)	
Other	14.1 (4.96)	2.7 (1.44)	14 (5.7%)	2.9 (1.07)	2.6 (1.22)	3.3 (1.20)	2.6 (0.85)	
Education								
HSD/GED	14.1 (5.18)	2.9 (1.41)	136 (55.1%)	3.0 (1.86)	2.6 (1.28)	3.0 (1.18)	2.6 (1.16)	
Some college	14.6 (5.54)	3.2 (1.57)	69 (27.9%)	3.1 (1.18)	2.8 (1.47)	2.9 (1.33)	2.6 (1.28)	
Bachelor's/graduate school	14.5 (7.79)	2.9 (1.34)	42 (17.0%)	3.0 (1.02)	2.8 (1.09)	3.0 (1.18)	2.7 (1.20)	
Employment								
Employed	13.6 (5.42)**	2.9 (1.42)	97 (40.4%)	2.8 (1.22)*	2.6 (1.26)*	2.9 (1.22)*	2.4 (1.16)**	
Student	13.1 (4.13)**	2.9 (1.48)	55 (22.9%)	2.9 (0.91)*	2.3 (1.21)*	2.7 (1.07)*	2.3 (1.10)**	
Retired/unemployed	15.6 (5.17)**	3.2 (1.40)	88 (36.7%)	3.3 (1.16)*	3.0 (1.31)*	3.3 (1.25)*	2.9 (1.21)**	
ASEX questions Correlation coefficient								
	Total ASEX score	Strength of sex drive	Arousal	Vaginal or erectile difficulties	Orgasm	Orgasm satisfaction		
Age	0.096	0.127*	0.068	0.096	-0.030	0.135*		
AUDIT-C	0.075	-0.035	0.077	0.061	0.137*	0.095		
Body mass index	0.046	0.037	-0.006	0.034	0.076	0.029		
Number of marriages	0.186	0.096	0.104	0.215*	0.171	0.145		
Number of lifetime sex partners	-0.017	-0.105	-0.079	-0.024	0.084	0.077		
Total number of children	0.099	0.075	0.034	0.125	0.033	0.134		
Pain	0.056	0.038	-0.023	0.081	0.073	0.054		
Service connection	0.220***	0.174**	0.163*	0.228***	0.121	0.226***		

*P < 0.05; **P < 0.01; ***P < 0.001. HSD = high school diploma; GED = general educational development; ASEX = Arizona Sexual Experience Scale; AUDIT = Alcohol Use Disorders Instrument-Consumption Scale; PDE-5 inhibitor = phosphodiesterase 5 inhibitor; SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin re-uptake inhibitor.

Table 2 Psychosocial characteristics of the sample and ASEX scores (N = 247)

	Distribution	ASEX questions					
		Total ASEX score	Strength of sex drive	Arousal	Vaginal or erectile difficulties	Orgasm	Orgasm satisfaction
Alcohol use—AUDIT_C							
Positive	67 (27.1%)	15.0 (5.0)	3.0 (1.4)	3.2 (1.2)	2.8 (1.3)	3.2 (1.2)	2.8 (1.2)
Negative	180 (72.9%)	14.1 (5.3)	3.0 (1.5)	2.9 (1.2)	2.7 (1.3)	2.9 (1.2)	2.5 (1.2)
Military sexual trauma							
Positive	8 (3.3%)	18.5 (3.4)*	3.9 (1.5)	4.0 (0.8)*	3.4 (1.5)	4.1 (1.1)**	3.1 (1.0)
Negative	236 (96.7%)	14.2 (5.2)*	3.0 (1.4)	3.0 (1.2)*	2.7 (1.3)	3.0 (1.2)**	2.6 (1.2)
Depression—PHQ2							
Positive	77 (31.2%)	16.5 (5.6)***	3.5 (1.61)***	3.4 (1.2)***	3.2 (1.4)***	3.4 (1.2)***	3.0 (1.2)***
Negative	170 (68.8%)	13.4 (4.7)***	2.8 (1.3)***	2.8 (1.1)***	2.5 (1.2)***	2.8 (1.2)***	2.4 (1.1)***
PTSD screen							
Positive	138 (55.9%)	15.2 (5.4)**	3.2 (1.5)*	3.1 (1.2)*	2.9 (1.4)*	3.2 (1.2)**	2.8 (1.1)*
Negative	109 (44.1%)	13.2 (4.8)**	2.8 (1.3)*	2.8 (1.1)*	2.5 (1.2)*	2.7 (1.2)**	2.4 (1.3)*
TBI screening							
Positive	26 (10.5%)	14.8 (5.3)	3.2 (1.6)	3.1 (1.4)	2.8 (1.5)	3.0 (1.1)	2.7 (1.1)
Negative	221 (89.5%)	14.3 (5.2)	3.0 (1.4)	3.0 (1.1)	2.7 (1.3)	3.0 (1.2)	2.6 (1.2)
Tobacco use							
Positive	97 (39.8%)	14.6 (5.3)	3.0 (1.4)	3.0 (1.2)	2.7 (1.4)	3.1 (1.2)	2.7 (1.2)
Negative	147 (60.2%)	14.2 (5.2)	3.0 (1.4)	3.0 (1.2)	2.7 (1.3)	2.9 (1.2)	2.5 (1.2)
History of STDs							
Positive	28 (11.3%)	14.8 (5.6)	3.2 (1.6)	3.1 (1.1)	2.6 (1.5)	3.1 (1.3)	2.7 (1.4)
Negative	219 (88.7%)	14.3 (5.2)	3.0 (1.4)	3.0 (1.2)	2.7 (1.3)	3.0 (1.2)	2.6 (1.2)

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$; AUDIT_C = Alcohol Use Disorders Instrument-Consumption Scale; PHQ2 = Patient Health Questionnaire-2; PTSD = posttraumatic stress disorder; TBI = traumatic brain injury; STD = sexually transmitted disease.

Regression Analyses

The final regression model for total score on the ASEX showed a significant association between higher total ASEX scores and a positive depression screen (see Table 3). The final regression models for scores on individual items showed associations between item #1 (strength of sex drive) and both a positive depression screen and being female; item #2 (ease of sexual arousal) and being female and positive depression screen; item #3 (vaginal lubrication or erection) and a positive depression screen; item #4 (ease of achieving orgasm) and a positive depression screen and positive PTSD screen; and item #5 (orgasm satisfaction) and a positive depression screen. The adjusted R^2 for all

models were low, ranging from 0.04 to 0.07 (see Table 3).

Discussion

The relevant results of this study are twofold. First, screening for sexual dysfunction using an empirically validated self-report instrument indicates that there is a high prevalence of sexual dysfunction among recently deployed veterans upon initial presentation for care. Second, analyses indicated that there are specific characteristics associated with both overall self-reported sexual dysfunction and specific subtypes of sexual dysfunction.

Table 3 Multiple regression predicting total and individual ASEX scores (N = 247)*

	ASEX questions					
	Total ASEX score Beta (SE)	Strength of sex drive Beta (SE)	Arousal Beta (SE)	Vaginal or erectile difficulties Beta (SE)	Orgasm Beta (SE)	Orgasm satisfaction Beta (SE)
PHQ-2 dichotomized	2.97 (0.7)	0.67 (0.2)	0.57 (0.2)	0.64 (0.2)	0.42 (0.2)	0.55 (0.2)
Male		-0.62 (0.3)	-0.60 (0.2)			
PTSD dichotomized					0.35 (0.2)	
Adjusted R^2	0.07	0.05	0.07	0.05	0.05	0.04

*Only variables found to be statistically significant in the model are shown above. Models also controlled for age, positive alcohol use screen (AUDIT-C), employment, military sexual trauma, has primary partner, and student status. SE = standard error; PHQ-2 = Patient Health Questionnaire-2; PTSD = posttraumatic stress disorder.

Overall ASEX scores of 19 or higher were observed in nearly one out of every five veterans (17.8%). Helmer et al. [17] examined a sample of returning veterans' records during the first 6 months of VA care and found a slightly higher rate of sexual dysfunction documented (25%). However, Helmer et al. included a broader range of sexual health concerns coded from text in the medical records, not a self-report measure of sexual dysfunction. Most of these sexual health concerns were documented after initial visits (at follow-up) and by mental healthcare providers [17]. Prior work by Hosain et al. [18] used administrative claims data to estimate rates of sexual dysfunction and resulted in markedly lower detection rates (5.5%) in a similar population and setting when compared with the current study [18]. The high prevalence of experienced sexual dysfunction reported among recent veterans in the current study was determined from data drawn exclusively from these veterans' initial primary care interaction in a large VA medical center.

McGahuey et al. found that the ASEX had strong internal consistency and scale reliability ($\alpha = 0.91$) and strong test-retest reliability ($r = 0.801$, $P < 0.01$) [19]. Thus, the results of the current study suggest that using a brief, structured, self-report measure can serve to systematically identify sexual functioning concerns during a veteran's initial interaction with VA primary care. Early detection allows clinicians to effectively identify and track sexual functioning concerns as part of an integrated initial health assessment. Further, use of a brief self-report measure for sexual functioning can assist clinicians in identifying opportunities for further diagnostic inquiry into co-occurring physical and mental health concerns as well as opportunities for intervention, including education.

Self-reported sexual dysfunction was most strongly associated with depression, PTSD, female sex, and service connection rating. While a positive depression screen accounted for the overwhelming majority of variance in our analyses, the data also showed that there are co-occurring characteristics associated with specific areas of sexual functioning. Thus, depression was found to be associated with all types of sexual dysfunction with additional factors being associated with specific subtypes of sexual dysfunction. For example, analyses showed significant associations between female sex and decreased sex drive and difficulty with arousal, while a positive PTSD screen was associated with difficulty achieving orgasm. While depressive symptoms are important, other factors, such as sex

and PTSD may affect sexual functioning differently, requiring more personalized and nuanced interventions. For example, a veteran presenting with low desire and difficulty with arousal may be a better candidate for cognitive behavioral therapy related to enhancing desire through behavioral interventions that promote partner trust, communication, intimacy, and enhance focused attention during sexual activity, rather than medication. However, a veteran who exclusively endorses difficulties maintaining an erection may benefit from a PDE-5 inhibitor and simultaneous cognitive behavioral therapy to better address issues within the sexual relationship.

This study has several limitations. First, veteran endorsement of a history of MST and non-heterosexual orientation are both markedly lower than estimates in the literature. This may be due to the fact that data for this study were gathered exclusively from veterans' initial contact with a new healthcare facility. Patients may have been uncomfortable disclosing such sensitive information with new healthcare providers in the absence of established rapport. Conversely, rates of positive PTSD screens were high. It is important to remember that the screening measure employed in the clinic and reported in this study is designed to maximize sensitivity to potential PTSD symptoms. Follow up assessment may not confirm full diagnostic criteria for PTSD for any given participant. Further, the adjusted R^2 for regression analyses in this study are low. This may in part be explained by the large effect size of depression across nearly all analyses and the choice to treat screening data as continuous rather than dichotomous.

Another limitation is that cross-sectional sampling precludes a more substantive analysis of medication use and its potential impact on sexual health in this population. We report medication prescription as recorded in the VA medical record at the time of the post-deployment clinic encounter. It is not clear whether these were new prescriptions or continuation of previously prescribed medications. Ideally, future projects will use longitudinal data to address any causal relationships that may exist between medication use and the onset or exacerbation of veterans sexual functioning concerns. Finally, our sample included too few lesbian, gay, or bisexual (LGB) veterans for analysis. At present, few data are available regarding LGB veterans sexual health needs [27].

Future work is needed to explore the utility of brief self-report instruments in prompting a clinical discussion of sexual health concerns. A substantive

examination of the ASEX's three scoring methods would also aid in determining the internal validity of this measure when it is used in VA settings. Future research should examine the etiology of specific sexual health concerns in this veteran cohort, such as dysfunction due to injury or events prior to, during, and following military service.

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