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Going Direct to the Consumer: Examining Treatment Preferences for Veterans with Insomnia, PTSD, and Depression

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Abstract

Inclusion of consumer preferences to disseminate evidence-based psychosocial treatment (EBPT) is crucial to effectively bridge the science-to-practice quality chasm. We examined this treatment gap for insomnia, posttraumatic stress disorder (PTSD), depression, and comorbid symptoms in a sample of 622 young adult veterans through preference in symptom focus, treatment modality, and related gender differences among those screening positive for each problem. Data were collected from veteran drinkers recruited through targeted Facebook advertisements as part of a brief online alcohol intervention. Analyses demonstrated that veterans reported greater willingness to seek insomnia-focused treatment over PTSD- or depression-focused care. Notably, even when participants screened negative for insomnia, they preferred sleep-focused care to PTSD- or depression-focused care. Although one in five veterans with a positive screen would not consider care, veterans screening for both insomnia and PTSD who would consider care had a preference for in-person counseling, and those screening for both insomnia and depression had similar preferences for in-person and mobile app-based/computer self-help treatment. Marginal gender differences were found. Incorporating direct-to-consumer methods into research can help educate stakeholders about methods to expand EBPT access. Though traditional in-person counseling was often preferred, openness to app-based/computer interventions offers alternative methods to provide veterans with EBPTs.

Keywords

veteran; treatment preference; PTSD; depression; insomnia; comorbidity; psychosocial treatment

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1. Introduction

A decade ago, the Institute of Medicine (2006) mandated the gap between research and practice be addressed through *both* scientific findings and patient preferences. Yet the longstanding chasm between research findings and practice of evidence-based psychosocial treatments (EBPTs) continues to exist (Barlow, 2004; Butler et al., 2006; Glasner-Edwards & Rawson, 2010; Lancaster et al., 2017; Weisz et al., 2006). “Direct-to-consumer” is an approach to address this gap and engages patients and caregivers to increase consumer awareness and demand for quality EBPTs when available (Becker, 2015). In that model, understanding individuals’ treatment preferences is crucial and can complement EBPTs roll-outs by increasing the probability that individuals access available care. This is particularly important within the Veterans Affairs Healthcare System (VA), where EBPTs are nationally implemented to address the mental health care needs of over nine million United States (U.S.) veterans every year (Cook et al., 2015; Eftekhari et al., 2013; Karlin et al., 2012; Karlin and Cross, 2014; Karlin et al., 2015; Karlin et al., 2013; Watts et al., 2014).

Despite national EBPT roll-outs within the VA, only about half of U.S. veterans in need seek care (Bagalman, 2013; Schell & Marshall, 2008; Department of Veterans Affairs, 2013), in part due to well-documented barriers including multiple comorbidities, perceived stigma, availability of services, and gender differences in pursuit of treatment (Department of Veterans Affiars, 2006; DeViva et al., 2016; Kehle et al., 2011; Kulesza et al., 2015; Pietrzak et al., 2009; Seal et al., 2010). Women are more likely to use outpatient mental health services and report higher levels of distress, yet once men recognize their symptoms, men and women are equally likely to use services (World Health Organization, 2002; Wang et al., 2007). However, there remains a gap in knowledge about gender differences in treatment preference, especially with respect to modality of services. Taken together, these barriers are particularly important to address in a system such as the VA where EBPTs should be widely available given the government initiatives to offer such care to all veterans who need it.

With respect to comorbidities and stigma, insomnia is a primary complaint of the military population (Alexander et al., 2016; Hoge et al., 2008) and one of the most common reasons for a mental health referral in active-duty military (Cozza et al., 2004) and veterans (Jenkins et al., 2015). However, the comorbidity of insomnia with PTSD and with depression complicates EBPT access by reducing clarity of symptom prioritization. Since PTSD and depression often have symptoms noticeable by a treating provider, a referring provider, or one’s family (e.g., depressed mood, irritability, hyperarousal), providers may prioritize treatments for PTSD or depression over insomnia in initial assessments and treatment plans. Yet this fails to factor in the patient’s preference for which symptoms they want to target directly in treatment; or more specifically, which symptoms they are *more willing* to target. Preferences among veterans for symptom focus within treatment remain uncertain and are important to determine due to potential differences in stigma barriers around seeking insomnia care over depression or PTSD care. For example, in a population where physical and mental strength are encouraged and rewarded, it may be difficult for many veterans to request help for mental health symptoms (McDermott et al., 2017; Nash et al., 2009; Westphal & Convoy, 2015). Symptoms perceived as physical (e.g., problems with sleep)

may be more digestible, and, as such, they may be more willing to pursue care for sleep problems over PTSD and depression care, which may be perceived to be more stigmatized.

In addition to knowing veterans' symptom-focus preferences, knowing their preferences for treatment modality may also increase the likelihood of veterans accessing care. Indeed, the VA offers multiple telehealth care options for veterans with insomnia, PTSD, and/or depression (e.g., Gehman et al., 2016; Luxton et al., 2016; Porcari et al. 2009), as well as mobile application ("app") and Internet-based approaches (e.g., Kuhn et al., 2014; 2016). Although some qualitative work has explored treatment preferences with veterans seeking VA care (e.g., preference for behavioral or pharamcological therapy; Epstein et al., 2012), preferences for treatment modality (e.g., in-person care versus self-delivered via mobile app or Internet) among veterans with insomnia, PTSD, and/or depression have been largely unexplored.

The present study was designed with three aims to better understand veterans' treatment preferences for insomnia, PTSD, and depression care. First, we examined veterans' preferences for symptom focus related to the three mental health concerns. Based on the rationale that veterans may view sleep problems as less stigmatizing than PTSD and/or depression symptoms, we hypothesized they would report higher willingness to seek care to address sleep concerns over the others. Second, we examined treatment modality preferences (i.e., in person counseling, mobile application/online treatment, neither, or both) among those screening positive for each of the three targeted concerns, hypothesizing veterans would report a high degree of preference for mobile/internet-based care given perceived stigma among this population and other barriers to seeking in-person care. Lastly, we explored gender differences in preference for symptom focus and treatment modality. Although women are traditionally more likely than men to seek mental health services (World Health Organization, 2002; Wang et al., 2007), women veterans face significant barriers to seeking VA care, such as limited resources available to women veterans within VA clinics, concerns about safety and comfort, and few outreach efforts encouraging pursuit of VA care (Department of Veterans Affairs, 2015). Findings from this study can help researchers and clinicians better develop interventions and treatments aligning with veteran preferences, as well as provide researchers and clinicians with important information about how to couch recruitment and outreach efforts to veterans in need.

2. Method

2.1 Participants and Procedures

All materials and procedures were approved by the local Institutional Review Board. Data were collected as part of a larger alcohol intervention study with young adult veterans recruited via Facebook to target a non-clinical sample outside the VA (Pedersen et al., 2017b). Eligibility criteria were: age between 18 and 34; separation from active duty service in the Air Force, Army, Marine Corps, or Navy; and, a score on the 10-item Alcohol Use Disorder Identification Test (Saunders et al., 1993) of at least 3 (women) or 4 (men). Although participants were recruited for an alcohol intervention study, very low alcohol use criteria were used to enroll participants in an effort to enroll veteran drinkers of various levels. In addition, the advertisements were devised to attract non-treatment seeking

individuals, with advertisements not mentioning treatment/intervention, but rather a brief survey followed by feedback (i.e., the “Veteran Behaviors Feedback Study”). Eligible participants completed a baseline survey and were randomized to receive the intervention or an attention control condition (N = 784). One month later, 79% (N = 622) of these participants completed a follow-up survey where the measures for the present study were added; thus, data are cross-sectional and from the 622 participants at follow-up. More details about the larger study are described further in previous work (Pedersen et al., 2016; Pedersen et al., 2017a).

2.2 Measures

2.2.1. Demographics and military characteristics—Participants responded to questions regarding age, gender, race, ethnicity, former branch of service, rank at discharge, and pay grade at discharge.

2.2.2. Treatment receipt—Participants were asked if in the past month they had attended an appointment at a VA facility for a mental health concern (e.g., stress, depression, nightmares), an alcohol or substance use concern, or any other reason (e.g., physical exam, compensation/pension). Participants indicated if in the past month they had attended an appointment at a non-VA clinic, hospital, doctor’s office, or at a Vet Center for a mental health concern.

2.2.3. Behavioral health symptoms—Participants completed the Insomnia Severity Index (ISI), to assess the severity of nighttime and daytime insomnia in the past two weeks (Bastien et al., 2001). Possible scores ranged from 0 to 28, with summary scores of 10 indicating an optimal cutoff for insomnia (Morin et al., 2011). The 8-item Patient Health Questionnaire (PHQ-8; no suicidality item) assessed depression symptoms over the past two weeks (Kroenke et al., 2009). Scores ranged from 0 to 24 with cutoff scores of 10 indicating optimal screening for a depression diagnosis (Kroenke et al., 2009). Participants also completed the 20-item PTSD Checklist (PCL-5;Weathers et al., 2013). Scores ranged from 0 to 80 with cutoff scores of 33 indicating optimal screening for a PTSD diagnosis (Wortmann et al., 2016).

2.2.4. Willingness to seek care (preferences for symptom focus)—Participants completed a modified version of the Intentions to Seek Counseling Inventory (Cash et al., 1975; Cepeda-Benito and Short, 1998) and rated how likely (1: very unlikely-4: very likely) they were to consider “counseling” (i.e., talking with a therapist individually or in a group) if they were experiencing (1) difficulty falling or staying asleep (not including nightmares), (2) feeling down, depressed, or hopeless, (3) having little interest or pleasure in doing things they used to enjoy, (4) nightmares or recurring thoughts about a stressful experience, (5) avoiding people or places they used to go that remind them of a stressful experience, (6) being constantly on guard, watchful, or easily startled, and (7) feeling numb or detached from others, activities, or surroundings. Item 1 reflected insomnia, items 2 and 3 were averaged to reflect depression ($r = 0.82$), and items 4 through 7 were averaged to reflect PTSD ($\alpha = 0.95$).

2.2.5. Treatment modality preference—Using a measure developed for this study, participants responded to four items regarding preferences for treatment modality (see Table 1).

2.3 Data Analytic Plan

Analyses consisted of descriptive analyses, paired samples t-tests, and chi-square comparison tests to examine the three aims. First, we reported on the demographics of the sample by gender. Next, we examined treatment preferences regarding focus of symptoms by comparing means of reported willingness to seek care for insomnia versus PTSD care and for insomnia versus depression care for those in the sample who screened positive for insomnia and/or PTSD and depression, for the whole sample and by gender. Lastly, we examined whether participants were more or less likely to report preferences for treatment modalities of in-person care versus mobile application/online treatment, with options to select preferences for neither or both. These chi-square analyses were conducted for the sample as a whole, as well as by screening status for each insomnia, PTSD, and depression, and then by comorbidities of insomnia and PTSD and insomnia and depression. These analyses were also conducted by gender to explore differences in treatment preferences between men and women.

3. Results

3.1 Sample Description

Participants were between 19 and 34 years old ($M = 28.95$, $SD = 0.13$). The majority were male (82.6%) and White (84.6%), with 10.8% reporting Hispanic/Latino(a) ethnicity. Table 2 contains demographics, behavioral health scores, and service receipt in the past month by gender. Compared to males, female veterans reported higher scores on the PHQ-8; positive screens for depression; increased use of VA services in the past month; and increased use of mental health services in the past month at the VA or elsewhere. Consistent with the objective to obtain treatment preferences among veterans outside the VA, only 30% of veterans reported use of any VA for any reason in the past month, with 26% reporting past month use of mental health services at the VA or elsewhere.

3.2 Preference for Symptom Focus of Treatment

3.2.1. Full Sample—Veterans screening for either PTSD or depression reported higher willingness to seek insomnia treatment than PTSD ($t(193) = 3.60$, $p < 0.001$) or depression ($t(213) = 3.40$, $p = 0.001$) treatment, respectively (see Table 3). With respect to comorbidity, the same pattern emerged. Veterans screening for both insomnia and PTSD reported higher willingness to seek sleep treatment than willingness to seek PTSD treatment, $t(179) = 4.82$, $p < 0.001$. Veterans screening for both insomnia and depression also reported higher willingness to seek sleep treatment than depression treatment, $t(196) = 4.92$, $p < 0.001$.

3.2.2. Findings by Gender—Although male veterans screening for either PTSD or depression showed the same sleep-focus preference pattern as the overall sample (PTSD: $t(156) = 3.59$, $p < 0.001$; depression: $t(165) = 4.10$, $p < 0.001$), females showed no

significant differences in symptom-focus preferences (PTSD: $p = 0.422$; depression: $p = 0.620$; see Table 3).

Regarding comorbidity, both male and female veterans screening for both insomnia and PTSD reported higher willingness to seek sleep versus PTSD treatment (males: $t(146) = 4.24$, $p < 0.001$; females: $t(32) = 2.43$, $p = .021$) (see Table 3). Male veterans screening for both insomnia and depression reported higher willingness to seek sleep versus depression treatment, $t(154) = 5.08$, $p < 0.001$, with no significant differences for female veterans ($p = 0.460$).

3.3 Preference for Treatment Modality

3.3.1. Full Sample—For each behavioral health concern, there were differences in the proportions of participants who would consider each treatment modality. For insomnia, fewer participants expressed interest in an intervention based on self-help app/computer program, relative to the other treatment options, X^2 (3, $N = 383$) = 8.53, $p = 0.04$. For both PTSD and depression, participants were most likely to report a preference for in-person counseling (PTSD: X^2 (3, $N = 195$) = 30.95, $p < 0.001$; depression: X^2 (3, $N = 215$) = 23.46, $p < 0.001$). Notably, about one in five participants, regardless of treatment focus, reported they would be unwilling to consider treatment (see Table 4).

3.3.2. Findings by Comorbid Screening—Participants screening positive for both insomnia and PTSD expressed a preference for in-person counseling for both insomnia, X^2 (3, $N = 181$) = 13.23, $p = 0.004$ and PTSD care, X^2 (3, $N = 181$) = 32.59, $p < 0.001$ (see Table 5). Participants screening positive for both insomnia and depression were more likely to consider both modalities equally over all other options for insomnia care X^2 (3, $N = 198$) = 19.29, $p < 0.001$, while they preferred in-person counseling for depression, X^2 (3, $N = 198$) = 23.13, $p < 0.001$.

3.3.3. Findings by Gender—For insomnia, there were no significant differences in modality preferences within or between gender. For PTSD, both men, X^2 (3, $N = 157$) = 18.21, $p < 0.001$ and women; X^2 (3, $N = 38$) = 16.95, $p = 0.001$ reported most strongly considering counseling over other modalities with no significant gender effect. Similarly, for depression, both men, X^2 (3, $N = 167$) = 8.88, $p = 0.031$ and women; X^2 (3, $N = 48$) = 23.50, $p = 0.001$ reported most strongly considering counseling over other modalities, and again, there were no significant effects of gender. Overall, about one in four male veterans would not consider any treatment modality for any of the three problems. For female veterans, only about one in 10 would not consider treatment for PTSD or depression, while nearly one in five would not consider treatment for insomnia (see Table 4).

3.3.4. Findings by Comorbid Screening and Gender—There were no significant gender differences between preference for modalities for insomnia care or for PTSD care, with both groups showing the same basic pattern of preferences for in-person care as the overall sample (see Table 5). About one in five male veterans screening positive for both insomnia and PTSD reported they would not consider any of the modalities for treatment,

while about one in seven female veterans screening positive for both insomnia and PTSD reported they would not consider any of the modalities for treatment.

For participants screening positive for both insomnia and depression (see Table 5), there were no significant preference differences between genders for insomnia care. However, there was a significant gender difference in participants' preference for modalities for depression care, X^2 (3, N = 198) = 9.26, p = 0.26, such that a greater proportion of female veterans endorsed a preference for in-person counseling for depression than male veterans. About one in five male veterans screening positive for both insomnia and depression reported they would not consider any of the modalities of treatment. For female veterans screening positive for both insomnia and depression, about one in four reported they would not consider any of the modalities for insomnia treatment and about one in nine reported they would not consider any of the modalities for depression treatment.

4. Discussion

Across all symptom presentations assessed, veteran participants reported greater willingness to seek treatment for insomnia over PTSD- or depression-focused treatment. Even veterans who screened positive for PTSD or depression and not insomnia, reported a preference for sleep treatment. These preferences were most apparent for male veterans, as all male groups reported greater willingness for sleep care over PTSD or depression care. Only females screening for both PTSD and insomnia reported a significantly higher willingness for sleep care than for PTSD care. Results consistently demonstrated that veterans, regardless of health concerns and gender, expressed a preference for in-person treatment for insomnia, PTSD, and depression. However, there was openness for mobile app-based/self-help programs for all three problems.

Treatment focus in the face of comorbidity is an important consideration for veterans. Although veterans expressed more willingness for sleep care over PTSD or depression care, this does not imply an unwillingness to receive PTSD or depression treatment. Rather it suggests a preference for sleep-focused treatment. Indeed, the means reported on the willingness scale for each consideration of specific treatment corresponded to a response of "likely" for all veteran participants regardless of gender or positive behavioral health screens. Yet these results propose the potential for sleep treatment to serve as a "gateway" treatment for those unwilling to engage in an EBPT for depression or PTSD. If veterans are able to engage in sleep treatment and make gains in a relatively brief period of time (e.g. cognitive behavioral treatment for insomnia (CBT-I) can be done in 3–8 weeks), perhaps there will be a greater willingness to engage in EBPTs for PTSD and depression afterwards (Nappi et al., 2012). In addition, sleep interventions can decrease the severity of the comorbidity symptoms (e.g., PTSD: Nappi et al., 2010), again potentially increasing willingness to pursue additional EBPTs.

Regarding treatment modalities, across behavioral health problems, veterans reported considering mobile-based app/self-help programs, even if they were not a first choice (e.g., approximately50% of those with positive screens for any of the concerns considered mobile-based app/self-help programs to treat insomnia). More than one-third of those with any

positive screens also reported considering this type of care to treat PTSD and depression. Openness to mobile app-based/self-help care is important, given the access-to-care problem within the VA. Alternative treatment modalities outside of face-to-face counseling may increase the opportunities for veterans to receive EBPTs. Moreover, online CBT-I (Ritterband et al., 2017) is a largely underutilized EBPT and is not an option within the VA. Online CBT-I could increase EBPT access and simultaneously eliminate certain barriers. Nevertheless, these veterans reported a greater consideration of in-person counseling and a relatively low preference for mobile app-based/self-help *alone*, which suggests a need for more outreach efforts to bring these veterans into clinics, as well as providing more resources to these institutions to ensure adequate staffing to match veterans' preferences. Educating providers and consumers regarding the efficacy of online based approaches is also important as some versions of online CBT-I (Espie et al., 2012; Ritterband et al., 2017; Thorndike et al., 2008) are not strictly considered "self-help," as users often have access to providers to some extent. Given our findings that veterans would consider a "self-help" approach (i.e., no provider assistance) , sole online efforts may help engage those veterans with insomnia, PTSD, and/or depression that would not otherwise consider treatment. Despite this promise, 10% to 28% of those screening positive for specific behavioral health concerns would not consider any care, which suggests other efforts may be needed to reach these veterans.

Understanding veteran treatment preference is a crucial step often overlooked when examining access to care. Perhaps surprisingly, even in those without a positive screen for insomnia, our study demonstrated a preference for insomnia treatment over other behavioral health treatments. While insomnia is ubiquitous with both PTSD and depression, it is also possible that this treatment carries less stigma and therefore is more appealing. Comorbidity further complicates access to care as it is often unclear which symptoms to prioritize. Additionally, a clinician suggested treatment plan may not always align with consumer preference. Our findings can help inform direct-to-consumer marketing of EBPTs, which will be increasingly important as veterans continue to seek mental health care outside of the VA, through programs like the Veterans Choice Act. Theoretically, more demand for EBPTs yields greater EBPT access. Having access to a variety of modalities of care also allows individuals further from clinics, or that work during clinic hours, to still receive an EBPT.

4.1 Limitations

While there are many strengths to the current study, there are also limitations worth noting. First, the sample in the current paper was a sample of convenience as it was collected from an ongoing brief alcohol intervention study. Though advertisements were designed purposely not to solely attract alcohol treatment seekers and those with alcohol-related problems (see Pedersen et al. 2017a), sampling was not done to ensure equal representation of current VA users and non-users, veterans were all young adults (19–34), and they all met a low threshold for hazardous drinking (thus, non-drinkers were excluded). It is possible that efforts to engage this population in the larger trial impacted the findings reported here; for example, drinkers may have been prone to prefer sleep treatments over other types of treatments and a sample recruited online from Facebook (i.e., via Facebook app or Facebook from an Internet-connected computer) may be more willing to consider phone/computer-

based approaches than those possibly recruited offline. Moreover, assessment was self-report and we do not have clinician-rated diagnostic measurements, which limits our ability to determine whether the sample met diagnostic criteria for insomnia, PTSD, or depression.

4.2 Conclusion

EBPT barriers remain despite significant efforts to reduce them and increase access for veterans within the VA, such as national roll-outs for widespread implementation of EBPTs targeting PTSD, depression, and insomnia and the availability of mental health care quality that exceeds or matches private sector care options (Watkins et al., 2011). Insomnia is both a standalone disorder and part of the diagnostic criteria for PTSD and depression, leaving substantial room to increase access to EBPTs by targeting these symptoms. Utilizing direct-to-consumer methods as in this study, as well as further survey-based research and qualitative methods (e.g., focus groups, interviews), can help researchers and clinicians to better understand what consumers want in their treatment, as well as what types of treatment they are willing to pursue, and can be used to inform providers about what types of care to offer in their clinics. This knowledge can also help to educate consumers themselves about available EBPTs and can open up a greater opportunity for such treatments in the VA, in the community, and through online applications. We already know that veteran preference is a key factor to successful implementation (Iverson et al., 2014), now efforts need to be made to help bridge the quality chasm by more broadly applying direct-to-consumer marketing to the patient population and decisions around EBPTs. Incorporating consumer preference into larger implementation and dissemination efforts will help to inform important decisions that may ultimately improve access to care.

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Highlights

- Treatment preferences and modality are rarely considered in dissemination efforts.
- In general, Veterans prefer in-person treatment
- Veterans expressed openness to mobile app-based/self-help treatment.
- There exists a preference for insomnia treatment over other disorders.
- Marginal gender differences were found.

Table 1

Treatment modality preference questions by symptom area

Question	Response 1	Response 2	Response 2	Response 3
If you were having difficulty falling or staying asleep (not including nightmares), which type of treatment would you most consider?	None, I would never consider treatment	I would more strongly consider a self-help phone app or computer program over counseling (like talking with a therapist individually or in a group) to help me sleep better	I would more strongly consider counseling (like talking with a therapist individually or in a group) over a self-help phone app or computer program to help me sleep better	I would consider either counseling or a self-help phone app or computer program equally to help me sleep better
If you were feeling numb or detached from others or activities, feeling on guard or easily startled, avoiding people and places, or having nightmares about a stressful experience, which type of treatment would you most consider?	None, I would never consider treatment	I would more strongly consider a self-help phone app or computer program over counseling (like talking with a therapist individually or in a group) to help me feel better	I would more strongly consider counseling (like talking with a therapist individually or in a group) over a self-help phone app or computer program to help me feel better	I would consider either counseling or a self-help phone app or computer program equally to help me feel better
If you were feeling down, depressed, or hopeless, or were finding you had little enjoyment of things you used to like doing, which type of treatment would you most consider?	None, I would never consider treatment	I would more strongly consider a self-help phone app or computer program over counseling (like talking with a therapist individually or in a group) to help me feel better	I would more strongly consider counseling (like talking with a therapist individually or in a group) over a self-help phone app or computer program to help me feel better	I would consider either counseling or a self-help phone app or computer program equally to help me feel better

Table 2

Sample Description by Gender

	Men (*n* = 514)	Women (*n* = 108)	Chi-square/t-value
Age	28.99 (3.31)	28.81 (3.56)	0.51
Ethnicity			3.36
Non-Hispanic	90.3%	84.3%	
Hispanic	9.7%	15.7%	
Race			23.99***
White	87.2%	72.2%	
Black	2.5%	12.0%	
Other†	10.3%	15.7%	
Branch of Service			28.43***
Army	58.9%	55.6%	
Navy	8.2%	14.8%	
Air Force	8.6%	21.3%	
Marine Corps	24.3%	8.3%	
Insomnia			
ISI score	12.06 (7.55)	13.45 (7.66)	1.73
Positive insomnia screen	61.0%	64.8%	0.55
PTSD			
PCL-5 score	23.11 (21.68)	26.13 (23.33)	1.30
Positive PTSD screen	30.7%	35.2%	0.85
Depression			
PHQ-8 score	7.45 (6.60)	8.87 (7.08)	2.00*
Positive depression screen	32.6%	44.4%	5.57*
Any VHA use past month	28.6%	38.9%	4.47*
Use of mental health care past month (VHA or elsewhere)	24.1%	37.0%	7.66**

†Category includes Asian (n = 8), Native Hawaiian/Pacific Islander (n = 3), American Indian/Alaska Native (n = 13), multiracial (n = 38), and other (n = 7)

*$p < 0.05$,

**$p < 0.01$,

***$p < 0.001$

Table 3

Preference for Focus of Treatment for the Full Sample and by Gender

	Full sample M(SD)	*Men M(SD)*	*Women M(SD)*
Positive for PTSD	*n* = 195	*n* = 157	*n* = 38
Willingness to seek insomnia care	2.80 (1.12)	2.74(1.13)	3.05(1.06)
Willingness to seek PTSD care	2.64 (0.99)	2.56(1.00)	2.97(0.87)
Positive for Depression	*n* = 215	*n* = 167	*n* = 48
Willingness to seek insomnia care	2.74(1.13)	2.72(1.14)	2.85(1.11)
Willingness to seek Depression care	2.57(1.01)	2.47(1.02)	2.60(1.00)
Positive Insomnia & PTSD Screen	*n* = 181	*n* = 148	*n* = 33
Willingness to seek Insomnia care	2.89(1.09)	2.82(1.10)	3.21(0.99)
Willingness to seek PTSD care	2.68(0.99)	2.60(1.00)	3.01(0.90)
Positive Insomnia & Depression Screen	*n* = 198	*n* = 156	*n* = 42
Willingness to seek Insomnia care	2.87(1.08)	2.83(1.09)	3.02(1.05)
Willingness to seek Depression care	2.62(1.00)	2.53(1.01)	2.95(0.94)

Table 4

Considerations of Treatment Modalities for Participants Screening Positive for Behavioral Health Screens by Gender

	Full sample	Men	Women
Treatment for insomnia	*Positive insomnia screen (n = 383)*	*Positive insomnia screen (n =313)*	*Positive insomnia screen (n =70)*
Not consider treatment	25.8%	27.5%	18.6%
More strongly consider self-help app/computer program	18.8%	18.8%	18.6%
More strongly consider counseling	26.6%	26.2%	28.6%
Consider either self-help app/computer or counseling	28.7%	27.5%	34.3%
Treatment for PTSD	*Positive PTSD screen (n = 195)*	*Positive PTSD screen (n = 157)*	*Positive PTSD screen (n = 38)*
Not consider treatment	20.0%	22.3%	10.5%
More strongly consider self-help app/computer program	16.9%	17.8%	13.2%
More strongly consider counseling	42.1%	39.5%	52.6%
Consider either self-help app/computer or counseling	21.0%	20.4%	23.7%
Treatment for depression	*Positive Depression screen (n = 215)*	*Positive Depression screen (n = 167)*	*Positive Depression screen (n = 48)*
Not consider treatment	20.5%	23.4%	10.4%
More strongly consider self-help app/computer program	18.1%	19.8%	12.5%
More strongly consider counseling	39.1%	34.7%	54.2%
Consider either self-help app/computer or counseling	22.3%	22.2%	22.9%

Table 5

Considerations of treatment modalities for comorbidity by gender

	Positive Insomnia & PTSD Screen		
	Full sample *(n = 181)*	**Men *(n =148)***	**Women *(n =33)***
Treatment for insomnia			
Not consider treatment	21.0%	22.3%	15.2%
More strongly consider self-help app/computer program	16.6%	18.2%	9.1%
More strongly consider counseling	34.2%	32.4%	42.4%
Consider either self-help app/computer or counseling	28.2%	27.0%	33.3%
Treatment for PTSD			
Not consider treatment	19.9%	21.6%	12.1%
More strongly consider self-help app/computer program	16.0%	17.6%	9.1%
More strongly consider counseling	43.1%	40.5%	54.5%
Consider either self-help app/computer or counseling	21.0%	20.3%	24.2%
Positive Insomnia & Depression Screen			
	***Full sample** (n =198)*	***Men** (n = 156)*	***Women** (n = 42)*
Treatment for insomnia			
Not consider treatment	22.2%	23.1%	19.0%
More strongly consider self-help app/computer program	14.1%	15.4%	9.5%
More strongly consider counseling	28.3%	34.6%	33.3%
Consider either self-help app/computer or counseling	35.3%	26.9%	38.1%
Treatment for depression			
Not consider treatment	19.8%	21.8%	11.9%
More strongly consider self-help app/computer program	17.7%	20.5%	7.1%
More strongly consider counseling	39.3%	34.6%	57.1%
Consider either self-help app/computer or counseling	28.2%	23.1%	23.8%