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Trauma Exposure and Disordered Eating: A Qualitative Study

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Abstract

Objective.—Quantitative studies have demonstrated a positive association between trauma exposure and disordered eating. However, reasons for this relationship are unclear. We used qualitative methods to understand why some individuals exposed to trauma report disordered eating.

Method.—We conducted five focus groups and two dyadic interviews between Spring 2013 and Fall 2014 with women at a Veterans Health Administration medical center (N=20). Most participants were recruited from outpatient mental health clinics. Participants completed demographic and psychological questionnaires. Using thematic analysis of transcripts, we identified trauma and disordered eating-related themes.

Results.—Most participants were women of color (55%), and many reported psychological symptoms (65%). Mean age was 48 years (SD=15). Thematic analysis resulted in three themes. First, trauma can be associated with disordered eating, often in relation to negative affect and maladaptive thoughts. Second, disordered eating can provide short-term, but not long-term, relief from trauma-related negative affect. Third, disordered eating can provide a mechanism to avoid unwanted attention from potential and past perpetrators of trauma.

Discussion.—Trauma-related disordered eating, particularly in relation to sexual trauma, may have a distinct profile. Querying patients about causes of disordered eating when women report trauma histories may help clinicians ensure patients receive appropriate treatment.

Keywords

mental health; psychosocial; stress; disordered eating

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Conflict of Interest
The authors declare no conflicts of interest.

Disordered eating spans a variety of problematic eating behaviors, from occasional, but distressing, binge eating and dietary restriction to more severe and frequent behaviors that result in diagnoses of eating disorders. Research over the past decade has provided strong quantitative support for a relationship between trauma exposure and disordered eating. For example, findings from the National Longitudinal Study of Adolescent Health suggested that exposure to adverse childhood experiences was associated with increased risk for several types of disordered eating, including skipping meals, loss of control over eating, and being diagnosed with an eating disorder (Fuemmeler et al. 2009). Rates of traumatic event exposure among individuals with disordered eating can also be high. Results of the National Comorbidity Survey-Replication Study suggested that roughly 80% of individuals who engaged in disordered eating reported trauma exposure (Mitchell, Mazzeo, et al. 2012), a finding supported by findings from several other large studies (Brewerton 2007, Forman-Hoffman et al. 2012, Harrington et al. 2006, Hirth, Rahman, and Berenson 2011, Lucea et al. 2012, Mitchell et al. 2014). Past exposure to traumatic events has also been associated with more severe disordered eating (Grilo et al. 2012, Karr et al. 2013, Mason et al. 2014, Tagay et al. 2014).

Some have hypothesized that individuals who experience traumatic events may be more prone to ongoing difficulties with emotion regulation, which can lead to disordered eating as a way to regulate negative affect (Briere and Scott 2007, Levitt 2007, Tagay et al. 2014, Talbot et al. 2013, Waller, Corstorphine, and Mountford 2007). Support for this emotion regulation hypothesis comes from cross-sectional studies that found positive associations among poor emotion regulation, traumatic event exposure and disordered eating (Michopoulos et al. 2015, Racine and Wildes 2015). The emotion regulation hypothesis is also supported by results from an ecological momentary assessment study in which individuals with bulimia nervosa and post-traumatic stress disorder (PTSD) reported a faster and larger increase in negative affect before purging and a faster and larger decrease in negative affect after purging when compared to individuals with bulimia nervosa without PTSD (Karr et al. 2013). (It should be noted that participants with PTSD may have had more difficulty with emotion regulation.)

At the same time, at least one longitudinal study demonstrated that emotion regulation was not the sole cause of disordered eating among individuals with PTSD (Mitchell, Wells, et al. 2012). The authors found that while improved emotion regulation was associated with a reduction in PTSD symptoms, it was not associated with a reduction in disordered eating symptoms. This finding highlights the complexity of the relationship between disordered eating and trauma and points to a need for research that can augment current associational findings. Such work is especially important because studies that are based on data from electronic health records or surveys, like those cited above, are limited in their ability to explain why some individuals exposed to trauma engage in disordered eating.

Given that women veterans are at increased risk for both trauma exposure and disordered eating (Bartlett and Mitchell 2015), the present study used qualitative methods to characterize disordered eating among women veterans who reported changing their eating in response to stress or trauma. Given existing quantitative work, qualitative interviews were

seen as an important, complementary method to provide a nuanced clinical picture of the relationship between trauma exposure and disordered eating.

Methods

Eligibility, Recruitment, and Consent

Women were eligible for this study if they were veterans between the ages of 18 and 70 years and endorsed disordered eating, defined as changing eating patterns in response to stress, using food to cope with stress, gaining or losing more weight than desired, and/or interest in healthier eating patterns. Additional screening questions ensured that all participants engaged in disordered eating rather than simply wanting to eat healthier. We intentionally chose these broad inclusion criteria so that we could learn from women across the spectrum of disordered eating behaviors. To account for the fact that both stress and trauma could be related to disordered eating, trauma exposure was not an explicit inclusion criterion. This provided the possibility of including women with a variety of eating behaviors and responses to stress across the response continuum, not only women with trauma-related psychological conditions, such as PTSD. Women who self-reported severe mental illness (i.e., diagnoses of schizophrenia and/or psychosis) were ineligible to participate.

Using homogenous sampling (Morgan 1996), we recruited women veterans through flyers at local colleges and through mental health clinicians at the VA where the study was conducted *[author note: replace with name of VA in unblinded version].* For women recruited from mental health clinics, clinicians gave researchers contact information for women who verbally consented to receive contact from study staff. Regardless of whether potential participants contacted study staff via flyer information or were referred by clinicians, study staff determined eligibility with a phone screen, for which interested participants verbally consented.

The total number of women who learned about this study, but were uninterested is unknown. However, we screened 26 women, one who learned about the study through a flyer and 25 who learned about the study from mental health clinicians. After screening, we excluded one potential participant for a diagnosis of schizophrenia. In addition, five eligible women did not participate due to scheduling conflicts or not wanting to participate in a group-based study. Therefore, a total of 20 women (one identified as a transgender woman) participated in this study, resulting in a 96% eligibility rate and an 80% participation rate. Eligible and interested women signed a written consent form before participating in focus groups or interviews and were paid $30.

All procedures were approved by Institutional Review Boards *[author note: replace with names in unblinded version*.]

Research Team

As suggested by the Consolidated Criteria for Reporting Qualitative Studies (COREQ) (Tong, Sainsbury, and Craig 2007), we report information on the research team, which consisted of six women: two clinical psychologists (one senior psychologist, one

postdoctoral fellow) with experience in eating disorders, trauma, and qualitative methods; two graduate students in psychology; a research assistant; and an anthropologist with expertise in qualitative methods. No members of the research team had prior relationships with participants. Three members of the research team (two psychologists and one of the graduate students) were on the coding committee.

Focus Groups

Between Spring 2013 and Fall 2014, two individuals (the senior psychologist and one of the graduate students) ran five focus groups at an urban VA medical center. The research assistant was also present to take notes and facilitate administrative tasks. Group size ranged from three to five participants. The same staff also ran two dyadic interviews due to only two of three participants attending scheduled focus groups. During focus groups and interviews, participants were asked questions based on a semi-structured guide (see Supporting Materials for full list of relevant questions). The guide included questions about participants' experiences with eating in relation to trauma and stress and changes in their eating over time, with a focus on changes related to traumatic or stressful events. For example, one question asked: "Some veterans…say that they eat when they experience stress or think of things that are just hard to deal with. Has this ever happened to any of you?" The focus groups and interviews were audio-recorded, professionally transcribed verbatim, and lasted one and half to two hours.

As frequently occurs in qualitative research, a specific sample size was not determined *a priori*, but instead was based on saturation of themes across focus groups/interviews. Given that three to four focus groups is usually sufficient to reach saturation, particularly in cases of homogenous sampling (Morgan 1996), we planned for at least four focus groups. Study staff took notes during and after the focus groups/interviews and held post-focus group/interview discussions to determine when saturation of themes was reached, that is, when no new themes were discussed during the final focus group.

Measures

Participants completed measures indexing demographic information, disordered eating symptoms, mental health symptoms, and potentially traumatic military experiences. Questionnaires were completed during the focus groups/interviews and were therefore not used to determine study eligibility

Sociodemographic information.—Participants completed a questionnaire regarding age, gender, race, ethnicity, income, marital status, number of children, and military history.

Eating disorders.—We used the SCOFF questionnaire (Hill et al. 2010, Morgan, Reid, and Lacey 2000) to assess possible diagnoses of anorexia nervosa, bulimia nervosa, and/or eating disorder not otherwise specified (EDNOS). As the SCOFF is based on the DSM-IV (American Psychiatric Association 1994), EDNOS included binge eating disorder, which had not been added to the DSM when the SCOFF was developed. The SCOFF measures eating disorder symptoms with five, yes/no items (e.g., "Do you believe yourself to be fat when others say you are thin?") that are summed (yes=1, no=0). Scores ≥2 suggest a

possible eating disorder diagnosis. In a meta-analysis, the SCOFF had acceptable sensitivity (0.80) and specificity (0.93) (Botella et al. 2013).

PTSD.—We used The PTSD Checklist – Military (PCL-M; Wilkins, Lang, and Norman 2011) to measure symptoms of PTSD. The PCL-M has 17 items and asks individuals to rate PTSD symptoms over the past month on a five-point scale (from 1 “not at all” to 5 “extremely”). Items scores are summed; scores ≥50 suggest probable PTSD.

Depressive Symptoms.—We used the Patient Health Questionnaire–2 (PHQ-2; Kroenke, Spitzer, and Williams 2003) to assess depressive symptoms. This two-item measure asks participants to rate lack of interest and depressed mood over the past two weeks using a four-point scale (0 “not at all” to 3 “nearly every day”). Items are summed and scores ≥3 suggest a depressive disorder.

Military stressors.—We asked participants eight, yes/no questions to determine their exposure to potentially traumatic events related to their military service (e.g., “During your military service did you become wounded or injured?” or “During your military service, did anyone use force, threat of force, or coerce you to have sex against your will?”).

Qualitative analysis

Two authors (a postdoctoral fellow and a graduate student) used thematic analysis (Braun and Clarke 2006) to identify themes and answer the following research question: Why is a relationship between trauma exposure and disordered eating observed? Using a coding by committee process (Saldaña 2015), these authors first read transcripts separately to come up with a preliminary list of inductive codes. Next, they reviewed codes and transcripts together to develop a combined list of inductive codes (e.g., eating habits, control). They then worked together to develop a list of deductive codes based on semi-structured interview guide questions and the framing of the study (e.g., trauma, disordered eating). After using this information to work with a third author (the senior psychologist) to develop a codebook with a total of 13 codes, the postdoctoral fellow and graduate student together reviewed and coded all transcripts using ATLAS.ti version 7. Finally, after both reviewing all quotes under all codes separately, the postdoctoral fellow and graduate student met to discuss findings and synthesize themes based on frequency and salience (these meetings often included the senior psychologist, who was consulted in three cases of disagreement). In addition, the same authors discussed similarities and differences between the focus groups and interviews. Most topics were consistent across groups and interviews, but one group focused more on using food to replace intimacy and manage anger than others. Participants were not asked to provide feedback on transcripts or findings.

Results

Among the 20 women who participated, the mean age was 48 years (SD=15). Length of time since military service varied (Mean: 15 years; *SD*: 13 years; Range: 1–30 years). Similar to the general population of women using VHA services (Frayne et al. 2014), participants were racially diverse – nine (45%) reported White race; four (20%) reported Black race; one (5%) reported Asian-American race; and six (30%) reported their race as

"other" (Table 1). Participants were relatively low income with only four participants (20%) reporting household incomes above the national median (~$53,000; United States Census Bureau 2015).

While we chose broad inclusion criteria to include women with a variety of eating behaviors, stress levels, and histories of trauma exposure, our participants reported high rates of disordered eating and trauma exposure. Fourteen women (70%) had possible eating disorders based on the SCOFF (Morgan, Reid, and Lacey 2000). Five participants (25%) reported purging and 15 (75%) reported being worried about losing control over their eating. All participants reported exposure to a potentially traumatic event (i.e., a military stressor), and 17 (85%) reported experiencing military sexual trauma, with survey data and qualitative analyses suggesting that many women experienced multiple forms of trauma. In addition, over half of participants had positive screens on measures of PTSD and depressive symptoms: 13 participants (65%) had probable PTSD; 11 (55%) had elevated depressive symptom scores, and 13 participants (65%) had both, based on the PCL-M (Wilkins, Lang, and Norman 2011) and PHQ-2 (Kroenke, Spitzer, and Williams 2003), respectively.

Through thematic analysis, we identified three themes related to trauma exposure and disordered eating among women veterans, which are described with illustrative quotes below. No themes were specifically related to binge eating versus restriction, though discussions of binge eating occurred more often. Please note: we use the phrase "disordered eating" in themes for clarity. We did not use this phrase with participants so that they could communicate their experiences through their own language. The interview guide asked about "problems with eating and food" more broadly in order to allow for more comprehensive discussion.

Theme 1: Trauma can be associated with disordered eating, often in relation to negative affect and maladaptive thoughts.

Almost all participants acknowledged the relationship between trauma exposure and disordered eating. For example, one participant summed up the relationship by saying, "we're overeating because we had trauma and we're angry." (Participant 19, Focus Group). Other participants said trauma was related to maladaptive thoughts, like low self-worth, which led to disordered eating. As a participant described, "…when I got out of the service I don't think I thought I deserved to eat healthy and be healthy. I had a pretty low self-opinion and it [disordered eating] was just one thing on the list…" (Participant 8, Focus Group). Similarly, in relation to trauma, self-esteem, and eating, another woman stated:

> [There was] depression after the trauma, because that happened when I was 19, and I just started seeking counseling in my forties, so I dealt with this a long time…it depends on how you feel: if you like yourself versus if you don't like yourself, and when you are going to eat and how much you eat and if you really need to eat. (Participant 5, Focus Group)

For these women, disordered eating seemed to be a kind of punishment, perhaps as a result of guilt or shame and, therefore, was described as both the result of negative affect and resulting in additional negative affect.

Others described trauma as creating emotional detachment and apathy that was related to disengagement from activities of daily living, including eating. As one woman said, “there was a traumatic event that happened, and after that I kind of just didn’t care anymore. I just didn’t care anymore about anything.” (Participant 9, Focus Group).

A minority of participants described other ways that trauma affected eating. As one woman said:

> …if I have like a flashback I find myself falling into the pattern again, but I remind myself, that’s your past, don’t relive it and then sometimes I can snap out of it and other times it will just dwell through the day and I will think about it, but a lot of times I am able to catch it before I go binge eating… (Participant 19, Focus Group)

In this case, the disordered eating seemed to serve as a conditioned response to the flashback. For another woman, trauma “blew any kind of trust” she had in herself or others (Participant 3, Focus Group). As a result, she said she distrusted food provided by the military, which led to dietary restriction resulting in weight loss.

Theme 2: Disordered eating can provide short-term, but not long-term, relief from negative affect.

Most participants explicitly described using disordered eating to regulate their emotions in response to experiencing negative affect. For example, one woman said, “I ate to comfort myself” (Participant 18, Focus Group) and another said, “when crisis comes up, I’ll start eating” (Participant 10, Interview). These women described disordered eating as a way to decrease negative affect, which seemed to be negatively reinforced: they engaged in disordered eating because it they felt it resulted in less negative affect, if only in the short-term.

Other women said they used disordered eating to avoid negative affect. For example, one woman described using food to numb herself saying, “I used it [food] to knock myself out most of the time” (Participant 11, Focus Group). Another participant noted that it was “safer to overeat” than to act on angry impulses. In these cases, women described the disordered eating as a way to negate as opposed to regulate emotion.

Participants also said they used disordered eating to self-soothe after experiencing negative affect, trauma-related or otherwise. One woman noted, “…what used to trigger me is seeing somebody in uniform; that would just automatically just send my anxiety into overdrive, so I would eat to comfort it…” (Participant 19, Focus Group). The same participant also said she used food to cope with anger: “…I won’t be hungry and I will smell it and I will see it and I’ll be like, well I was mad last night and maybe I do deserve this piece of cake.” Another said that she engaged in disordered eating after negative experiences because “it would make me feel so good.” (Participant 17, Focus Group). In these cases, disordered eating seemed to be positively reinforced; participants did not necessarily describe using it to regulate/reduce negative affect, but rather to self-soothe and increase positive affect after negative experiences.

At the same time, some participants said they were aware that efforts to use disordered eating to cope with negative affect could have negative consequences, noting that "whoever I'm angry at, they're just living their life not even knowing that this anger is still in me, and I'm going to go eat some Twinkies, and then I am going to be unhealthy again." (Participant 19, Focus Group). Another participant said that the results of disordered eating, in this case restriction, felt good: "I'd get so excited in the morning, and I'd get on the scale and I would watch my weight drop and drop and drop and drop…" (Participant 17, Focus Group), but she also noted that her experience with trauma changed her relationship with food from something "good" to an unhealthy "game." For these participants, disordered eating was a doubled-edged sword, like many maladaptive behaviors, they described it providing short-term benefits, but negative consequences in the long-term.

Theme 3: Disordered eating can provide a mechanism to avoid unwanted attention from potential and past perpetrators of trauma.

Some participants reported engaging in disordered eating as a way to change their shape and weight to avoid attention that might lead to additional traumatic experiences. As one participant said, trauma "made us not want to eat because then we felt like, okay, maybe they won't bother us [if we] lose the weight." (Participant 19, Focus Group). However, the same woman also noted that, for some women, trauma led to an urge to overeat because "maybe when we gain weight, [perpetrators] will leave us alone." Her comments highlight how some women described gaining weight and some women described losing weight to avoid attention. Ultimately, both losing and gaining weight served as a way to transform the body in an attempt to make it invisible to those that were threatening; they wanted to gain control and prevent additional trauma.

Some women said that avoiding attention meant avoiding communal acts of eating, which let them avoid interacting with other service members, including the perpetrators of trauma, during meals. They noted that avoiding communal acts of eating also prevented negative affect induced by exacerbations of trauma-related hyper-arousal. At the same time, as a result of these avoidance behaviors, many women said they ate alone after traumatic experiences and felt socially isolated, which induced additional negative affect and maladaptive thoughts and also increased their likelihood of engaging in disordered eating. This was likely exacerbated by the fact that most women said they did not report their traumatic experiences, which made them feel alone and left them with few skills to cope with experiences of trauma. As one woman said, "I [ate] and that is kind of how I dealt with [the trauma]. It was like I was at war with my body…" (Participant 11, Focus Group).

Finally, it should be noted that in one focus group, participants described using food to replace intimacy after sexual trauma. For example, one woman said that after military sexual trauma, "rather than have sex, I'd rather go and have food." (Participant 13, Focus Group).

Discussion

We conducted focus groups and dyadic interviews that provided in-depth information about the relationship between trauma exposure and disordered eating. We found that women reported eating more and/or eating less in response to trauma. We also found that the

relationship between trauma exposure and disordered eating seemed to trap participants in a vicious cycle. For many women, the cycle began with a reminder of past trauma that triggered negative affect and maladaptive thoughts, which then led women to cope using disordered eating. This disordered eating led to short-term relief, but ultimately resulted in additional negative affect and maladaptive thoughts that perpetuated further disordered eating.

Despite the fact that exposure to a traumatic event was not an eligibility criterion for this study, all participants reported trauma exposure, with many women reporting several traumas. This is not entirely surprising as participants were veterans and were mostly recruited from mental health clinics. Nonetheless, these data support the results of several past studies that have indicated high rates of traumatic event exposure among individuals engaging in disordered eating (Brewerton 2007, Forman-Hoffman et al. 2012, Harrington et al. 2006, Hirth, Rahman, and Berenson 2011, Lucea et al. 2012, Mitchell, Mazzeo, et al. 2012, Mitchell et al. 2014). The present study adds to the literature by describing why and how some individuals who experience trauma engage in disordered eating.

Past work focused on emotion regulation as a driver of trauma-related disordered eating. Similarly, in this study, many participants described using disordered eating to regulate emotions. For example, participants said they used disordered eating as a way to reduce negative affect or increase positive affect. Our findings also support past work suggesting that emotion regulation does not fully explain the relationship between trauma exposure and disordered eating. That is, participants in our study described multiple reasons for engaging in disordered eating in response to trauma, including self-soothing, avoiding difficult emotions or unwanted attention, and/or as a response to apathy caused by exposure to a traumatic event (regardless of its relationship to a psychological disorder). These varied reasons for disordered eating in response to trauma suggest that moderated mediation models may be necessary to understand the relationship between trauma exposure and disordered eating in quantitative studies. For example, emotion regulation may mediate the relationship between trauma exposure and disordered eating when an individual engages in disordered eating to self-soothe, but may not mediate the relationship when an individual engages in disordered eating to avoid unwanted attention.

The results of the present study also suggested that trauma-related disordered eating may have a unique profile. For example, many women in the current study said they engaged in disordered eating to avoid an ideal shape in the hopes of avoiding unwanted attention from past or future perpetrators of trauma. While this finding was likely related to the high rates of sexual trauma among participants, it is notable given that clinicians and researchers often conceptualize eating disorders as driven by a desire to obtain an ideal shape and/or weight (Fairburn 2008). Similarly, other women described engaging in disordered eating, usually restriction, related to trauma sequelae, such as apathy and/or described a sort of passive disordered eating. These forms of disordered eating also differed from disordered eating to obtain an ideal shape or weight and from disordered eating used to regulate emotion (e.g., as described in Theme 2).

Taken together, these findings have clinical implications and highlight the utility of individualized case conceptualizations during psychological care, which are necessary to account for the variety of ways traumatic experiences can affect eating behaviors. To develop accurate case conceptualizations and select the most appropriate interventions, mental health clinicians should help patients identify the specific thoughts, emotions, and behaviors that maintain patterns of disordered eating. For example, if an assessment or clinical interview suggests that an individual engages in disordered eating as a result of maladaptive shape and weight concerns, cognitive behavioral therapy for eating disorders (with its focus on shape and weight concerns) may be the best treatment, even if that individual reports trauma exposure. For an individual who primarily reports engaging in disordered eating as a way to regulate affect, focusing first on emotion regulation may be most appropriate. Finally, for an individual who reports disordered eating as mostly related to specific PTSD symptoms (e.g., hyperarousal), it may be best to address the PTSD before treating the disordered eating, which may be a behavioral manifestation of trauma.

While this assessment and case formulation approach may not differ from standard practice for some cognitive behavioral clinicians, we believe our findings can enhance clinical practice by providing clinicians with heuristics to use when assessing for disordered eating in cases in which patients have a history of trauma. In addition, the findings provide researchers with testable research questions, including whether treating trauma-related symptoms before disordered eating symptoms is more effective for some patients. Future research to unravel the complex relationship between trauma and disordered eating is warranted.

Limitations of the current study included the fact that all participants were women veterans from a single geographic area who all had exposure to potentially traumatic events and had high rates of sexual trauma. Therefore, results may not have reflected the experiences of women across the full stress response continuum, men, or individuals in the general population. In addition, most participants were recruited from mental health clinics; so, results may not represent the experiences of women without mental health impairments or women who successfully recovered from mental health impairments related to traumatic events. As with all qualitative research, social acceptability bias may have also affected outcomes. Additionally, we did not have information on participants' weight or detailed information about their trauma histories, nor did we have information on participants' prior histories of eating disorder diagnosis or treatment, which given the age of our sample, could have provided valuable information. Further, recruitment focused on women who likely perceived a relationship between trauma and disordered eating, so results may not reflect the experiences of women who do not perceive that relationship.

Given the prevalence of trauma and the strength of past research associating trauma with disordered eating, we believe this study provides important information, despite the limitations described above. Our findings also suggest several avenues of future research, including investigations of disordered eating among other populations, such as men or women with specific forms of trauma. It could also be useful to investigate disordered eating among women who have recovered from eating disorders or other mental health conditions, or women who eat in response to stress, but have not experienced traumatic events. In

addition, future research could assess whether changes in mental health symptoms affect disordered eating. Finally, it is incredibly important to understand why some individuals respond to stress and trauma with disordered eating while others do not.

Conclusions

Our results suggest that some women exposed to trauma engage in disordered eating as a way to regulate trauma-related maladaptive thoughts and negative affect (Themes 1 and 2), and/or as a mechanism to avoid unwanted attention (Theme 3). The fact that individuals engage in disordered eating for a variety of reasons highlights the potential importance of understanding why a patient engages in disordered eating before beginning treatment. Querying patients about causes when trauma-related disordered eating is suspected may help clinicians ensure patients get appropriate and effective evaluation and treatment.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Participant characteristics

	N	%
Education		
Some college	5	25%
Associates degree	8	40%
College graduate	3	15%
Master's	3	15%
Doctoral Degree	1	5%
Marital Status		
Never Married	9	45%
Married	2	10%
Divorced	9	45%
Have children	10	50%
Annual Household income		
Under $10,000	2	10%
$10,000–25,000	7	35%
$25,001–50,000	7	35%
$50,0001–75,000	3	15%
$75,001–100,000	1	5%
Have private health insurance	6	30%
VA service connection *§		
Yes	15	75%
Pending	10	50%
Service branch		
Air Force	4	20%
Army	9	45%
Navy	6	30%
Coast Guard	1	5%
Past Active Duty		
Yes	17	85%

*Not mutually exclusive as more than one condition can have a service connection.

§VA service connection is a designation that provides veterans with reduced or absent co-pays for medical treatment at VA facilities.