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An Investigation of Treatment Engagement among Iraq/Afghanistan Era Veterans with Problematic Anger

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Abstract

Anger is a commonly reported problem among returning veterans, yet little attention has been devoted to studying treatment engagement among veterans who report anger problems but do not have PTSD. This study compares Iraq-Afghanistan veterans with Anger/No PTSD ($n = 159$) to others reporting significant PTSD symptoms ($n = 285$) and those reporting neither anger nor PTSD ($n = 716$) on rates of treatment utilization, perceived barriers to treatment, and preferences for care. Relative to the PTSD group, the Anger/No PTSD group was significantly less likely to have received mental health treatment in the last year, despite endorsing barriers to treatment at a lower rate. Furthermore, the Anger/No PTSD group endorsed fewer preferences than the PTSD group. Results suggest that the Anger/No PTSD group is a unique subgroup that may be less likely to identify a need for treatment. Implications are discussed.

Keywords

anger; OEF/OIF veterans; barriers to treatment; preferences for treatment; treatment engagement

Introduction

Despite high rates of mental health problems amongst veterans of the recent wars in Iraq and Afghanistan, many of those who may benefit from treatment fail to seek or receive it (Elbogen et al., 2013; Hoge et al., 2004; Seal et al., 2010). Recent research has focused on identifying veterans' perceived barriers to care in an effort to better understand these low rates of treatment utilization and improve treatment engagement (Crawford et al., 2015; Kim et al., 2010; Pietrzak et al., 2009; Seal et al., 2011). Many of these studies have focused on

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veterans with probable diagnoses of posttraumatic stress disorder (PTSD), depression, or substance use disorders. However additional trans-diagnostic problems, such as anger, may also be important targets for treatment engagement efforts.

High levels of anger are commonly reported by returning veterans. A recent and large survey of Iraq-Afghanistan combat veterans discovered that difficulty controlling anger was the most prevalent community reintegration problem reported (Sayer et al., 2010). More than half of respondents reported anger problems, including 38% of respondents who did not have a probable diagnosis of PTSD (Sayer et al., 2010). Furthermore, Kim et al. (2010) found that angry and aggressive behaviors were the most frequently reported behavioral problems among active duty and National Guard soldiers (more than twice as prevalent as PTSD amongst active duty soldiers). Another study of a large sample of Iraq veterans assessed 3 and 12 months post-deployment found that about 40% reported becoming so angry that they had an aggressive outburst, about 35% reported that they had threatened someone with physical violence, and about 17% reported that they had gotten into a fight with another person in the past month (Thomas et al., 2010). Problematic anger is likely to have a negative impact on the physical and emotional health of veterans as they reintegrate to civilian life. A recent study using a large sample of Iraq and Afghanistan soldiers found that anger was associated with difficulties in relationships with coworkers, increased substance use, and risk for harm to self and others (Novaco, Swanson, Gonzalez, Gahm, & Reger, 2012). More generally, anger has been associated with many negative consequences including cardiovascular disease (Smith et al., 2004; Williams et al., 2000), aggressive behavior (Berkowitz, 1993; Tafrate et al., 2002), nicotine dependence (Cougle et al., 2013), excessive alcohol use (Leibsohn et al., 1994; Litt et al., 2000), relationship problems (Baron et al., 2007; Tafrate et al., 2002; Miller et al., 1995), suicide risk (Hawkins and Cougle, 2013) and increased risk of involvement in the criminal justice system for veterans (Elbogen et al., 2012).

Anger is associated with many psychological disorders, including PTSD and depression. Much of the research focused on anger in veteran samples has examined the association between anger and PTSD. A recent meta-analysis revealed a robust relationship between PTSD and anger among adults that had been exposed to trauma, especially those with combat exposure (Orth and Wieland, 2006). Anger has been identified as a risk factor for violence among combat veterans with PTSD (Novaco & Chemtob, 2015). Additionally, PTSD symptom severity is positively correlated with measures of anger (Novaco and Chemtob, 2002), and responsiveness to PTSD treatment is associated with reductions in state anger (Cahill, Rauch, Hembree, & Foa, 2003), trait anger, and improved anger control (Galovski et al., 2014). Furthermore, anger has been identified as a predictor of PTSD treatment outcomes among veterans, with fear of anger being associated with poorer treatment outcomes (Forbes et al., 2008). However, PTSD does not always accompany anger control problems in veterans. As mentioned before, over one-third of veterans without a probable diagnosis of PTSD report anger problems (Sayer et al., 2010). Additionally, symptoms of PTSD are just one of several risk factors associated with anger and hostility among Iraq and Afghanistan veterans. Elbogen et al. (2010) identified several correlates of anger and hostility, including hyperarousal symptoms of PTSD, witnessing family violence, history of abuse, and combat exposure. Furthermore, a recent longitudinal cohort study of

military personnel in the United Kingdom found that anger was associated with subthreshold levels of symptoms for all mental disorders assessed, leading the authors to suggest that, “many cases of anger in the population will be found in individuals who are not sufficiently symptomatic to seek health care for mental illness” (Rona et al., 2015, p. 20).

It is important to realize that solely focusing on improving treatment utilization among veterans with probable PTSD or depression leaves out analysis of veterans with anger control problems who defy diagnostic classification. Furthermore, there is reason to believe that veterans reporting anger problems may be resistant to seeking treatment. Despite the numerous negative consequences associated with problematic anger, many individuals with anger problems do not engage in treatment, and those that do are often forced into treatment by others (Howells and Day, 2003). Thus, efforts to increase treatment engagement for this group of veterans may be beneficial.

The current study is an initial investigation of Iraq-Afghanistan veterans who reported problematic anger, but did not have probable PTSD. In order to clearly differentiate between veterans reporting anger problems and veterans with significant PTSD-related symptoms, we partitioned veterans reporting significant symptoms of PTSD from those endorsing problematic anger. Based on findings suggesting that Iraq-Afghanistan veterans with subthreshold PTSD report greater anger and hostility than those without PTSD (Jakupcak et al., 2007), we defined individuals experiencing “significant symptoms of PTSD” as those who would likely meet criteria for a full or subthreshold diagnosis of PTSD in order to clearly differentiate between veterans reporting anger problems in the absence of PTSD symptoms and veterans with PTSD. We sought to investigate the rates of treatment utilization among this group of veterans reporting anger problems, their perceived barriers to treatment, and their preferences for care. Furthermore, we sought to compare this group of veterans anger problems to two comparison groups: 1) veterans reporting significant PTSD symptoms and, 2) those without PTSD or anger problems, in order to obtain a better understanding and to move towards addressing the unique needs of a potentially underserved cohort of returning veterans.

To this end, planned comparisons were conducted comparing the group of veterans with anger problems to each comparison group on demographic, mental health treatment utilization, barriers to treatment, and preferences for treatment variables. Based on documented treatment engagement challenges among individuals with anger problems (Howells and Day, 2003), we hypothesized that veterans with anger problems would be less likely to have received mental health treatment and would report higher endorsements of barriers to treatment than those in the PTSD group. Further, based on previous findings that returning veterans with probable PTSD endorse strong preferences for treatments that address particular PTSD-related symptoms and physical health concerns (Crawford et al., 2015), we hypothesized that veterans in the anger group would have lower reported preferences for treatment than those in the PTSD group. We did not have any predictions that rates of mental health treatment engagement or barriers to treatment would differ between the anger group and the neither anger nor PTSD group.

Method

Sampling Strategy

This project was approved by the Durham VA Medical Center Institutional Review Board and the VA Office of Management and Budget. Five thousand veterans were randomly selected to be surveyed from the estimated 70,000 OEF/OIF veterans eligible for VA services residing in the Veterans Integrated Service Network 6 (VISN 6) catchment area, encompassing all of North Carolina, the greater part of Virginia, and the southeastern corner of West Virginia in the spring of 2010. Participants were randomly selected from a Department of Defense list of separated active duty personnel, National Guard service members, and Reservists who served in support of the wars in Iraq and Afghanistan.

After the appropriate Business Associate Agreements and VA contracts were completed, the list of contacts and available demographics (age, race, gender, branch of military, unit-type) were securely transferred to a survey contractor. A modified Dillman Total Design Method approach to survey research was used (Dillman, 2000). To enhance privacy protection, participant identifiers were not shared with VA researchers. Contacted participants received the survey described below, elements of informed consent, contact information for the contractor and VA investigators, and a detailed explanation of the study. They were informed that the purpose of the survey was to better understand the needs and preferences of OEF/OIF veterans, as well as barriers to seeking treatment, in order to tailor and improve VA services accordingly. A more comprehensive description of the Veterans Health and Needs Assessment survey recruitment strategy and comparisons with other national, representative samples of veterans of the wars in Iraq and Afghanistan are available elsewhere (Crawford et al., 2015). Of the 5,000 veterans selected, 72 (1.4%) were unreachable (e.g., deceased, deployed, ineligible) and 924 (18.5%) surveys were undeliverable. A total of 4004 (80%) surveys were delivered and 1161 were completed and returned, resulting in a cooperation rate of 29%.

Measures

Demographics—The survey included an extensive demographic section that assessed multiple variables including age, gender, ethnicity, income, marital status, employment status, VA disability rating, and whether or not the respondent had children. The survey also collected information on military history (e.g. rank, number of deployments, branch).

Combat exposure—As a measure of combat exposure, participants were asked to indicate which of 17 combat experiences they had encountered while deployed (Hoge et al., 2004). This list included experiences such as, “Being attacked or ambushed” and “Shooting or directing fire at the enemy.” In the present study, the total number of experiences reported was summed to create a measure of combat exposure, so the possible range of this variable was 0 to 17.

Mental health treatment utilization—Participants were asked about mental health treatment utilization in the past year, with the question, “How many times have you seen a doctor or received counseling or therapy for readjustment or emotional problems in the last

12 months?” This was answered with a 4-level scale (“Never”, “1 or 2 times”, “3 to 5 times”, “6 or more times”). In the current study, respondents indicating any amount of treatment in the last year were coded as positive to create a dichotomous variable (0 = no use, 1 = use).

Barriers to care—In order to assess veterans’ perceived barrier to care, respondents were asked to rate a series of 17 statements using a 5 point Likert-scale (1 = strongly disagree; 5 = strongly agree) that have been used in other studies of OEF/OIF Veterans (Elbogen et al., 2013; Hoge et al., 2004). These statements pertained to reasons that veterans with post-deployment health problems may be resistant to seek treatment (e.g., “I would be seen as weak by others,” or, “I don’t know where to go for help.”)

Preferences for health services—In order to assess veterans’ preferences for health services, respondents were asked to rate their likelihood of using 25 interventions across multiple service domains (e.g., “Help with school or career decisions,” or, “Help dealing with anger and irritability.”) using a three-point Likert-scale (1 = not likely, 2 = somewhat likely, and 3 = very likely) drawing from a qualitative needs assessment utilizing six, 10 – 12 participant, focus groups that are described in detail elsewhere (Kelly and Barksdale, 2011) .

Posttraumatic stress disorder—The PTSD Checklist-Civilian Version (PCL; Weathers et al., 1993) was used to assess the presence of significant symptoms of PTSD. The PCL is a 17-item self-report scale with items that correspond to the 17 DSM-IV-TR PTSD criteria (APA, 2000). Respondents rated how much they had been bothered by each symptom during the past month on a 5-point scale. The PCL has demonstrated excellent reliability, high test-retest reliability, and good convergent validity (Blanchard, 1996). In the present sample the internal consistency was excellent (Cronbach’s $\alpha = .97$). In an effort to ensure that the criteria used to identify individuals with significant symptoms of PTSD and individuals reporting problematic anger were mutually exclusive, item 14 (“Felt irritable or had angry outbursts”) was not included in the total score derived from the PCL used for diagnostic classification purposes. In order to capture individuals who reported significant levels of PTSD symptoms (i.e., would likely meet criteria for full or subthreshold PTSD) a conservative cut-off score was used. Previous research has used a cut-off of 35 or greater on the PCL to identify subthreshold levels of PTSD among Iraq-Afghanistan veterans (Jakupcak et al., 2007). In the current study, as we did not include item 14 in the PCL total score, we adjusted Jakupcak et al.’s (2007) cut-off score by subtracting the median value of item 14 (score of 2; see below) to arrive at a cut-off score of 33. Thus, in the present study, individuals who scored 33 or greater were identified as having significant symptoms of PTSD.

Anger—Item 14 from the PCL, “Felt irritable or had angry outbursts,” was used to detect participants reporting problematic anger. In the current sample, the median value for this variable was a score of 2 (*a little bit*), with 43.4% of respondents reporting a score of 1 (*none*), 22.1% reporting 2, and the remaining respondents (34.5%) reporting a score of 3 (*moderately*) or higher. Thus, the sample was dichotomized at the median and those who endorsed a 3 (*moderately*) or greater were classified as having problematic anger.

Analyses

Three groups were created: 1) veterans reporting anger problems without significant symptoms of PTSD ('Anger/No PTSD group'), 2) veterans with significant symptoms of PTSD ('PTSD group'), and 3) veterans without anger problems or significant symptoms of PTSD ('Neither Anger nor PTSD group'), using the methods outlined above. Demographic characteristics of each group were calculated. Analysis of variance (ANOVA) and chi-square tests were conducted to compare the demographic characteristics of the three groups. Significant ANOVA results were followed up with planned comparison tests to determine if the Anger/No PTSD group differed significantly from either of the other two groups.

Next, mental health treatment utilization, barriers to care, and preferences for treatment were calculated and compared between the Anger/No PTSD group and the other two groups. These comparisons were conducted using Chi-square tests for categorical measures (mental health treatment utilization) and ANOVAs (ratings of barriers and preferences) to compare the three groups. Significant ANOVA results were followed up with planned comparison tests to determine if the Anger/No PTSD group differed significantly from either of the other two groups. In order to control for Type 1 error, family-wise Bonferroni corrections were applied. Alpha levels used to test for significance for each category were: Demographics: $p = 0.0031$; Barriers: $p = 0.0029$; Preferences: $p = 0.002$.

Results

Demographic Characteristics

Cohort characteristics and ANOVA F-values or Chi-square values comparing the three groups are presented in Table 1. Planned comparison analyses comparing the Anger/No PTSD group with each of the other two groups, found that the Anger/No PTSD group reported significantly more combat exposure than the Neither Anger nor PTSD group ($t_{215.2} = 4.40, p < .001$), significantly higher PCL scores ($t_{174.5} = 13.38, p < .001$), and were significantly less likely to be an officer ($\chi^2 = 15.26, p < .001$). Furthermore, the Anger/No PTSD group earned significantly greater income ($t_{304.0} = 3.46, p = .001$), had lower PCL scores ($t_{401.0} = -17.78, p < .001$), and reported significantly less combat exposure ($t_{338.9} = -6.31, p < .001$) than the PTSD group.

Mental Health Treatment Utilization

Analyses of mental health treatment utilization found that the rate of mental health use was nearly twice as high for the PTSD group (49.5%) compared to the Anger/No PTSD group (28.3%), and this difference was significant, $\chi^2 = 18.11, p < .001$. Additionally, the Anger/No PTSD group was more than four times as likely to have used mental health care services as the Neither Anger nor PTSD group (5.8%), $\chi^2 = 70.63, p < .001$.

Barriers to Care

Ratings of barriers items (see Table 2) revealed that the most highly endorsed barrier to treatment for the Anger/No PTSD group was the belief, "It's up to me to work out my own problems," followed by avoidance of psychotropic medication, fear that treatment would harm their career, fear of being seen as weak by others, and concerns about cost of

treatment. These were followed by concerns about being treated differently by an employer, concerns about the effectiveness of therapy, and concerns that therapy would make them feel down about themselves. The lower half of items endorsed were related to logistical difficulties (e.g., trouble getting time off work), reluctance to discuss war experiences, mistrust of mental health professionals, and doubts about confidentiality.

For all barriers, there were significant differences between the endorsement rates among the three groups (see Table 2). Broadly, the Anger/No PTSD group's mean endorsement ratings were lower than those of the PTSD group and higher than those of the Neither Anger nor PTSD group. Next, planned comparison tests were conducted to determine which barriers were rated significantly differently between the Anger/No PTSD group and each of the other two groups. The Anger/No PTSD group endorsed significantly higher ratings of the following barriers, when compared to the Neither Anger nor PTSD group: belief that it is up to them to work out their own problems ($t_{1018} = -4.49, p < .001$), avoidance of psychotropic medication ($t_{214.4} = -3.206, p = .002$), fear of career stigma ($t_{1023} = -4.40, p < .001$), fear of being seen as weak by others ($t_{1020} = -5.58, p < .001$), concerns about cost of treatment ($t_{1024} = -4.49, p < .001$), fear of stigma from employers ($t_{1023} = -4.81, p < .001$), concerns that treatment would not work ($t_{1020} = -3.70, p < .001$), concerns it may make them feel down about themselves ($t_{203.65} = -5.27, p < .001$), hesitance to talk about war experiences ($t_{1022} = -5.29, p < .001$), concerns about amount of time that treatment will take ($t_{199.65} = -3.57, p < .001$), concerns about getting time off work ($t_{198.36} = -3.21, p = .002$), and concerns about trusting mental health professionals ($t_{189.53} = -3.71, p < .001$). Furthermore, the Anger/No PTSD group endorsed significantly lower ratings of the following barriers when compared to the PTSD group: fear of stigma from employers ($t_{1023} = -3.35, p = .001$), hesitance to talk about war experiences ($t_{1022} = -4.85, p < .001$), and fear of stigma from coworkers ($t_{309.3} = -3.77, p < .001$).

Preferences for Health Services

Among preferences items (see Table 3), the Anger/No PTSD group rated receiving information about benefits as the most highly preferred service. They rated help finding employment, eye exams, and dental exams highly in this list. Consistent with the group selection, they rated anger treatment next. Additional items that were ranked in the top half of the list include hearing exams, help making career decisions, information about chemical or infectious exposures during deployment, and help with stress, sleep, and pain management. Preferences for help with family/marriage issues and financial counseling were endorsed less frequently. Help for substance misuse and peer counseling with other Veterans were among the lowest ranked preferences endorsed.

For all preferences, there were significant differences between the endorsement rates among the three groups (see Table 3). Similar to the barriers findings, the Anger/No PTSD group's mean endorsement ratings fell in between those of the other groups, lower than the PTSD group and higher than the Neither Anger nor PTSD group. Again, planned comparison tests were conducted to determine which preferences were rated significantly differently between the Anger/No PTSD group and each of the other two groups. The Anger/No PTSD group endorsed significantly higher preferences for the following services, when compared to the

Neither Anger nor PTSD group: help dealing with anger ($t_{1057} = -6.57, p < .001$), help with school and career decisions ($t_{1055} = -3.14, p = .002$), help dealing with stress ($t_{1056} = -4.66, p < .001$), and help getting their marriage back on track ($t_{189.4} = -3.51, p = .001$). The Anger/No PTSD group rated multiple preferences for services significantly lower when compared to the PTSD group: dental exams ($t_{1073} = -3.56, p < .001$), eye exams ($t_{1076} = -3.51, p < .001$), help dealing with anger ($t_{1057} = -3.31, p = .001$), hearing tests ($t_{1059} = -3.82, p < .001$), help handling stress ($t_{1056} = -4.23, p < .001$), help with sleep problems ($t_{256.7} = -6.65, p < .001$), help with pain management ($t_{1051} = -4.80, p < .001$), readjustment help in primary care ($t_{299.2} = -4.99, p < .001$), information and support for family ($t_{1037} = -4.44, p < .001$), help managing breathing problems ($t_{305.7} = -3.94, p < .001$), and peer counseling ($t_{327.7} = -3.22, p = .001$).

Discussion

Despite the fact that anger is one of the most common reported problems among returning veterans (Sayer et al., 2010), little research attention has been devoted to studying issues of treatment engagement in subgroups of returning veterans with anger problems who do not meet diagnostic criteria for other psychiatric conditions, most notably PTSD. To our knowledge, this was the first investigation to assess treatment preferences and barriers among returning veterans with anger problems who did meet criteria for full or subthreshold PTSD. As we had hypothesized, we found that veterans endorsing anger problems reported significantly lower rates of mental health treatment utilization than the PTSD group, with only 28.3% having received mental health treatment in the past year. This was significantly less than the PTSD group (49.5%), but over four times the rate of the Neither Anger nor PTSD group (5.8%). This finding is somewhat surprising, considering that, contrary to our predictions, the Anger/No PTSD reported fewer barriers to treatment than the PTSD group. However, given that the Anger/No PTSD group's top barrier to treatment was "It's up to me to work out my own problems," they may be less willing to seek therapy or more convinced that resolving anger and related concerns is a personal responsibility. The Neither Anger nor PTSD group also reported significantly less mental health treatment utilization than the Anger/No PTSD group, and fewer barriers to treatment, which is not surprising considering lack of apparent need for mental health treatment.

The Anger/No PTSD group was significantly different from the other two groups on several variables, suggesting that this subsample was unique in a number of key ways. For example, the Anger/No PTSD group endorsed significantly less combat exposure than the PTSD group, yet significantly more combat exposure than the Neither Anger nor PTSD group. Furthermore, the Anger/No PTSD group was significantly less likely to be an officer than the Neither Anger nor PTSD group. Additionally, the Anger/No PTSD group rated many barriers (e.g., stigma, concerns about treatment, logistical barriers) more highly than the Neither Anger nor PTSD group, suggesting a greater degree of resistance to engage in mental health treatment. They rated three barriers significantly lower than the PTSD group (i.e., stigma from employer, stigma from coworkers, and hesitation to discuss war experiences) as well. Taken together, these findings lend support to the notion that the Anger/No PTSD sample is a distinctive subgroup of veterans with a unique array of barriers to receiving mental health treatment, which may warrant targeted efforts for intervention.

At the same time, it is important to note that all three groups communicated fairly similar preferences for treatment. Overall, and as we had hypothesized, the PTSD group rated all preferences higher than the Anger/No PTSD group (who in turn rated all preferences higher than returning veterans without problematic anger or probable PTSD). As we would expect, the Anger/No PTSD group rated their preference for receiving anger treatment quite highly (5th out of 25 items). Additionally, they rated their preference for anger treatment significantly higher than the Neither Anger nor PTSD group, suggesting that at least some of the individuals in the Anger/No PTSD were aware of their anger problems and amenable to treatment. It should be noted that the PTSD group produced the strongest preference for anger treatment among all subgroups. An additional analysis found that individuals in the PTSD group reported higher levels of anger and irritability (PCL item 14) than those in the Anger/No PTSD group ($t_{1135} = -2.20, p < .05$). Thus, it is not surprising that the PTSD group may be more interested in receiving anger treatment than the Anger/No PTSD group. Overall, it appears that anger is a pervasive problem and desired treatment target for many veterans post-deployment, whether or not they meet criteria for PTSD.

Another potential explanation for the PTSD group's higher reported preference for receiving anger treatment is that PTSD may lead individuals to experience greater daily distress than those with anger problems alone. Symptoms of PTSD are generally highly distressing and associated with marked reductions in quality of life (Malik et al., 1999). They are manifested as a result of exposure to a traumatic event. By definition, individuals with PTSD experience a change in their mental state following exposure to a traumatic event (APA, 2013). In contrast, it is reasonable to hypothesize that anger problems are considered more acceptable to the individual. Veterans in our Anger/No PTSD group may have experienced anger problems for many years, even before deployment. They may view their anger as instrumental and may not be fully aware of the negative consequences of their anger (Taylor and Novaco, 2005). They may also believe that their anger is caused by those around them and not something for which treatment is required, despite potential negative consequences, including relationship problems, health problems, and increased risk for suicide. Therefore, those in the Anger/No PTSD group may be less likely to seek treatment because they view their anger as functional rather than distressing.

Furthermore, there has been great emphasis placed on assessing PTSD symptoms in returning veterans at post-deployment and offering education about treatment options. For example, the Department of Defense has initiated the use of a standardized mental health screening tool for all returning combat veterans (Milliken et al., 2007). Given the prominence of community outreach (including websites like makingtheconnection.net, <http://www.ptsd.va.gov/apps/AboutFace/>, & NCPTSD.va.gov) and media coverage (e.g., an internet search of "Veterans and PTSD" yields nearly 6 million responses), returning veterans who are experiencing PTSD symptoms may realize that there are treatment options available. It is less clear whether returning veterans with anger problems (who are not experiencing full or subthreshold PTSD) realize that they can receive treatment for anger, or understand where they may go for such treatment. Cognitive behavioral treatments for anger have demonstrated efficacy among Iraq-Afghanistan veterans (e.g., Morland et al., 2010; Shea, Lambert, & Reddy, 2013) and Vietnam veterans (e.g., Chemtob, Novaco, Hamada &

Gross, 1997). However, anger treatments for veterans have been less researched than PTSD treatments and may in fact be less available to returning veterans.

Within the VA system, anger management groups are often offered as a secondary or adjunctive treatment, and usually are accessed through traditional mental health services once an individual has sought treatment for another problem, such as PTSD or substance use disorders. Veterans whose primary complaint is anger may be less likely to be identified and offered treatment than those who present for treatment with another diagnosis or mental health problem. Given the prevalence of anger problems and interpersonal conflict among returning veterans at post-deployment (Milliken et al., 2007; Sayer et al., 2010), a greater focus on implementing anger treatment programs, increasing access to these services and identifying/screening potential candidates is warranted.

That the highest rated barrier to treatment for the Anger/No PTSD group was “It’s up to me to work out my own problems” may signal a general reluctance in this cohort of veterans to reach out to others for help. Other highly rated barriers to treatment referred to cost of treatment, reluctance to use medication, fear of stigma at work, uncertainty of the effectiveness of treatment, fear of being seen as weak by others, and concerns that treatment would make them feel down about themselves. Efforts to educate returning veterans about available treatments (including anger treatments), their format, and their effectiveness may be important to assuage some of these concerns and make veterans more willing to consider therapy. Additionally, fear of stigma was a highly rated concern for this group. Programs that disseminate testimonials from veterans who have been through mental health treatment (e.g., maketheconnection.net) may be particularly helpful to reduce this fear of stigma and illustrate the benefits of treatment.

The top rated preference among the Anger/No PTSD group of returning veterans was “help learning about benefits,” followed by interest in help finding a job and medical services (e.g., dental, eye, and hearing exams). These services may be a valuable way to engage returning veterans in the VA health system. Recently, there have been efforts by the VA to incorporate mental health care services within primary care settings (Johnson-Lawrence et al., 2012). Efforts to bridge the gap between primary medical care and mental health care may be a key component to getting treatment-resistant veterans to reconsider. Especially in the case of anger, a problem that, if chronic and unmanaged, can lead to long term health problems, including cardiovascular disease (Smith et al., 2004; Williams et al., 2000). Primary care physicians and ancillary staff may be instrumental in educating veterans about the link between their anger and health conditions and informing them about available treatments.

There are a few limitations with the current study. First, the Anger/No PTSD group was identified based on response to a single item of the survey (from the PCL) rather than a validated measure of anger. However, the characteristics of the Anger/No PTSD group are unlikely to be driven by underlying PTSD-related symptoms as we partitioned out respondents reporting even subthreshold symptoms and it is notable that a significant proportion (13%) of the pool of respondents acknowledged experiencing distressing irritable feelings and angry outbursts in absence of other PTSD-related symptoms. Future research

should use validated, anger-specific measures to identify veterans with problematic anger. One such measure is the Dimensions of Anger Reactions scale (DAR; Novaco, 1975), a brief 7-item scale that has been validated for use with Iraq-Afghanistan veterans (Novaco, Swanson, Gonzalez, Gahm, & Reger, 2012). Second, the measure used to assess combat exposure was simply a count of the types of combat experienced, but did not account for the number of experiences within an exposure type (e.g., number of times that the soldier was attacked or ambushed) or the intensity of this exposure. Third, not all veterans completed the survey. The modest cooperation rate (29%), as well as the fact that a regional sample was targeted, indicates that the current sample may not be representative of all returning veterans. Unfortunately, we were unable to compare the demographic characteristics of survey completers vs. non-completers, due to privacy and confidentiality protections in place. However, other population-based, mail survey studies of OEF/OIF veterans have reported similarly low response rates (Eisen et al., 2012; Gradus et al., 2013; Pietrzak et al., 2009). Furthermore, similar surveys of OEF/OIF veterans have found that as many as 43% of non-returned surveys were not received (Eisen et al., 2012), and the demographics of the current sample compare very favorably with other national samples of Iraq-Afghanistan veterans and active-duty military (Crawford et al., 2015). Nonetheless, additional research on this topic, using a nationally representative sample is needed.

Conclusions

Taken together, the findings from this study suggest that veterans who may benefit from anger management treatments may be less likely to seek them than veterans with full or subthreshold PTSD. Efforts to identify and educate this group of returning veterans about available treatments may be instrumental in reducing the negative effects of anger problems on veterans' mental and physical health, their relationships, and their reintegration to civilian life. Future research should continue to examine the needs of this unique group of veterans.

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Sociodemographic characteristics and rates of mental health treatment utilization of VISA-6-area returning Veterans who report significant anger, but do not have significant symptoms of PTSD, those with significant symptoms PTSD, and those without anger problems or PTSD

Table 1

Variable	Anger Problems without PTSD (N= 159)			PTSD (N = 285)			Neither Anger nor PTSD (N = 716)		
	M	SD		M	SD		M	SD	F
Age	37.53	9.12		37.32	10.04		39.97	9.82	9.46***
Income (in thousands) *	66.87	35.40		55.03	32.46		74.85	34.19	34.23***
Deployments	1.61	0.90		1.60	0.82		1.62	0.88	0.07
Months deployed	11.85	6.27		12.57	6.24		10.59	7.02	9.51***
Years since deployment	4.79	1.92		4.91	1.72		4.99	1.95	0.75
PTSD Checklist Score ^{*/+}	32.14	10.39		52.63	13.61		20.84	4.95	1356.75***
Combat Exposure ^{*/+}	4.40	3.84		6.88	4.11		2.93	3.45	115.80***
	N	%		n	%		n	%	χ^2
Male	137	86.2		239	83.9		584	81.6	2.63
Female	22	13.8		43	16.1		131	18.4	
Ethnicity									
White	110	72.4		192	71.4		516	74.7	1.21
Non-white	42	27.6		77	28.6		175	25.3	
Hispanic	15	9.6		19	6.8		43	6.1	2.50
Non-Hispanic	142	90.4		259	93.2		666	93.9	
Married	122	77.7		180	64.3		514	72.4	10.25**
Unmarried	35	22.3		100	35.7		196	27.6	
Dependent Children	111	69.8		177	62.1		441	61.6	3.85
No Dependents	48	30.2		108	36.9		275	38.4	
Currently Employed	116	73		174	61.1		569	79.5	36.10***
Currently Unemployed	43	27		111	38.9		147	20.5	
VA Disability Rating									40.72***
0%	84	56		110	43		409	60.4	
10 – 40%	40	26.7		72	28.1		185	27.3	

Variable	Anger Problems without PTSD (N= 159)			PTSD (N = 285)			Neither Anger nor PTSD (N = 716)		
	M	SD		M	SD		M	SD	F
50%	26	17.3		74	28.9		83	12.3	
Military Component									
Reserves	26	16.4		51	17.9		142	19.8	11.72
National Guard	35	22		66	23.2		119	16.6	
Active Duty	91	57.2		165	57.9		433	60.5	
Officer [†]	28	17.7		34	12.1		238	33.6	55.07***
Enlisted	130	82.3		248	87.9		471	66.4	
Military Branch [†]									59.46***
Air Force	18	11.3		21	7.4		126	17.6	
Army	90	56.6		166	58.2		311	43.4	
Marines	27	17		50	17.5		77	10.8	
Navy	22	13.8		39	13.7		188	26.3	
Mental Health Treatment Utilization ^{*,†}									273.80***
Never	109	71.7		141	50.5		648	94.2	
1 or more times	43	28.3		138	49.5		40	5.8	

* Anger/No PTSD group is significantly different than the PTSD group at the Bonferroni-corrected p-value of 0.0031.

[†] Anger/No PTSD group is significantly different than the Neither Anger nor PTSD group at the Bonferroni-corrected p-value of 0.0031.

p < .001,

**
p < .01

Table 2

Barriers to post-deployment mental health engagement among VISA-6-area returning Veterans who report significant anger, but do not have significant symptoms of PTSD, those with significant symptoms PTSD, and those without anger problems or PTSD

	Anger Problems without PTSD (N =145) ^a	PTSD (N =275) ^a	Neither Anger nor PTSD (N =611) ^a	F
	M (SD)	M (SD)	M (SD)	
It's up to me to work out my own problems ⁺	3.04 (1.24)	3.31 (1.32)	2.51 (1.22)	40.98 ***
I don't want to be prescribed medications ⁺	3.04 (1.33)	3.36 (1.38)	2.63 (1.41)	26.80 ***
It might harm my career ⁺	2.89 (1.43)	3.27 (1.41)	2.32 (1.34)	47.22 ***
I would be seen as weak by others ⁺	2.87 (1.28)	3.26 (1.38)	2.20 (1.24)	69.05 ***
I am concerned about the cost of treatment ⁺	2.83 (1.37)	2.90 (1.45)	2.26 (1.29)	26.00 ***
My unit leadership or employer might treat me differently ^{*,+}	2.82 (1.29)	3.27 (1.39)	2.23 (1.26)	62.60 ***
I don't think treatment would help me ⁺	2.66 (1.11)	2.96 (1.25)	2.29 (1.14)	33.45 ***
Treatment would make me feel down on myself ⁺	2.64 (1.10)	2.95 (1.31)	2.10 (1.09)	55.19 ***
I don't want to talk about my war experiences ^{*,+}	2.76 (1.22)	3.36 (1.30)	2.16 (1.16)	95.99 ***
My unit or coworkers might have less confidence in me [*]	2.58 (1.26)	3.09 (1.42)	2.22 (1.26)	43.09 ***
I just don't have the time ⁺	2.56 (1.32)	2.69 (1.30)	2.12 (1.21)	22.10 ***
It's hard getting time off work for treatment ⁺	2.56 (1.36)	2.91 (1.38)	2.16 (1.25)	32.27 ***
I don't trust mental health professionals ⁺	2.47 (1.32)	2.65 (1.32)	2.03 (1.10)	28.26 ***
Visits would not remain confidential	2.31 (1.19)	2.69 (1.40)	2.02 (1.16)	28.08 ***
I don't know where to go for help	2.26 (1.34)	2.60 (1.39)	1.90 (1.13)	31.61 ***
It is difficult getting childcare	2.26 (1.13)	2.35 (1.27)	2.00 (1.08)	9.93 ***
I don't have adequate transportation	1.68 (1.08)	1.72 (1.03)	1.43 (0.81)	11.06 ***

Barriers are presented in order of endorsement (highest to lowest mean rating) by the Anger/No PTSD subsample. Barriers were rated on a 5-point Likert-scale (1 = strongly disagree; 5 = strongly agree).

^a All data were not available for all veterans.

^{*} Anger/No PTSD group is significantly different than the PTSD group at the Bonferroni-corrected p-value of 0. 0029.

⁺ Anger/No PTSD group is significantly different than the Neither Anger nor PTSD group at the Bonferroni-corrected p-value of 0. 0029.

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Table 3

Post-deployment health care preferences among VISN-6-area returning Veterans who report significant anger, but do not have significant symptoms of PTSD, those with significant symptoms PTSD, and those without anger problems or PTSD

	Anger Problems without PTSD (N =144) ^a			PTSD (N =278) ^a Neither Anger nor PTSD (N =654) ^a		
	M (SD)	M (SD)	F	M (SD)	M (SD)	F
Help learning about benefits	2.37 (0.73)	2.51 (0.68)	12.49***	2.25 (0.78)		
Help getting a job	2.14 (0.89)	2.23 (0.86)	12.66***	1.93 (0.86)		
Dental exams *	2.14 (0.86)	2.44 (0.78)	21.50***	2.05 (0.85)		
Eye exams *	2.12 (0.86)	2.42 (0.77)	20.37***	2.04 (0.84)		
Help dealing with anger and irritability * ₊	2.10 (0.80)	2.36 (0.76)	92.94***	1.63 (0.77)		
Hearing tests *	2.07 (0.83)	2.39 (0.77)	30.41***	1.93 (0.83)		
Help with school or career decisions ⁺	2.07 (0.86)	2.26 (0.83)	27.26***	1.82 (0.84)		
Information about chemical or infectious exposures while deployed overseas	2.01 (0.84)	2.16 (0.84)	16.76***	1.82 (0.84)		
Help handling stress * ₊	1.98 (0.81)	2.31 (0.79)	75.71***	1.65 (0.74)		
Help with sleep problems *	1.88 (0.86)	2.45 (0.76)	91.98***	1.68 (0.78)		
Help with pain management *	1.85 (0.86)	2.25 (0.82)	49.40***	1.67 (0.78)		
Information about exposure to chemicals and toxins	1.81 (0.85)	2.06 (0.86)	17.23***	1.70 (0.82)		
Help getting your marriage on track ⁺	1.73 (0.82)	1.74 (0.86)	15.35***	1.47 (0.72)		
Help with weight control	1.72 (0.83)	1.91 (0.89)	16.01***	1.58 (0.76)		
Financial counselling	1.67 (0.80)	1.85 (0.86)	17.77***	1.51 (0.75)		
Readjustment help if offered in primary care *	1.67 (0.77)	2.09 (0.85)	43.73***	1.56 (0.76)		
Information and support for your family about normal readjustment problems *	1.65 (0.72)	1.99 (0.83)	41.53***	1.50 (0.70)		
Assistance with physical rehabilitation	1.64 (0.79)	1.90 (0.87)	14.31***	1.59 (0.78)		
Help getting back in touch with your kids	1.60 (0.77)	1.73 (0.86)	19.69***	1.40 (0.69)		
Help with managing breathing problems *	1.54 (0.75)	1.87 (0.87)	20.63***	1.51 (0.75)		
Peer counselling with other Veterans *	1.50 (0.71)	1.76 (0.85)	18.05***	1.44 (0.70)		

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	Anger Problems without PTSD (N =144) ^a		PTSD (N =278) ^a		Neither Anger nor PTSD (N =654) ^a		<i>F</i>
	<i>M</i> (<i>SD</i>)		<i>M</i> (<i>SD</i>)		<i>M</i> (<i>SD</i>)		
Help with smoking cessation	1.40 (0.72)		1.53 (0.80)		1.35 (0.67)		5.84 ^{***}
Help with substance use/dependence	1.37 (0.66)		1.55 (0.82)		1.33 (0.66)		9.26 ^{***}
Multi-lingual services	1.30 (0.64)		1.44 (0.75)		1.29 (0.63)		4.85 ^{***}

Preferences are presented in order of endorsement (highest to lowest mean rating) by the Anger/No PTSD subsample. Preferences were rated on a 3-point scale (1 = not likely, 2 = somewhat likely, 3 = very likely).

^a All data were not available for all veterans.

* Anger/No PTSD group is significantly different than the PTSD group at the Bonferroni-corrected p-value of 0.002.

[†] Anger/No PTSD group is significantly different than the Neither Anger nor PTSD group at the Bonferroni-corrected p-value of 0.002.

p < .001,

p < .01