



Veteran satisfaction and treatment preferences in response to a posttraumatic stress disorder specialty clinic orientation group

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ABSTRACT

To maximize accessibility to evidence-based treatments for posttraumatic stress disorder (PTSD), the United States Department of Veterans Affairs (VA) has widely disseminated cognitive processing therapy (CPT) and prolonged exposure (PE) therapy to VA clinicians. However, there is a lack of research on veteran preferences when presented with a range of psychotherapy and medication options. This study uses a mixed-method approach to explore veteran satisfaction with a VA PTSD specialty clinic pre-treatment orientation group, which provides education about available PTSD treatment options. This study also tested differences in treatment preference in response to the group. Participants were 183 US veterans. Most were White, male, and referred to the clinic by a VA provider. Results indicated high satisfaction with the group in providing an overview of services and helping to inform treatment choice. Most preferred psychotherapy plus medications (63.4%) or psychotherapy only (30.1%). Participants endorsed a significantly stronger preference for CPT versus other psychotherapies. PE was significantly preferred over nightmare resolution therapy and present-centered therapy, and both PE and cognitive-behavioral conjoint therapy were preferred over virtual reality exposure therapy. Results suggest that by informing consumers about evidence-based treatments for PTSD, pre-treatment educational approaches may increase consumer demand for these treatment options.

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Posttraumatic stress disorder (PTSD) is a prevalent psychiatric condition among civilians and military veterans (Norris & Sloane, 2014). Among veterans, approximately 22% of Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF) veterans (Seal et al., 2009) and 19%–30% of Vietnam veterans (Dohrenwend et al., 2006) have met probable criteria for PTSD. These rates highlight the substantial number of military personnel and veterans that may require treatment to address PTSD. Fortunately, there are several evidence-based psychotherapies and medications that have demonstrated efficaciousness and effectiveness in treating PTSD symptoms (Cahill, Rothbaum, Resick, & Follette, 2009; Friedman, Davidson, & Stein, 2009). Less is known about preferences for evidence-based psychotherapies and medications among

treatment-seeking individuals, including veterans.

Exploring treatment preferences is an important research endeavor that can highlight factors associated with the gap between the need for - and the use of - mental health services among veterans and service members (e.g., Tanielian & Jaycox, 2008). For example, efficacious treatments may be underutilized if individuals do not view these treatments as desirable options for psychological treatment. Understanding patient preferences for treatment may also improve clinical outcomes as matching patients to their preferred treatment may facilitate engagement in treatment. In addition, matching patients to their treatment of choice is associated with less likelihood of treatment drop out and better outcomes following treatment (Swift, Callahan, & Vollmer, 2011). Finally, addressing patient preference for treatment and educating patients about their treatment options is a central part of the informed consent process. For these reasons, it is essential that we further examine patient preferences for evidence-based treatments for PTSD.

Although there is a small, but growing literature in the area of treatment choice, there are several studies that provide an initial

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understanding of individual preferences for treatment. In a sample of college students in the United Kingdom who were presented with 14 options for psychotherapies, results demonstrated the strongest preferences for cognitive therapy, exposure therapy, or psychoeducation, whereas eye movement desensitization and reprocessing (EMDR), psychodynamic psychotherapy, and therapies involving novel technologies (i.e., virtual reality, e-therapy, and computer-based therapy) were the least preferred treatment options (Tirrier, Liversidge, & Gregg, 2006). Similar findings were shown among a sample of United States college student analogue sample in that exposure therapy and cognitive-behavioral therapy were the most preferred treatments (Becker, Darius, & Schaumberg, 2007).

Studies using clinical samples have also explored patient treatment preferences for PTSD, particularly regarding psychotherapy and medication. Consistent with the general public's preference for psychotherapy over medication (Barlow, 2004); empirical evidence suggests that victims of assault prefer psychotherapy over medication (Roy-Byrne, Berliner, Russo, Zatzick, & Pitman, 2003). Specifically, 80% of the sample indicated interest in treatment (i.e., psychotherapy or medication), with 76% expressing interest in counseling and 62% in medication. The study did not assess preference for a specific type of counseling or for specific medications, so more detailed comparisons could not be made. Zoellner, Feeny, Cochran, and Pruitt (2003) showed that among 273 women there was a significant preference for cognitive-behavioral therapies (i.e., prolonged exposure [PE]) for PTSD as compared to sertraline. Preference for PE as compared to sertraline has been replicated in other studies using various samples, such as trauma-exposed women (Feeny, Zoellner, Mavissakalian, & Roy-Byrne, 2009), undergraduate students naïve to treatment (Pruitt, Zoellner, Feeny, Caldwell, & Hanson, 2012), and a community sample with trauma histories (Angelo, Miller, Zoellner, & Feeny, 2008). Patients may have preference for psychotherapies over medication due to the perception that processing the trauma is necessary for recovery (Angelo et al., 2008; Jaeger, Echiverri, Zoellner, Post, & Feeny, 2009) or that psychotherapy appears more credible as a treatment option (Zoellner, Feeny, & Bittinger, 2009).

To date, the only research examining treatment choice and preference among military personnel or veterans is a study by Reger et al. (2013) of deployed US Army soldiers. Additionally, this study utilized a primarily male sample, which was a notable difference from prior studies examining treatment preference. Even with these differences, the findings were comparable to the results of non-military samples. Specifically, results showed greater preferences for PE and virtual reality exposure (VRE) compared to paroxetine or sertraline. Soldiers who preferred exposure therapies reported that they believed these medications to be less efficacious; whereas those who preferred medications were more concerned about stigma and negative repercussions associated with seeking treatment. These findings allude to the importance of beliefs regarding treatment efficacy in patient choice and preference. Particularly, understanding the mechanisms of treatment and perceived treatment efficacy are shown to be more robustly associated with treatment choice among patients seeking PTSD treatment than individual characteristics of the patient (Angelo et al., 2008; Chen, Keller, Zoellner, & Feeny, 2013; Zoellner et al., 2009). Thus, these findings support the importance of not only exploring treatment preferences, but educating patients seeking PTSD treatment about their treatment options.

The research literature has helped inform clinical understanding of preferences regarding PTSD treatment; yet there is a need for additional research on treatment choice for PTSD, especially within US Department of Veterans Affairs (VA). Currently, the VA

mandates that patients be offered empirically-supported psychotherapies (i.e., cognitive processing therapy [CPT] and PE) for PTSD (US Department of Veterans Affairs, 2012). In order to make these treatments available to veterans, the VA has initiated an unprecedented dissemination program to train VA clinicians in evidence-based psychotherapies. However, researchers have noted that a top-down organizational approach to train clinicians and mandate that veterans are offered CPT and PE will have limited success unless there is also patient buy-in to engage in these treatments (Karlin & Cross, 2014). To obtain maximum uptake of empirically-supported psychotherapies, Karlin and Cross (2014) recommend a multi-level organization approach, which includes strategies to increase patient "pull" or motivation to receive empirically-supported therapies. However, strategies that target patient preferences have been one of the most neglected aspects of healthcare dissemination (Karlin & Cross, 2014). In addition, despite the availability of CPT and PE within VA clinics, there is a lack of research exploring veteran preferences for these and other PTSD treatment options. To our knowledge, no studies to date have examined treatment preferences when veterans seeking PTSD treatment are offered competing psychotherapies, choices for either psychotherapy or medication alone, or the option to receive psychotherapy combined with medication. Finally, clinic orientation groups are commonly used within VA settings as a method of educating and engaging veterans who are new to treatment (Karlin & Cross, 2014); yet there are no studies to examine veteran satisfaction with these groups or how these groups may affect veteran choice of treatments.

The first aim of this study was to examine veteran-reported satisfaction with a VA PTSD specialty clinic orientation group. The purpose was to increase the knowledge of consumer acceptability of a pre-treatment engagement strategy that is often used in VA clinics, but for which there is a lack of research (Karlin & Cross, 2014). A mixed-method approach was used to measure quantitative ratings of veterans' satisfaction and to explore qualitative themes that arose from veterans' written responses to an open-ended question inviting feedback about how to improve the orientation group.

The second aim of this study was to compare veteran preference ratings for treatments offered within the clinic. Given the lack of research on veteran preferences for PTSD options, the purpose was to improve the understanding of veteran-rated preferences for specific forms of evidence-based treatment for PTSD. Based upon findings from non-veteran samples (e.g., Roy-Byrne et al., 2003; Zoellner et al., 2003) and an active duty sample (Reger et al., 2013), we had the following hypotheses. First, veterans would more frequently endorse a preference for psychotherapy versus medication to address their PTSD. Second, veterans would indicate a stronger preference for CPT and PE versus other psychotherapies. This hypothesis is based upon prior studies of non-veterans who showed a preference for exposure-based and cognitive-behavioral psychotherapies versus other form of psychotherapy (Becker et al., 2007; Tirrier et al., 2006). Following prior research (Angelo et al., 2008; Chen et al., 2013), we expected that information regarding the strong efficacy and effectiveness of CPT and PE would persuade veterans to endorse a stronger preference for these psychotherapies in particular.

1. Method

1.1. Participants

Participants included 183 US military veterans who attended an outpatient VA PTSD clinic orientation group. Most veterans were male (89.13%; $n = 164$) and, on average, in their mid-40's ($M = 45.32$, $SD = 15.37$). Veteran service era was 43.48% ($n = 80$)

Iraq/Afghanistan, 26.63% ($n = 49$) Vietnam, 15.76% ($n = 29$) Persian Gulf, 13.59% ($n = 25$) Post-Vietnam, and 0.54% ($n = 1$) between Korean and Vietnam Wars. Self-identified race was predominately White (78.26%; $n = 144$) followed by African American (17.39%; $n = 32$). Eighty-seven percent (86.96%; $n = 160$) were VA provider referred, while 13.04% ($n = 24$) were self-referred to the clinic. Veterans were encouraged to invite family members and friends to the orientation group.

1.2. Materials and procedure

The 60-min orientation group was led by a licensed psychologist or social worker. The orientation group followed a structured agenda, which was provided to each veteran. The structured agenda included bullet points describing specific PTSD-focused psychotherapies and medication options that were offered through the PTSD clinic. Veterans were invited to take notes and ask questions during the group. Following the order dictated in this structured agenda, participants first received information about PE and CPT, which US VA/DoD guidelines recommend as first-line treatments for PTSD (US Department of Veterans Affairs/Department of Defense, 2010). In order to control for possible primacy effects, a random numbers table was used to determine the order in which PE or CPT were presented during a given orientation group session. Hence, order effects in presenting PE versus CPT were randomly distributed across orientation groups.

1.2.1. CPT and PE materials

Materials for describing CPT and PE include brochures produced by the VA. Participants are first given the brochures and the group facilitator provides an overview of the basic premise and structure of the treatments. Next, veterans are shown a video describing the specific treatments in-depth. Veterans view *Cognitive Processing Therapy: Effective Treatment for Veterans with PTSD* and the *Prolonged Exposure Therapy: Embrace Your Life Again* videos. Both videos are available through the VA and publicly available through the US National Center for PTSD (http://www.ptsd.va.gov/public/treatment/therapy-med/cognitive_processing_therapy.asp; <http://www.ptsd.va.gov/public/treatment/therapy-med/prolonged-exposure-therapy.asp>).

1. Cognitive Processing Therapy – Veteran/Military Version (CPT; Resick, Monson, & Chard, 2010) has the goal of reducing PTSD through emotional processing and cognitive restructuring of trauma-related emotions and thoughts. The treatment involves 12 weekly, 60-min, individual sessions. CPT assists veterans in processing trauma-related emotions through written accounts, as well as identifying more realistic and adaptive beliefs through the use of worksheets. VA/DoD guidelines recommend CPT as a first-line treatments for PTSD (US Department of Veterans Affairs/Department of Defense, 2010).
2. Prolonged Exposure (PE; Foa, Hembree, & Rothbaum, 2007) has the goal of reducing PTSD through imaginal and in-vivo exposure, which involve repeated exposure to feared, but objectively safe, memories and situations until anxiety responses are diminished. The treatment involves 9–15 weekly, 90-min, individual sessions. PE assists veterans in engaging in activities they have been avoiding because of the PTSD and reducing distress in response to traumatic reminders. VA/DoD guidelines recommend PE as a first-line treatments for PTSD (US Department of Veterans Affairs/Department of Defense, 2010).

1.2.2. Description of other treatments

After CPT and PE were presented, veterans received a

description of other treatments, which were also listed on the printed agenda. The agenda outlines the purpose and format of the treatments and what components are included in each of the treatments. The following is the presentation order and summary of the information that was provided to veterans about these remaining treatment options:

1. Virtual Reality Exposure Therapy (VRE; Rothbaum, Difede, & Rizzo, 2008) has the goal of reducing PTSD by utilizing a virtual reality format within a prolonged exposure therapy protocol. VRE assists veterans in recalling the trauma by using technology to simulate the sights, sounds, and smells of combat within a virtual reality environment. It otherwise follows a similar protocol to PE. The treatment involves 9–15 weekly, 90-min, individual sessions. Studies show that VRE appears to be equally as effective as PE.
 2. Cognitive-Behavioral Conjoint Therapy for PTSD (CBCT for PTSD; Monson & Friedman, 2012) has the goals of reducing PTSD while improving the relationship between the person with PTSD and a concerned significant other. The treatment involves 15 weekly, 75-min conjoint sessions. Participants learn to improve conflict management and communication, engage in activities they have been avoiding because of the PTSD, and identify and challenge unhelpful thoughts that have been affected by the traumatic events. Controlled and uncontrolled studies show this is an effective therapy for reducing PTSD and improving relationships.
 3. Nightmare Resolution Therapy (NRT; Donovan & Padin-Rivera, 2008) is a variation of imagery rehearsal therapy with the goals of improving sleep and reducing trauma-related nightmares. It involves 5 weekly, 60-min, individual sessions. Participants record information about their sleep and nightmares, apply relaxation and other strategies to improve sleep, and rehearse a rescripted version of the nightmare in order to make it less distressing. Studies show some benefits of imagery rehearsal therapy in improving sleep and reducing trauma-related nightmares.
 4. Present-Centered Therapy (PCT; Bernardy et al., 2008) has the goals of improving the participant's understanding of PTSD and gaining a sense of mastery in coping with these symptoms. It involves 12 weekly, 60-min, individual sessions. Participants learn to identify problems and the role of PTSD in contributing to these problems. Participants also try out ways to better cope with PTSD and other problems. Multiple controlled studies show this is an effective treatment for PTSD, although some studies show that CPT and PE might work better for reducing PTSD symptoms.
- Following the description of these psychotherapy options, participants are provided with a description of medication options for PTSD. Participants are told that they are not mandated to receive medications as part of the program but may elect to receive medications in addition to psychotherapies. Participants are also told that some veterans elect to receive medications without participating in psychotherapy. The following is the summary of the information presented to participants about medications:
1. Antidepressants have the most empirical support as medication options and are considered to be first-line choices in treating PTSD. Federal Drug Administration-approved anti-depressant medications for PTSD include sertraline (Zoloft) and paroxetine (Paxil). Other first-line antidepressant medications for PTSD include fluoxetine (Prozac) and venlafaxine (Effexor; Friedman et al., 2009; US Department of Veterans Affairs/Department of Defense, 2010).

2. Prazosin may be helpful as an adjunctive medication to improve sleep and reduce trauma-related nightmares (Friedman et al., 2009; US Department of Veterans Affairs/Department of Defense, 2010).
3. VA/DoD practice guidelines recommend against the use of benzodiazepines for treating PTSD, as there are no demonstrated benefits of these medications in treating PTSD. These medications have possible harmful side effects including the risk for addiction, overdose in combination with alcohol, and interference with benefits of some psychotherapies (US Department of Veterans Affairs/Department of Defense, 2010).

Finally, after receiving the information about medication options, veterans are asked to complete an orientation group questionnaire and those interested in treatment are scheduled for a PTSD clinic intake evaluation.

1.3. Instruments

1.3.1. Orientation group questionnaire

A 5-item mixed-method instrument was developed to assess the degree of veterans' satisfaction with the orientation group, initial treatment preferences, and recommendations for improving the orientation group. Item 1.

("How helpful was this group in providing an overview of the services available through this clinic?") and Item 2 ("How helpful was this group in informing your decision about your mental health care?") are answered on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). Item 3 asks respondents to indicate their interest in pursuing psychotherapy only, psychotherapy plus medication, medication only, or no treatment. Item 4 asks respondents who are interested in psychotherapy to rank order their choices for the following psychotherapies: CBCT for PTSD, CPT, PCT, PE, NRT, and VRE. If a participant endorses 'psychotherapy only' or 'psychotherapy plus medication' for item 3 and did not rank a particular psychotherapy for item 4, the item 4 rank for that particular therapy was coded as '7' to indicate that the preference ranked below any of the possible 6 choices. Responses to Item 5 ("Is there anything we can do to improve the orientation and education group?"), an open-ended question, were qualitatively coded.

1.4. Analyses

In recognition that mixed-method represents a burgeoning approach in psychological research, our data were subjected to quantitative and qualitative analyses. Combining qualitative and quantitative methods has several advantages. This combination enables researchers insight into participants' worldviews, offers opportunities for exploring complex phenomena, and provides data for effectively tailoring interventions to individuals (Peterson et al., 2013).

1.4.1. Qualitative analyses

One open-ended question was analyzed via content analysis, a method that arose out of the grounded theory approach (Glaser & Strauss, 1967). After the raw survey data from both open-ended questions were compiled, two of the authors independently reviewed all responses several times to see what themes and categories emerged from the data. A list of initial categories was then generated as a means of representing potential patterns individually by both authors. The two authors compared notes and reconciled any differences from their initial lists. Categories were then inspected for overlap and redundancy and, when appropriate, combined by the two authors. After categories were established, the two authors used the consolidated list to independently code

each comment.

1.4.2. Quantitative analyses

Non-parametric tests were used to analyze veteran-reported preferences for treatment. Using IBM SPSS Statistics Version 22.0 (IBM Corp, 2013), chi-square analyses were performed to test differences in the proportion of veterans who endorsed a preference for psychotherapy versus medication. Friedman's ANOVA (Friedman, 1937) was used to test differences in participants' rank order preference among psychotherapies.

2. Results

2.1. Veteran satisfaction ratings and qualitative analysis of veteran suggestions for improving the group

One veteran did not provide satisfaction ratings. Veterans reported high levels of satisfaction with the orientation group. Of the 182 who provided satisfaction ratings, most veterans (83.5%) endorsed a rating of 4 (*quite a bit*) or 5 (*extremely*) in response to the item asking them to indicate how helpful the orientation was in *providing an overview of the services available* through the PTSD clinic ($M = 4.15$; $SD = 0.82$). Most veterans (74.7%) endorsed a rating of 4 (*quite a bit*) or 5 (*extremely*) in response to the item asking them to indicate how helpful the orientation group was in *informing their decision about mental health care* ($M = 3.95$; $SD = 0.93$).

A total of 58 veterans provided qualitative responses to the open-ended item asking for suggestions to improve the orientation group. The content analysis of these responses resulted in two categorical themes: 1) no suggested improvements and 2) suggested improvements. The inter-rater agreement in classifying responses was initially excellent ($\kappa = 0.90$; Fleiss, 1981) among two of the authors. Those two authors then met again to discuss and subsequently resolve differences. The content of most veteran responses (79.3%) indicated satisfaction with the orientation group and no suggestions for improvement (see Table 1). Of the 12 "suggested improvements" comments, no thematic pattern could be identified.

2.2. Quantitative analysis of veteran treatment preferences

Most (63.4%) of the 183 veterans endorsed a preference for psychotherapy plus medications. The next highest proportion endorsed preference for psychotherapy only (30.1%), followed by no treatment (3.8%) and medications only (2.7%). A one-sample chi-square test supported significant differences in the proportion of veterans endorsing these options, $\chi^2 (N = 183, df = 3) = 178.86$, $p < .001$. A higher than expected (expected = 45.75) number of veterans endorsed a preference for psychotherapy plus medications (observed = 116) and psychotherapy only (observed = 55) and a lower than expected number of veterans endorsed a preference for no treatment (observed = 7) and medication only (observed = 5).

To test our first hypothesis, we removed the 7 veterans who endorsed a preference for no treatment and conducted a one-sample chi-square to test differences in the number of veterans endorsing preference for psychotherapy versus medication. Results supported significant differences in veteran treatment preference, $\chi^2 (N = 176, df = 2) = 105.35$, $p < .001$. The most extreme residual differences between the expected (expected = 58.67) and observed cell counts involved a higher than expected number of veterans endorsing a preference for psychotherapy plus medication (observed = 116), and lower than expected number of veterans endorsing a preference for medication only (observed = 5). The lowest residual difference between expected (expected = 58.67)

Table 1

Qualitative content analysis of veteran responses to open-ended question asking for recommendations to improve the posttraumatic stress disorder clinic orientation group.

Themes	Frequency	Example
No Suggested improvements	46	"It was informative and provided everything I needed to know." "No, very informative and outlined services available very well." "Gave a good in-depth analysis of each treatment, which helped me to make decisions easier." "This was presented very well. Thank you." "Session was informative and met expectations." "A break between videos" "Some of the cognitive language could be simplified" "Give us some of the information beforehand so we can ask questions about the stuff we read." "Time was a little short, but I'm sure more discussion time will be allotted for Q/A next during intake apt." "Don't make PTSD patients sit with their backs to the door."
Suggested improvements	12	

and observed (observed = 55) cell counts was found in veterans' preference for psychotherapy only. These findings provided mixed support for our first hypothesis in showing that the proportion of veterans endorsing a preference for medication only was lower than the number endorsing a preference for psychotherapy only or psychotherapy plus medication. However, the combination of psychotherapy plus medication was endorsed as the most preferred option.

To test our second hypothesis, we examined veterans' preference rankings for specific psychotherapies. Veterans' who indicated a preference for psychotherapy only or psychotherapy plus medication and who ranked one or more specific psychotherapies were included in this analysis. As shown descriptively in Table 2, about half (51.0%) endorsed CPT as their first psychotherapy choice, while around one-fifth endorsed CBCT (20.4%) and PE (18.5%) as their first psychotherapy choice. Less than 7% endorsed PCT, NRT, or VRE as their first psychotherapy choice. To statistically test differences in preference ratings, we used Friedman's non-parametric omnibus test. Friedman's test supported differences in veterans' psychotherapy preference rankings, $\chi^2(N = 154, df = 5) = 161.65, p < .001$. Follow-up pairwise comparisons were conducted using Wilcoxon sign-ranked tests and using the Bonferroni correction for statistical significance. Pairwise comparisons showed significantly higher veteran preference rankings for CPT versus the other psychotherapies. PE was ranked significantly higher than PCT, NRT, or VRE. CBCT was ranked significantly higher than VRE. Other pairwise comparisons were non-significant (see Fig. 1). These findings provided partial support for our second hypothesis that veterans would endorse a stronger preference for CPT and PE versus other psychotherapies.

3. Discussion

Patient preferences for evidence-based PTSD treatments are understudied in the literature, particularly among US veterans receiving treatment in VA healthcare settings. The current study not only examined veteran preferences for evidence-based PTSD treatments in a US VA clinic setting, but also explored patient satisfaction with a clinic orientation group, commonly used within the VA to provide information about available treatment options (Karlin & Cross, 2014). With regard to veteran satisfaction with the clinic orientation group, the vast majority of veterans reported that they were at least *quite a bit*, if not *extremely*, satisfied with the orientation group. Similarly, the majority of veterans in the sample found the orientation group to be helpful in informing their mental health treatment decisions. Taken together, these findings indicate that veterans who attended the PTSD orientation group were generally satisfied with the group and found the content to be helpful in making informed treatment decisions. Given the ratio of "no suggested improvements" to "suggested improvements," the qualitative findings compliment the quantitative ones. A theme was not derived from the "suggested improvements" category in the present study. Additional research with a larger sample may provide insight into qualitative themes that may be endorsed by the minority of veterans who provide feedback as to how to improve the orientation group.

The study also explored patient preferences for PTSD treatment options in a US VA clinic setting. The hypothesis that veterans would endorse a preference for psychotherapy over medication, consistent with existing literature, was partially supported in the current study. Although, psychotherapy alone was preferred

Table 2

Rank order preferences for psychotherapy treatment.

Treatment	1st choice		2nd choice		3rd choice		4th choice		5th choice		6th choice		Not ranked	
	<i>N</i>		<i>N</i>		<i>N</i>		<i>N</i>		<i>N</i>		<i>N</i>		<i>N</i>	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
CBCT	32	20.4	10	6.4	15	9.6	6	3.8	4	2.5	11	7.0	79	50.3
CPT	80	51.0	27	17.2	6	3.8	5	3.2	3	1.9	2	1.3	34	21.7
PCT	10	6.4	17	10.8	10	6.4	12	7.6	10	6.4	5	3.2	93	59.2
PE	29	18.5	38	24.2	13	8.3	3	1.9	6	3.8	6	3.2	62	39.5
NRT	7	4.5	24	15.3	6	3.8	16	10.2	8	5.1	7	4.5	89	56.7
VRET	4	2.5	7	4.5	15	9.6	5	3.2	13	10	10	6.4	103	65.6

Note. Treatments: CBCT = Cognitive Behavioral Conjoint Therapy; CPT = Cognitive Processing Therapy; PCT = Present Centered Therapy; PE = Prolonged Exposure Therapy; NRT = Nightmare Resolution Therapy; VRET = Virtual Reality Exposure Therapy.

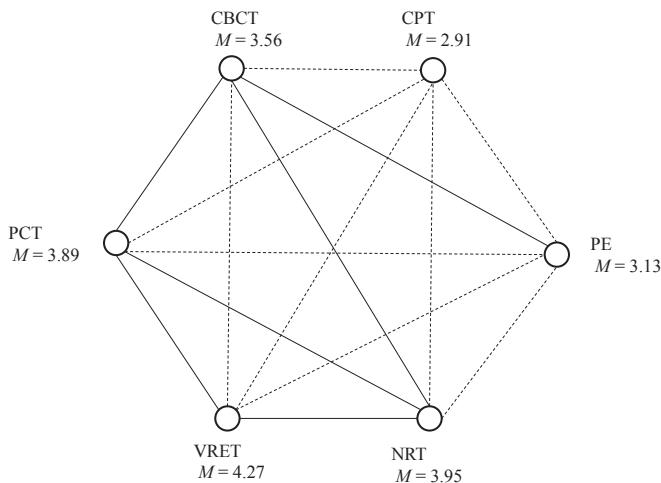


Fig. 1. Pairwise comparisons of veteran mean preference rankings for psychotherapies. CBCT = Cognitive Behavioral Conjoint Therapy; CPT = Cognitive Processing Therapy; PCT = Present Centered Therapy; PE = Prolonged Exposure Therapy; NRT = Nightmare Resolution Therapy; VRET = Virtual Reality Exposure Therapy. Comparisons were conducted using Wilcoxon sign-ranked tests and using the Bonferroni correction for statistical significance. Dotted lines indicate comparisons that were significant, $p < .05$. Solid lines indicate comparisons that were non-significant.

significantly more than medication alone, the majority of veterans preferred the combination of psychotherapy and medication. This is an important finding as the majority of existing studies in this area only provided participants with options of psychotherapy or medication (e.g., Reger et al., 2013; Roy-Byrne et al., 2003; Zoellner et al., 2003). When considering both veterans' preference for both psychotherapy and medications along with the demonstrated effectiveness of these treatments (Cahill et al., 2009; Friedman et al., 2009), these findings support offering PTSD-focused psychotherapies along with medications as first-line standard of care. That said, preference for the combination of psychotherapy and medication should be explored in terms of the evidence for combination treatments. Meta-analytic results of depression treatment indicated that the combination of psychotherapy and medication was significantly more effective than psychotherapy alone – although yielded small to moderate effect size differences, which may or may not be clinically meaningful (Cuijpers, van Straten, Warmerdam, & Andersson, 2009). Whereas a recent study of depression treatment found that the combination of psychotherapy and medication did not significantly improve outcomes compared to medication alone (Kocsis et al., 2009). Among PTSD studies, the evidence is inconclusive as to whether the combination of psychotherapy plus medication is superior to each treatment alone. (Herrick, Purcell, Garner, & Parslow, 2010). Additional research is needed to investigate whether preference for receiving a combination of psychotherapy and medication versus either of these treatments alone influences PTSD treatment outcome.

When patients were given the option to receive *both* psychotherapy and medication, this option was the most frequently endorsed. Due to the small number ($n = 55$) of veterans endorsing a preference for psychotherapy without medications, we were unable to adequately test differences in preference rankings for specific psychotherapy protocols between those preferring not to receive adjunctive medication versus the majority of veterans who preferred both psychotherapy and medication. Future research that includes a larger number of individuals preferring psychotherapy without medication may help to discern if this group differs in their preferences for specific psychotherapy protocols versus those who prefer both psychotherapy and medications.

Among preferences for psychotherapy options, results showed that veterans endorsed a stronger preference for CPT versus other psychotherapies and for PE versus PCT, NRT, or VRE. This provided partial support for our second hypothesis that veterans would endorse a stronger preference for CPT and PE versus other psychotherapies. These findings suggest that pre-treatment education about CPT and PE may offer a complimentary approach to VA organizational top-down dissemination strategies for CPT and PE (Karlin & Cross, 2014). By increasing patient preference for these treatments, pre-treatment educational approaches may improve uptake of veteran engagement in evidence-based psychotherapies for PTSD.

Consistent with Tarrier et al. (2006) results which showed a preference among college students for cognitive-behavioral therapies for PTSD over those that involve novel technologies (e.g., virtual reality), the current study showed that VRE was less preferred by veterans than competing cognitive-behavioral therapies (i.e., CBCT, CPT, and PE). Preference for VRE may be impacted by the fact that PE was presented as a competing and very similar form of psychotherapy, with the primary difference being the method in which the imaginal exposure is delivered. This may suggest that when given a choice of VRE and PE, veterans prefer to receive imaginal exposure via the conventional PE method of closing their eyes and imaging the traumatic memory versus keeping their eyes open and conducting imaginal exposure with assistance from a virtual reality combat environment. It is also possible that because participants were informed that PE can address both combat and non-combat PTSD, veterans with non-combat-related PTSD endorsed a preference for PE but not VRE. Since data from the study were collected prior to veterans completing an intake evaluation to determine whether veterans' PTSD symptoms were related to combat or non-combat traumas, we were not able to examine whether having non-combat-related PTSD impacted the preference ratings. This could be an important question for future research.

Preference ratings for CBCT and NRT may have been impacted by the unique applicability of these forms of psychotherapy. Unlike the other psychotherapies that are individually-based treatments, CBCT incorporates veterans' concerned significant others into treatment. Hence, CBCT is only applicable to those veterans with a concerned significant other who the veteran would like to incorporate into PTSD-focused psychotherapy. Ratings for CBCT were likely impacted by the fact that some veterans do not have a concerned significant other to involve in their treatment, making this treatment not applicable. That said, a similar proportion of veterans endorsed CBCT versus PE as their first choice, and there was not a significant difference in mean preference ratings for CBCT versus PE. This suggests that CBCT and PE may have similar proportions of veterans who are attracted to these treatments as their top psychotherapy choice. Because data was not collected on whether or not the veterans who presented to the orientation group had a concerned significant other, it is not possible to distinguish preferences among veterans who had a concerned significant other versus those who did not. Future research may be useful in examining differences in treatment choice among veterans who have a concerned significant other versus those who do not have a concerned significant other. Preference for NRT may have been impacted by this treatment being uniquely focused on addressing sleep problems and trauma-related nightmares. Although NRT may be appealing to many veterans who exhibit these specific symptom complaints, it is possible that veterans with other prominent complaints such as intrusive memories occurring during the day may have opted for competing treatments that have a broader symptom focus.

Several strengths were evident in this study. To begin, this study investigated patient preferences for PTSD treatment options and

satisfaction with a USVA clinic orientation group, both of which are important yet understudied areas in the literature. Veterans were asked about preferences for not only psychotherapy or medication, but also for the combination of psychotherapy and medication. Given that the combination of psychotherapy and medication was the most preferred treatment option, this finding highlights the importance of asking about this combination in both research and clinical contexts. The order in which CPT and PE were presented in the orientation group, the two evidence-based psychotherapies for PTSD that are being disseminated within the VA, was randomized in the study to counteract primacy effects. Finally, the mixed-method design provided a potentially richer and converging way of understanding veterans' reactions to and satisfaction with the orientation group versus a singular approach to assessing veterans' responses.

Limitations were also noted within the study. Because this study is not a controlled clinical trial, it is not possible to determine the degree to which the orientation group was specifically responsible for impacting veterans' treatment preferences and treatment-seeking behaviors. Another limitation of this study is that data were not collected from veterans' family members who were in attendance at the orientation group. Future research should be conducted to evaluate the degree to which a psychoeducation that involves veterans' family members is viewed by family members as being helpful in understanding PTSD treatment options that are available to the veteran. Although the orientation group described in the present study covered the first line, evidence-based treatments that are recommended by the US VA/DoD (US Department of Veterans Affairs/Department of Defense, 2010), the group was not exhaustive in describing treatments that are shown to be efficacious or effective in treating PTSD in general. Therefore, it is not clear how presentation of a wider range of treatment options would impact veterans' choice for PTSD-focused interventions. Finally, we did not collect qualitative data to evaluate veterans' rationale for why they preferred particular treatment options. Future research should investigate reasons why veterans prefer specific treatment options, as this may inform strategies for educating veterans about treatments.

In conclusion, this study supports the use of an orientation group as a pre-treatment strategy for engaging and educating veterans about PTSD treatment options. Findings suggest that this strategy may be useful in complimenting the multi-level VA initiative to disseminate evidence-based PTSD treatment to veterans. The PTSD educational group appears promising in promoting veteran treatment preference for evidence-based treatments for PTSD, which may improve the consumer "pull" or demand for such services (Karlin & Cross, 2014). VA PTSD specialty clinics should consider offering this type of orientation group as a method of initially engaging and educating veterans about available treatment choice options and to improve consumer demand for evidence-based treatment options. By attending a PTSD orientation group prior to completing an intake evaluation or meeting with a clinician to plan the type of treatment, veterans have the opportunity to become educated about treatments and, as a result, more capable of providing input into choosing their PTSD treatment. When meeting with veterans to determine the nature of treatment, clinicians can then more effectively incorporate veteran preferences into their recommendations for the type of PTSD treatment. Future studies are needed to determine of veteran participation in a pretreatment orientation groups ultimately results in increased veteran preference for evidence-based PTSD treatments and engagement and completion of these treatments.

Conflict of interest

None declared.

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