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Residential Treatment for Posttraumatic Stress Disorder in the Department of Veterans Affairs: A National Perspective on

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Abstract

Thirty-eight U.S. Department of Veterans Affairs's (VA) residential treatment programs for posttraumatic stress disorder took part in a formative evaluation of their programmatic services, including perceptions of effective treatment. From July 2008 through March 2011, face-to-face qualitative interviews were conducted with over 250 VA residential staff. A wide variety of perceived effective treatment elements were noted. The most frequently mentioned elements were evidence-based treatments, frequency and intensity of milieu, staff cohesion, varied programming, and individualized treatment. Implications for VA managers and policy-makers as well as non-VA health care systems and health care providers are discussed.

Keywords

posttraumatic stress disorders; psychotherapy; veterans; dissemination

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Patterns of care for posttraumatic stress disorder (PTSD) in the U.S. Department of Veterans Affairs (VA) have been well documented (Desai, Spencer, Gray, & Pilver, 2010; Fontana, Rosenheck, & Spencer, 1990). The development of these services has been traced from long-stay inpatient programs of the mid 1970s through 1980s, to a national network of outpatient programs in the early 1990s, and most recently to a full continuum of treatment including evaluation and brief treatment and day hospitalization. Throughout all of these advancements in programming for PTSD, specialized residential treatment has been a cornerstone, treating individuals with some of the most significant mental health care needs (Rosenheck, Fontana, & Errera, 1997).

The scientific literature on what comprises effective residential treatment programming for veterans with PTSD, or any other trauma survivor group, is equivocal (Alvarez et al., 2011; Bloom, 1994; Chard, Schumm, McIlvain, Bailey, & Parkinson, 2011; Chard, Schumm, Owens, & Cottingham, 2010; Courtois & Bloom, 2000; Fontana & Rosenheck, 1996; Rosenheck & Fontana, 2001). In particular, though much has been written about VA residential treatment programs, their efficacy has been questioned (Fontana & Rosenheck, 1997; Johnson, Feldman, Southwick, & Charney, 1994; Johnson, Rosenheck, & Fontana, 1997). For example, some have inquired as to what additional benefits residential programming offers compared with other treatment types (e.g., outpatient) in light of its significantly greater cost (Fontana & Rosenheck, 1997).

For nearly 20 years, the VA's Northeast Program Evaluation Center (NEPEC) has been monitoring psychiatric symptom and functioning outcome data for all veterans receiving services in the residential programs. Measures are collected at baseline (1 month prior to inpatient admission) and follow-up (the month preceding 4 months posttreatment). Over the years, the most common use of this data was to compare patient characteristics (e.g., race, disability-seeking status) or program type (e.g., shorter vs. longer programming) to symptom improvement (e.g., Fontana & Rosenheck, 1997; Rosenheck & Fontana, 1999). In addition, monitoring data has been used to guide program development (see Rosenheck & Fontana, 1999, for a review). More recently, NEPEC data has been used to examine changes and trends in veteran demographics, intensity of care, and outcomes spanning from its inception in 1997 to current day (Hermes, Rosenheck, Desai, & Fontana, 2012). NEPEC assigns programs a rank or "report card" based on reported improvements in veteran psychiatric and functioning outcomes. Use of these rankings has never before been reported in the scientific literature.

One avenue for understanding effective residential programming is to assess the perspectives of key stakeholders, such as front-line providers. Exploring provider perceptions regarding most effective treatment elements may provide clues to improving treatment efficacy and impact either directly or indirectly through provider knowledge, attitudes, and practices or patient acceptability and adherence (Aarons & Palinkas, 2007). In addition, understanding provider perspectives on effective treatment elements can help to facilitate a more successful introduction of a new treatment by an external body (e.g., government mandate), or can serve to assist in the identification of barriers and areas of strength to dissemination efforts currently under way, by providing contextual information on the setting. For example, if providers in a particular setting agree that group treatment in

the most effective element of their programming, that setting may be less inclined to use a evidence-based treatment (EBT) that has only been shown to be efficacious when delivered on an individual basis.

To gain provider insights into perceived successful programming, a formative evaluation of VA residential PTSD programs was conducted (Cook et al., 2011). The purpose of this article was to report on the frequency and percentage of ingredients of perceived effective treatment as indicated by PTSD residential treatment staff. In addition, we conducted exploratory analyses to examine the relationship between perceived effective treatment elements and NEPEC program rankings. In particular, we sought to examine whether there were differences in top five perceived most effective treatment elements from providers in programs with the top rankings compared with bottom tier programs. Although the data are specific to VA programs, intensive community out-patient programs, private residential programs, and Department of Defense programs, such as Warrior Transition Units, may find these results informative for their own delivery of services for patients with PTSD.

Method

This study was approved by the VA Connecticut Health Care System, West Haven Division's Institutional Review Board. From July 2008 to March 2011, a formative evaluation was conducted to identify favored services and to facilitate interprogram exchanges in every VA PTSD residential program nationally that reports program monitoring data to the NEPEC ($N = 38$). Two-day site visits to each program were conducted during which an independent clinical psychologist not affiliated with the VA interviewed program directors, providers, and staff.

A semistructured interview guide, developed and refined during the first few site visits, was used to conduct private discussions with each willing member of the residential team.¹ The interviewer, a non-VA clinical psychologist, followed a consistent set of domains (e.g., perceived treatment effectiveness, organizational functioning), although wording and order shifted to preserve conversational flow. Interviews ranged in length from 15 to over 60 min, with the average lasting 30. Interviews typically took place on an individual basis, alone in a private space. Participants were told that their interviews were confidential and would not be shared with VA administration or leadership. Interviews were audio-recorded on a voluntary basis with written permission. Only 10% declined to be recorded but agreed to be interviewed. Digital recordings were transcribed verbatim by a professional transcriptionist and identified with a numerical code to protect the identity of participants. The data for these analyses come from provider responses to the interview question, "What do you think are the most effective treatment elements in your program?"

Verbatim transcriptions of qualitative interviews were entered into Atlas.ti, Version 6.0, a qualitative data analytic software package, for coding and analysis (Muhr, 2004). Participant responses to the open-ended question on perceived effective treatment elements were reviewed by two raters with master's degrees (S.D. and V.S.). These raters independently

¹A copy of the semistructured interview guide is available on request from the first author.

made a list of all responses (e.g., EBTs, milieu) and then compared their lists for convergence and dissonance. The new list was used to produce a coding scheme with definitions and examples. The raters then independently re-reviewed the responses for each interview and categorized them according to the new coding scheme. This has been referred to in the qualitative literature as “quantitizing” the data (Sandelowski, 2000). A kappa coefficient between the two raters was .91. Several techniques and methods were used to enhance reliability and validity of qualitative data, including semi standardization of the interview, digital recording of the interview and professional transcription, development of systematic coding schemes with the aid of computer programs, and an iterative approach and consensus to interpretation. In addition, use of counting responses was employed to ensure accuracy and to avoid undue attention to rare events at the expense of more common ones.

NEPEC program rankings are calculated using the standardized combined means of each of the following: the Short Form of the Mississippi Scale for Combat Related PTSD (Fontana & Rosenheck, 1994), the four-item NEPEC PTSD Scale, the alcohol and drug abuse composite indexes from the Addiction Severity Index (McClellan et al., 1985), a four-item measure on violent behavior adapted from the National Vietnam Veterans Readjustment Study (Kulak et al., 1990), and total days of employment in past 30-day period. This study used the program ranks identified in the *Long Journey Home XVIII* (Desai et al., 2010) because these corresponded with the timeframe of the study. Four of the 38 programs were not assigned rankings because they had more than 50% of the patient outcome data missing. Thus the analyses on the relationship between perceived treatment effectiveness and ranking were limited to 34 programs. Programs were ranked between 1 and 34, in ascending order.

Results

There were no significant differences between these programs and seven identified programs that do not report data to NEPEC in regard to number of operational beds ($M = 18.24$, $SD = 11.11$; $M = 14.71$, $SD = 9.95$, respectively), number of full-time employees ($M = 11.06$, $SD = 6.81$; $M = 9.53$, $SD = 5.47$), or type of program (e.g., residential rehabilitation programs).

Descriptive information on the VA residential PTSD programs and providers is included in Table 1. A majority were residential rehabilitation programs, followed by domiciliary. Programs reported a wide range of number of currently occupied VA-operated and staffed beds, from 0 (day hospital, with lodging available on request) to 48 ($M = 15.26$, $SD = 10.65$) and a targeted length of stay of 5–98 days ($M = 47.97$, $SD = 21.15$).

Across the sites, 267 directors, clinical providers, and staff members were interviewed. The most frequently reported profession was psychologists, followed by social workers, and nurses. Staff reported a range of employment duration within each program, with some employed as little as a few weeks and some with more than 25 years.

The 267 staff interviews were coded for up to a potential three “most effective treatment elements,” totaling 801 possible responses. Of the 267 staff, 142 (53.2%) provided one answer only, 70 (26.2%) gave two answers, 34 (12.7%) responded with three answers, and

21 did not provide an answer (7.9%). Frequency counts and rank-order analyses of the responses are included in Table 2.

Staff identified 21 elements representing a broad range of influences contributing to the effectiveness of residential programming. Only the top five (excluding “other”) that were endorsed by at least 20 staff members each are reviewed below.

Evidence-Based Treatments

The most commonly perceived effective treatment element was the integration of EBTs into the program. In the words of one interviewee, “If I had to kind of rank order in what I thought was most effective, I would say certainly the empirically supported treatments first.” In particular, EBTs were credited by some staff as most noticeably reducing veteran PTSD symptoms. Of the 66 staff members who indicated that EBTs were the most effective treatment element, 20 (30.3%) did not identify a specific EBT as most effective, but rather the more generalized benefit of introducing annualized, evidence-based programming.

Of the 66 providers who identified EBTs as the most effective treatment element in their program, 28 (42.4%) identified cognitive processing therapy (CPT; Resick & Schnicke, 1996), followed by six (9.1%) who indicated prolonged exposure (PE; Foa, Hembree, & Rothbaum, 2007), four (6.1%) each for eye movement desensitization reprocessing (Shapiro, 2001) and seeking safety (Najavits, 2002), and two (3.0%) each for acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999) and dialectical behavior therapy (Linehan, 1993). Those providers who identified a specific treatment as critical to the efficacy of their practice expectedly spoke with fervency: “CPT is essential for what we do and I certainly have a strong belief that, that is a very effective treatment in terms of what we are offering here.” For some providers, the opinions of patients influenced their identification of a treatment as most effective: “I am a firm believer in Seeking Safety. When you talk to the guys that are getting ready to leave, you always ask them what has been the most helpful and they’ll say Seeking Safety.”

Not only did staff indicate belief in the efficacy of a particular EBT, but they also noted that it created a unified structure to the program where the main themes, language, and even worksheets from a treatment could be used consistently throughout all veteran programming (e.g., the use of CPT-specific language such as “stuck points” in a relationships group or creating an in vivo hierarchy in recreation therapy). As articulated by one provider, “I am a real firm believer in implementing the evidence-based practices, not for the sake of just implementing them, but for providing really clear structure in the residential program.”

Frequency and Intensity of Residential Milieu

Sixty (22.5%) of the providers identified the most effective element in residential care as the frequency, intensity, and cohesion of therapeutic milieu. Described by one program as “value in the bricks,” residential programming reportedly enables veterans to reengage in behaviors (e.g., going to crowded places) that they had previously avoided, while receiving support from staff and peers through formal treatment and informal interactions.

The milieu is credited with challenging veterans when they attempt to isolate, do not fully participate in treatment, or display behaviors that are historically part of their presenting problems, such as outbursts of anger. Staff spoke of being sensitive toward and actively cultivating a cohesive therapeutic community: “I think that you can’t overstate the amount of therapeutic gain that they experience just by getting close to other veterans.”

Providers also suggested that living in a group setting with other veterans promotes interpersonal interactions thus normalizing, validating and supporting veterans’ attempts to achieve behavioral, emotional, and cognitive change. One interviewee spoke to how the milieu even contributed to veteran outcomes: “I think probably one of the most effective facets in this treatment is the community. People have established lifelong friendships here, have found support systems that they didn’t have before, have reconnected with families ... probably one of our best outcomes is interpersonal relationships.”

Staff Cohesion and Dedication

Twenty-nine (10.9%) providers viewed the treatment team as the most effective element of programming. These providers further indicated that in their opinion effective treatment teams are democratic in their structure, approach, treatment planning, problem-solving, and decision-making. Some articulated that the unique aspects of residential care, such as length of stay, create a closely bonded staff. Many expressed that they felt their team was exemplary, likening it to a “family” atmosphere that is supportive and increases effective coping in dealing with work-related stress. In addition, providers explained that the staff created a milieu of respectful conflict resolution, open communication, and mutual goals that served as a model for interpersonal functioning for veterans. For some programs, the goodwill among staff was reflected back to them by their veterans: “Ultimately when the guys talk about what they’re gonna remember the most and what made them want to change the most and ... that we hear over and over is ‘You guys really care’.”

Variety of Programming

Offering a variety of treatments and services was reported by 24 (9.0%) of providers as essential to effective programming. Meeting the mental health needs of patients was considered only one aspect of residential treatment, with attention also given to veterans’ physical health, psychosocial readjustment and community reintegration, expression through creative arts and movement, employment and continuing education, as well as family and housing needs. The integration of a proliferation of modalities to programming was said to be essential to creating a “well-rounded program.”

Individualizing Treatment

Twenty-two (8.2%) staff identified individualizing treatment as the “key” to effective care. They noted that residential treatment for PTSD was not “cookie cutter,” an “assembly line,” or “one size fits all.” As said by one provider: “it doesn’t say group treatment plan...it’s individualize or individual treatment.” Examples of efforts to individualize care included allowing veteran input into treatment planning, flexibility in attending aspects of the program (e.g., optional classes), differentiating specific tracks within program (i.e., Iraq or Afghanistan veteran track), or flexibility in the duration of stay.

Relationship Between Perceived Treatment Elements and NEPEC Rankings

Bivariate correlations were conducted between NEPEC rankings and 20 (all identified responses except “other”) perceived treatment effectiveness elements. Two correlations with rankings were significant, .40 with skill-building ($p < .02$) and .35 with group treatment ($p < .05$). However, to counteract the problem of multiple comparisons, we used a Bonferroni correction. Using this simple and conservative method, these two correlations were no longer significant.

In addition, one-way analyses of variances were conducted to determine whether there were differences in top five noted perceived treatment elements from providers in programs with the top rankings were compared with those the bottom tier programs. There were no significant relationships between top and bottom ranked programs and EBTs, $\chi^2(5) = 1.42$, frequency and intensity of milieu, $\chi^2(4) = 2.15$, staff cohesion, $\chi^2(2) = 0.14$, varied programming, $\chi^2(3) = 4.05$, and individualized treatment, $\chi^2(4) = 2.15$.

Discussion

Findings from this formative evaluation suggest that VA PTSD residential treatment providers perceive a wide variety of effective treatment elements. In fact, there was limited consensus in their perspectives. Despite large-scale national efforts to disseminate PE and CPT for PTSD in the VA (Karlin et al., 2010), less than a quarter of providers reported these interventions as the most effective treatment element. This does not necessarily indicate that providers do not value these EBTs. Some providers instead indicated that the more generalized umbrella of EBTs, and not specifically PE or CPT, was most effective, and others noted that EBTs was effective in that they helped create structure and continuity in programming.

These findings may help explain why the use of PE and CPT in residential treatment was not universal (Cook et al., 2013). In the study, use occurred on a continuum from no adoption to treatment became the core of programming to “de-adoption” (abandoning a treatment after initial adoption; Massatti, Sweeney, Panzano, & Roth, 2007). In randomized controlled trials, PE and CPT have been shown to be efficacious with both nonveteran (e.g., Foa et al., 2005; Resick et al., 2008) and veteran samples (Forbes et al., 2012; Monson et al., 2006; Schnurr et al., 2007). Additionally, a small body of literature has demonstrated that participation in CPT for veterans in residential programs is related to symptom reduction (Alvarez et al., 2011; Chard et al., 2011). Further information is needed to help explain provider perspectives on use of these particular EBTs.

Providers also reported the increased frequency, intensity, and cohesion of the milieu were of greatest benefit to veterans. In part, they indicated that the creation of a treatment environment without interference or disruption of normal everyday stressors is essential for intensive treatment. Support and connection with other veterans was viewed as essential to treatment effectiveness, particularly in terms of veterans support for one another in their treatment and serving to normalize the patients’ reactions to trauma. This echoes experts’ opinions on necessary ingredients for non-VA residential treatment as well (Courtois & Bloom, 2000).

Staff cohesion was also noted to be one of the essential and effective components of VA PTSD residential treatment. This is consistent with one investigation of residential programs for adolescents (Johnson, 1981). In that study, staff cohesion was related to treatment environment and outcomes. Namely, programs with lower levels of cohesion required more structure (including rule enforcement) and staff control. In addition, residential team cohesion was directly related to the staff's ability to implement the treatment philosophy. In our investigation, the most effective teams were those who consistently engaged in formal team meetings, additional informal mechanisms of communication, group problem-solving, and treatment planning. These types of teams are also thought to model positive social interactions for veterans. More research is needed to understand how staff cohesion impacts patient outcomes and how this information can be used to improve the quality of care that veterans receive.

Offering a variety of treatments (e.g., trauma-processing therapies, skills-building, mindfulness-based interventions) to veterans was also identified as a key element of effective care. Additionally, the ability to individualize treatment was viewed by some as essential. This was reportedly accomplished through multiple treatment tracks, flexibility in length of stay, nonmandatory attendance in some aspects of the programming, and offering individual therapy (in addition to group therapy). These factors may be important for future treatment program design or restructuring.

Although provider perspectives may contain errors and are colored by recent experiences and successes (Beutler, 2004), these findings may provide some indication of patient receptivity to treatments. Indeed, provider perceptions of improvement are similar to patient-satisfaction data, in that both are likely associated with treatment compliance as opposed to symptom reduction (Bickman, 1999). These findings may draw the attention of administrators and treatment developers toward addressing issues such as milieu and individualization of care when discussing with providers the best way to implement EBTs. In Rogers's (Rogers, 2003) seminal work on the diffusion of innovations, an examination of social process factors at the provider level was principal to understanding the myriad of influences stemming from the external introduction of an innovation into an organization. Understanding provider perspectives on the most salient elements of treatment in their setting may help administrators to maximize their return on the significant investment involved in treatment dissemination (Chorpita & Regan, 2009). When the focus is on improving treatment relevance, efficacy, and impact, implementation research takes on a quality improvement emphasis, whereby a greater understanding of both the treatment and the setting is achieved by valuing the experience and voice of all stakeholders (Aarons & Palinkas, 2007).

There were no significant relationships between NEPEC rankings and 20 perceived treatment effectiveness elements, including EBTs. Although this may be surprising, it is suspected that these rankings may not be an accurate reflection on a program's efficacy. First, the outcomes measured by NEPEC may not fully encapsulate psychiatric and functional gains made. Quality of life outcomes and other measures of well-being have recently received more attention as important indicators of intervention efficacy (Schnurr, Lunney, Bovin, & Marx, 2009). Further, some have called into question the utility of

program rankings given the limited outcomes collected and the sole means of data collection (survey) without corroborating data, such as anonymous, confidential provider or patient interview (Scurfield & Wilson, 2003). Indeed, a potentially influencing limitation of the data reported to NEPEC is that it is collected by program providers themselves, typically through telephone calls to former patients. Thus, it is difficult to know if there is bias in reporting by veterans, who many feel reticent to acknowledge negative aspects of programming to their treating provider. Additionally, programs with greater staffing numbers, including administrative and support staff, may be able to dedicate more time and resources to collecting this information from veterans, a labor-intensive task, than smaller staffed programs.

Although findings presented here are of particular relevance to the VA, there are also implications for non-VA health care systems and providers. Studies of service utilization in recent veterans have indicated that only about 48% have engaged in health care treatment through the VA (VA Office of Public Health & Environmental Hazards, 2010). Such data suggest that large numbers of recently returning veterans may be receiving treatment in non-VA settings by civilian providers, who likely lack in-depth understanding of military culture or trauma issues. As such, access to and an understanding of perceptions of effective programming from front-line VA providers may help to guide non-VA programming.

Future research could build on this effort by comparing providers' perceptions of effective programming based on veteran characteristics such as gender or cohort (e.g., Vietnam veterans as opposed to Iraq and Afghanistan veterans). For instance, Chard et al. (2010) found differences in recent returnees and Vietnam veterans who participated in CPT. Namely, recent returnees had significantly lower posttreatment PTSD symptoms compared with Vietnam veterans. The authors suggested that Vietnam veterans with high levels of PTSD may benefit from motivational techniques or treatment that is multifaceted. Understanding how providers' perceptions of treatment effectiveness are communicated to veterans and what aspects of these identified elements account for improvement in symptoms may also provide valuable insight.

Additionally, future research might examine provider perspectives on the advantages and effectiveness of residential PTSD treatment versus the more common use of outpatient treatment. Qualitative investigations of patient perspectives on most effective treatment elements in both residential and outpatient care (and in comparison) could serve to engage yet another important stakeholder group in maximizing treatment and program utility and effectiveness. Using data from this same formative investigation, our research group is currently undertaking a qualitative analysis of provider-identified barriers and facilitators to the adoption of EBTs.

There are several limitations to this report that deserve mention. One is that there is variation in the residential programs, including the particular type of program, geographical region, number of full-time employees, and cohort versus rolling admission. These variables may have an influence on the treatment and services provided in ways that we were not able to statistically account or control for in reporting these findings. Additionally, the data were obtained from provider self-reports and thus may be influenced by reporting bias or demand

characteristics. Lastly, data obtained from these interviews were solely from provider opinions and do not address patients' perspectives of most effective treatment elements.

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Table 1

Description of PTSD Residential Treatment Programs and Providers

Characteristics	Programs (N = 38)	
	n	%
Type		
PTSD residential rehabilitation and psychosocial residential rehabilitation ^a	23	57.9
Domiciliary ^b	8	21.1
Other ^c	8	21.1
Location		
City	19	50
Suburban	11	29
Rural	6	15.8
Other	2	5.3
Size (no. of beds currently occupied)		
1–10	19	50
11–20	7	18.4
21–30	8	21.1
31–40	3	7.9
41–50	1	2.6
Average LOS (days)		
0–20	5	13.2
21–35	5	13.2
36–50	16	42.1
51–65	8	21.1
66 and above	4	10.6
Full-time VA employees		
0–5.4	11	28.9
5.5–10.4	8	21.1
10.5–15.4	9	23.7
15.5–20.4	4	10.5
20.5–25.4	5	13.2
Staff (N = 267)		
Type of provider		
Psychiatrist	18	6.7
Psychologist	109	40.8
Social worker	56	21
Nurse	38	14.2
Other	46	17.3
Length of service on unit (N = 267)		
No. of years		
<1	35	13.1

Characteristics	Programs (N = 38)	
	n	%
1–3	106	39.7
4–5	28	10.5
6–10	34	12.7
11–18	37	13.9
<19	27	10.1

Note. PTSD = posttraumatic stress disorder; LOS = length of stay; VA = U.S. Department of Veterans Affairs.

^aPTSD residential rehabilitation programs: Lower-intensity programming with access to acute services as needed, rehabilitative focus with average LOS of 30 days.

^bPTSD domiciliary: 24/7 care. May be part of a larger domiciliary serving multiple patient populations; LOS ranges from 38–102 days.

^cOther: Specialized inpatient PTSD units, PTSD day hospital, evaluation and brief treatment PTSD units.

Table 2**Most Effective Treatment Ingredients Identified by Residential Staff**

Most effective ingredient(s)	No. of participants	%
Evidence-based treatment	66	24.7
Milieu	60	22.5
Staff cohesion	29	10.9
Variety of programming	24	9.0
Individualizing treatment	22	8.2
Trauma processing groups	20	7.5
Sense of safety	13	4.9
Psychoeducation	13	4.9
Therapeutic alliance	12	4.4
Skill building	12	4.4
In vivo exposure	12	4.4
Mindfulness-based activities	11	4.1
Cognitive restructuring	11	4.1
Individual treatment	9	3.4
Group treatment	9	3.4
Continuity of care	4	1.5
Leadership	3	1.1
Length of stay	2	0.74
Formal and informal communication	2	0.74
None	19	7.1
Other	54	20.2