



# PTSD *Research Quarterly*

ADVANCING SCIENCE AND PROMOTING UNDERSTANDING OF TRAUMATIC STRESS

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## Patient Engagement in PTSD Treatment

For patients with PTSD to derive the greatest benefit from available evidence-based psychotherapies and psychiatric medications they must be able to fully engage in their treatment. However, a wealth of published data demonstrates that a majority of service members and Veterans with PTSD are not successful in doing so (e.g., Hoge et al., 2014; Spont, Murdoch, Hodges, & Nugent, 2010). Patient engagement in mental health services has received relatively little attention as compared to the substantial consideration given to patient engagement in the design and delivery of patient-centered physical health care (Carman et al., 2013). Below, we provide a selective review of the available literature in an attempt to describe factors that make patients more likely to engage in PTSD treatment and identify interventions that may improve patient engagement in PTSD treatment, with a focus on evidence-based treatments. Following Gruman et al.'s (2010) conceptualization, we define patient engagement as the behaviors required to achieve optimal benefit from health care. The review focuses on the three aspects of engagement most often examined in the PTSD literature: treatment initiation (utilizing care; starting treatment), retention (completing the intended course of treatment), and adherence (performing behaviors in the treatment plan). The scope of the review is adult patients' engagement in PTSD treatment; however, due to limited data regarding civilians' engagement, a majority of the studies reviewed focus on active duty and Veteran populations. Following the review, we evaluate this literature within a patient engagement conceptual framework and suggest future research directions.

### Factors Associated with Engagement

Demographic factors such as age, gender, race, and ethnicity have been the most frequently studied and are among the few variables that have consistently demonstrated significant associations with treatment

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initiation and retention across studies. Patient age has repeatedly been found to predict initiation and retention in general mental health treatment, psychotherapy, and evidence-based psychotherapy (EBP) in that younger patients are less likely to initiate and be retained in treatment (Goetter et al., 2015; Kehle-Forbes, Meis, Spont, & Polusny, 2016; Spont et al., 2014). Patient race has also been shown to be associated with treatment initiation and retention, although not as consistently as age (Goetter et al., 2015; Spont, Hodges, Murdoch, & Nugent, 2009; Spont et al., 2015). For example, African American and Latino Veterans were found to be less likely than white Veterans to receive a minimally adequate trial of treatment (both psychotherapy and pharmacotherapy for African American Veterans; pharmacotherapy only for Latino Veterans) within six months of PTSD diagnosis (Spont et al., 2015). Negative attitudes towards psychotherapy and pharmacotherapy (e.g., believing that treatment wouldn't be helpful) accounted for the disparity in Latino Veterans' retention, but the disparities in African American Veterans' retention remained after accounting for treatment-related beliefs (Spont et al., 2015). Findings regarding the associations between engagement and other demographic variables such as Veterans' service connection status, marital status, and employment have been equivocal (Goetter et al., 2015; Mott, Mondragon, et al., 2014; Grubbs et al., 2015). Potentially modifiable factors underlying differences in engagement between demographic groups should be the focus of future research.

Pre-treatment symptomology and patients' social environments are two nondemographic factors that have been subject to considerable study. Research regarding the impact of PTSD severity on initiation and retention has yielded inconsistent results, with some studies showing that higher total levels of

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severity are associated with engagement and others failing to find a relationship (Goetter et al., 2015; Grubbs et al., 2015; Kehle-Forbes et al., 2016; Spont et al., 2014). Researchers have also tested the hypothesis that high levels of avoidance symptoms may interfere with engagement, but as with total PTSD symptom severity, the results have been mixed (Harpaz-Rotem, Rosenheck, Pietrzak, & Southwick, 2014; Bryant et al., 2007). The associated construct of perceived need for treatment has been a more robust predictor. Feeling as though they could manage their symptoms on their own (e.g., self-sufficiency) was the most frequent reason for treatment dropout given by soldiers with PTSD (Hoge et al., 2014). Similarly, Spont et al. (2015) found that perceived need for treatment was a robust independent predictor of treatment initiation following a PTSD diagnosis. The impact of one's environment has also been shown in multiple studies to impact engagement. Social support has been shown to be associated with retention in EBPs (Goetter et al., 2015), encouragement by one's social network was found to be predictive of PTSD treatment initiation (Spont et al., 2014), and concerns that others at work may lose confidence in you or treat you differently (e.g., stigma) was one of soldiers' most commonly cited reasons for treatment dropout (Hoge et al., 2014). These findings suggest that beliefs about the need for treatment and patients' social environments may be effective intervention targets.

Patient "readiness" for treatment is often targeted in largely untested, but frequently implemented group interventions designed to improve Veterans' engagement in EBPs such as prolonged exposure (PE) and cognitive processing therapy (CPT; Hamblen et al, 2015). While what constitutes readiness for PTSD treatment has not been explicitly defined, qualitative interviews with PTSD clinicians discovered that willingness to remain in treatment and change behavior, ability to tolerate and cope with negative emotions, and "buy-in" to the treatment rationale are central to clinicians' conceptualizations (Zubkoff, Carpenter-Song, Shiner, Ronconi, & Watts, 2016). Jakupcak and colleagues (2013) examined the related construct of readiness to change, a concept derived from the transtheoretical model that presents stages through which one moves in enacting intentional behavior change. They demonstrated that being in the contemplation (considering behavior change), action (currently engaged in behavior change), and maintenance (taking steps to maintain changes already made) stages of change predicted retention in mental health services among Veterans who screened positive for one of several mental health disorders (including PTSD; Jakupcak et al., 2013). However, despite its clinical popularity, to the best of our knowledge no studies have examined the association between readiness and engagement in EBPs. Direct study of readiness as it is currently being conceptualized in PTSD clinics and its relationship to PE and CPT engagement is imperative given its popularity in the field.

## Interventions to Improve Engagement

Interventions that include motivational enhancement strategies have been the most widely evaluated. In a small randomized control trial (RCT), Seal and colleagues (2012) found that four telephone sessions of motivational interviewing resulted in increased rates of mental health treatment initiation and greater treatment retention among VA-enrolled Iraq (OIF) and Afghanistan (OEF) war Veterans who screened positive for PTSD (58% of the sample) or another mental health problem. The intervention resulted in 62% of Veterans attending at least one session during which mental health was discussed (compared to 26% in the control condition) and a mean total of 1.68 mental-health focused appointments (versus 0.38 sessions for the

control condition) within 16 weeks. A second RCT examined the impact of a four session in-person motivational enhancement group on retention in a twelve-month cognitive-behavioral outpatient treatment program for Veterans with PTSD (Murphy, Thompson, Murray, Rainey, & Uddo, 2009). The intervention sought to help patients reduce ambivalence about changing PTSD-related problematic behaviors. Veterans randomized to the motivational enhancement group attended significantly more PTSD program appointments (65% versus 54%) and remained in the PTSD program longer (8.8 months versus 7.35 months) than Veterans randomized to a control PTSD education group. Contrary to the authors' hypotheses, Veterans assigned to the motivational enhancement group did not report a greater readiness to change than those assigned to the control condition and the rates of overall PTSD program dropout did not differ between the two conditions. These trials suggest that motivational enhancement interventions may yield small to moderate positive effects on PTSD treatment initiation and retention; however, given that neither trial examined engagement in EPB or pharmacotherapy, the potential impact on those treatments remains largely unknown. Only one published study has examined the effect of an intervention designed to increase motivation to participate in EBPs. DeViva and colleagues examined a brief educational and treatment planning group designed to increase readiness for EBPs for PTSD (DeViva, Bassett, Santoro, & Fenton, 2016). While the naturalistic design of the study limits the conclusions that can be drawn, the intervention was associated with a greater proportion of Veterans choosing to participate in PE and CPT (actual initiation rates were not reported), but not retention in those treatments.

Rosen et al. (2017) examined the effectiveness of a telephone care management intervention that included motivation enhancement strategies as well as risk and symptom assessment, positive feedback for the use of coping skills and treatment adherence, brief problem solving of treatment-interfering behaviors, and communication of increased risk or symptomology to providers. Veterans randomized to care management completed 43% more mental health visits and attended significantly more psychotherapy appointments (3.1 versus 2.2 visits) during the three-month intervention than those randomized to usual care. Surprisingly, the increased retention did not correspond with greater improvements in mental health symptoms, perhaps due to the small proportion of Veterans in the sample receiving evidence-based treatment. Fortney et al. (2015) examined the effectiveness of a similar telephone care management program paired with the interactive video delivery of CPT and psychiatric consultation. Rural Veterans randomized to the telemedicine-based collaborative care condition were significantly more likely to initiate (54% versus 12%) and complete at least eight sessions (27% versus 5%) of CPT than rural Veterans randomized to usual care; initiation and adherence to evidence-based pharmacotherapy did not differ by condition. Greater CPT retention in the collaborative care condition resulted in significantly larger decreases in PTSD symptomology for those in the collaborative care condition than those in usual care. The differing outcomes of these two well-designed trials demonstrate the importance of developing interventions to specifically improve engagement in evidence-based treatments, rather than in PTSD treatment more broadly.

Several novel strategies for increasing engagement in PTSD treatment are in the early stages of evaluation. For example, shared decision-making may improve engagement in EBP. A pilot randomized trial demonstrated that a 30-minute session devoted to providers and

patients collaboratively reviewing treatment options (EBPs and other psychotherapy options) and deciding on a treatment plan resulted in greater PE and CPT initiation and greater psychotherapy retention than treatment planning as usual (Mott, Stanley, Street, Grady, & Teng, 2014). Researchers have investigated novel pharmacological augmentation strategies to improve engagement in EBPs. In a small, double-blind RCT, Yehuda and colleagues (2015) demonstrated that receiving 30 mg of hydrocortisone (as compared to placebo) prior to PE sessions containing imaginal exposure resulted in greater treatment retention (9.42 versus 6.00 sessions) and associated improvements in PTSD symptom severity. Incorporating technology, such as mobile applications, into EBPs to reduce barriers to engagement is another potential strategy for improving engagement (particularly adherence). A mobile application has been designed to support the delivery of PE through appointment reminders, convenient access to homework assignments, and homework tracking, but with the exception of a two-person pilot, its impact on engagement has yet to be evaluated (Reger et al., 2013). All of these newly-developed interventions warrant further investigation. Finally, it has been proposed that completion of Seeking Safety, a cognitive-behavioral skills-based treatment for comorbid PTSD and substance use disorders (SUD), may facilitate EBP initiation among Veterans who were previously unwilling to engage in such treatment (Norman, Wilkins, Tapert, Lang, & Najavits, 2010). However, the current evidence base for Seeking Safety as an engagement strategy is weak and further research is needed. More broadly, the identification of both unique and nonspecific components of prior treatments that foster subsequent EBP engagement may enable the development of effective engagement interventions for those initially unwilling to initiate EBP.

## Future Directions

While initiation, retention, and adherence in effective treatments are good indicators of patient engagement, we can consider these elements to reflect broader domains of behavior that constitute engagement. For example, the Robert Wood Johnson Foundation Aligning Forces for Quality initiative groups engagement behaviors into self-management, health promotion, patient-provider communication, and 'shopping behaviors' (Mittler, Martsof, Telenko, & Scanlon, 2013). Self-management behaviors include treatment adherence, but also other behaviors that control or reduce the impact of symptoms on functioning and quality of life. Patient-provider communication places an emphasis on a collaborative relationship in which patients are encouraged to express questions or concerns, and engage in ongoing shared decision-making about treatment risks/side-effects, benefits, and the fit with the patient's goals and resources. 'Shopping behaviors' include information seeking and critical evaluation of health care and treatment options; treatment initiation and retention may be shopping behaviors inasmuch as the decision to start or continue treatment is a function of the perceived benefit of that treatment. Furthermore, this conceptualization notes that engagement behaviors are context sensitive. Socio-cultural contexts such as social norms, identities, and social supports will influence engagement behavior, and both provider and health care contexts can influence behavior by providing engagement opportunities (Carman et al., 2013; Mittler et al., 2013). For example, patient access to medical record progress notes and patient portals facilitate patient engagement, and providers appear to be more responsive and provide more information when interacting with more highly engaged patients (Carman et al., 2013; Cené et al., 2016). This broad conceptualization of engagement can inform perspectives on engagement with PTSD treatment.

Further investigation of the role of the provider context may be especially informative. Though engagement is reflected by individual behaviors, many of these behaviors are a function of patient-provider interactions. In the broader psychotherapy literature, greater provider experience and relationship factors such as empathy, collaboration, and shared goals and priorities are associated with better retention, participation, and adherence (Eliacin, Rollins, Burgess, Salyers, & Matthias, 2016; Holdsworth, Bowen, Brown, & Howat, 2014). Although there are few published studies, available data suggest that similar factors may be associated with retention in psychotherapy for PTSD (Ehlers et al., 2013; Keller, Zoellner, & Feeny, 2010). Patients' success in engaging in treatment and the barriers to doing so are likely fluid throughout the course of treatment, requiring providers to adeptly identify and respond to ongoing individual variability. As such, enhancing patient-provider communication throughout the course of treatment and developing a strong therapeutic alliance within the context of EBPs have the potential to increase patient engagement.

Few studies have examined or attempted to modify engagement behaviors other than initiation and retention. Future research should place a greater focus on measuring adherence behaviors, identifying potentially modifiable factors associated with greater adherence, and evaluating adherence interventions. Tetley and colleagues' review of psychotherapy engagement measures can provide a starting place for researchers seeking to examine a broader range of engagement behaviors; domains of engagement that may be relevant to EBP adherence include completion of treatment within the expected timeframe, completion of between-session assignments (e.g., homework), and contribution to therapy sessions (Tetley, Jinks, Huband, & Howells, 2011).

Finally, with the exception of identifying patients' social environments as a factor associated with engagement, relatively few studies have considered the context in which PTSD treatment occurs. Particularly notable is the lack of attention paid to the healthcare system in which the treatment is delivered. Fortney et al. (2015) demonstrated the potential impact of changing system-level factors such as team structure and location of care on patient engagement; their intervention which included offering evidence-based treatments for PTSD via telemedicine was one the most successful in improving engagement. Future research should examine the impact of expanding delivery of evidence-based PTSD treatments to other care settings already utilized by patients (e.g., primary care) on engagement. The association between patient engagement behaviors and other aspects of the healthcare context, such as commitment to a recovery orientation, clinic processes (e.g. mandated participation in pre-EBP groups), and access factors such as wait-time to EBP should also be examined. In summary, broadening the domains of engagement that are evaluated and routinely considering nonpatient-level factors associated with engagement would further the literature and likely result in more effective interventions.

## Conclusions

Few consistent predictors of patient engagement in PTSD treatment have been identified, and a limited number of those that have been identified are modifiable. Because engagement in PTSD treatment has rarely been the primary focus of research projects, investigators have relied on previously collected or readily available administrative data. This has yielded a largely atheoretical approach to the problem. Grounding future studies in a conceptual model of engagement may facilitate the identification of robust, modifiable predictors more quickly.

Treatments that include motivational enhancement strategies appear to have modest effects on treatment initiation and retention; however, their impact on engagement in evidence-based treatments is unknown. The intervention literature highlights the importance of developing interventions that specifically increase engagement in evidence-based treatments in order to have the greatest impact on patients' health. This literature also underscores the importance of assessing patient outcomes in addition to engagement behaviors when evaluating interventions. Finally, it is important to note that the preponderance of PTSD engagement studies has been conducted with U.S. Veterans, particularly over the last five years; it is unclear if the findings generalize to other populations, especially given the potentially important role of context in treatment engagement.

## References

Cené, C. W., Johnson, B. H., Wells, N., Baker, B., Davis, R., & Turchi, R. (2016). **A narrative review of patient and family engagement: The "foundation" of the medical "home."** *Medical Care, 54*, 697-705. doi:10.1097/MLR.0000000000000548

Gruman, J., Rovner, M. H., French, M. E., Jeffress, D., Sofaer, S., Shaller, D., & Prager, D. J. (2010). **From patient education to patient engagement: Implications for the field of patient education.** *Patient Education and Counseling, 78*, 350-356. doi:10.1016/j.pec.2010.02.002

Zubkoff, L., Carpenter-Song, E., Shiner, B., Ronconi, J. M., & Watts, B. V. (2016). **Clinicians' perception of patient readiness for treatment: An emerging theme in implementation science?** *Administration and Policy in Mental Health and Mental Health Services Research, 43*, 250-258. doi:10.1007/s10488-015-0635-z

## FEATURED ARTICLES

DeViva, J. C., Bassett, G. A., Santoro, G. M., & Fenton, L. (2016). **Effects of a brief education and treatment-planning group on evidence-based PTSD treatment utilization and completion among veterans.** *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. doi:10.1037/tra0000189  
**Objective:** Veterans with posttraumatic stress disorder (PTSD) presenting for care with Veterans Affairs Health Care System (VA) tend not to engage in evidence-based psychotherapies (EBPs) despite widespread availability of these treatments. Though there is little evidence that "readiness for treatment" affects treatment choice, many VA providers believe that interventions to increase readiness would be helpful. This naturalistic study examined the effects of a 4-session education/treatment-planning group on treatment choice among veterans in a VA outpatient PTSD treatment program.  
**Method:** Treatment choices and completion rates of 114 veterans who received at least 1 session of the group (EG) were compared with those of 68 veterans who did not receive the group and received PTSD program treatment as usual (TAU). TAU and EG cases were matched on gender and service era.  
**Results:** Of 114 EG cases, 52 (45.6%) chose to receive EBPs, compared with 10 of 68 TAU cases (14.7%). These rates were significantly different,  $\chi^2(1) = 18.1$ ,  $p < .0001$ . Among cases choosing EBPs, 52.2% of EG cases completed the EBPs as planned, compared with 60% of TAU cases. These percentages were not significantly different. Among EG cases choosing EBPs, lower likelihood of treatment completion was related

to psychiatric medication prescription, presence of PTSD service connection, and higher overall service-connection level.  
**Conclusion:** The education/treatment-planning group was associated with higher likelihood of selecting but not completing EBPs for PTSD. The decision to engage in trauma-focused treatment may be a different process from the decision to complete such treatment.

Fortney, J. C., Pyne, J. M., Kimbrell, T. A., Hudson, T. J., Robinson, D. E., Schneider, R., . . . & Schnurr, P. P. (2015). **Telemedicine-based collaborative care for posttraumatic stress disorder: A randomized clinical trial.** *JAMA Psychiatry, 72*, 58-67. doi:10.1001/jamapsychiatry.2014.1575  
**Importance:** Posttraumatic stress disorder (PTSD) is prevalent, persistent, and disabling. Although psychotherapy and pharmacotherapy have proven efficacious in randomized clinical trials, geographic barriers impede rural veterans from engaging in these evidence-based treatments.  
**Objective:** To test a telemedicine-based collaborative care model designed to improve engagement in evidence-based treatment of PTSD.  
**Design, Setting, and Participants:** The Telemedicine Outreach for PTSD (TOP) study used a pragmatic randomized effectiveness trial design with intention-to-treat analyses. Outpatients were recruited from 11 Department of Veterans Affairs (VA) community-based outpatient clinics serving predominantly rural veterans. Inclusion required meeting diagnostic criteria for current PTSD according to the Clinician-Administered PTSD Scale. Exclusion criteria included receiving PTSD treatment at a VA medical center or a current diagnosis of schizophrenia, bipolar disorder, or substance dependence. Two hundred sixty-five veterans were enrolled from November 23, 2009, through September 28, 2011, randomized to usual care (UC) or the TOP intervention, and followed up for 12 months.  
**Interventions:** Off-site PTSD care teams located at VA medical centers supported on-site community-based outpatient clinic providers. Off-site PTSD care teams included telephone nurse care managers, telephone pharmacists, telepsychologists, and telepsychiatrists. Nurses conducted care management activities. Pharmacists reviewed medication histories. Psychologists delivered cognitive processing therapy via interactive video. Psychiatrists supervised the team and conducted interactive video psychiatric consultations.  
**Main Outcomes and Measures:** The primary outcome was PTSD severity as measured by the Posttraumatic Diagnostic Scale. Process-of-care outcomes included medication prescribing and regimen adherence and initiation of and adherence to cognitive processing therapy.  
**Results:** During the 12-month follow-up period, 73 of the 133 patients randomized to TOP (54.9%) received cognitive processing therapy compared with 16 of 132 randomized to UC (12.1%) (odds ratio, 18.08 [95% CI, 7.96-41.06];  $P < .001$ ). Patients in the TOP arm had significantly larger decreases in Posttraumatic Diagnostic Scale scores (from 35.0 to 29.1) compared with those in the UC arm (from 33.5 to 32.1) at 6 months ( $\beta = -3.81$ ;  $P = .002$ ). Patients in the TOP arm also had significantly larger decreases in Posttraumatic Diagnostic Scale scores (from 35.0 to 30.1) compared with those in the UC arm (from 33.5 to 31.7) at 12 months ( $\beta = -2.49$ ;  $P = .04$ ). There were no significant group differences in the number of PTSD medications prescribed and adherence to medication regimens were not significant. Attendance at 8 or more sessions of cognitive processing therapy significantly predicted improvement in Posttraumatic Diagnostic Scale scores ( $\beta = -3.86$  [95% CI, -7.19 to -0.54];  $P = .02$ ) and fully mediated the intervention effect at 12 months.  
**Conclusions and Relevance:** Telemedicine-based collaborative care can successfully engage rural veterans in evidence-based psychotherapy to improve PTSD outcomes.

Goetter, E. M., Bui, E., Ojserkis, R. A., Zakarian, R. J., Brendel, R. W., & Simon, N. M. (2015). **A systematic review of dropout from psychotherapy for posttraumatic stress disorder among Iraq and Afghanistan combat veterans.** *Journal of Traumatic Stress, 28*, 401-409. doi:10.1002/jts.22038 A significant number of veterans of the conflicts in Iraq and Afghanistan have posttraumatic stress disorder (PTSD), yet underutilization of mental health treatment remains a significant problem. The purpose of this review was to summarize rates of dropout from outpatient, psychosocial PTSD interventions provided to U.S. Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND) veterans with combat-related PTSD. There were 788 articles that were identified which yielded 20 studies involving 1,191 individuals eligible for the review. The dropout rates in individual studies ranged from 5.0% to 78.2%, and the overall pooled dropout rate was 36%, 95% CI [26.20, 43.90]. The dropout rate differed marginally by study type (routine clinical care settings had higher dropout rates than clinical trials) and treatment format (group treatment had higher dropout rates than individual treatment), but not by whether comorbid substance dependence was excluded, by treatment modality (telemedicine vs. in-person treatment), or treatment type (exposure therapy vs. nonexposure therapy). Dropout is a critical aspect of the problem of underutilization of care among OEF/OIF/OND veterans with combat-related PTSD. Innovative strategies to enhance treatment retention are needed.

Grubbs, K. M., Fortney, J. C., Pyne, J. M., Hudson, T., Moore, W. M., Custer, P., . . . & Schnurr, P. P. (2015). **Predictors of initiation and engagement of cognitive processing therapy among veterans with PTSD enrolled in collaborative care.** *Journal of Traumatic Stress, 28*, 580-584. doi:10.1002/jts.22049 Collaborative care (CC) increases access to evidence-based pharmacotherapy and psychotherapy. The study aim was to identify the characteristics of rural veterans receiving a telemedicine-based CC intervention for posttraumatic stress disorder (PTSD) who initiated and engaged in cognitive processing therapy (CPT) delivered via interactive video. Veterans diagnosed with PTSD were recruited from 11 community-based outpatient clinics ( $N = 133$ ). Chart abstraction identified all mental health encounters received during the 12-month study. General linear mixed models were used to identify characteristics that predicted CPT initiation and engagement (attendance at 8 or more sessions). For initiation, higher PTSD severity according to the Clinician Administered PTSD Scale ( $d = -0.39, p = .038$ ) and opt-out recruitment (vs. self-referral;  $d = -0.49, p = .010$ ) were negative predictors. For engagement, major depression ( $d = -1.32, p = .006$ ) was a negative predictor whereas a pending claim for military service connected disability ( $d = 2.02, p = .008$ ) was a positive predictor. In general, veterans enrolled in CC initiated and engaged in CPT at higher rates than usual care. Those with more severe symptoms and comorbidity, however, were at risk of not starting or completing CPT.

Harpaz-Rotem, I., Rosenheck, R. A., Pietrzak, R. H., & Southwick, S. M. (2014). **Determinants of prospective engagement in mental health treatment among symptomatic Iraq/Afghanistan veterans.** *The Journal of Nervous and Mental Disease, 202*, 97-104. doi:10.1097/NMD.0000000000000078 There is considerable public and professional concern about the mental health status of veterans deployed to Iraq and Afghanistan as well as how to engage and retain symptomatic veterans in treatment. This study examined

demographic, psychiatric, and psychosocial determinants of prospective initiation and retention in mental health services among symptomatic Iraq/Afghanistan veterans. One hundred thirty-seven symptomatic veterans who were referred to mental health screening completed a survey at the time of their first mental health visit. Associations between survey variables and subsequent Veterans Affairs service utilization were evaluated. The most consistent determinants of mental health service initiation and retention were severity of posttraumatic stress disorder (PTSD) and depressive symptoms. Notably, whereas PTSD-related re-experiencing symptoms were independently associated with initiation of mental health treatment, PTSD-related numbing symptoms were independently associated with retention in treatment. Stigma, barriers to care, and beliefs about mental health treatment were not associated with either mental health initiation or retention.

Hoge, C. W., Grossman, S. H., Auchterlonie, J. L., Riviere, L. A., Milliken, C. S., & Wilk, J. E. (2014). **PTSD treatment for soldiers after combat deployment: Low utilization of mental health care and reasons for dropout.** *Psychiatric Services, 65*, 997-1004. doi:10.1176/appi.ps.201300307 *Objective:* Limited data exist on the adequacy of treatment for posttraumatic stress disorder (PTSD) after combat deployment. This study assessed the percentage of soldiers in need of PTSD treatment, the percentage receiving minimally adequate care, and reasons for dropping out of care. *Methods:* Data came from two sources: a population-based cohort of 45,462 soldiers who completed the Post-Deployment Health Assessment and a cross-sectional survey of 2,420 infantry soldiers after returning from Afghanistan (75% response rate). *Results:* Of 4,674 cohort soldiers referred to mental health care at a military treatment facility, 75% followed up with this referral. However, of 2,230 soldiers who received a PTSD diagnosis within 90 days of return from Afghanistan, 22% had only one mental health care visit and 41% received minimally adequate care (eight or more encounters in 12 months). Of 229 surveyed soldiers who screened positive for PTSD (PTSD Checklist score  $\geq 50$ ), 48% reported receiving mental health treatment in the prior six months at any health care facility. Of those receiving treatment, the median number of visits in six months was four; 22% had only one visit, 52% received minimally adequate care (four or more visits in six months), and 24% dropped out of care. Reported reasons for dropout included soldiers feeling they could handle problems on their own, work interference, insufficient time with the mental health professional, stigma, treatment ineffectiveness, confidentiality concerns, or discomfort with how the professional interacted. *Conclusions:* Treatment reach for PTSD after deployment remains low to moderate, with a high percentage of soldiers not accessing care or not receiving adequate treatment. This study represents a call to action to validate interventions to improve treatment engagement and retention.

Holdsworth, E., Bowen, E., Brown, S., & Howat, D. (2014). **Client engagement in psychotherapeutic treatment and associations with client characteristics, therapist characteristics, and treatment factors.** *Clinical Psychology Review, 34*, 428-450. doi:10.1016/j.cpr.2014.06.004 Client engagement has been associated with positive psychotherapeutic outcomes, yet it is relatively under-theorized. The aims of this review were to establish how client engagement with psychotherapeutic interventions targeting psychological or behavioral change has been operationally defined and assessed, and the associated client characteristics, therapist

characteristic, and treatment factors. Seventy-nine studies were selected for review, revealing inconsistent definitions and assessments of engagement and a broad array of client characteristics and treatment factors investigated. Attendance was frequently used as a proxy for engagement, but may not be reliable. Participation or involvement in conjunction with homework compliance which reflects clients' efforts within and between sessions may more reliably reflect engagement. The findings of associations between client characteristics and engagement variables were equivocal, although clients' capacities to address their problems tended to be positively associated with engagement. Nearly all therapist characteristics, particularly therapists' interpersonal skills, and most treatment factors, particularly strengths-based approaches and the therapeutic relationship, were positively associated with engagement. A theory of engagement that characterizes the function and inter-relations of variables across different psychotherapeutic settings is needed.

Jakupcak, M., Hoerster, K. D., Blais, R. K., Malte, C. A., Hunt, S., & Seal, K. (2013). **Readiness for change predicts VA mental healthcare utilization among Iraq and Afghanistan war veterans.** *Journal of Traumatic Stress, 26*, 165-168. doi:10.1002/jts.21768

Many veterans present to Veteran Affairs (VA) care intending to seek mental health treatment for symptoms of posttraumatic stress disorder (PTSD), depression, and/or alcohol misuse, yet most subsequently underutilize mental health care. This study examined the association of readiness for change with outpatient VA mental health care utilization in 104 treatment-seeking Iraq and Afghanistan war veterans who screened positive for PTSD, depression, and/or alcohol misuse at intake. Multivariate analyses demonstrated that readiness for change assessed at intake was positively associated (Incident Rate Ratio [IRR] = 1.22) with prospective outpatient mental health care utilization with demographic factors, military characteristics, and mental health burden in the model. Results suggest that interventions that target readiness to change, such as motivational interviewing, may improve treatment utilization in veterans presenting for mental health care.

Kehle-Forbes, S. M., Meis, L. A., Spont, M. R., & Polusny, M. A. (2016). **Treatment initiation and dropout from prolonged exposure and cognitive processing therapy in a VA outpatient clinic.**

*Psychological Trauma: Theory, Research, Practice, and Policy, 8*, 107-114. doi:10.1037/tra0000065 Emerging data suggest that few veterans are initiating prolonged exposure (PE) and cognitive processing therapy (CPT) and dropout levels are high among those who do start the therapies. The goal of this study was to use a large sample of veterans seen in routine clinical care to 1) report the percent of eligible and referred veterans who (a) initiated PE/CPT, (b) dropped out of PE/CPT, (c) were early PE/CPT dropouts, 2) examine predictors of PE/CPT initiation, and 3) examine predictors of early and late PE/CPT dropout. We extracted data from the medical records of 427 veterans who were offered PE/CPT following an intake at a Veterans Health Administration (VHA) PTSD Clinical Team. Eighty-two percent ( $n = 351$ ) of veterans initiated treatment by attending Session 1 of PE/CPT; among those veterans, 38.5% ( $n = 135$ ) dropped out of treatment. About one quarter of veterans who dropped out were categorized as early dropouts (dropout before Session 3). No significant predictors of initiation were identified. Age was a significant predictor of treatment dropout; younger veterans were more likely to drop out of treatment than older veterans. Therapy type was also a significant predictor of dropout; veterans receiving PE were more likely to drop out late than

veterans receiving CPT. Findings demonstrate that dropout from PE/CPT is a serious problem and highlight the need for additional research that can guide the development of interventions to improve PE/CPT engagement and adherence.

Mittler, J. N., Martsof, G. R., Telenko, S. J., & Scanlon, D. P. (2013). **Making sense of "consumer engagement" initiatives to improve health and health care: A conceptual framework to guide policy and practice.** *Milbank Quarterly, 91*, 37-77. doi:10.1111/milq.12002

*Context:* Policymakers and practitioners continue to pursue initiatives designed to engage individuals in their health and health care despite discordant views and mixed evidence regarding the ability to cultivate greater individual engagement that improves Americans' health and well-being and helps manage health care costs. There is limited and mixed evidence regarding the value of different interventions. *Methods:* Based on our involvement in evaluating various community-based consumer engagement initiatives and a targeted literature review of models of behavior change, we identified the need for a framework to classify the universe of consumer engagement initiatives toward advancing policymakers' and practitioners' knowledge of their value and fit in various contexts. We developed a framework that expanded our conceptualization of consumer engagement, building on elements of two common models, the individually focused transtheoretical model of behavior and the broader, multilevel social ecological model. Finally, we applied this framework to one community's existing consumer engagement program. *Findings:* Consumer engagement in health and health care refers to the performance of specific behaviors ("engaged behaviors") and/or an individual's capacity and motivation to perform these behaviors ("activation"). These two dimensions are related but distinct and thus should be differentiated. The framework creates four classification schemas, by (1) targeted behavior types (self-management, health care encounter, shopping, and health behaviors) and by (2) individual, (3) group, and (4) community dimensions. Our example illustrates that the framework can systematically classify a variety of consumer engagement programs, and that this exercise and resulting characterization can provide a structured way to consider the program and how its components fit program goals both individually and collectively. *Conclusions:* Applying the framework could help advance the field by making policymakers and practitioners aware of the wide range of approaches, providing a structured way to organize and characterize interventions retrospectively, and helping them consider how they can meet the program's goals both individually and collectively.

Mott, J. M., Mondragon, S., Hundt, N. E., Beason-Smith, M., Grady, R. H., & Teng, E. J. (2014). **Characteristics of U.S. veterans who begin and complete prolonged exposure and cognitive processing therapy for PTSD.** *Journal of Traumatic Stress, 27*, 265-273. doi:10.1002/jts.21927

This retrospective chart-review study examined patient-level correlates of initiation and completion of evidence-based psychotherapy (EBP) for posttraumatic stress disorder (PTSD) among treatment-seeking U.S. veterans. We identified all patients ( $N = 796$ ) in a large Veterans Affairs PTSD and anxiety clinic who attended at least 1 individual psychotherapy appointment with 1 of 8 providers trained in EBP. Within this group, 91 patients (11.4%) began EBP (either Cognitive Processing Therapy or Prolonged Exposure) and 59 patients (7.9%) completed EBP. The medical records of all EBP patients ( $n = 91$ ) and a provider-matched sample of patients who received another form of individual psychotherapy ( $n = 66$ ) were

reviewed by 4 independent raters. Logistic regression analyses revealed that Iraq and Afghanistan veterans were less likely to begin EBP than veterans from other service eras,  $OR = 0.48$ , 95%  $CI = [0.24, 0.94]$ , and veterans who were service connected for PTSD were more likely than veterans without service connection to begin EBP,  $OR = 2.33$ , 95%  $CI = [1.09, 5.03]$ . Among those who began EBP, Iraq and Afghanistan veteran status,  $OR = 0.09$ , 95%  $CI = [0.03, 0.30]$ , and a history of psychiatric inpatient hospitalization,  $OR = 0.13$ , 95%  $CI = [0.03, 0.54]$ , were associated with decreased likelihood of EBP completion.

Mott, J. M., Stanley, M. A., Street, R. L., Grady, R. H., & Teng, E. J. (2014). **Increasing engagement in evidence-based PTSD treatment through shared decision-making: A pilot study.** *Military Medicine*, 179, 143-149. doi:10.7205/MILMED-D-13-00363 Within the Veterans Health Administration, post-traumatic stress disorder (PTSD) treatment decisions are left to the patient and provider, allowing substantial variability in the way treatment decisions are made. Theorized to increase treatment engagement, shared decision-making interventions provide a standardized framework for treatment decisions. This study sought to develop (phase 1) and pilot test the feasibility and potential effectiveness (phase 2) of a brief shared decision-making intervention to promote engagement in evidence-based PTSD treatment. An initial version of the intervention was developed and then modified according to stakeholder feedback. Participants in the pilot trial were 27 Iraq and Afghanistan Veterans recruited during an intake assessment at a Veterans Affairs PTSD clinic. Participants randomized to the intervention condition ( $n = 13$ ) participated in a 30-minute shared decision-making session, whereas patients randomized to the usual care condition ( $n = 14$ ) completed treatment planning during their intake appointment, per usual clinic procedures. Among the 20 study completers, a greater proportion of participants in the intervention condition preferred an evidence-based treatment and received an adequate ( $\geq 9$  sessions) dose of psychotherapy. Results provide preliminary support for the feasibility and potential effectiveness of the intervention and suggest that larger-scale trials are warranted.

Murphy, R. T., Thompson, K. E., Murray, M., Rainey, Q., & Uddo, M. M. (2009). **Effect of a motivation enhancement intervention on veterans' engagement in PTSD treatment.** *Psychological Services*, 6, 264-278. doi:10.1037/a0017577 This study is the first randomized controlled trial of the posttraumatic stress disorder (PTSD) motivation enhancement (PME) Group, a brief intervention based on Motivational Interviewing and designed to enhance combat veterans' engagement in PTSD treatment by increasing awareness of the need to change PTSD-related problems. Outpatients in a year-long, group- and cognitive-behavioral therapy (CBT)-oriented Veterans Affairs PTSD treatment program were randomly assigned to 4 sessions of the PME Group ( $n = 60$ ) or a Psychoeducation Group ( $n = 54$ ) in the 2nd month of treatment. Hypotheses about the proposed impact of the PME Group on PTSD treatment engagement (i.e., readiness to change, perceived treatment relevance, and PTSD program attendance) were all supported, although predicted differences were not found on all measures. These results support the need to address readiness to change in combat-related PTSD treatment.

Reger, G. M., Hoffman, J., Riggs, D., Rothbaum, B. O., Ruzek, J., Holloway, K. M., & Kuhn, E. (2013). **The "PE coach" smartphone application: An innovative approach to improving implementation, fidelity, and homework adherence during prolonged exposure.** *Psychological Services*, 10, 342-349. doi:10.1037/a0032774

Prolonged exposure (PE) is an empirically supported treatment that is being disseminated broadly to providers in the Department of Veterans Affairs and Department of Defense. Innovative methods are needed to support the implementation, dissemination, and patient and provider adherence to PE. The PE Coach is a smartphone application (app) designed to mitigate barriers to PE implementation. PE Coach is installed on the patient's phone and includes a range of capabilities for use during the PE session and after each session to support the treatment. Functions include the ability to audio record treatment sessions onto the patient's device, to construct the in vivo hierarchy on the device, to record completed homework exercises, to review homework adherence, and to track symptom severity over time. The app also allows sessions and homework to be scheduled directly in the app, populating the device calendar with patient reminder notifications. In the final session, a visual display of symptom improvement and habituation to items on the in vivo hierarchy is presented. These capabilities may significantly improve convenience, provider implementation and adherence, and patient compliance with treatment. Future research is needed to test whether PE Coach is useful and effective.

Rosen, C. S., Azevedo, K. J., Tiet, Q. Q., Greene, C. J., Wood, A. E., Calhoun, P., . . . & Schnurr, P. P. (2017). **An RCT of effects of telephone care management on treatment adherence and clinical outcomes among veterans with PTSD.** *Psychiatric Services*, 68, 151-158. doi:10.1176/appi.ps.201600069 *Objective:* This study assessed whether adding telephone care management to usual outpatient mental health care improved treatment attendance, medication compliance, and clinical outcomes of veterans with posttraumatic stress disorder (PTSD). *Methods:* In a multisite randomized controlled trial, 358 veterans were assigned to either usual outpatient mental health treatment ( $N=165$ ) or usual care plus twice-a-month telephone care management (TCM) and support in the first three months of treatment ( $N=193$ ). Treatment utilization and medication refills were determined from U.S. Department of Veterans Affairs administrative data. PTSD, depression, quality of life, aggressive behavior, and substance use were assessed with self-report questionnaires at intake, four months, and 12 months. *Results:* Telephone care managers reached 95% of TCM participants ( $N=182$ ), completing an average 5.1 of 6.0 planned telephone calls. During the three-month intervention period, TCM participants completed 43% more mental health visits ( $M \pm SD = 5.9 \pm 6.8$ ) than did those in usual care ( $4.1 \pm 4.2$ ) (incident rate ratio = 1.36,  $\chi^2 = 6.56$ ,  $df = 1$ ,  $p < .01$ ). Treatment visits in the nine-month follow-up period and medication refills did not differ by condition. Only 9% of participants were scheduled to receive evidence-based psychotherapy. Slopes of improvement in PTSD, depression, alcohol misuse, drug problems, aggressive behavior, and quality of life did not differ by condition or treatment attendance. *Conclusions:* TCM improved PTSD patients' treatment attendance but not their outcomes. TCM can enhance treatment engagement, but outcomes depend on the effectiveness of the treatments that patients receive.

Seal, K. H., Abadjian, L., McCamish, N., Shi, Y., Tarasovsky, G., & Weingardt, K. (2012). **A randomized controlled trial of telephone motivational interviewing to enhance mental health treatment engagement in Iraq and Afghanistan veterans.** *General Hospital Psychiatry*, 34, 450-459. doi:10.1016/j.genhosppsych.2012.04.007 *Objective:* To test the efficacy of telephone-administered motivational interviewing (MI) to enhance treatment engagement in Iraq and

Afghanistan veterans with mental health (MH) problems. *Method:* Between April 23, 2008, and February 25, 2011, 73 Iraq and Afghanistan veterans who screened positive for  $\geq 1$  MH problem(s) on telephone-administered psychometric assessment, but were not engaged in treatment, were randomized to either personalized referral for MH services and four sessions of telephone MI or standard referral and four neutral telephone check-in sessions (control) at baseline, 2, 4 and 8 weeks. Blinded assessment occurred at 8 and 16 weeks. *Results:* In intent-to-treat analyses, 62% assigned to telephone MI engaged in MH treatment compared to 26% of controls [relative risk (RR)=2.41, 95% confidence interval (CI)=1.33–4.37,  $P=.004$ ], which represented a large effect size (Cohen's  $h=0.74$ ). Participants in the MI group also demonstrated significantly greater retention in MH treatment than controls [MI mean visits (S.D.)=1.68 (2.73) and control mean visits (S.D.)=0.38 (0.81), incidence rate ratio (IRR)=4.36, 95% CI=1.96–9.68,  $P<.001$ ], as well as significant reductions in stigma and marijuana use at 8 weeks ( $P<.05$ ). *Conclusions:* Telephone MI enhances MH treatment engagement in Iraq and Afghanistan veterans with MH problems.

Spoont, M. R., Nelson, D. B., Murdoch, M., Rector, T., Sayer, N. A., Nugent, S., & Westermeyer, J. (2014). **Impact of treatment beliefs and social network encouragement on initiation of care by VA service users with PTSD.** *Psychiatric Services, 65*, 654–662. doi:10.1176/appi.ps.201200324 *Objectives:* Despite the U.S. Department of Veterans Affairs' (VA) expansion of mental health services to treat VA service users with posttraumatic stress disorder (PTSD), many with PTSD do not engage in treatment. Numerous studies suggest that beliefs about treatment and social network factors, such as encouragement to seek treatment by others, affect engagement; however, prospective studies examining these factors are largely absent in this population. This study sought to understand social and attitudinal factors influencing treatment initiation, which may help to inform outreach interventions for VA service users with PTSD. *Methods:* A prospective, national cohort study of mental health care use among veterans recently diagnosed as having PTSD ( $N=7,645$ ) was undertaken. Data from self-administered surveys and administrative databases were analyzed to assess contributions of treatment-related beliefs and social network encouragement to subsequent mental health care use, after facility, demographic, need, and access factors were controlled. *Results:* After the analysis controlled for treatment need and accessibility, the odds of initiating mental health care were greater for veterans who believed that they needed help for PTSD or other emotional problems and those who were encouraged to seek help by friends and family. Beliefs about the effectiveness of PTSD treatments were associated with the type of treatment received. Negative illness identity was not a barrier to treatment initiation. *Conclusions:* VA service users' social networks, veterans' perceptions of their need for mental health care, and their beliefs about PTSD treatment effectiveness may be fruitful targets for future treatment engagement interventions.

Spoont, M. R., Nelson, D. B., Murdoch, M., Sayer, N. A., Nugent, S., Rector, T., & Westermeyer, J. (2015). **Are there racial/ethnic disparities in VA PTSD treatment retention?** *Depression and Anxiety, 32*, 415–425. doi:10.1002/da.22295 *Background:* Chronic posttraumatic stress disorder (PTSD) can result in significant social and physical impairments. Despite the Department of Veterans Affairs' (VA) expansion of mental health services into primary care clinics to

reach larger numbers of Veterans with PTSD, many do not receive sufficient treatment to clinically benefit. This study explored whether the odds of premature mental health treatment termination varies by patient race/ethnicity and, if so, whether such variation is associated with differential access to services or beliefs about mental health treatments. *Methods:* Prospective national cohort study of VA patients who were recently diagnosed with PTSD ( $n=6,788$ ). Self-administered surveys and electronic VA databases were utilized to examine mental health treatment retention across racial/ethnic groups in the 6 months following the PTSD diagnosis controlling for treatment need, access factors, age, gender, treatment beliefs, and facility factors. *Results:* African American and Latino Veterans were less likely to receive a minimal trial of pharmacotherapy and African American Veterans were less likely to receive a minimal trial of any treatment in the 6 months after being diagnosed with PTSD. Controlling for beliefs about mental health treatments diminished the lower odds of pharmacotherapy retention among Latino but not African American Veterans. Access factors did not contribute to treatment retention disparities. *Conclusions:* Even in safety-net healthcare systems like VA, racial and ethnic disparities in mental health treatment occur. To improve treatment equity, clinicians may need to more directly address patients' treatment beliefs. More understanding is needed to address the treatment disparity for African American Veterans.

Yehuda, R., Bierer, L. M., Pratchett, L. C., Lehrner, A., Koch, E. C., Van Manen, J. A., . . . & Hildebrandt, T. (2015). **Cortisol augmentation of a psychological treatment for warfighters with posttraumatic stress disorder: Randomized trial showing improved treatment retention and outcome.** *Psychoneuroendocrinology, 51*, 589–597. doi:10.1016/j.psyneuen.2014.08.004 *Background:* Prolonged exposure (PE) therapy for post-traumatic stress disorder (PTSD) in military veterans has established efficacy, but is ineffective for a substantial number of patients. PE is also associated with high dropout rates. We hypothesized that hydrocortisone augmentation would enhance symptom improvement and reduce drop-out rates by diminishing the distressing effects of traumatic memories retrieved during imaginal exposure. We also hypothesized that in responders, hydrocortisone augmentation would be more effective in reversing glucocorticoid indices associated with PTSD than placebo augmentation. *Method:* Twenty-four veterans were randomized to receive either 30 mg oral hydrocortisone or placebo prior to PE sessions 3–10 in a double-blind protocol. Glucocorticoid receptorsensitivity was assessed in cultured peripheral blood mononuclear cells (PBMC) using the *in vitro* lysozyme inhibition test and was determined before and after treatment. Intent-to-treat analysis was performed using latent growth curve modeling of treatment effects on change in PTSD severity over time. Veterans who no longer met diagnostic criteria for PTSD at post-treatment were designated as responders. *Results:* Veterans randomized to hydrocortisone or placebo augmentation did not differ significantly in clinical severity or glucocorticoid sensitivity at pre-treatment. Hydrocortisone augmentation was associated with greater reduction in total PTSD symptoms compared to placebo, a finding that was explained by significantly greater patient retention in the hydrocortisone augmentation condition. A significant treatment condition by responder status interaction for glucocorticoid sensitivity indicated that responders to hydrocortisone augmentation had the highest pre-treatment glucocorticoid sensitivity (lowest lysozyme  $IC_{50-DEX}$ ) that diminished over the course of treatment. There was a significant association



## FEATURED ARTICLES *continued*

between decline in glucocorticoid responsiveness and improvement in PTSD symptoms among hydrocortisone recipients. **Conclusions:** The results of this pilot study suggest that hydrocortisone augmentation of PE may result in greater retention in treatment and thereby promote PTSD symptom improvement. Further, the results suggest that particularly elevated glucocorticoid responsiveness at pre-treatment may identify veterans likely to respond to PE combined with an intervention that targets glucocorticoid sensitivity. Confirmation of these findings will suggest that pharmacologic interventions that target PTSD-associated glucocorticoid dysregulation may be particularly helpful in promoting a positive clinical response to PTSD psychotherapy.

## ADDITIONAL CITATIONS

Bryant, R. A., Moulds, M. L., Mastrodomenico, J., Hopwood, S., Felmingham, K., & Nixon, R. D. V. (2007). **Who drops out of treatment for post-traumatic stress disorder?** *Clinical Psychologist, 11*, 13-15. doi:10.1080/13284200601178128 This study examined pretreatment characteristics of civilian trauma survivors who remained in and dropped out of either cognitive behavioral therapy or supportive counseling for PTSD. Consistent with the authors' hypotheses, participants who reported more avoidance and catastrophic cognitions were more likely to drop out of treatment.

Carman, K. L., Dardess, P., Maurer, M., Sofaer, S., Adams, K., Bechtel, C., & Sweeney, J. (2013). **Patient and family engagement: A framework for understanding the elements and developing interventions and policies.** *Health Affairs, 32*, 223-231. doi:10.1377/hlthaff.2012.1133 The authors proposed a framework of patient engagement that considered a continuum of health and healthcare related engagement behaviors ranging from consultation to partnership, and a variety of levels of engagement across the healthcare system (direct care, organizational design and governance, and policy making). They present patient, organizational, and societal factors that may influence engagement.

Ehlers, A., Grey, N., Wild, J., Stott, R., Liness, S., Deale, A., . . . & Clark, D. M. (2013). **Implementation of cognitive therapy for PTSD in routine clinical care: Effectiveness and moderators of outcome in a consecutive sample.** *Behaviour Research and Therapy, 51*, 742-752. doi:10.1016/j.brat.2013.08.006 Through examining pre-and post-treatment symptomology for 330 consecutive patients, this study investigated whether Cognitive Therapy for PTSD (CT-PTSD) can be effectively implemented into a UK National Health Service Outpatient Clinic. CT-PTSD led to very large improvement in PTSD symptoms, depression and anxiety. Therapists who were inexperienced in CT-PTSD had more dropouts than those with greater experience.

Eliacin, J., Rollins, A. L., Burgess, D. J., Salyers, M. P., & Matthias, M. S. (2016). **Engaging African-American veterans in mental health care: Patients' perspectives.** *The Journal of Nervous and Mental Disease, 204*, 254-260. doi:10.1097/NMD.0000000000000479 This qualitative study explored African American Veterans with mental illness's perspectives of facilitators and barriers to engaging in outpatient mental health services. Participants reported that the patient factors of self-awareness, assertiveness, willingness to seek help, and leadership skills facilitated engagement. They also noted the importance of forming a human connection with their therapist.

## ADDITIONAL CITATIONS *continued*

Hamblen, J. L., Bernardy, N. C., Sherrieb, K., Norris, F. H., Cook, J. M., Louis, C. A., & Schnurr, P. P. (2015). **VA PTSD clinic director perspectives: How perceptions of readiness influence delivery of evidence-based PTSD treatment.** *Professional Psychology: Research and Practice, 46*, 90-96. doi:10.1037/a0038535 In their examination of the implementation of PE and CPT in VA outpatient clinics, the authors discovered that participation in PE and CPT was preceded by a preparatory group in nearly all programs. Clinic directors perceived that the groups improved readiness for the treatments, helped Veterans make informed decisions about their treatment plans, improved coping skills and symptom management, and decreased the likelihood of PE and CPT no-shows. Despite a lack of evidence regarding the association between readiness and EBP engagement or data demonstrating the effectiveness of preparatory groups, the concept of readiness guided program development and flow through the programs.

Keller, S. M., Zoellner, L. A., & Feeny, N. C. (2010). **Understanding factors associated with early therapeutic alliance in PTSD treatment: Adherence, childhood sexual abuse history, and social support.** *Journal of Consulting and Clinical Psychology, 78*, 974-979. doi:10.1037/a0020758 During a 10-week RCT examining the efficacy of PE and sertraline in the treatment of PTSD, early therapeutic alliance was associated with PE adherence and overall treatment completion. Trauma-related social support, but not a history of childhood sexual abuse, was associated with early therapeutic alliance.

Norman, S. B., Wilkins, K. C., Tapert, S. F., Lang, A. J., & Najavits, L. M. (2010). **A pilot study of Seeking Safety therapy with OEF/OIF veterans.** *Journal of Psychoactive Drugs, 42*, 83-87. doi:10.1080/02791072.2010.10399788 This study reported outcomes for fourteen OEF/OIF Veterans with comorbid PTSD and substance use disorders who initiated a truncated version of Seeking Safety, a cognitive-behavioral psychotherapy for co-occurring PTSD and substance use disorder. The authors noted that the case management component of Seeking Safety may have increased Veterans' willingness to participate in EBPs for PTSD.

Spoont, M. R., Hodges, J., Murdoch, M., & Nugent, S. (2009). **Race and ethnicity as factors in mental health service use among veterans with PTSD.** *Journal of Traumatic Stress, 22*, 648-653. doi:10.1002/jts.20470 The authors conducted a retrospective cohort study using VA administrative data to determine rates of mental health care use and to examine whether the odds of service use varied by race or ethnicity among all Veterans with a new diagnosis of PTSD. Veteran race, but not Hispanic ethnicity, was associated with decreases in some measures of pharmacotherapy engagement and increases in some measures of psychotherapy engagement.

Spoont, M. R., Murdoch, M., Hodges, J., & Nugent, S. (2010). **Treatment receipt by veterans after a PTSD diagnosis in PTSD, mental health, or general medical clinics.** *Psychiatric Services, 61*, 58-63. doi:10.1176/ps.2010.61.1.58 This study examined outpatient treatment participation among Veterans with a recent PTSD diagnosis. Within six months of diagnosis, approximately two-thirds of the sample initiated PTSD treatment; 33% of the sample received a minimally adequate dose of either pharmacotherapy (at least four 30-day supplies) or counseling (at least eight visits). Those diagnosed in PTSD specialty programs were more likely to initiate and be retained in treatment than those diagnosed in a general medical clinic.

## ADDITIONAL CITATIONS *continued*

Tetley, A., Jinks, M., Huband, N., & Howells, K. (2011). **A systematic review of measures of therapeutic engagement in psychosocial and psychological treatment.** *Journal of Clinical Psychology, 67*, 927-941. [doi:10.1002/jclp.20811](https://doi.org/10.1002/jclp.20811) The authors conducted a systematic review of engagement measures for psychosocial therapy. The findings suggested that although therapeutic engagement appears to be considered an important construct to assess, there is substantial variability in the definition of engagement across studies and additional work is needed to develop adequate measures of therapeutic engagement.