

***Commentary on Written Exposure Therapy as Step One in Reducing the Burden of PTSD:  
The Composite Cases of “Alex,” “Bruno,” and “Charles”***

**On the Implementation of Written Exposure Therapy (WET)  
with Veterans Diagnosed with PTSD**

**DENISE M. SLOAN<sup>a,b</sup> & BRIAN P. MARX<sup>a</sup>**

<sup>a</sup> National Center for PTSD, VA Boston Healthcare System, & Boston University School of Medicine

<sup>b</sup> Correspondence regarding this article should be sent to Denise M. Sloan, National Center for PTSD, VA Boston Healthcare System, 150 S. Huntington Avenue, Boston, MA 02130  
Email: [Denise.Sloan@va.gov](mailto:Denise.Sloan@va.gov)

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**ABSTRACT**

We provide commentary on the article by Austern (2017) in which several composite PTSD treatment cases with veteran clients are presented. Written Exposure Therapy (WET) was implemented in each case, with varying levels of success. We provide additional background on the development of WET to provide readers with a better understanding of how this treatment was created. We also describe the available efficacy data supporting the use of WET as well as describe efficacy studies that are currently underway. Lastly, we comment on Austern’s use of WET in the three composite veteran cases that are described.

*Key words:* PTSD; military combat; veterans; trauma; exposure therapy; composite case studies; clinical case studies

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We read Austern’s case study paper with great interest and are pleased to have an opportunity to comment. In this commentary, we first provide a background on how written exposure therapy (WET) was developed and describe the efficacy data to support its use. Following this, we will discuss the manner and methods in which WET was used by Austern. Throughout our commentary we will refer to the empirical data on PTSD treatment and the gaps in the literature, especially related to treating military service members and veterans.

**DEVELOPMENT OF WET**

Because only a partial description of the development of WET is provided by Austern, we want to describe how WET was developed, as well as offer the reader an understanding of the mechanism by which exposure-based treatments for PTSD work. A thorough description of the development of WET will enable a better understanding of the theoretical model underlying the treatment, which in turn provides a better understanding in the ways the treatment should and should not be altered.

Our work began out of curiosity about the wide ranging benefits associated with an expressive writing procedure developed by Pennebaker and Beall (1986). This procedure involves writing about stressful or traumatic experiences for 20 minutes on three consecutive days. Shockingly, in spite of the procedure's brevity, a large number of published studies have demonstrated its robust physical and psychological health benefits (for a review see Frattaroli, 2006). As we read the results of these studies, we were struck by the consistent findings as well as the similarities of the procedure to imaginal exposure treatments for PTSD and other disorders. However, we hypothesized that the expressive writing procedure would not be beneficial for individuals who had experienced an event that qualified as a bona fide traumatic stressor ("Criterion A traumatic event"; American Psychiatric Association, 1994, 2013) and PTSD symptoms of at least moderate severity, because exposure-based treatments, such as Prolonged Exposure (PE; Foa, Hembree, & Rothbaum, 2007) typically include many more therapy sessions.

We tested our hypothesis by randomly assigning individuals who reported a PTSD Criterion A traumatic stressor and PTSD symptoms of at least moderate severity to either an expressive writing condition or a control writing condition in which individuals wrote about how they spent their time each day with no emotions or opinions (Sloan & Marx, 2004). To ensure that we replicated expressive writing procedure, we obtained the protocol directly from Pennebaker and consulted with him throughout the development of this study as well as subsequent studies testing expressive writing protocol. To test the underlying mechanism of the exposure model (i.e., extinction) we collected saliva samples from participants in order to examine salivary cortisol reactivity during each session as well as self-report ratings of emotional reactivity. We expected to find no between group differences in changes in PTSD symptoms because the expressive writing protocol did not seem to include enough writing sessions (i.e., exposures) to result in the extinction of the pathological fear response. In contrast to our expectations, we found that participants assigned to the expressive writing condition reported a significant reduction in PTSD symptom severity at both immediate post-treatment and later follow-up, relative to those assigned to the control condition. Moreover, salivary cortisol and self-reported ratings of emotional reactivity indicated both initial activation of fear-responding in response to the first expressive writing session and later extinction of fear-responding by the third session (Sloan & Marx, 2004).

These findings were a surprise to us as we assumed a much greater dose would be necessary for extinction of pathological fear-responding. Subsequently, we examined the empirical literature in an attempt to uncover studies that had been conducted in an effort to determine the necessary and sufficient therapy dose for successful PTSD treatment. Incredibly, in doing this literature review, we found that there were no studies that had examined the association between therapy dose and treatment outcome. This discovery, in combination with the findings from our first study, led us to conduct a series of subsequent studies to better understand critical components of successful PTSD treatment.

In our next study, we examined whether it was necessary to write about the same traumatic experience during each writing session for successful outcome (Sloan, Marx, & Epstein, 2005). Pennebaker and Beall's original expressive writing protocol permits switching

between different stressful or traumatic events and, consequently, some individuals do change topics between the writing sessions. Such an allowance is generally assumed to be at odds with what is typically done in exposure-based therapy protocols, which generally require that a client is repeatedly exposed to reminders of the same trauma so that extinction of pathological fear responses can occur.

However, there has been some controversy regarding the specificity of the exposure stimuli, with some (e.g., Watson & Marks, 1971) suggesting that any stimulus can be used during exposure sessions, as long as those stimuli elicit intense negative affect from the individual. If this is the case, then expressive writing should produce positive results regardless of whether or not the individual changes topics as long as whatever the individual writes about elicits strong negative affect. To determine if this was indeed the case, we recruited participants who had a history of multiple experiences that met PTSD criterion A and reported at least moderate overall PTSD symptom severity. We randomly assigned participants to either write about the same traumatic event at each session, to write about different traumatic events at each session, or to a control writing condition. All other expressive writing procedures were followed. We also collected salivary cortisol reactivity data at each session and self-reported emotion ratings to test the extinction hypothesis. Findings indicated that only participants who wrote about the same traumatic event during each session reported significant reductions in PTSD symptom severity at post-treatment and follow up assessments. Individuals assigned to the different traumatic events condition and the control condition reported no significant reduction in PTSD symptom severity. Importantly, participants in both trauma writing conditions displayed elevated initial fear responding during the first writing session, but only participants who wrote about the same trauma displayed a significant extinction of fear responding by the third writing session. In fact, participants who wrote about different traumas during each session displayed a significantly greater fear-response at the third session, relative to both the same trauma writing condition and the control writing condition. These findings underscore the importance of writing about the same trauma at each session and the importance of the specificity of exposure stimuli when conducting imaginal exposure (Asnaani, McLean, & Foa, 2016).

We then conducted several additional studies to investigate possible moderators of expressive writing (Epstein, Sloan, & Marx, 2005; Sloan & Epstein, 2005; Sloan, Marx, Epstein, & Dobbs, 2008), as well as to continue to examine a critical component of expressive writing, such as writing instructions that emphasize the expression of emotion versus emphasizing the thoughts experienced during the trauma event (Sloan, Marx, Epstein, & Lexington, 2007). The combination of this work led us to better understand for whom expressive writing may be beneficial and under what conditions.

After spending approximately eight years examining critical components of imaginal exposure using narratives, we next investigated whether the expressive writing protocol would be beneficial for individuals with a diagnosis of PTSD (Sloan, Marx, and Greenberg, 2011). In our prior studies, we had participants provide self-report ratings of PTSD symptoms instead of conducting a diagnostic interview. Given the range of self-reported PTSD symptoms across the studies we certainly had included some individuals who were likely to have a diagnosis of PTSD as well as individuals who were unlikely to have a PTSD diagnosis. Thus, it was possible that

expressive writing would not be efficacious among individuals with a greater PTSD symptom severity level. To address this question we conducted a study in which we first assessed for PTSD with a clinician-administered interview. Participants with a confirmed PTSD diagnosis were randomly assigned to either an expressive writing condition or to a control writing condition. Based on our earlier findings (Sloan et al., 2005), we altered the expressive writing protocol to instruct individuals to write about the same traumatic experience during each session. We continued to test the underlying mechanism of exposure (i.e., extinction) by examining heart rate reactivity and self-reported emotion ratings during each session. Findings indicated that expressive writing was not associated with a significant reduction in PTSD symptoms, and the two conditions did not significantly differ in PTSD symptom severity at post-treatment and follow up assessments. Heart rate and self-report emotion reactivity data indicated initial activation of fear responding for participants assigned to the expressive writing condition but no reduction in this response was observed following the first session.

The findings with the PTSD sample are what we had expected to observe in our first study. However, we were glad that we did not conduct this study first as we would not have learned as much about what does and does not work when using narrative writing as a form of imaginal exposure for the treatment of posttraumatic stress symptoms. Our systematic research provided data to support the notion that imaginal exposure using narratives could be an efficacious treatment but we needed to make modifications in order for it to be beneficial for individuals with more severe PTSD. We made several modifications that were informed by data from our prior work, by pilot work we conducted to further investigate the narrative writing dose, and by drawing from other relevant empirical data.

Two main changes that we made were to include a psychoeducation component, something that all evidence-based treatments for PTSD include (e.g., Hamblen, Schnurr, Rosenberg, & Eftekhari, 2009). It is important to inform patients about the core symptoms of PTSD as well as how PTSD develops and is maintained. This information provides a nice segue into describing the rationale for why writing about one's traumatic experiences will reduce PTSD. There are clear data that treatment expectation accounts for substantial variance in treatment outcome (Glass, Arnkoff, & Shapiro, 2001). It is also important to explain to a patient why you are asking him or her to do the very thing they have made great efforts not to do in order for the patient to be willing to write about their trauma experiences. We scripted the treatment in order to enable easy dissemination across providers and to ensure that the treatment was the same regardless of the therapist implementing the treatment. Thus, we intend for the therapist to read the treatment information to the patient. We also conducted pilot work to investigate the minimal narrative writing dose necessary and sufficient for successful treatment outcome. We altered both the duration and number of sessions. Our pilot work indicated that 5 sessions, each of which includes 30 minutes of writing, was a sufficient dose for successful outcome with individuals diagnosed with PTSD. We also altered the instructions for writing based on our cumulative empirical work. Lastly, we included the instruction for the patient to write about the trauma experience using a distance perspective ("as you look back upon it now") rather than an immersed perspective ("write about it in the present tense, as if it were happening right now"). This decision was informed by a rich body of empirical data indicating that people are better able to accurately recount and "work-through" highly negative life events when using a

distance versus immersed perspective (for a review see, Kross & Ayduck, 2011). Following the changes to the expressive writing protocol we named the new protocol Written Exposure Therapy (WET).

## POINTS OF CLARIFICATION

Austern (2017) indicated that we developed WET for the Department of Veteran Affairs, but this is incorrect. We are both currently investigators at the National Center for PTSD housed within the Department of Veteran Affairs. However, all of the development work we conducted was completed prior to working for the VA. In fact, as we will discuss next, very little of work with WET has involved veterans.

Austern (2017) also stated that WET was developed for use as a stepped-care treatment approach in which WET would be first implemented, followed by additional treatment. This is incorrect as we developed WET to be a standalone treatment, and have only tested its efficacy as such, as we describe next. We understand how Austern and others might view WET as an initial step in treatment given its brevity. However, as we discovered, PTSD can be successfully treated with a brief treatment. We also had assumed initially that a larger treatment dose was necessary for successful PTSD outcome, but there are emerging data suggesting that fewer treatment sessions may be needed to effectively treat PTSD (van Minnen & Foa, 2006; Nacasch et al., 2015). As a field, it is important to be guided by data to inform treatment dose.

## EFFICACY DATA FOR WRITTEN EXPOSURE THERAPY

After finalizing changes to the WET protocol we then conducted an efficacy test with a sample of individuals who had PTSD related to a motor-vehicle accident (Sloan, Marx, Bovin, Feinstein, & Gallagher, 2012). Participants were randomly assigned to either WET or a wait list control condition. The treatment was well-tolerated, with only 9% dropping out prematurely. This rate is much lower than dropout rates associated with other trauma-focused treatments, which average 36% (Imel, Laska, Jakupcak, & Simpson, 2013). Findings indicated that participants assigned to WET displayed significant reductions in PTSD symptoms, relative to those assigned to the waitlist group with large between-group differences. Moreover, 90% (i.e., 20 out of 22) of the participants assigned to WET no longer met diagnostic criteria for PTSD following treatment.

We considered the next step in investigating efficacy of WET. Although we included a wait-list comparison condition in our study, the findings of the treatment group per se were striking in terms of the number of individuals who no longer met PTSD diagnostic criteria, the low treatment-dropout rate, and the high treatment satisfaction ratings. Because our between-group effect size has been similar to PE and Cognitive Processing Therapy (CPT) when a no-treatment comparison condition has been included (e.g., Resick et al., 2002), we decided the next best step in investigating WET would be to directly compare it to a first-line PTSD treatment. Thus, we are randomly assigning adults with PTSD to either WET or CPT (for detailed design description see, Sloan, Marx, & Resick, 2016). We expect that participants assigned to WET will display an equally efficacious PTSD outcome relative to CPT, despite the substantial treatment

differences in dose (e.g., 5 sessions compared with 12 sessions). Currently, we have completed participant recruitment, meeting our recruitment goal of 126 participants, and have completed the treatment phase. We are in the final months of the follow-up assessment phase in which we assess participants one year after completing treatment. We anticipate publishing the primary findings of this study by this coming fall. Because we are still conducting follow-up assessments we are unable to examine treatment outcome findings at this time. When these outcome findings become available, we believe that they will be important in terms of potentially providing additional efficacy support for WET and for informing the field of whether WET is equally efficacious to a first-line PTSD treatment.

## **SPECIAL PTSD TREATMENT CONSIDERATIONS FOR VETERAN AND ACTIVE DUTY SERVICE MEMBERS**

Efficacy of PTSD treatments is of particular importance for this commentary. As Austern (2017) correctly describes, there are a number of first-line PTSD treatments, with PE and CPT having the strongest empirical support (VA/DoD, 2010). However, much of the efficacy and effectiveness data for these treatments has been obtained with civilian samples, not veterans and service members. The recent conflicts in Iraq and Afghanistan have resulted in a substantial increase in veterans and service members presenting for PTSD services (Tanielian & Jaycox, 2008). This increased demand for care has also resulted in increased attention to the need to conduct studies examining the efficacy of first-line treatment approaches with veterans and military service members. As summarized by Steenkamp and colleagues (2015), the available efficacy evidence indicates that PE and CPT do not work as well for veterans and service members as for other trauma exposed samples. Specifically, Steenkamp et al. reported that while studies examining the efficacy of PE or CPT with service members or veterans reported 49-70% achieving clinically meaningful symptom reductions, these studies also found that approximately two-thirds of veterans and service members retained their PTSD diagnosis following either PE or CPT (range 60-72%).

In addition to the efficacy data, there is emerging evidence that VA and DoD providers are infrequently using these treatments even after receiving training in PE and CPT (Borah et al., 2013; Finley et al., 2015; Watts et al., 2014). Finley and colleagues (2015) found that VA providers used supportive-care treatment approaches for veterans presenting for PTSD treatment substantially more often than PE or CPT, citing high-care demands in combination with limited staff resources as a barrier for not using PE and CPT more often.

Taken together, these data have led to the call for identifying alternative PTSD treatments (see Hoge, Lee, & Castro, 2017). Alternative approaches should be brief in order to address the implementation barriers cited by VA and DoD providers as well as address access to care barriers cited by service members (Hoge et al., 2014). Alternative treatments should include an exposure component, as this appears to be a critical component of successful PTSD treatment (Institute of Medicine, 2008). We believe that WET may represent such an alternative approach. WET is slated to be included as a first-line treatment in the updated and soon to be published VA/DoD PTSD Practice Guidelines. However, we caution that there is limited efficacy data for using WET with veterans and service members. As Austern (2017) reported and as mentioned

above, we have conducted an open pilot of WET that suggested promising findings (Sloan, Lee, Litwack, Sawyer, & Marx, 2013); and also, we are currently conducting a non-inferiority study in which we are comparing WET with the CPT-cognitive only protocol (CPT-C) with a sample of active duty service members. Lastly, we have a grant under review at the Department of Veteran Affairs to conduct a comparative effectiveness study of WET with a sample of veterans. We are also collecting WET implementation data at our local VA Boston PTSD specialty clinic, which routinely offers WET to veterans in addition to CPT and PE.

## **THE IMPLEMENTATION OF WET BY AUSTERN**

We want to first commend Austern (2017) on conducting a thorough assessment before developing a treatment plan in his composite case studies. The use of the Clinician Administered PTSD Scale for DSM-5 (CAPS-5; Weathers et al., 2017) is a particular strength. As Austern indicates, it is important to conduct an assessment to inform treatment planning as well as to use assessment measures to evaluate treatment progress. Austern states that psychometric information for CAPS-5 was unavailable, which was likely the case at the time he conducted his treatment sessions. However, this information is now available (Weathers et al., 2017). In addition, Austern states a cut-off score of 38 on the PCL-5 indicates probable PTSD. Although 38 was the cut off score for probable PTSD with veteran samples using early psychometric data, more recent psychometric data indicates a cut off score of 33 (Bovin et al., 2016).

We do have a general comment regarding implementation of WET in the cases presented. Specifically, although much of the treatment protocol is scripted, it is critical that therapists provide feedback on the written narratives to clients. The therapist should read each narrative after the session and then provide feedback to the clients in the subsequent session regarding ways in which they did and did not follow the writing instructions. In addition, it is important for therapists to check in with the client at the end of each writing session about how the writing session went. For example, it is helpful to ask clients if they remembered details of the event that they didn't realize they remembered and if they found it easier to write about the event than they anticipated. This check-in provides an opportunity for the client to discuss their reactions to the writing with the therapist. We generally recommend that the check-in not last longer than 10 minutes to ensure that therapists are simply checking in with the client rather than conducting a cognitive processing session.

The case presentation of Alex was well described and demonstrates how clinically meaningful reductions can be obtained with just five sessions of exposure-based writing. The SUDS reported during each session also underscore the extinction of fear responding that was likely taking place. We also like the way that Austern handled the client's cell phone, by requesting to keep it after discovering he was playing video games instead of writing in the first session. Removing potential methods to avoid during the writing session is key. We agree with Austern that additional treatment was likely needed at the conclusion of the five WET sessions. However, given the clinical presentation, we would have suggested in vivo exposures targeted at the driving avoidance rather than suggesting a course of PE.

In the case of Bruno, we believe that providing feedback regarding how Bruno followed the instructions and where he did not follow instructions could have led to further improvements. From the description, it appears that Bruno had difficulty following some of the narrative instructions, which is not uncommon among those with PTSD, especially among individuals who have developed a lifetime of avoidance coping. Nonetheless, providing feedback about ways in which Bruno should be writing to gain the most benefit might have been helpful, resulting in greater PTSD symptom reduction. It's possible that Bruno's admission of the pleasure he experienced during the rape that was revealed during the 6<sup>th</sup> session of PE would have occurred during the first 5 WET sessions if feedback about lack of details, thoughts, and feelings was provided to Bruno. Despite the lack of corrective feedback, Bruno reported an 18 point PCL-5 reduction in symptoms. This reduction is promising, but clearly indicates additional treatment was needed. Several options were possible at this point, including re-administering the WET protocol. Given Bruno's high level of avoidance, additional exposure sessions were likely needed and he may have been willing to continue with additional WET sessions given his positive experience. The administration of PE also makes sense for Bruno and we were glad to see the treatment gains that were achieved.

The case of Charles is a common presentation among those with PTSD and a long history of trauma exposures. Although Charles identified a military-related event as the cause of his PTSD, it is possible that his childhood trauma contributed to his symptoms. Austern did describe providing corrective feedback on the first narrative session for Charles, which was certainly needed in that and subsequent sessions. It is clear that WET was not an ideal match for Charles given his reluctance to write about the military-related trauma. However, his apparent avoidance may also have been due to the military trauma not being the primary source of his PTSD symptoms.

Overall, each of these clients may have selected WET as their treatment of choice because it was short and appeared "easier" than the other trauma-focused treatment options. We see this with many veterans that present at our local VA PTSD specialty clinic. Yet, often we observe that veterans engage in the treatment in terms of completing the trauma narratives and complete the five writing sessions. That was the case with the three veterans cases presented by Austern, each of whom completed the five sessions of WET and each achieved some treatment gain.

Each of the cases underscores the need to provide clients with several treatment choices. PE and CPT are clearly effective treatment approaches, yet the literature also indicates there is room for improvement. We believe WET is one such alternative approach. However, regardless of the therapy a client selects it is critical that therapists follow the therapy protocol. Implementation data from VA and DoD (Borah et al., 2013; Finley et al., 2015; Watts et al., 2014)) is making it clear that when PE and CPT are used by providers, critical components are often left out (e.g., the in-vivo hierarchy in PE). The effectiveness of a given treatment is likely dampened when critical components of the treatment are discarded. Similarly, WET was developed from systematic investigation of the critical components of treatment. Accordingly, the effectiveness of WET will depend on whether it is implemented as it was intended to be implemented. We scripted much of the treatment to increase the likelihood of accurate



implementation but the entire treatment is not scripted, such as the feedback portion at the beginning of sessions 2-5, and the check-in portion at the end of each session. Despite the brevity of the treatment, the therapist plays a critical role in WET. We have collected data on therapeutic alliance and have found that both the therapist and the client report a very strong therapeutic bond.

In closing, we appreciate and are impressed with the work done and described by Austern (2017) in his case studies. He nicely describes his efforts to use the WET protocol with several different composite patients with varying degrees of success. The three different, stepped-care contexts in which the WET protocol was administered in Austern's three cases are valuable in spelling out the different clinical contexts in which the WET treatment can play out. We hope that this accompanying commentary provides readers with additional information about the WET protocol and how to most effectively and appropriately use it. We acknowledge that WET may not be an effective treatment for everyone with PTSD. More work is needed to examine for whom and under what conditions WET works best. That being said, we believe that the evidence to date for WET shows that it is another viable treatment option for clinicians working with trauma survivors suffering from PTSD.

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