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Written exposure as an intervention for PTSD: A randomized clinical trial with motor vehicle accident survivors

Denise M. Sloan [a,*], Brian P. Marx [a], Michelle J. Bovin [a], Brian A. Feinstein [b], Matthew W. Gallagher [a]

[a] National Center for PTSD, VA Boston Healthcare System and, Boston University School of Medicine, 150 S. Huntington Avenue, Boston, MA 02130, USA
[b] Stony Brook University, Department of Psychology, Stony Brook, NY 11794, USA

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ABSTRACT

The present study examined the efficacy of a brief, written exposure therapy (WET) for posttraumatic stress disorder (PTSD). Participants were 46 adults with a current primary diagnosis of motor vehicle accident-related PTSD. Participants were randomly assigned to either WET or a waitlist (WL) condition. Independent assessments took place at baseline and 6-, 18-, and 30-weeks post baseline (WL condition not assessed at 30 weeks). Participants assigned to WET showed significant reductions in PTSD symptom severity at 6- and 18-week post-baseline, relative to WL participants, with large between-group effect sizes. In addition, significantly fewer WET participants met diagnostic criteria for PTSD at both the 6- and 18-week post-baseline assessments, relative to WL participants. Treatment gains were maintained for the WET participants at the 30-week post baseline assessment. Notably, only 9% of participants dropped out of WET and the WET participants reported a high degree of satisfaction with the treatment. These findings suggest that a brief, written exposure treatment may efficaciously treat PTSD. Future research should examine whether WET is efficacious with other PTSD samples, as well as compare the efficacy of WET with that of evidence-based treatments for PTSD.

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Written exposure as an intervention for PTSD: a randomized clinical trial

Over the last 20 years several evidence-based treatments (EBTs) for posttraumatic stress disorder (PTSD) have been identified (e.g., Foa, Keane, Friedman, & Cohen, 2009; Institute of Medicine [IOM], 2008). Evidence from many well-controlled trials with a variety of PTSD samples indicates that these treatments are effective, and that the exposure component of each of these treatment protocols is important for clinically significant symptom change (Foa et al., 2009; IOM, 2008).

Although these successes are impressive, there are some good reasons to develop alternative EBTs for PTSD. Most notably, a significant minority of PTSD patients do not respond favorably to the available EBTs. In their meta-analysis of randomized controlled trials for PTSD, Bradley, Greene, Russ, Dutra, and Westen (2005) found that approximately 33% of treatment completers continued to meet diagnostic criteria for PTSD and 46% of treatment completers did not show clinically significant symptom improvement following treatment. Moreover, approximately one-quarter of individuals in exposure-based treatments for PTSD prematurely ends treatment (i.e., dropout; Hembree et al., 2003). Another point of concern about PTSD EBTs is that they are often unavailable to those in greatest need due to geographic, economic, and time commitment barriers (Sloan, Marx, & Keane, 2011).

In their review of the available treatments for PTSD, the IOM noted that, in some particular manner, all the EBTs emphasize the repeated confrontation of feared memories, images and situations by the affected individual (i.e., exposure). This suggests that any novel treatment for PTSD should incorporate this component, while simultaneously being palatable to patients and clinicians, easily disseminated and implemented, economical and accessible. Written exposure (i.e., confronting the trauma memory through writing) holds promise as a treatment alternative that can fulfill all of these conditions. In one of its earliest forms, Pennebaker and Beall (1986) had individuals write repeatedly (three, 20 min sessions) about their most traumatic or distressing experience with as much emotion and detail as possible. In this and many subsequent studies with a variety of samples, results showed that this writing procedure, referred to as written disclosure, improved both psychological and physical health (see Frattaroli, 2006; for a review).

* Corresponding author. National Center for PTSD (116B-2), VA Boston Healthcare System, 150 S. Huntington Avenue, Boston, MA 02130, USA. Tel.: +1 857 364 6333; fax: +1 857 364 4501.
E-mail addresses: denise.sloan@gmail.com, Denise.Sloan@va.gov (D.M. Sloan).

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Given the procedural similarities between the written disclosure procedure pioneered by Pennebaker and Beall (1986) and more established exposure-based treatments for PTSD, our research team has conducted several studies to examine the extent to which written disclosure may reduce PTSD symptom severity among trauma exposed (i.e., event meeting PTSD Criterion A [American Psychiatric Association, 1994]) individuals with at least moderate levels of PTSD symptoms. These studies (e.g., Sloan & Marx, 2004; Sloan, Marx, & Epstein, 2005, 2007) have found that, relative to a control writing condition, written disclosure significantly reduces PTSD symptom severity and that individuals experience significant fear activation during the initial writing session followed by significant reductions of fear activation (i.e., extinction) by the last session. Although these results suggested that Pennebaker and Beall's (1986) written disclosure procedure may potentially ameliorate PTSD symptoms among trauma survivors much like exposure-based treatments, they should be interpreted cautiously since participants were not treatment seeking and did not necessarily meet diagnostic criteria for PTSD. In fact, the mean symptom severity levels in these studies were substantially lower than what is typically reported for participants enrolled in PTSD clinical trials (e.g., Foa et al., 2005).

More recently, Sloan, Marx, and Greenberg (2011) examined whether or not written disclosure would be beneficial to individuals meeting diagnostic criteria for PTSD. Results revealed no significant PTSD symptom severity reduction for individuals randomly assigned to the written disclosure condition, relative to individuals assigned to a control writing condition. Findings also showed that participants assigned to the written disclosure condition did not experience the significant reduction in arousal and negative affect observed in prior studies. This finding suggested that the therapeutic dose (three, 20 min writing sessions) may not have been sufficient to produce beneficial outcome. However, the lack of group differences might have occurred for other reasons, such as participants in this study were not treatment seeking and they were not provided with any treatment rationale or psychoeducation about PTSD. Past research has suggested that these components may be necessary, but not sufficient, for successful treatment outcomes (e.g., Hamblen, Schnurr, Rosenberg, & Eftekhari, 2009).

Through additional treatment development work, we determined that five, 30-min sessions would be sufficient to produce significant reductions in arousal and negative affect among participants meeting diagnostic criteria for PTSD. Based on this initial pilot work, we made some other changes to the treatment protocol, including the addition of psychoeducation and treatment rationale components to the first session. The psychoeducation component includes information on symptoms of PTSD and other maladaptive behaviors that maintain these symptoms (e.g., avoidance). The treatment rationale emphasizes the importance of confronting the trauma memory, rather than avoiding or attempting to avoid, and the use of writing as a means of confronting the trauma memory. In addition, based on prior study findings (Sloan et al., 2005, 2007), we modified the writing instructions, such that participants are directed to write about the same trauma memory during each session and focus on the details of the trauma, with particular attention to felt emotions, the meaning of the traumatic event, and "hot spots."[1] To reflect these changes and distinguish the original Pennebaker and Beall (1986) written disclosure protocol from our modified protocol, from this point onward, we will refer to the current treatment protocol as written exposure therapy (WET). The WET protocol was designed to be consistent with the goal of creating a tolerable, easily disseminated and implemented, economical and accessible exposure-based treatment alternative for PTSD.

For this initial test of the WET protocol, we recruited a sample of participants with motor vehicle accident (MVA)-related PTSD. We chose this sample because over three million Americans are injured in MVAs each year (Blanchard & Hickling, 2004) and research has shown that MVAs are the leading cause of PTSD in Western society (e.g., Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). PTSD and associated psychopathology, such as travel anxiety and depression, represent a large, clinically significant problem that may persist for years (e.g., Mayou, Tyndel, & Bryant, 1997). Prospective studies of injured MVA survivors have reported PTSD rates that range from 8% to approximately 40%, with a reasonable estimate being around 25% (Blanchard & Hickling, 2004). Thus, from a public health perspective, the development of a tolerable, accessible, easily disseminated and implemented exposure-based treatment for MVA-related PTSD stands to impact a very large number of individuals in need of services.

The current study examined the efficacy of WET as an intervention for individuals with a current primary diagnosis of MVA-related PTSD. We expected that participants who were randomly assigned to WET would show clinically significant improvements in PTSD symptom severity, relative to participants assigned to a waitlist (WL) comparison condition. We also expected that the WET condition would be associated with fewer cases of PTSD at follow-up assessment, relative to the WL. Based on our treatment development pilot work, we expected WET participants to report a significant reduction in negative affect and arousal from the first treatment session to the last. Because of the brevity of treatment, we expected a low treatment dropout rate associated with WET. Finally, we expected participants assigned to WET would report high levels of treatment credibility and satisfaction. The guidelines of the Journal Article Reporting Standards (JARS) were followed (APA Publications and Communications Board Working Group on JARS, 2008).

Method

Participants

Participants were recruited from the greater Boston, MA area. Recruitment was conducted through postings (e.g., flyers placed near public transportation stops, in community centers, public libraries, laundromats, grocery stores) and public service announcements. Recruitment occurred between February 2009 and May 2010. Eligible participants were adults with a primary diagnosis of PTSD related to a MVA that occurred at least 3 months prior to the initial evaluation. Exclusion criteria included current diagnosis of organic mental disorder, schizophrenia, psychotic disorder, unmedicated, symptomatic bipolar disorder, substance dependence, and illiteracy in English. Participants deemed at high risk for suicidal behavior or with a history of two or more suicide gestures or attempts in the preceding year were also excluded. Participants taking psychiatric medication were required to have been on a stable dose for at least three months prior to study entry, and asked to maintain the regimen during treatment. Lastly, participants were excluded if they were currently receiving psychotherapy. All participants were monetarily compensated for their time during the assessment sessions.

A participant flowchart is shown in Fig. 1. One hundred forty-five individuals contacted the researchers regarding the study. Of these 145 individuals, 68 did not qualify for the study during the initial phone screen and 77 were scheduled for an initial assessment. The phone screen consisted of asking a set of brief questions

[1] The treatment protocol is available upon request from the first author.