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Rebound Effects Following Deliberate Thought Suppression: Does PTSD Make a Difference?

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This study was designed to examine the effects of deliberate suppression of trauma-related thoughts in 44 individuals who were diagnosed with posttraumatic stress disorder (PTSD+) and 26 individuals who were not (PTSD–) following a motor vehicle accident (MVA). In an effort to resolve discrepancies in the literature, the PTSD– group was selected from the same help-seeking population as the patient group. Measures included the percentage of MVA-related thoughts, mood, perceived controllability of thoughts, and physiological arousal (heart rate, skin conductance, and two measures of facial EMG). Contrary to hypothesis, both PTSD+ and PTSD– groups showed a rebound in trauma-related thoughts following deliberate thought suppression. This rebound was associated with increases in negative affect, anxiety, and distress and diminished perceptions of controllability over thoughts. Examination of the physiological measures did not mirror the pattern noted for trauma-related thoughts, although the data suggest that suppression was associated with higher levels of frontalis EMG. The current study indicates that help-seeking individuals who are distressed about their psychological state following a serious MVA will show a rebound in MVA-related thoughts, irrespective of PTSD diagnosis. Implications for the study of thought suppression as a potential maintaining factor for trauma-related problems are discussed, with suggestions for future research.

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THE THOUGHT SUPPRESSION PARADIGM represents a popular avenue for investigating the maintenance of cognitive intrusions and their role in psychopathology (e.g., Abramowitz, Tolin, & Street, 2001; Wenzlaff & Wegner, 2000). As originally observed by Wegner and colleagues (Wegner, Schneider, Carter, & White, 1987), attempting to suppress a target thought can produce an ironic increase in the occurrence of that thought. Two forms of this unexpected increase in target thoughts have been observed: (a) an immediate enhancement effect, where the frequency of target thoughts increases during the interval when suppression is occurring, and (b) a rebound effect, where the frequency of the target thought increases following deliberate suppression. This effect has been observed with personally irrelevant target thoughts (e.g., Kelly & Kahn, 1994; Wegner & Gold, 1995) as well as personally relevant thoughts (e.g., Smari, Birgisdottir, & Brynjolfsdottir, 1995). Several investigators have employed this paradigm to study deliberate thought suppression in clinical populations, particularly populations with diagnosed disorders that are characterized by intrusive thoughts such as obsessive-compulsive disorder (e.g., Tolin, Abramowitz, Przeworski, & Foa, 2002), depression (e.g., Wenzlaff, Wegner, & Roper, 1988), and posttraumatic stress disorder (PTSD; Shipherd & Beck, 1999; 2005). The current study examined emotional and psychophysiological correlates of deliberate thought suppression among individuals with PTSD and a help-seeking comparison sample.

One of the key characteristics of PTSD is recurrent, intrusive thoughts about the traumatic event (American Psychiatric Association, 1994). Several theoretical accounts posit that these intrusive thoughts signify an effort to assimilate information about the traumatic event into existing mental representations (Horowitz, 1976; Lang,

1977). Presumably, attempts to suppress these thoughts could retard or inhibit emotional processing of the trauma and contribute to the maintenance of posttrauma intrusions (e.g., Foa & Kozak, 1986). In particular, suppression could interrupt the way that trauma survivors review trauma-related thoughts and feelings, which theoretically increases their risk for the development of PTSD. As such, past research has examined the role of thought suppression in naturalistic studies with trauma survivors. For example, Ehlers, Mayou, and Bryant (1998) assessed 967 individuals who attended an emergency clinic immediately after a motor vehicle accident (MVA) and followed these participants over the subsequent 12 months. Deliberate thought suppression emerged as a significant predictor of PTSD at 12 months, along with a collection of other demographic, psychological, and trauma characteristic factors. Thus, thought suppression may play a role in the etiology or maintenance of PTSD, based on this and related naturalistic studies (e.g., Aaron, Zagul, & Emery, 1999; Morgan, Mathews, & Winton, 1995). However, naturalistic studies do not allow precision in measurement when considering the role of thought suppression (e.g., separating the influence of repeated measurement from natural changes over time). Additionally, naturalistic studies do not allow determination of the causal relationship between variables. As such, investigators have begun to rely on the experimental thought suppression paradigm to examine in a more controlled fashion the effects of deliberately not thinking about trauma-related thoughts.

To date, four studies have been published using this paradigm with traumatized individuals, with very mixed results. Harvey and Bryant (1998) examined thought suppression in 48 newly traumatized individuals, 24 with acute stress disorder (ASD) and 24 without. All participants were inpatients who had been admitted to a trauma hospital following a serious MVA. Participants experienced three phases, each lasting for 5 minutes: First, they were told that they could think about anything; second, they were randomly assigned to either suppress or not suppress trauma-related thoughts; and third, they were instructed that they could think about anything. Both ASD and non-ASD participants who suppressed trauma thoughts showed a rebound in these thoughts during the third measurement interval, relative to those who had not received suppression instructions. In an effort to examine thought suppression over an extended time interval, Guthrie and Bryant (2000) used a similar paradigm as Harvey and Bryant (1998), only each phase was 24 hours in length. Derived from a sample of mixed trauma survivors recruited from a trauma hospital, two groups were formed: a group of participants with ASD (n = 20) and a group without ASD (n = 20). No evidence was found for a rebound in trauma-related thoughts following deliberate suppression. Shipherd and Beck (1999) examined thought suppression in women with and without chronic PTSD following sexual assault. In this study, participants were recruited from the community for research involvement. The paradigm involved three phases, each lasting 9 minutes. All participants were asked to suppress trauma-related thoughts during the second phase, with similar instructions as those used by Harvey and Bryant during the first and third phases. Sexual assault survivors with chronic PTSD showed a rebound of trauma-related thoughts following suppression, whereas women without PTSD did not. To expand these findings, Shipherd and Beck (2005) used a slightly modified paradigm with individuals with PTSD following an MVA. In this second study, 30 PTSD patients were compared with 25 non-PTSD participants; the majority of participants were part of a larger treatment study, although a portion of the non-PTSD control group were recruited from friendship networks and ads in the community. The paradigm was expanded to include a personally relevant neutral thought target condition (e.g., thoughts about one's errands), in addition to a trauma-related thought target condition. The PTSD group showed a rebound effect following attempted suppression of trauma-related thoughts but was able to suppress neutral thoughts without a rebound. The non-PTSD group did not show a rebound effect following suppression of either neutral or trauma-related thoughts.

These findings suggest that deliberate thought suppression may play a role as a maintaining factor in PTSD, although the data from ASD patients paint a less clear picture. In considering the use of the thought suppression paradigm with clinical samples, it is salient to recognize that there are very few published studies, and within this small collection, methodological variations are apparent. In reviewing the four studies involving traumatized samples, two studies involved acute trauma survivors, with one study noting a rebound in previously suppressed thoughts for both diagnosed and control samples, while the second study failed to observe a rebound following suppression. Among the two studies that have focused on chronic trauma survivors, both reported rebound effects but only among diagnosed samples and only for trauma-relevant thoughts. Differences appear among these studies with respect to the strategies used to recruit "control" samples, including recruitment from the same medical or help-seeking population versus recruitment of