

### Just Think About It: How Can Cognitive Therapy Contribute to the Treatment of Posttraumatic Stress Disorder?

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**As documented by the review by Hassija and Gray (2010), reports of the death of cognitive therapy (CT) for posttraumatic stress disorder (PTSD) are greatly exaggerated. CT has shown evidence of efficacy with adult PTSD comparable with that of prolonged exposure therapy (PE). The cognitive restructuring interventions provided by CT also are an integral component of evidence-based PTSD psychotherapies, such as PE for adults and trauma-focused cognitive-behavior therapy for children and adolescents. Moreover, CT offers a “present-centered” alternative to PTSD psychotherapy that can include, but does not require, trauma memory narrative disclosure. Inclusion of systematic approaches to not only changing thoughts but also enhancing thinking—i.e., self-regulatory information processing—represents an important next step in the development of models of CT for PTSD.**

**Key words:** cognitive-behavior therapy, outcome research, posttraumatic stress disorder. [*Clin Psychol Sci Prac* 17: 128–133, 2010]

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Cognitive therapy (CT) has been widely used for the treatment of posttraumatic stress disorder (PTSD) for several decades, with children (Cohen, Mannarino, & Deblinger, 2006) as well as adults (Cahill, Rothbaum, Resick, & Follette, 2009). Early approaches to CT for PTSD adapted the work of pioneers, such as Aaron Beck’s cognitive therapy for depression and Albert Ellis’s rational emotive therapy for anxiety disorders (Follette, Ruzek, & Abueg, 1998). When shattered assumptions about the self and the world (Janoff-Bulman, 1992) and trauma-altered cognitions (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999) were posited as a core mechanism underlying PTSD, the stage was set for the development of CT modalities specific to PTSD. The two primary approaches to CT for PTSD—cognitive processing therapy (CPT; Resick & Schnicke, 1992) and “cognitive re-structuring” (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998)—are designed to enable people with PTSD to recognize, re-evaluate, and reconstruct or replace trauma-affected cognitions that occur when PTSD intrusive reexperiencing, avoidance, or hypervigilance/hyperarousal symptoms occur in current daily life. CT also can be used to help trauma survivors to identify and reappraise thoughts that occurred during traumatic experiences, to facilitate the “emotional processing” (Foa, Huppert, & Cahill, 2006) of troubling traumatic memories (Resick & Schnicke, 1992).

As the literature review by Hassija and Gray (2010) describes, PTSD clinical researchers have questioned whether CT is necessary in, or adds value to, psychotherapy for PTSD. Studies cited in an earlier review (Longmore & Worrell, 2007) indicated that CT may

not substantially enhance the efficacy of an empirically supported PTSD psychotherapy, prolonged exposure (PE; Cahill et al., 2009). However, studies cited by Hassija and Gray (2010) demonstrate that CT can be a viable and efficacious alternative to PE for the treatment of adults with PTSD, with particular utility for certain associated problems (e.g., guilt, somatic complaints) and PTSD symptoms (e.g., detachment). The informative appraisal of the current status and future prospects of CT for PTSD provided by Hassija and Gray (2010) can be understood as two (of the many) chapters in the story of the evolution of psychotherapy for PTSD. After a brief reprise of those two “chapters,” two newer developments in PTSD psychotherapy in which CT figures prominently will be discussed.

#### **CHAPTER ONE: FACING THE TRAUMATIC FEAR**

Psychoanalytic (Kudler, 2008) and psychodynamically informed (Van de Hart, Nijenhuis, & Steele, 2006) psychotherapy for PTSD and complex characterological and dissociative variants of PTSD (Ford, Courtois, Steele, Hart, & Nijenhuis, 2005; Herman, 1992) emerged in the late 19th and early 20th centuries as a template for helping psychological trauma survivors to face terrifying or horrifying memories therapeutically. Subsequently, cognitively and behaviorally informed etiological theories were developed, including cognitions as a component in the psychobiological “fear structures” that were hypothesized to account for PTSD (Foa & Kozak, 1986). The cognitive-behavioral approach to PTSD psychotherapy thus extended the psychodynamic repertoire of support, guidance, and interpretation of psychic conflicts and structural dissociation, adding new ways of helping trauma survivors to face fear-infused memories. The behavioral innovation was a set of protocols for safely undertaking counterphobic behavioral experiences (e.g., prolonged exposure). CT acquired a place as a key component in PTSD psychotherapy by adding protocols for providing carefully titrated fear-reducing cognitive and affective information before and during the facing of feared memories.

However, cognitive-behavioral theory did not postulate cognitions as the primary etiological or change mechanism in PTSD, but instead viewed them as only one of several potential contributors to or means of

counteracting the classically conditioned fear and anxiety-based avoidance responses thought to account for PTSD’s core intrusive reexperiencing and avoidance/hypervigilance features (Foa & Kozak, 1986). Therefore, CT often was viewed as an adjunct to therapeutic modalities that directly counteracted anxiety-based avoidance (e.g., PE). The clinical research question increasingly became not “how efficacious is CT for PTSD” but “does CT add anything to therapeutic exposure models such as PE?” PE indeed has marshaled a larger number of supportive randomized clinical trial studies than any other therapy for adult PTSD (Cahill et al., 2009). As a result of these studies, PE no longer includes CT as a core component (Foa, Hembree, & Rothbaum, 2007).

#### **CHAPTER TWO: ADDRESSING**

However, there is another parallel line of PTSD theory and therapy development in which cognitions are considered primary in the etiology and treatment of PTSD, and CT plays a central rather than peripheral role. Cognitive theories of PTSD have evolved substantially from the early classical conditioning model of global and undefined “fear structures” to a specification of how the fear structures are associative networks of post-traumatic beliefs (schemas), representations of trauma memories, appraisals of threat, and overarching conclusions (propositions) regarding the meaning and implications for life choices of this trauma-related information (Dalgleish, 2004).

Based on these models, CT was developed as a free-standing PTSD psychotherapy, showing comparable efficacy to PE in studies with adults with a wide range of backgrounds and traumatic experiences (Cahill et al., 2009), and potentially greater benefits than PE in terms of reduced guilt (Nishith, Nixon, & Resick, 2005) and somatic complaints (Galovski, Monson, Bruce, & Resick, 2009). CT also has been found to be superior to PE with adults in reducing emotional numbing/detachment (Livanou et al., 2002) and in promoting long-term recovery from PTSD (Tarrier & Sommerfield, 2004). Although methodological limitations to these studies render the evidence to date at most preliminary (Hassija & Gray, 2010), it is evident that CT is potentially a viable alternative to PE for adults with PTSD, and possibly a first-line approach to

treatment in some cases (e.g., if guilt, emotional numbing/detachment, or somatic complaints are prominent).

### **CHAPTER THREE: CT AS A PARADIGM FOR PRESENT-CENTERED PTSD PSYCHOTHERAPY**

The competition between behaviorally based therapies, such as PE and CT, for the treatment of PTSD is largely a matter of clinical preference and efficiency, or theoretical allegiance, rather than a fundamental conflict between distinct paradigms. PE tends to include a careful examination of the thoughts that were occurring during traumatic events, and PE has been shown to lead to change in posttraumatic cognitions (Foa & Rauch, 2004). The most widely used approach to CT, CPT, is not purely based on CT, but also includes a modified approach to helping recipients face fearful traumatic memories—writing a vivid personal story description of key past traumatic events. Thus, CPT involves not only CT but also the purposeful reversal of avoidance by systematic recollection and retelling of trauma memories, as does PE. However, the cognitive reexamination/reappraisal activities in CPT appear to have greater effects than its trauma writing component: consider a recent randomized clinical trial in which CT without the written trauma narrative was found to be comparably efficacious to the full CPT protocol and to have greater overall efficacy than a hybrid version involving only the written trauma narrative without CT (Resick et al., 2008). Thus, careful review/restructuring of cognitions is integral to both PE and CPT, although in PE this is done primarily as a component of trauma memory recollection rather than as freestanding CT.

Therefore, the singular importance of CT in the treatment of PTSD may lie not as a straw man alternative to PE, but instead in its *original intent* and its *as yet unrealized promise*. Regarding the former, CT provides a unique and relatively unprecedented alternative to the received wisdom that PTSD psychotherapy must include an in-depth recollection of fearful traumatic memories. There is ample reason to hypothesize that while PTSD has been described as a disorder of disturbing memories (Rubin, Berntsen, & Bohni, 2008), it is not the traumatic memories or avoidance of those memories that is of primary concern in PTSD but the dysregulation of the body's stress systems (Henckens,

Hermans, Pu, Joels, & Fernandez, 2009). Unwanted and troubling memories of traumatic events (i.e., intrusive recollections, flashbacks, nightmares) may be by-products of trauma-related alterations in psychobiological stress reactivity (Ford, 2005). Consistent with this view, trauma memories are not the only form of PTSD's hallmark intrusive reexperiencing symptoms—psychological or bodily distress secondary to current reminders of traumatic experiences often occurs in the absence of a distinct, or even a consciously recognized, traumatic memory. Moreover, the remaining avoidance, emotional numbing and detachment, and hyperarousal/hypervigilance symptoms of PTSD do not require, and often do not include, the recollection of traumatic memories.

On the other hand, most PTSD symptoms do involve hallmark features of cognitive theories of PTSD (Dalgleish, 2004): an appraisal of threat (often inconsistent with current circumstances; e.g., hypervigilance), mental representations of or beliefs (schemas in an associative network) regarding current experiences and situations that are biased by a sense of danger (e.g., emotional numbing, anxiety, anger), and intentions to act largely oriented to avoidance of perceived threats or disturbing mental representations and their emotional and physiological concomitants (e.g., hyperarousal).

Thus, it is plausible that addressing the threat-related appraisals and intentions that occur in PTSD in response to stressors in current life events—particularly, but not exclusively, experiences and cognitions that are (or could be) associated with past traumatic events—through approaches such as CT could provide a basis for ameliorating PTSD by facilitating the management or even reversal of PTSD's core alterations in stress reactivity. The importance of preventing avoidance, which is central to behavioral models and interventions such as PE (Foa & Kozak, 1986), would not be diminished, but actually expanded by addressing avoidance of distressing thoughts and emotions associated with past traumatic exposures in daily life (Ford & Russo, 2006).

If avoidance includes attempts to not recall or not think about trauma memories, trauma narrative reconstruction interventions such as those in PE and CPT could be utilized in addition to “present-centered” CT. Interestingly, cognitive-behavioral therapies for

adults with complicated clinical presentations—e.g., co-occurring PTSD and substance use disorders (Frisman, Ford, Lin, Mallon, & Chang, 2008; Najavits, Gallop, & Weiss, 2006) or severe mental illness (Mueser et al., 2008)—have focused on cognitive approaches to stress management and self-regulation in daily life, with trauma narrative reconstruction included as an option but not a required element. In contrast to the mixed outcomes reported for other “present-centered” PTSD psychotherapies that focus on stress management or social problem solving in daily life rather than on trauma memory recollection (e.g., McDonagh et al., 2005; Schnurr et al., 2007; Schnurr et al., 2003), CT thus represents an approach to present-centered PTSD therapy for adults that has a strong evidence base.

#### **CHAPTER FOUR: A SELF-REGULATORY INFORMATION-PROCESSING PARADIGM FOR THE EVOLUTION OF COGNITIVE THERAPY**

Ultimately, CT’s greatest promise for PTSD treatment may lie more in its ability to help trauma survivors restructure their *thinking* than in simply changing their trauma-related *thoughts*. Increasingly, psychological and neurobiological theories and research have focused on the role of alterations in information processing in PTSD (Bryant et al., 2005; Falconer et al., 2008). Cognitions in PTSD (i.e., beliefs, schemas, associative networks, representations, and intentions; Dalgleish, 2004) reflect, and are derived from, the operations of neurobiologically based self-regulatory information-processing systems that underlie attention, mental concentration, appraisal, emotion regulation, inhibitory self-control, memory (including working, procedural, declarative, and narrative processes), and executive functions (Ford, 2005). Each form of these modes of information processing has been shown to be altered in PTSD and to be associated with areas or networks within the central nervous system that subserve stress adaptation and also are altered in PTSD (Magnea & Lanius, 2008; Southwick et al., 2007).

Thus, CT could provide a foundation and platform for the development of PTSD interventions that psychotherapeutically modify biologically based self-regulatory information processing. Adaptive information processing (Silver, Rogers, & Russell, 2008), cognitive

processing (Resick et al., 2008), and emotion processing (Cahill & Foa, 2007) serve as central organizing principles for existing cognitive-behavioral therapies for PTSD, but a map of how these models’ techniques and strategies engage or modify specific information-processing functions or sequential phases has not been elucidated. For example, in a newer PTSD psychotherapy model, TARGET (Ford & Saltzman, 2009), a sequential algorithm for self-regulatory information processing is taught as the core skill set, using the acronym FREEDOM (Focusing, Recognizing triggers, Emotion regulation, Evaluating thoughts, Defining goals, Options for action, Making a contribution).

Whether information-processing capacities can be enhanced psychotherapeutically in PTSD treatment, and what impact this will have on treatment outcome, remains to be tested empirically. There is preliminary evidence that CT can modify not only beliefs or schemas but also the way in which adults with PTSD think about their trauma memories. CPT was associated with increased accommodation of beliefs and a reduced degree of problematic (assimilated or overaccommodated) thoughts in rape survivors’ written descriptions of the personal impact of having experienced rape trauma (Sobel, Resick, & Rabalais, 2009). In addition, rape survivors who received PE showed evidence of increasing attempts to organize their trauma memories, and while the fragmentation of their memory narratives did not decline following PE, there was a correlation between reductions in PTSD symptom severity and decreased memory fragmentation (Foa, Molnar, & Cashman, 1995).

The importance of enhancing information processing is underscored by research showing that diminished cognitive capacity is a risk factor for PTSD (Qouta, Punamaki, Montgomery, & El Sarraj, 2007) and that cognitive overload is associated with increased fragmentation and severity of intrusive thoughts (Nixon, Cain, Nehmy, & Seymour, 2009; Nixon, Nehmy, & Seymour, 2007).

In sum, psychotherapy for PTSD inevitably involves cognitive processes, and CT provides a systematic and efficacious approach to restructuring trauma-related beliefs and schemas. There is evidence that CT provides a present-centered alternative to trauma memory narrative approaches to PTSD psychotherapy that

may be of particular value when PTSD is complicated by persistent toxic beliefs, self-schemas, and emotional distress (Hassija & Gray, 2010). CT also opens the door to the development of PTSD psychotherapies that enhance not only trauma survivors' cognitions but also their fundamental self-regulatory information-processing capacities.

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Received October 12, 2009; accepted October 13, 2009.