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Chapter 11

Psychosocial Intervention for Co-Existing MDD and PTSD

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1. Introduction

This chapter will focus on the relationship between chronic depression and posttraumatic stress disorder (PTSD). This relationship has become increasingly critical to our understanding of the etiology of early onset chronic depression. For the patient presenting with early onset chronic depression we typically find a developmental profile of maltreatment in the form of emotional abuse or neglect, physical abuse or neglect, and sexual abuse [1]. In addition, interpersonal maltreatment is not the only childhood experience occurring within the context of family and caregiver relationships. Children are also subject to a range of losses, sociopolitical stressors, and environmental disasters that can have a dramatic negative impact on their view of self, other and their world [2].

It is generally accepted that early onset depression has a traumatic substrate that is rooted in a child's developmental history [3, 4, 5]. The derailment of a secure attachment and requisite cognitive-affective development produces negative self-other attributions and an enhanced fear response toward unfamiliar or threatening environmental stimuli. Behaviorally, this is manifested in a predominantly avoidant coping strategy, which, in turn, increases the strength of the fear structure [6]. Chronic depressive trajectories stemming from late onset or adult trauma have received less attention in the literature and yet present with frequency among veterans. For instance, a large proportion of veterans diagnosed with PTSD also carry a diagnosis of depression [7,8]. This population has a high treatment refractory rate for both antidepressant medication and psychosocial interventions [9].

2. Problem statement

Rates of co-morbidity

PTSD and Major Depressive Disorder co-occur at high rates. Gerrity et al [10] found that 86% of depressed VA patients (N=398) reported a history of trauma and severity of PTSD

symptoms was strongly associated with severity of depressive symptoms. Rates of reported Co-Morbid PTSD and Major Depression vary, but are generally quite high. For example, in a multi-site study (N=677), Campbell et al [11] reported 36% of patients met criteria for PTSD and Major Depression. In a large epidemiological study (N=5877), Kessler et al [12] found that 48% of those studied reported co-occurring PTSD and Major Depression.

According to DSM-IV-TR criteria, specific symptom overlap exists in Major Depression and PTSD [13]. In the DSM-IV-TR, anhedonia, sleep problems, and difficulty concentrating are specific symptoms that are included as criteria for both PTSD and a Major Depressive Episode. Depressed mood, a criterion for Major Depression, in some patients can present as restricted range of affect, a diagnostic criterion for PTSD. Irritability and anger, criteria for PTSD, also co-occur in depressed mood, specifically for children and adolescents. However, clinical experience indicates that anger is frequently present in chronically depressed patients, and this may be especially true in depressed men [14, 15].

PTSD is a chronic often disabling disorder that affects approximately 6.8% of the U.S. population with a lifetime prevalence of 3.6% for males, and 9.7% for females [12]. There is a complex interaction among neurobiological and psychosocial factors that involve the overactivation of the Hypothalamic-Pituitary-Adrenal (H-P-A) axis [16]. The Veterans Health Study [17] showed that 31% of the over 2,000 veterans sampled had experienced significant depressive symptoms with 54% of these depressed veterans evidencing one or more psychiatric co-morbidity, predominantly PTSD. Additionally, 88% had medical co-morbidities such as hypertension, heart disease, diabetes, and degenerative joint disease. The lifetime prevalence of Major Depressive Disorder in patient populations such as combat veterans who have a diagnosis of PTSD has been reported to be as high as 68% [18]. A community co-morbidity sample demonstrated that individuals who have PTSD are 3-5 times more likely to develop Major Depressive Disorder over their lifetime [19].

While the empirical literature has begun to outline the interaction of these two disorders, most of the treatment literature focuses on effective interventions with MDD or PTSD alone. This presents a gap in our understanding about how to clinically address the patients with co-morbid MDD/PTSD. Patients suffering from co-occurring Major Depression and PTSD also experience overlap in subjective symptoms. For example, problems with relationships, lack of intimacy, poor emotion regulation, social isolation, feelings of worthlessness, low self-esteem, helplessness and hopelessness, and cognitive and behavioral rigidity characterize both chronic depression and PTSD.

3. Clinical presentation of co-morbid MDD/PTSD

The distinction that we are treating co-occurring and interactive disorders rather than two separate or sequential disorders makes a significant difference in our approach to treatment. On the one hand the clinician is faced with a singular treatment goal of working through a patient's trauma symptoms when their motivation is poor, and

avoidant behavioral patterns make trauma focused treatment problematical. On the other hand, treatment directed only at depressive symptoms may by derailed by the expression of trauma symptoms that serve to undermine the patient's sense of safety and trust within the therapeutic relationship, and negatively impact treatment adherence. What is clinically evident is that when these disorders co-occur, patients report greater symptom distress, and treatment interventions are often highly problematic or refractory [11]. Although first line psychosocial treatments such as, Prolonged Exposure Therapy (PE) and Cognitive Processing Therapy (CPT) for trauma disorders describe a remission of depressive symptoms when PTSD symptoms are actively addressed, it is argued that some chronically depressed patients find it difficult to engage in exposure therapies that directly activate trauma memories and require adherence to between session imaginal and in vivo exposures. This problem is represented in a 40% drop-out rate for veterans with PTSD who receive only trauma-based treatment, It many of whom had co-occurring disorders, including MDD [18].

4. Etiology of complex PTSD and chronic depression

Various authors [19,20,21] have conceptualized "complex PTSD" in which the affected person is exposed to repeated traumas over a number of years. In persons with complex PTSD other problems often develop, including substance use disorders, Major Depression, and Axis II diagnoses. However, in persons with complex PTSD, these co-occurring disorders may present in different ways compared to a patient who presents with any of these disorders alone [20].

A history of Major Depression may predispose one to developing PTSD. As Brady et al noted [22], Major Depression can result from exposure to a trauma and previous Major Depression is a risk factor for developing PTSD. Some researchers have found that early, toxic environmental milieus are correlated with the development of chronic depression [1,3], such as emotional maltreatment (active or passive); physical abuse or neglect; and sexual abuse.

An early, abusive environment may lead to the phenomenon of learned helplessness, which primes the person to develop Major Depression [26]. If that same person is then thrust into an environment in which a discreet traumatic event occurs, the person's learned helplessness may then be reinforced by this trauma event.

5. Application area

Implications for assessment and treatment

The clinician should consider both PTSD and Major Depressive Disorder during the initial. In fact, Kessler et al [12] advised considering all traumas, not only the most serious trauma during assessment. When assessing for co-occurring recurrent Major Depression and PTSD, the clinician must assess the patient's history in a way that allows developmental insults to be revealed. Often the patient's early environment was characterized by

unpredictability, physical or emotional harm, or being thrust into a care-giving role. Chronic depression is correlated with these various types of trauma in the early, developmental environmental [1, 3]. The Significant Other History is used in CBASP to assess the nature and extent of early psychological insults [3].

Becoming a source of perceived safety is one of the first tasks of the clinician treating a patient with PTSD and chronic Major Depression. The principle of "safety first" has long been recognized for its importance in the treatment of PTSD [20]. What may be less widely recognized is that the same principle is operative with the chronically depressed patient. In order for learning to take place, the therapist must first become an inhibitor or "safety signal" for the patient [23]. Becoming a source of safety and helping the patient differentiate between the therapist and toxic others, and between past toxic environments and the therapeutic environment is critical in successful treatment of depressed persons who have experienced early trauma.

Regarding treatment of co-occurring chronic depression and PTSD, the question arises as to which disorder to treat first. Foa and Rothbaum [6] stated that in cases of severe depression, depression should be treated first, as severe depression is likely to limit a patient's ability to benefit from cognitive-behavioral therapy for PTSD. Others have argued that addressing the relational aspect of trauma is a key element of successful treatment for PTSD [20].

6. Theoretical considerations

Learning theory posits that learning theory, the early abusive environment that often characterizes the developmental history of the chronically depressed patient establishes both Pavlovian and Skinnerian learning. Typically, the patient who has a history of abuse associates that abuse with specific persons and then generalizes his or her fear response to other persons, so that all or nearly all people elicit a Pavlovian fear response. Additionally, the patient with a history of early trauma demonstrates Skinnerian learning by avoiding people in order to decrease the fear response (negative reinforcement). While this strategy of interpersonal avoidance decreases anxiety, social isolation serves to maintain chronic depression [23].

For persons who have a history of trauma in the early environment, other traumatic events (e.g., combat, rape) reinforce previous learning. Specifically, subsequent traumas can heighten the fear response and further generalize interpersonal avoidance. Therefore, traumas from which distinct PTSD symptoms develop reinforce what was previously learned in the toxic early environment.

In addition, McCullough [3] also references Piaget's theory of cognitive development in his formulation of the chronic depressive patient as having a predominant reliance on preoperational or concrete thought processes, which are characterized by precasual, prelogical thinking that precludes the use of abstractions and interpersonal empathy. As such the chronic depressive patient is stuck in a pattern of avoidant behaviors that limit

alternative perspective taking and cognitive flexibility. Within this preoperational cognitive frame the individual fails to make perceptual connection between their behavior and the outcome of interpersonal events. Therefore they find it difficult to learn the consequences of particular behaviors that lead to negative outcomes. This lack of *perceived functionality* is hypothesized by McCullough [23] to be a precursor of learned helplessness and hopelessness that is characteristically exhibited by the chronically depressed patients.

7. Cognitive behavioral analysis system for psychotherapy

McCullough's Cognitive-Behavioral Analysis System of Psychotherapy (CBASP) is the only empirically supported treatment developed specifically for chronic depression [3]. CBASP offers a type of therapy that addresses the relational aspect of chronic depression and PTSD. The therapist using CBASP becomes a safety signal to the patient, allowing the patient to feel safe and then to move toward extinguishing the previously learned response of interpersonal avoidance [23]. Because interpersonal avoidance characterizes the chronically depressed patient as well as the patient with chronic PTSD, treatment with CBASP may pave the way for the patient to feel safe enough to remain in therapy and address the traumas that are related to the unique symptoms of PTSD, such as re-experiencing symptoms.

CBASP, as an integrative methodology, is fundamentally attuned to traumatic experiences in early development. Systematic exploration of interpersonal situations occurring in the patient's current interactions typically reveal patterns of interpretations and behaviors that reflect aspects of the individual's developmental experiences of maltreatment from caregivers, as well as significant traumatic events that have shaped their self-other perspectives. To the extent that interpretation of interpersonal situations and coping behaviors are maladaptive and rely primarily on avoidant coping strategies, it can be expected that these patterns will resurface in the therapeutic dyad. An initial task for the CBASP therapist is to collaboratively define the significant relationships in the patient's history and develop a casual conclusions stemming from these relationships that have had an adverse impact on the self-other, and world view. This process assists the therapist and the patient to arrive at a pivotal "*Transference Hypothesis*" that becomes the cornerstone for new interpersonal learning by means of the therapist's judicious use of CBASP techniques, such as *"Interpersonal Discrimination"* and *"Disciplined Personal Involvement,"* which are only mentioned here, but can be best understood by referencing McCullough [3,23].

Based on our work with depressed patients who have co-existing PTSD, the use of the *Significant Other History* (SOH) to also record salient traumatic experiences, has provided therapeutic utility for assessment and intervention. Obtaining a record of the significant people in the patient's formative history as well as the linkage to specific traumatic experiences allows the therapist to respond directly to expression of trauma symptoms as they surface in treatment.

8. Significant traumatic events

Significant traumatic events (STE) are frequently parallel the patient's recounting of their experiences leading to the casual analysis stemming from their Significant Other History. In conducting the STE the therapist collaboratively explores the primary thematic domain within the following areas: *Safety, Trust, Control, Closeness, and Self-esteem*. These thematic domains come from research conducted by Resick, et al. [30] that demonstrated that these overlapping interpersonal themes account for the predominant sources of psychological distress for traumatized patients. These connect to both intrapsychic and interpersonal changes for patients with PTSD. This adaptation to the SOH can assist therapists in understanding the impact of the patient's trauma on their cognitive-affective attributions and relational environment. In other words, what does the patient do on a cognitive, emotional, and interpersonal level when this traumatic theme is re-experienced. This is often expressed during sessions in the form of trauma related symptoms, but may also reflect an interpersonal "pull" with the therapist that is maladaptive due to distorted interpretations of the interpersonal environment.

During the treatment process, the therapist working with the co-morbid patient needs to attend to both interpersonal *hotspots* as well as trauma *hotspot*s, which are typically addressed at the conclusion of the Situational Analysis. These modifications parallel and interact with the standard CBASP methods and require the therapist's mapping of trauma events along the depression timeline provided by the patient, and the addition of the Significant Trauma Event description and causal conclusion in reference to the Significant Other History. Additionally, these adaptations are reflected in the Interpersonal Discrimination Exercise (IDE) in which the patient is taught to differentiate internal arousal signals from environmental stimuli. These adaptations are reflected schematically in Figure 1.

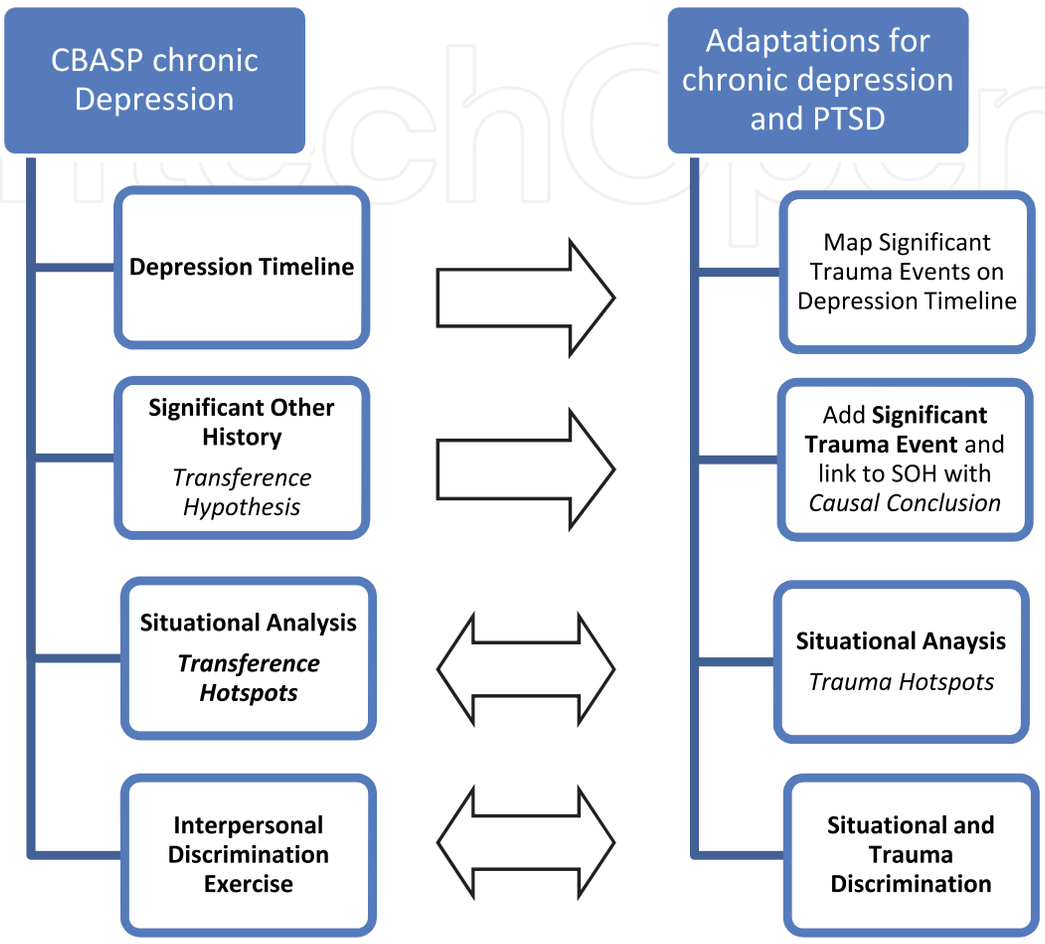
9. Research course

Methods

In a sample of 12 male veterans, aged 48-65, diagnosed with chronic depression and PTSD, CBASP was delivered as an individual psychotherapy over the course of 24 sessions. All sessions were conducted by three clinical psychologists trained in CBASP as well as the added interventions for PTSD symptoms. In each of the cases the veterans were on psychotropic medications and had dropped out of trauma focused psychotherapy at least once prior to engaging in CBASP. Veterans with psychosis, bipolar disorder and/or current substance abuse were excluded from the sample. The adaptations, outlined above were implemented to address co-existing PTSD symptoms and each of the therapist were trained in the application of these methods.

Pretreatment measures were administered to establish baseline scores on BDI-II and PCL-C. At the end of 24 sessions of CBASP the BDI-II and PCL-C were administered again and the scores were analyzed by a t-test to determine the level of change for each measure.

Participant's narrative responses on weekly Coping Questionnaires were analyzed using the Standard Cognitive Developmental Classification System (SCDCS) that was developed by Ivey [26] to score patient narratives across cognitive domains, and was used to ascertain shifts in participants' predominant cognitive orientation.



Note: Schematic shows CBASP procedures used to treat depression (left), as well as the parallel adaptations at each stage to accommodate PTSD symptoms (right).

Figure 1. Adaptations to CBASP for Co-existing PTSD and MDD

10. Results

Both the measure for depression (BDI-II), $t(11)=6.28$, $p=.00$ and for PTSD (PCL-C), $t(11)=6.99$, $p=.01$ evidenced a significant reduction at the end of treatment. The results can be seen in figure 2. There was a greater reduction in the mean BDI-II score than for PCL-C scores. Mean depression fell with mild depressive range. Mean scores on the PCL-C were higher overall and showed less reduction compared to the BDI-II. There was a significant reduction, however, even though mean PCL-C scores continued to show symptom expression for PTSD.

We were particularly interested in the Hypothesized change from concrete/preoperational cognitive processes to formal operational cognitive processes over the course of CBASP

treatment. As expected, there was no significant change in sensorimotor or dialectic/systemic cognitive orientations at the end of treatment. However, there was a significant reduction in the frequency ratings for preoperational cognitions, $t(11)=8.20, p=.00$. Additionally, there was a moderate increase in the production of formal operational cognitions at the end of CBASP treatment, $t(11)=2.08$, p=.06 . These findings can be seen in figure 3.

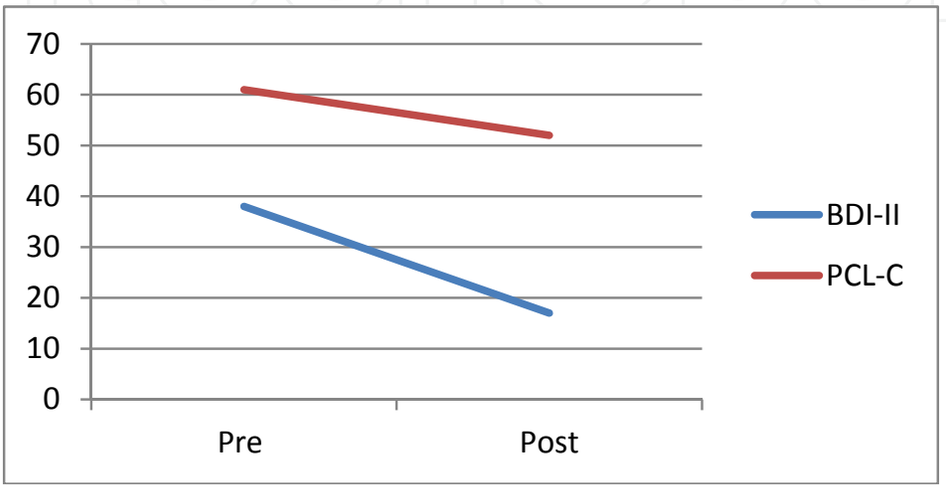
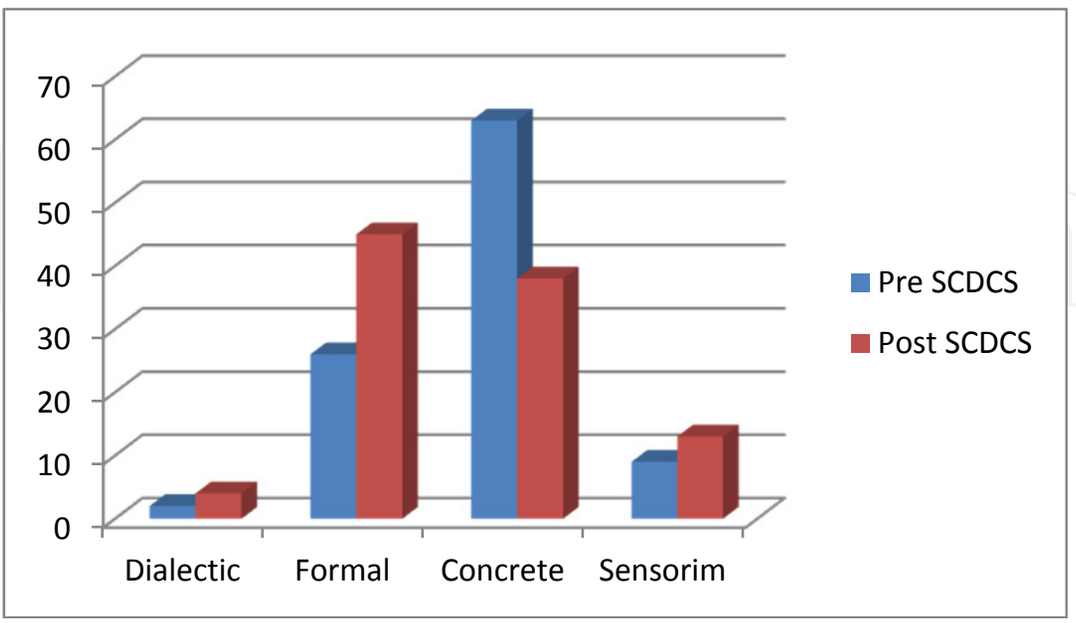


Figure 2. CBASP 24 individual sessions (N=12)



Note: Standard Cognitive Developmental Classification System (SCDCS)

Figure 3. CBASP - Cognitive-Affective Change 24 sessions (N=12)

11. Limitations and future research

This study was conducted as a preliminary investigation of the feasibility of adaptation to the CBASP method to accommodate co-morbid PTSD when working with chronically depressed patients. This was a small, homogenous sample of middle aged veterans who were not able to utilize first line trauma-focused treatments and our results may not generalize to other age, gender or cultural groups. Although there were significant results in terms of symptom reduction, the effect size is small. Future controlled research is needed on a larger, heterogeneous sample to see if these results can be replicated. It would be essential to compare co-morbid groups who receive CBASP and CBASP that has been adapted for co-existing PTSD/MDD to determine added benefits of the adapted model.

12. Summary and conclusions

In this chapter, we proposed the use of an adapted CBASP model treatment of chronic depression with co existing posttraumatic stress disorder. Given the high rate of co-occurrance and significant symptomatic interaction we propose that with specific adaptations CBASP provides an active therapeutic environment that can accommodate the patient's traumatic memories and link them to interpersonal avoidance patterns that exacerbate depressive mood. The techniques of Situational Analysis and Interpersonal Discrimination Exercises assist the patient to make clearer distinctions between historical traumatic events and their current interpersonal life.

The effectiveness of CBASP in the treatment of co-morbid PTSD and chronic MDD is being studied in veteran populations at several VA Healthcare Systems in the United States due to the significant number of treatment refractory cases that require maintenance mental health care. There are also a high ratio of young veterans returning from multiple deployments in Iraq and Afghanistan that are diagnosed with chronic forms of depression and PTSD [8]. The increased burden of delivery of effective mental health services is by no means isolated to veteran populations. Natural disasters, interpersonal violence, and increased familial stressors appear to be omnipresent over the past several years placing children and adults at risk for the chronic psychiatric conditions such as MDD and PTSD. Finding efficacious methods for early intervention and improving our service delivery system are becoming more important than ever. The potential benefits of a transdiagnostic perspective in the adaptation of CBASP to patients with chronic depressive co-morbidities, potentiates a reduction in the rate of refractory treatments outcomes.

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