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The Use of Exposure-Based Treatment Among Individuals With PTSD and Co-occurring Substance Use Disorders: Clinical Considerations

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Abstract

Integrative treatments for co-occurring posttraumatic stress (PTSD) and substance use disorders have been shown to be safe and effective. Improvement in PTSD symptoms can positively impact substance use outcomes. Interventions that include exposure-based techniques, which are considered the treatment of choice for PTSD, have not been well studied in substance abusing populations. Concurrent Treatment of PTSD and Substance Use Disorders with Prolonged Exposure (COPE) is a manualized psychotherapy that combines both imaginal and in vivo exposure techniques for PTSD with cognitive behavioral techniques for substance use disorders. Preliminary studies using COPE demonstrate promise and feasibility. This article explores the clinical considerations when implementing exposure-based therapy for PTSD in substance abusing individuals.

Keywords

posttraumatic stress disorder; substance use disorder; prolonged exposure

Individuals with PTSD are two to four times more likely than individuals without PTSD to have a comorbid substance use disorder (Kessler et al, 1995; Reed et al.2007). Among treatment-seeking individuals with substance use disorders, the prevalence of lifetime PTSD has been reported as high as 50% or greater (Dansky, et al., 1996; Triffleman, et al., 1999). In the majority of cases, the development of PTSD precedes the development of the substance use disorder (Back et al., 2005; Jacobsen et al., 2001) thereby lending support to the notion that alcohol or drugs may be used to help diminish PTSD symptoms (Khantzian, 1985). Among current United States military populations, the prevalence of PTSD post deployment is estimated to be 15% or higher, with about half of these cases demonstrating co-occurring alcohol misuse (Thomas et al., 2010). In a sample of army Veterans three to four months post deployment from Iraq, 27% screened positive for alcohol misuse. Those with the highest combat exposure were 1.93 times more likely to misuse alcohol (Santiago et al., 2010).

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The frequent co-occurrence of PTSD and substance use disorders, and the negative impact of this comorbidity on treatment outcome confirm the need for improved treatment options (Back, 2010; Back et al., 2000; 2006; ; Brady et al., 2001; Hien et al., 2004; Mills et al., 2010). Traditionally, trauma-focused treatment for PTSD has been put “on hold” until the substance use disorder is in either full or partial remission. However, it has become increasingly clear that a) this treatment model, known as the sequential model, is not effective with many patients who are unable to defer discussion of the trauma until they can abstain or significantly decrease their substance use, b) both PTSD and substance use disorders can be safely and effectively addressed in a single treatment episode, known as the integrative treatment model, and c) improvement in PTSD symptoms confers significant improvement in substance use outcomes (Back et al., 2006; Hien et al., 2010; Read et al., 2004). Furthermore, patients with comorbid substance use disorders and PTSD may report different relapse precipitants than patients with substance use disorders alone. In a study exploring relapse precipitants, substance abusing patients with comorbid PTSD were more likely than those without PTSD to report that the first use following abstinence was triggered by interpersonal related depression (19% versus 3%, respectively). In contrast, substance abusing patients without PTSD were more likely than those with PTSD to report that the first use following abstinence was triggered by substance-related cues in the environment (15% versus 0%, respectively). This provides further evidence for use of integrative models that concurrently address both disorders (Ouimette et al., 2007).

To date, several behavioral therapies have been developed to address both disorders concurrently, namely Seeking Safety (Najavits et al., 1998; 2002), Transcend (Donovan et al., 1997; 2001) and Substance Dependence-PTSD Therapy (Triffleman et al., 1999). However, none of these therapies include both key components of prolonged exposure: in vivo and imaginal exposure techniques. Exposure-based therapy is the only modality of psychotherapy deemed by the Institute of Medicine (IOM) to have sufficient empirical evidence to be considered effective in the treatment of PTSD (IOM, 2008). Furthermore, exposure-based therapy is deemed the most appropriate psychotherapy to manage PTSD by the International Consensus group on Depression and Anxiety (Ballenger et al., 2000). Exposure-based therapy has been shown to be effective for PTSD in victims of rape, physical assault, combat/terrorism, childhood sexual and physical abuse, motor vehicle accidents, refugees and mixed trauma (Bryant et al., 2008; Foa et al., 2005; McDonagh et al., 2005; Nacasch et al., 2010, van Minnen et al., 2006). A recent meta-analysis of prolonged exposure for PTSD found large effect sizes for prolonged exposure compared to control conditions. There was no significant difference in effect sizes across types of trauma which included combat, childhood sexual abuse, rape and mixed trauma (Powers et al., 2010).

Despite the strong empirical evidence, prolonged exposure has not been largely adopted in clinical practice.Rosen et al. (2004) found that fewer than 20% of PTSD specialists in the Veterans Administration (VA) system conduct prolonged exposure. In a recent study, 423 clinicians from various backgrounds were asked about challenges in treating comorbid PTSD and substance use disorders (Back et al., 2009). Clinicians perceived treating this comorbid population as more difficult than treating patients with either PTSD or substance use disorders alone. Specific challenges included treatment implementation issues, patients’ symptom severity and helping patients abstain from substances. In a sample of licensed psychologists surveyed on attitudes and utilization of exposure-based therapy, only 27% reported receiving training in prolonged exposure and only 17% reporting using prolonged exposure in their practice. The most common reasons for not using prolonged exposure were limited training, not wanting to use a manualized therapy, and concern over worsening of symptoms, specifically suicidality, substance use and attrition (Becker et al., 2004). Currently, the VA is disseminating Prolonged Exposure and Cognitive Processing Therapy

(CPT) for PTSD throughout the VA health care system in preparation for the increased demand for evidence-based treatments for PTSD in OIF/OEF veterans (Karlin et al., 2010).

Only until recently have patients with comorbid PTSD and substance use disorders been treated with prolonged exposure. **Co**ncurrent Treatment of PTSD and Substance Use Disorders with **P**rolonged **E**xposure (COPE), an integrative, 12-session individual psychotherapy that combines the most effective approaches for treating PTSD and substance use disorders, was developed to optimize treatment outcomes for this population (COPE, unpublished manual). COPE is the only integrative therapy to date that includes both in vivo and imaginal exposure techniques. COPE combines evidence-based cognitive behavioral therapy for substance use disorders (Carroll, 1998) with prolonged exposure for PTSD (Foa et al., 2007). The PTSD treatment component of COPE is designed to help patients understand the interrelationship between PTSD and substance use, normalize common reactions to trauma, and reduce PTSD symptoms via exposure techniques. In vivo and imaginal exposure are used to help patients process trauma experiences through desensitization techniques, thereby allowing patients to gain more control over distressing symptoms and improve life functioning (Foa et al., 2007). In vivo exposure involves having the patient repeatedly confront situations “in real life” that are safe but avoided because they serve as reminders of the trauma and generate fear and anxiety. Imaginal exposure involves having the patient repeatedly recount the memory of the traumatic event in the therapy session for approximately 30–45 minutes (Foa et al., 2007). The substance use treatment component of COPE is designed to help patients recognize and manage cravings and urges to use alcohol or drugs, manage thoughts about substance use, identify and plan for “high-risk” situations in which vulnerability to relapse is heightened, and effectively manage a potential lapse (Carroll, 1998).

Preliminary studies of COPE demonstrated significant improvement in both PTSD and substance use disorder symptoms and, importantly, no increase in attrition or relapse to drugs or alcohol (Brady et al., 2001; Mills et al., 2010). Brady et al. (2001) completed a NIDA-funded, Phase IA psychotherapy development study (N=39) of COPE examining the application of exposure-based therapy in the treatment of civilian PTSD and concurrent cocaine dependence. The primary goal was to test the initial promise and tolerability of using in vivo and imaginal prolonged exposure techniques in people with PTSD and substance use disorder. This was an uncontrolled study with follow-up at post intervention (16 weeks) and 6 months. Exposure therapy was not associated with escalation of substance use or increased risk of relapse. Similar to other studies employing only substance abuse treatments in this population (Chris-Christoph et al., 1999), attrition was high. Fifteen participants (38.5%) were categorized as treatment completers, defined a priori as patients who attended at least 10 sessions (63% of sessions) and received at least 3 imaginal exposures. The average number of sessions attended was 14.7 (1.9) for treatment completers and 4.1 (2.6) for treatment noncompleters. The majority of subjects who dropped out of treatment (75%) did so before the initiation of exposure procedures. Treatment completers demonstrated significant reductions in all PTSD symptom clusters (i.e., re-experiencing, avoidance, hyperarousal) and cocaine use from baseline to end of treatment (effect size of 1.48 for Clinician Administered Scale for PTSD [CAPS] and 1.5 for Addiction Severity Index drug composite score) (Brady et al., 2001; Coffey et al., 2005). The average CAPS score at baseline was 45.4 (12.2) and at 6 month follow-up was 24 (24.2). Significant reductions in depression and psychiatric severity were also observed (see Table 1).

Mills et al. (2010) reported on the preliminary findings (N=103) from an Australian randomized controlled trial of COPE vs. community treatment as usual (TAU) among drug-dependent patients with civilian PTSD. Treatment as usual in the community consisted of detoxification, and inpatient and/or outpatient drug counseling. The proportion of time spent

in substance abuse treatment for the control group over the follow-up period was 78%. In the intent-to-treat analysis, patients who received COPE showed greater improvements in PTSD symptoms (CAPS at baseline 91.1 to 50.2 at 9 month follow-up) than patients who received TAU (CAPS at baseline 89.4 to 68.9 at 9 month follow-up). Patients receiving COPE also had significantly reduced drug dependence severity at 9 months as compared to patients in the TAU group (on a scale of 0 to 6: 5.3 to 1.5 for the COPE group versus 5.6 to 2.4 for the TAU group, respectively). Participant attrition in this study also tended to occur prior to initiation of the exposure procedures. Twenty-one (46.7%) participants who came to the first treatment session attended nine or more sessions (≥ 6 exposure sessions). These studies demonstrate that COPE is safe, feasible and has promising preliminary efficacy for treating PTSD and co-occurring substance use disorders. The preliminary results can be compared to non- exposure-based integrated treatments, such as Seeking Safety. Among women with PTSD and substance use disorders, Seeking Safety did not prove more efficacious that relapse prevention therapy (Hien et al., 2004). In this study, participants who received Seeking Safety had average total CAPS scores of 72 at baseline, 60 at 6 month follow-up, and 55 at 9 month follow-up; while those who received relapse prevention therapy had scores of 70 at baseline, 53 at 6 month follow-up, and 48 at 9 month follow-up.

Description of the COPE Intervention

The COPE intervention, previously called Concurrent Treatment of PTSD and Cocaine Dependence (CTPCD) in the Brady et al., 2001 study, was modified to address all substances of abuse and, hence, renamed. The number of sessions was reduced from the original 16 sessions to 12 sessions (COPE, unpublished manuscript; Mills et al., 2010; Hien, personal communication). COPE consists of 12, individual, 90-minute weekly sessions. The goals of COPE are: (1) provide psychoeducation around the interrelationship between PTSD and substance use disorders, (2) provide patients with skills to minimize and manage cravings and thoughts about using, (3) engage patients in both in vivo and imaginal exposures for PTSD, and (4) continue to address the PTSD and substance use disorders in an integrative fashion throughout the therapy.

Each session includes: (1) a review of PTSD symptom levels and any substance use since last session, (2) review of homework, (3) focus on substance use problems and coping skills (15–20 minutes), (4) focus on trauma and PTSD (45–50 minutes), and (5) assign homework. During the first three sessions, therapists review the development and maintenance of PTSD (highlighting the role of avoidance and the use of substances as a way to avoid), common reactions to trauma (highlighting the use of substances to cope with symptoms and “self-medicate”), and the rationale for exposure-based procedures. The in vivo hierarchy is constructed during the third session and imaginal exposures begin in the fourth session. During the first three sessions, therapists are also working with patients to identify and manage cravings and thoughts that may increase risk for substance use. In sessions 4 – 11, imaginal exposures are conducted and therapists work with patients to identify high-risk situations, which often involve PTSD-specific triggers/symptoms. Therapists draw from a variety of cognitive-behavioral relapse prevention coping skills specific to the patient’s identified risk situation (e.g. anger management, dealing with a lapse, drink/drug refusal skills, assertiveness).

Therapist Selection Considerations

The implementation of COPE requires a moderate level of clinical skill and should ideally be delivered by persons with graduate training in counseling/psychology/psychiatry (e.g., M.D., Ph.D., M.A., MSW), who have received formal training in the delivery of CBT and prolonged exposure, and who are receiving adequate supervision. Formal training in COPE

includes participation in a four-day workshop followed by a review of two pilot cases that meet adequate fidelity ratings. Therapists must possess good interpersonal skills, be comfortable hearing the details of traumatic events and be able to manage the strong emotions that are elicited by the exposure sessions. Experience in treating patients with both PTSD and/or substance use disorder is preferred.

Future studies that train community substance abuse treatment clinicians to implement COPE will provide more information on fidelity, attrition and secondary trauma. Recent changes in reimbursement regulations have resulted in an increased number of master's level clinicians in the community treatment workforce (Buck, 2011). About 44% - 53% of clinicians in community treatment programs report having a master's level or higher degree (Abraham et al., 2011; Knudson et al., 2009; Roman et al., 2006). As such, there are an adequate number of qualified substance abuse clinicians available in most community treatment programs to be trained and supervised in the COPE intervention. Several investigators currently exploring the effectiveness of COPE in larger randomized controlled trials have trained community substance abuse clinicians. In these studies therapist attrition is low and therapist adherence and competence has been implemented with adequate fidelity, although specific ratings have not been published.

Therapist confidence in the treatment and the patient's ability to benefit from it are of the utmost importance in delivering COPE. Substance abuse counselors report having a high percentage of trauma patients in their clinical caseloads but most have minimal training in evidence-based treatment for PTSD (Bride et al., 2009). As a result, the trauma is either left untreated or counselors who do attempt to apply trauma-focused work are more likely to experience burnout, job dissatisfaction, compassion fatigue or secondary trauma, which can ultimately adversely impact occupational commitment or counselors' intent to remain in the field (Bride et al., 2011).

Individuals with substance use disorders often lead chaotic and stressful lives, characterized by unstable living circumstances, unstable employment, lack of family support, and financial and legal problems (Brady et al., 1994; Najavits et al., 2007). It is not uncommon for patients with PTSD and substance use disorders to be in crisis, especially at the onset of treatment when substance use symptoms are often at a peak. This presents many challenges to COPE therapists as they begin to engage patients in the exposure-based procedures. It is advantageous for therapists to be familiar with community resources and referrals (e.g., housing, vocational rehabilitation) to assist patients in achieving greater stability. During the first few sessions of COPE, therapists establish a trusting therapeutic relationship and introduce basic substance use disorder coping skills intended to prepare the patient for trauma-focused work. Patients are assured that they can share their substance use openly and honestly with the therapist throughout the treatment, and that they will not be criticized, judged or terminated from treatment. Some procedures and practices that are traditionally used in substance use disorder treatment may trigger trauma reactions and are, therefore, not employed in COPE. For example, confrontational techniques may trigger memories of past emotional abuse. The use of a more patient-centered approach, such as motivational interviewing techniques, is more appropriate for this population (Miller & Rollnick, 2002).

Therapy Considerations

Early Therapy Considerations

When implementing exposure-based techniques with patients who have co-occurring PTSD and substance use disorders, several therapy issues warrant careful consideration. For example, prior to the implementation of COPE, patients are evaluated for alcohol and drug withdrawal symptoms, which may need to be managed prior to initiation of exposure.

Medically managed detoxification may include the use of certain anxiolytic medications which can impact exposure-based procedures and influence patients' ability to experience and tolerate distressing states (Kosten and O'Conner, 2003).

Use of other non-addicting anticraving medications, such as naltrexone or maintenance therapies such as methadone and buprenorphine, may be helpful adjuncts to COPE therapy. Selective Serotonin Reuptake Inhibitors (SSRI) are also considered useful agents because of their efficacy in improving PTSD and comorbid disorders such as depression, panic disorder, and obsessive-compulsive disorder, and because of their relatively low side-effect profile (Brady et al., 2009; Myrick & Brady, 2003).

As attrition rates among people with PTSD and substance use disorders are high (Brady et al., 1994), it is important to anticipate potential obstacles to successful treatment completion, especially factors that may lead to early attrition. COPE therapists explore any instances in which the patient previously dropped out of treatment and advise them to discuss any thoughts of quitting treatment before doing so. Such thoughts are not uncommon, and open discussion may help resolve concerns and decrease attrition. Patients are warned that, even with strong efforts to maintain recovery, some people slip and use alcohol or drugs while on the road to recovery. Patients are instructed not to arrive for treatment intoxicated, but they are strongly encouraged to continue to attend therapy after a slip so that they can receive help in regaining their recovery program, effectively managing their reaction to the slip, and learning ways to avoid future lapses or relapses (Marlatt, 1985). There is a delicate balance between setting the stage for patients' feeling that it is permissible to return after a slip and actually giving them permission to slip. COPE therapists take care early on to ensure that patients understand this distinction.

During the initial COPE sessions, patients are educated on the common reactions to trauma. It is often the case that substance use is triggered by PTSD symptoms (Ouimette et al., 2007). It is important that patients understand the role of substance use in the perpetuation of PTSD symptoms. As with many psychosocial interventions, therapists work with patients to establish treatment goals inclusive of both substance use and PTSD. Although abstinence is an optimal goal, patients may choose to incrementally reduce substance use. Therapists do not impose the goal of abstinence on the patient if that is not what they are able to achieve at the present time. In assisting the patient to generate treatment goals, COPE therapists consider the degree of dependence, recent patterns of use, negative consequences from use (e.g., legal problems, relationship impairment, physical health and injuries) and previous attempts to control substance use. If abstinence is not the goal, patients must have a firm, reasonable and realistic rule for moderate use (e.g., only use a designated amount once per week, cut use by 50%). Revisiting and revising goals and assessing motivation throughout the course of the therapy can help therapists determine specific relapse prevention needs as well as the patient's readiness to proceed with the exposure treatment component. It is useful to employ motivational interviewing skills to help patients work through any ambivalence they have regarding decreasing their substance use and/or engaging in trauma work (Miller & Rollnick, 2002). Use of a readiness ruler to gauge the patients' commitment and confidence in their ability to accomplish such goals can give therapists a marker to guide therapy decisions and monitor progress throughout the therapy. Therapists do inform patients that abstinence is the best goal in order for the therapy to be most effective. If abstinence is not the goal, it is important to be clear about the use of substances as an avoidance strategy when performing exposure homework. Use of substances prior to or during the assigned exposure homework can interfere with emotional processing.

Ongoing Therapy Considerations

At the beginning of each COPE session, therapists discuss urine drug screen and breathalyzer results. Monitoring alcohol and drug use throughout the therapy also guides therapeutic decisions made regarding treatment. An increase in substance use may be an indication that patients need more time to learn and practice techniques for reducing alcohol or drug use before engaging in the exposure component.

Avoidance is common in both PTSD and substance use disorders. Avoidance of triggers and situations that remind people of using is an adaptive coping mechanism to help decrease substance use (Carroll, 1998; Marlatt, 1985). However, avoidance of triggers or safe situations that remind people of their trauma is not helpful for reducing PTSD symptoms (Foa et al., 2007). COPE therapists, therefore, must differentiate situations that pose a threat to relapse and should be avoided, from trauma-related situations that are safe and need to be confronted in order to process the trauma memory. It is helpful to point this out to patients and explain why they are being asked to ***avoid*** triggers/situations that remind them of substance use, and yet they are being asked to ***confront*** triggers/situations that remind them of their trauma. Therapists exercise caution when selecting in vivo exposure situations with a high risk for exposure to alcohol and/or drugs.

One of the most basic substance abuse coping skills is the identification and management of cravings (Marlatt, 1985). When identifying triggers for craving, it is also important to assess trauma-related situations and PTSD symptoms. For many patients with PTSD and substance use disorders, triggers for substance use are often trauma-related (Ouimette et al., 2007). For example, seeing someone who reminds the patient of their perpetrator may generate thoughts about using in order to “numb out.” Sleep impairment may lead to a patient using drugs to be able to sleep and/or not recall nightmares about the trauma.

Not all high-risk situations can be avoided, thus patients are taught a technique called “urge surfing” to effectively manage cravings when faced with high-risk situations that are unavoidable. Instead of trying to suppress cravings and thoughts about using, patients are encouraged to allow themselves to experience the craving. In urge surfing, patients focus inward and notice where they physically experience the craving and what sensations characterize the craving experience (Carroll, 1998). Understanding how cravings are felt physically throughout different parts of the body may be difficult for physical and sexual abuse victims. In-session practice of this technique may help facilitate its use outside the session. Often, patients find it helpful to visualize the craving as an ocean wave that rises, peaks and then subsides (Carroll, 1998). Analogous to exposure techniques for PTSD, allowing oneself to approach and experience, as opposed to avoid or suppress, cravings can result in subsequent habituation and a sense of mastery. Patients learn that they do not have to “run from” either the trauma memory or the thoughts about using substances. Both can be faced and managed, and neither last forever (Foa et al., 2007; Carroll, 1998).

Anger is an emotion associated with both PTSD and substance use. It is very common for trauma victims to feel anger toward the perpetrator, toward themselves for what they think they should or should not have done, or for what they “lost” (e.g., their innocence, trust in others) as a result of the experience (Elbogen et al., 2010; Orth et al., 2008). Anger is also one of the most common emotions involved in relapse to drugs and alcohol (Ramo & Brown, 2009). Often, low self-confidence and low self-esteem can also cause patients to feel subdued in responding to high-risk situations (Carroll, 1998). Patients may have a hard time resisting offers or requests from others to use alcohol or drugs. Attaining and practicing skills that can effectively manage anger or empower patients with PTSD and substance use disorders may help in these situations.

Prolonged Exposure Considerations

In the imaginal exposure sessions, patients are taught to use the "subjective units of discomfort" scale (0= no discomfort at all to 100=the most discomfort they have ever experienced) as a way to communicate their level of distress or fear (Foa, 2007). In COPE, patients are also asked to measure subjective cravings before and after the imaginal exposure sessions. This helps to highlight the relationship between the trauma memory and substance use, and also helps therapists monitor improvement in both areas over time. Just as patients remain in the safety of the office until the subjective units of discomfort diminish, COPE patients also remain in the office until any cravings diminish to pre exposure levels (COPE, unpublished manual).

In the in vivo exposure assignments, subjective units of discomfort and craving are also monitored by the patient. At the next session, therapists review the patient's ratings as well as any coping mechanisms used to deal with cravings. Therapists differentiate adaptive coping mechanisms used by the patient to deal with cravings and maladaptive coping used to avoid the in vivo exposure. Patients are urged not to leave the in vivo situation or use any form of avoidance (e.g., distraction or substances) during the assignment. Therapists discuss the in vivo situation in detail with the patient beforehand to ensure that the patient does not leave the situation prematurely. Therapists continue to emphasize the rationale for confronting safe, but anxiogenic trauma-related situations and emphasize that leaving a situation or using substances before or during the exposure only serves to reinforce the fear and anxiety (COPE, unpublished manual). It can be helpful for therapists to let patients know that feeling increased distress in these situations is expected and is part of the recovery process. Therapists encourage patients to use the analogy of an ocean wave for both fear/anxiety and alcohol/drug cravings. At their peak, it may seem like the anxiety/fear will never go away unless they leave the situation, just as it may seem that the craving will never end unless they use. It is important for patients to experience the natural decline in anxiety and craving states (Carroll, 1998; Foa et al., 2007).

In vivo situations that trigger craving for alcohol/drugs and may put the patient at risk of exposure to substances are avoided. For example, if the trauma occurred in a bar, this would most likely not be a safe in vivo exposure to assign to a patient with co-occurring PTSD and substance use disorders. A patient with a substance use disorder who has been avoiding going to bars is not encouraged to do so now. Therapists help patients choose situations and activities that help keep them safe from increased risk of alcohol/drug use and retraumatization. That being said, there may be times when a safe in vivo situation triggers a craving simply because it is a stressful situation, not because it was associated with substance use in the past. For example, a patient who avoids crowded areas could be walking through a shopping mall and become distressed, which is a normal and expected part of in vivo exposures, and start thinking about how a drink would help to calm the anxiety. This is very different than a specific situation that poses a risk of relapse because alcohol or drugs will be present (e.g., going to a bar, reconnecting with old using buddies). If a patient is in a stressful, but safe situation and he/she experiences a craving, encourage the patient to stay in the situation long enough to experience the natural rise and fall of both anxiety and craving described above (COPE, unpublished manual).

Conclusion

The high comorbidity between PTSD and substance use disorders warrants evidence-based interventions that will optimize recovery from both disorders. The sequential model has been the traditional treatment model, but research on integrative models has proven them to be safe and effective for comorbid PTSD and substance use disorders. As the treatment field moves forward, there remains limited guidance on optimal ways to combine the most

effective treatments for both disorders. **Co**ncurrent Treatment of PTSD and Substance Use Disorders with **P**rolonged **E**xposure (COPE) is an integrative therapy that combines the most effective approaches available to treat both PTSD and substance use disorders, and has positive preliminary evidence to support it. COPE is currently being tested in a group of adult civilians with PTSD and substance use disorders (Hien, personal communication), and in OIF/OEF combat veterans with comorbid PTSD and substance use disorder (Back, personal communication). These studies will provide more information on the effectiveness of COPE in different substance abusing populations with different types of trauma. Patients who can be successfully treated for both substance use disorders and PTSD are more likely to maintain long term recovery from both disorders.

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TABLE 1

Treatment Outcome

	Pre- to Post-Treatment[a]	
	***M* (*SD*)**	***M* (*SD*)**
IES		
Intrusion	19.5 (13.0)	9.1 (7.1)*
Avoidance	20.1 (9.1)	14.6 (8.2)
Total	39.6 (21.4)	23.8 (13.7)
CAPS		
Intrusion	9.4 (6.3)	3.2 (6.7)**
Avoidance	19.7 (10.1)	5.8 (8.9)**
Hyperarousal	16.6 (7.9)	8.7 (11.6)*
Total	45.2 (19.8)	15.8 (23.0)***
MISS		
Total	111.7 (21.9)	83.7 (24.8)*
BDI	12.1 (8.0)	5.7 (7.4)*
ASI		
Family	.28 (.19)	.18 (.16)
Medical	.35 (.37)	.26 (.34)
Employment	.61 (.37)	.57 (.38)
Psychiatric	.46 (.10)	.19 (.17)***
Legal	.13 (.17)	.07 (.07)
Drug	.20 (.08)	.08 (.07)***
Alcohol	.27 (.22)	.11 (.16)***

Source Brady et al., 2001.

[a] $N = 15$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.