Helping Vulnerable Populations: A Comprehensive Review of the Treatment Outcome Literature on Substance Use Disorder and PTSD

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We review treatment studies for comorbid substance use disorder (SUD) and posttraumatic stress disorder (PTSD). Results show positive outcomes on multiple domains. Most models had more effect on PTSD than SUD, suggesting SUD is harder to treat. Seeking Safety (SS) is the most studied model. It shows positive outcomes, and is the only treatment outperforming a control on both PTSD and SUD. Partial-dose SS had more mixed results than the full dose. This first-generation of PTSD/SUD research addresses complex samples excluded from "gold standard" PTSD-alone literature. Treatments for PTSD/SUD are generally longer than PTSD-alone treatments and present-focused, emphasizing stabilization and coping. The few models with past-focused (exposure-based) components also incorporated present-focused approaches for these vulnerable clients. We discuss public health perspectives to advance the field. J. Clin. Psychol: In Session 69:433–479, 2013.

Complex trauma, posttraumatic stress disorder (PTSD), and substance use disorder (SUD) are like parts of a prism—different lenses from which to see into clients' often-tragic past. Though they may have formal diagnostic representations that lead us to view them as separate entities, they are highly related in the day-to-day experience of clients' lives. Yet it is only quite recently that attention has been directed toward linkages between these domains. Splits between mental health and SUD treatment are well known, as is the fact that most clinicians never receive formal training in both. Clients have been left to try to integrate what our field historically has not.

Thus, it is heartening that the past several years have seen the emergence of new therapies to address comorbidity and research to evaluate those therapies. This article is an attempt to summarize where we are at this point: What models have been developed and tested? What themes can we draw from the research on them? What next new directions are needed?

A major aspect that we hope to portray is that the data have many "stories to tell." Within the framework of empirical studies, different details and ideas can be brought out. Our goal is to address topics that are meaningful to both clinicians and researchers. For example, for each study we list how many hours of treatment were delivered, how the sample addressed complex trauma, the rate of minority representation, the types of clients who were excluded from the studies (which is just as important as who was included), whether the clinicians conducting the model were native to the setting (which bodes for stronger replication), and whether any negative outcomes occurred. We also apply uniform descriptors across studies so that one can compare a consistent set of standards across studies. Because of space limitations, *a more detailed, fully academic version of this article is available from the first author, which provides a complete reference*

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section, footnotes to explain technical points, and identification of methodological and statistical issues in studies.

Method

This review includes all studies that address (a) *a PTSD/SUD treatment model* (one designed for the comorbidity) or (b) a *PTSD/SUD population,* even if the treatment model was not designed for the comorbidity. Exclusion criteria for studies are as follows: if they did not attempt to treat both disorders and instead offer a posthoc analysis of their outcomes (e.g., Rotunda, O'Farrell, Murphy & Babey, 2008); had no SUD outcome (e.g., Bragdon & Lombardo, 2012); are solely a case study (Batten & Hayes, 2005) or case series without aggregated data (e.g., Berenz, Rowe, Schumacher, Stasiewicz & Coffey, 2012); are prevention rather than treatment (e.g., Danielsen, McCart, Walsh, de Arellano, White & Resnick, 2012; Zatzick et al., 2004); use a nonmanualized treatment (Steindl, Young, Creamer & Compton, 2003); evaluate a multicomponent intensive treatment program rather than primarily a manualized model per se (Donovan, Padin-Rivera & Kowaliw, 2001); or take a model that has been studied for PTSD/SUD but is being applied to a sample that does not have SUD (e.g., Ford, Steinberg & Zhang, 2011).

In sum, our focus is on comprehensively summarizing the PTSD/SUD comorbidity treatment literature. Studies were obtained through existing literature reviews, online searches, reference lists of articles, and colleagues. Throughout, we use the term "PTSD" to broadly refer to the full range of trauma-related symptoms, and SUD to refer to the full spectrum of both substance abuse and dependence, unless otherwise indicated.

However, there are also topics we do not address, such as level of treatment attendance. Attendance is defined inconsistently in studies, sometimes with no clear denominator (how many sessions were available to clients), sometimes reported only for those attending a certain amount of the study treatment, and sometimes not reported. Similarly, we do not report effect sizes, which are a metric of how much change occurred on an outcome. Many studies do not report effect sizes or use different statistical methods for them, so they are beyond the scope of this article. Finally, the treatment models themselves are not described, but that information can be obtained online or through the reference list from the first author. Regarding statistics, results are reported only for the standard .05 significance level (no trends). Finally, there were a few instances where, either for accuracy or to make equivalent comparisons across studies, a result reported in Table 2 (see Appendix) may differ from that in the paper on the published study. Such discrepancies are documented in detail in the full academic version of this paper available from the first author.

Results

A description of each study (see Table 1 in Appendix) is organized by treatment model, and Table 2 provides results of each study in relation to PTSD, SUD, and other outcomes. In a narrative sense, Table 1 represents "before and during" treatment and Table 2 is "after." Several major themes are identified below that apply across studies, followed by a section related to specific models.

Key Themes

All of the Studies Address Complex Trauma/PTSD

The studies did not use a definition of complex trauma or complex PTSD as an inclusionary criterion (identifier of who is to be included in the study), as there is as yet no formal definition of these terms. Yet each study in fact did address a complex trauma/PTSD sample. Table 1, columns C, D, and E, indicate how each study relates to complex trauma/PTSD, in any or all of the following ways.

A multiply-traumatized sample and the presence of current trauma-related symptoms. Symptoms were in the form of PTSD (full or subthreshold), elevated trauma symptoms, or a positive screen for major trauma history and/or symptoms. Most studies used well-validated assessments to identify these.

Comorbidity. To be included in this review, each study had to include comorbidity in the form of a SUD sample, which was either defined through formal assessment of SUD or by virtue of being in a SUD treatment setting. The SUD in these studies was generally severe (usually dependence, not just abuse), chronic, often involved multiple substances, and included both alcohol and drugs (the latter being typically harder to treat). Further, although the studies in this review do not provide a full diagnostic picture, any studies that did assess for additional diagnoses or symptoms found notable rates of them, such as major depression, Axis II disorders, or severe and persistent mental illness.

Childhood-based and/or repeated trauma. The clients in these studies often had childhood-based sexual and/or physical trauma, typically repeated, and interpersonally-based.

Multiple life burdens. A defining characteristic of complex trauma populations is the presence of multiple life problems, in addition to formally diagnosed disorders. In these studies, per column D, these were clearly multiply-burdened samples, including homelessness, unemployment, criminal justice involvement, multiple prior treatment episodes, low education, domestic violence, suicidality, and violence.

Just reading some of the descriptors of these samples in Table 1 (column D) is heart-wrenching: "All had childhood-based PTSD; average of near-daily substance use; most had active suicidal ideation and/or plan; all had substance dependence, primarily drug rather than alcohol" (Najavits, Schmitz, Gotthardt & Weiss, 2005); "Most were violent offenders with serious mental illness, including bipolar/psychotic; child sexual abuse; average of 15 life stressors; in minimum, medium, or maximum security" (Wolff, Frueh, Shi, & Schumann, 2012); "Primarily unmarried mothers, 35% with parental rights terminated by legal system, due primarily to SUD; 69% had problems with multiple substances, and substantial percentage used substance(s) daily; 77% had prior SUD treatment; 35% had major depression, 19% bipolar I or II" (Young et al., 2004).

Minimal exclusionary criteria. The studies generally have low or at most moderate exclusions (see Table 1, column E), in contrast to the relatively high level of exclusions in the literature on PTSD-alone (Bradley, Greene, Russ, Dutra, & Westen, 2005). Moreover, when major exclusions are present, they are usually due to the study requiring a high level of care for these vulnerable clients (studies #10, 22, 25, 33).

Finally, all but one of the *treatment models themselves* were explicitly designed for complex trauma/PTSD in terms of the above-mentioned characteristics: Concurrent Treatment of PTSD and Cocaine Dependence (CTPTCD), later named Concurrent Prolonged Exposure (COPE); Creating Change (CC); Helping Women Recover/Beyond Trauma (HWR/BT); Integrated CBT for PTSD and SUD (ICBT); Seeking Safety (SS); Substance Dependence PTSD Therapy (SDPT); Trauma Adaptive Recovery Group Education and Therapy (TARGET); and Trauma Recovery Empowerment Model (TREM). All of these models were conceptualized from the start to address the multiple comorbidities and life problems of PTSD/SUD or complex trauma clients. In contrast, one additional model, Exposure Therapy plus SUD coping skills treatment (EXP), used a PTSD-alone model in a PTSD/SUD sample.

The Studies' Clinical Implementation Speaks to the Needs of the Population

There is much to be gleaned from Table 1, column B. For example, although the current research culture focuses on short-term treatment models, notice *how long the treatments were* in these studies. They are wide-ranging but often were delivered in about 30–40 hours and sometimes quite a lot more. The study treatments were also added on to what were often quite high levels of care (See Table 1, column C).

Column B also shows that the majority of studies used a group rather than individual modality, and within the group studies many used open rather than closed groups. Finally, many of the studies used frontline clinicians who were native to the setting, often without advanced degrees or high levels of formal training. One study (#22) used a creative method of training its clinicians,

who were in recovery themselves, by having them go through the model as participants prior to leading sessions. Another study used peer-led treatment (#9).

In sum, Column B provides a window into the needs of frontline settings that work with these highly complex populations. Aspects such as the number of hours of treatment, the use of group over individual modality, and the use of a less highly trained workforce speak to the realities of these environments, where a good deal of complex trauma treatment is delivered. This picture is also discrepant from many PTSD-alone treatment trials. (We are using the term "PTSD-alone" to differentiate the standard PTSD treatment literature from this review on comorbid PTSD-SUD.) Overall, the PTSD-alone literature has focused more on efficacy rather than effectiveness studies. The former represents more pure academic research designed to have stricter control and more rigorous scientific standards; the latter addresses real-world outcomes in regular practice. For example, PTSD-alone studies have focused largely on individual rather than group therapies; closed groups if they do use group modality; clinicians who are costly (highly trained, often with advanced degrees, and receiving many hours of consultation and training as part of the studies; Karlin et al., 2010).

PTSD-alone studies have also consistently excluded more vulnerable populations such as those who have problems with homelessness, domestic violence, suicidality, violence, serious and persistent mental illness, and SUD (particularly substance dependence and drug disorders rather than alcohol). The PTSD treatment field does produce positive outcomes with short-term models of 12–20 sessions (Institute of Medicine, 2007), but not generally on these types of highly complex clients. And, even with its successes, it is also true that a substantial subset of clients remains symptomatic, and go through repeated episodes of these and other treatments.

All Studies Using a Past-Focused (Exposure) Approach Combined it With a Present-Focused (Coping) Approach

A major current discussion in the field is the relative merit of present-focused versus past-focused approaches to PTSD treatment. Broadly speaking, models that focus on exposure-based or other emotionally intense exploration of the trauma narrative are termed here *past-focused*, in contrast to models that focus on current coping skills and psychoeducation, which are *present-focused* (Najavits, 2013).

A note on terms: The term *trauma-focused* is sometimes used to refer to exposure-based models. However, we view that as a misnomer as all present-focused PTSD models, including those covered in this review, directly and strongly "focus on trauma." The difference is how they approach it. Exposure-based models focus primarily on the past by exploring trauma memories and associated feelings, thoughts, and body sensations. Present-focused PTSD models explicitly omit detailed exploration of the past, typically in the service of helping stabilize the client, and instead focus primarily on coping skills and psychoeducation. We observe too that the term "nontrauma-focused treatment" to refer to these present-focused PTSD models is also problematic as it labels them solely by what they are not; it is equivalent to referring to women as "non-men" or children as "non-adults." Present-focused approaches have a rich content of coping skills and psychoeducation that is better captured by a meaningful label.

Terminology aside, in recent years, there has been growing interest in applying past-focused PTSD models to SUD, which historically was always viewed as outside the purview of such models. The phrase, "get clean and sober first, and then work on PTSD" was the predominant message for most of the 20th century (Najavits, 2002). In part, this perspective was based on documented cases (Pittman et al., 1990) and other reports of increased substance use or other iatrogenesis from trying to move clients into emotionally intense trauma narratives before they were stable enough to tolerate it, sometimes called "opening Pandora's box" (Hien, Litt, Cohen, Miele & Campbell, 2009). It has also been based on differences in workforce, culture, resources, and modality of treatment in mental health versus SUD treatment settings (Najavits, 2013). The stage-based approach to PTSD treatment, in which present-focused stabilization occurs first before moving into past-focused exposure, has been an important historical framework (Herman, 1992), and remains one that is still widely endorsed by PTSD experts (Cloitre, Courtois, Charuvasta, Carapezza, Stolbach & Green, 2011).

However, in recent years there has been a new development of trying to evaluate whether past-focused approaches can be used safely with complex PTSD/SUD populations. (To see the shift in enthusiasm for applying past-focused models to PTSD/SUD, compare, for example Foa, 2000, to Riggs and Foa, 2008). Six studies in this review have attempted this, using four different models: CTPCD (#30), later reworked as COPE (#34); Exposure (EXP; #33); SS-plus-Exposure-Therapy-Revised (#31), later reworked as CC (#35); and SDTP (#32). Several important lessons can be gleaned from these studies, albeit based on an early stage of literature at this point. First, it *is* possible to use exposure-based models with these complex clients *when using the modifications used in these studies.* The latter is emphasized because all six studies markedly changed classic exposure for PTSD. Two models, COPE and SDTP, took the approach of combining an existing empirically validated model already developed for PTSD (such as PE) and SUD (such as relapse prevention). Another, CC, was developed as a companion to present-focused SS, and has extensive preparation and decision-making tools for deciding whether a client is ready for exposure, as well as broadening exposure to a gentler version. Finally, the EXP study required all clients to be in highly intensive SUD treatment and to verify abstinence prior to starting. That study was primarily a laboratory experiment rather than a treatment trial, but does report outcome results and so is included.

With such extensive modification to classic exposure, all six studies found some positive outcomes and no notably negative outcomes, which is an important take-home message. However, two of the three randomized controlled trials (RCTs) conducted thus far (SDTP and COPE) did not outperform standard SUD treatment to any notable degree. In the SDTP study (#32) there was no difference between it and 12-Step Facilitation therapy on any outcome. And COPE (#34) did not outperform the control (SUD treatment-as-usual) on any substance use variable in the study at any timepoint, and only outperformed on PTSD at 9-month follow-up, not at the end of treatment point for COPE (Najavits, 2012). The EXP study (#33) did outperform the control, but only on PTSD (SUD and other variables were not reported), and only in the context of mandatory SUD treatment and major exclusions for complex clients (see Table 1, column E).

Finally, Table 1 indicates that all six studies that included a past-focused component were delivered in individual modality rather than group, and most tended to restrict to a more narrow sample than the present-focused studies, in keeping with the PTSD-alone literature. It is also evident that the CTPCD and EXP (#30, 33) studies only report outcomes on a minority of their sample, and SDTP is unclear on the percentage it reported on (see Table 2, column A).

The Studies Have Variable Methodological Rigor and Clearly More Research is Needed

Also evident from the tables is that the mantra of research—"more research is needed"—holds very true in this area of work. There are relatively few RCTs compared with pilots and controlled trials. Moreover, there were some consistent methodological weaknesses in the studies. These can be useful for clinicians to keep in mind when considering adoption of treatments and when reading outcome articles, as well as for improving future research in this area.

Absence of end-of-treatment outcomes. Per Table 2, a surprising number of studies report no data at the end of treatment, but instead only at follow-up points. One study, for example, has a treatment that ends at 4 months, but there are no outcome data until 12 months (#13). Yet from baseline to end of treatment is the most rigorous timeframe from which to understand the effect of a treatment model, and end of treatment to follow-up to understand whether clients maintained gains. One study collected data at what appears to be the end of treatment, but did not compare it separately to either baseline or follow-up (#25). There are certainly interesting questions, from a health services perspective, that can be addressed by follow-ups months after the study treatment has ended, but the "black box" of the follow-up period, during which clients may be receiving all sorts of unknown treatments, makes it less useful for understanding how to improve treatment models.

Omission of key information. Also notable was the large amount of missing information. Published reports typically lacked some of the following details: attendance data and effect sizes (mentioned earlier); whether any negative outcomes occurred; clear reporting on timing (i.e., when the study treatment ended, how much study treatment was delivered); the amount of training and supervision clinicians had to undergo in the study treatment; treatments clients were engaged in aside from the study treatment; sample sizes at each stage of the research and in all statistical reporting; and full-intent-to-treat analyses (reporting on all clients who entered the study, rather than just those who completed treatment as in #22 and #33). And, although not standard at this point, a wish-list for additional information would include urinalysis/breathalyzer to verify substance use self-reports, scales to measure complex trauma and intergenerational trauma, treatment satisfaction by both clients and clinicians (the latter is virtually never reported, the cost of the treatment (even in some basic form), the treatment developer's level of involvement in the research, and use of only psychometrically valid instruments for key constructs. Such details matter, in terms of both being able to interpret the results of studies and also for later implementation of models in practice.

Questionable aspects. Occasionally, there was some reporting that was puzzling. Some examples are as follows: A study treatment that had 52% more clients randomized to it than to the control condition, with no reason given (#25); report of a "decrease in substance use" without adequate data or a statistical test to support that (#22); covarying out a set of variables that were not statistically different between treatment conditions at baseline, resulting in positive outcomes for the study treatment that otherwise did not exist (#23); mention of a treatment being "superior" to another based on a trend on one variable and no other significant difference on primary outcomes between study conditions (#26); stating a difference existed at a 6-month timepoint that was not there (#28); stating that a study had adequate sample size though it obtained 26% less than was required by the power analysis listed in the paper (#18); reporting follow-up results when just 13% (#30) or 27% (#14) of the study treatment sample was still available. Thus, one should always read beyond the study abstracts as sometimes they are rosier than actual verifiable results in the text, and may omit findings that do not put the study treatment in a positive light.

Yet it is clear that many of the studies were conducted under less than optimal conditions and some were unfunded, and the teams were sometimes not academics but rather more clinically oriented. The remarkable big picture point is that the studies were done on complex populations that heretofore have been largely unstudied in the treatment outcome field. Thus, the weaknesses of these studies, as reflected in their methodological and reporting flaws, are noted here so as not to imply that the literature is further along than it is. Although it is a dramatic improvement over the virtual absence of such studies a decade ago, the hope is that the next decade will see increasing rigor.

Summary of Results on Models

About Table 2

Table 2 provides a wealth of information. To better understand results listed there, the following points may be helpful.

The goal of the table is to provide comprehensive data on all models and all variables, addressing both the end of treatment and follow-up results. In other words, do clients improve from baseline to end of treatment (columns C, D, E)? And do they improve at follow-up, i.e., at some timepoint months after the end of the treatment (column F)? Within each of these central questions, results are organized into three types of outcomes: (a) trauma/PTSD, (b) SUD, and (c) "other variables," which refers to all other outcomes studied.

Throughout, results are reported only for psychometrically valid measures. Also, given the early stage of literature and the often small sample sizes (resulting in statistical lack of power), only significant outcomes are listed.

All controlled studies and RCTs are, by their design, comparing the study treatment to a control such as another treatment or treatment-as-usual. For such studies, results are listed as follows. If the study treatment outperforms the control, the result is shown in boldface and underline (regardless of whether the control also improves, as our primary goal is to identify whether there is any added benefit for the study treatment). If the study treatment does not outperform the control, and both conditions improve, the result is underlined only. This is useful because it gets away from just the "horse race" results reported in many reviews, which indicate only whether one treatment outperformed another. From a public health standpoint, a more relevant question is, "In what ways does the study treatment outperform the control, and in what ways do both improve?" Thus, Table 2 is constructed to help the reader see the full body of evidence so as to be able to identify overarching patterns.

Column A provides the percentage of the original sample that the investigators sought to report on in their outcomes. This is important because (as is evident from looking down column A) some investigators aim to report outcomes for the entire initial sample, which is considered the gold standard known as "full intent to treat" reporting. It is the least biased because it asks, "How did everyone do who enrolled in the trial?" Other studies have some smaller proportion, which is also legitimate but addresses a different question, such as in a pilot study where the goal may be: "How did clients do if they attended at least one session [or four sessions, etc.] of the treatment?" In Column A, studies that have less than the full intent to treat (100%) data are listed by their percentage. In most studies, the majority of participants were reported on. But in a few studies, it is a minority percentage, and thus limits the generalizability of the results. Any studies with a minority of the original sample being reported on are noted with this symbol to indicate absence of sufficient sample and thus caution needed in interpreting the study results: ◊.

Findings Across Models

The following points become clear when looking across Table 2.

The models generally show positive outcomes. Notice the many "yes" results across the table, each indicating a positive outcome. This is good news because it means that clients improved over time when given these manualized models of treatment that were designed to target their problems. They improved, depending on the study, in many different domains including trauma/PTSD, SUD, and areas such as psychopathology, functioning, cognitions, self-compassion, and coping skills. There were few negative outcomes (worsening over time), and treatment satisfaction was generally strong in studies that addressed it. However, it is also important to keep in mind the context of these studies. Clients were almost always in additional treatments while receiving the study treatment, and those additional treatments were rarely identified in terms of amount, type, or quantity. Additional treatments included psychiatric medication, other psychotherapies, 12-step, intensive partial program, and methadone maintenance, for example. Thus, future research is needed to help address the interaction between study treatments and additional treatments. Also, other questions would be needed for a full understanding: Are there different subgroups of clients who improve more than others in treatment? How do clinicians differ in delivering the treatment (as therapist factors are one of the most powerful influences on outcomes; Najavits & Weiss, 1994)? How much treatment is needed to produce positive outcomes?

There are some findings for treatments outperforming the control. This is the "horse race" question, asking whether the study treatment did better than what it was being compared to (the design of all studies in Table 2 listed as "controlled trial" or "RCT"). The table indicates that there were various findings for the models outperforming the control, although not always, and not for all models. (Look for the findings that are both in boldface and underlined, not underlined alone, to locate the ones that did occur). Those that showed any difference were as follows: SS (#13, 14, 15, 16, 17, 18, 19, 20, 21); ICBT (#25); TREM (#27, 29) and BCM/TREM (#28); EXP/SUD (#33); and COPE (#34). A few models showed no significant differences from the control (SDPT, TARGET, GRT). Even the models that did show a difference sometimes

only showed it for one variable or scale, so it is important to recognize that at this early stage of work, it is not yet clear what the future holds in terms of range, degree, and sustainability of changes produced by any one model.

It is also important to recognize that treatments differed in how long they were delivered (e.g., they varied extensively in number of hours of treatment, per Table 1 and, by implication, likely cost). There are also many other relevant contextual factors (see the paragraph above). It is also notable that there were no instances of the control outperforming the study treatment. (The only ones reported was for GRT, #23, on one variable and only in the overtime, not between-conditions analysis, and for SS, #21, on one secondary analysis variable [alcohol use by stimulant users]). Finally, it is just as important to notice how often *both* the study treatment and the control showed improvement, without a difference between them (see all instances in the table of the underlined, but not boldface, results). This happened quite frequently across the table, indicating that the study treatment was not more helpful than the control on those variables.

Overall, then, it is evident that there were some positive findings for some of the study treatments outperforming the controls. Among the models that did evidence outperforming a control, there were also differences in the number and range of findings achieved, per Table 2. And there were also quite a few instances where both the study treatment and the control showed improvement, with no difference between them.

When there were differences between conditions, they were more on PTSD or other mental health variables, and less often on SUD. This is important as it may indicate that in these complex comorbid clients, the PTSD and mental health issues may be easier to treat or sustain over time than SUD outcomes. That remains a question for future research but does fit clinicians' perceptions (Back et al., 2009). It also fits the larger body of work wherein PTSD is typically conceptualized as amenable to short-term treatment and resolution, whereas SUD (dependence in particular) is conceptualized as a chronic relapsing disorder (Arria & McLellan, 2012). The pattern seen in Table 2 may also reflect that clients were typically in SUD treatments while in the study treatment. In terms of specific models in Table 2, study treatments that showed this pattern of outperforming the control on PTSD but not SUD occurred for ICBT (#), BCM (#28), and COPE (#34). The only models in which the study treatment outperformed the control on SUD were SS (e.g., #16,17, 18) and TREM (#29). The only model thus far that outperformed the control on *both* PTSD and SUD was SS (see next section).

SS

We will summarize results on SS here, as it has been the subject of the majority of studies.

SS is the most rigorously studied treatment thus far for PTSD/SUD. It has been studied in 22 of the 35 studies in this review: 13 pilots, three controlled studies, and six RCTs (one a hybrid RCT). It is also the model with the most number of independent studies, which, as noted earlier, are less subject to positive bias. Consistent with all the studies in this review, clients in SS studies were consistently in the realm of complex trauma/PTSD, with comorbidity, high severity and chronicity, and multiple life problems. Various studies had strong minority representation. There were relatively few exclusionary criteria for clients, and in many studies clinicians were native to the setting. SS has been studied primarily in group modality (18 of the 22 studies), with most of these open rather than closed groups, and usually singly led rather than co-led. Overall, these characteristics are representative of frontline SUD treatment settings.

Some studies are partial-dose SS only. Six of the studies are *partial-dose SS* studies, using 24% to 48% of the model (#10–12, 19–21), including the largest investigation of SS to date, the National Institute on Drug Abuse Clinical Trials Network (CTN) study, which used 48% of the model in 6 weeks (#21). "Partial-dose" refers to the number of SS topics used. The CTN study, for example, used 12 of the 25 SS topics. Partial-dose does not refer to a total number of hours conducted per se as SS does not have a defined dose in that sense (per the SS manual

sessions can vary in duration of session and timing of sessions, based on the needs of the client and clinician). Partial-dose studies address a different question than full dose SS studies. They ask, "How well does SS work when only a segment of the content is delivered?" which in all six partial-dose studies thus far was less than half of its content. (Thus far, all reviews that include SS omit this important point, e.g., Bernardy et al., 2013; Torchalla, Nosen, Rostam & Allen, et al. 2012, van Dam, Vedel, Ehring & Emmelkamp et al., 2011.)

SS has shown positive outcomes across studies generally. Across studies SS has had numerous positive outcomes on PTSD, SUD, and other variables (the many "yes" results in Table 2). In the controlled trials and RCTs, SS outperformed the control *on PTSD but not SUD* in some studies (#13, 14, 15, 20); *on SUD but not PTSD* in another (#18); and in some studies, on *both PTSD and SUD* (#16, 17) and on both PTSD and SUD among more severe SUD patients (#21, on secondary analyses of subgroups). Most also found SS outperformed the control on *other variables*, such as psychopathology, cognitions, and coping. Thus, in keeping with the finding noted for other models, it appears to be easier to obtain results for PTSD and mental health outcomes than for SUD, although SS has shown demonstrable results on SUD in some studies as well.

Also, consistent with our earlier summary of Table 2, there are various instances of both SS and the control improving. Studies of partial-dose SS have had mixed results, with some finding stronger results than others (see studies #10–12, 18–20). In the partial-dose CTN study, secondary analyses on subgroups found SS to outperform the control in various results (and especially with more severe SUD clients), and in only one instance found the control outperforming SS (#21). When treatment satisfaction has been studied it has consistently been strong. Also, greater dosage has been shown to positively affect outcomes (#13, #19), and in two studies SS obtained higher attendance than the control (#18, 21). SS has achieved various positive outcomes even with delivery by case managers (#14), by peers (#9), and with client who have pathological gambling disorder (#8). Thus far, there appear to be no discernable patterns of difference in studies based on factors such as individual versus group delivery, level of minority representation, or type of clinicians delivering it, but formal comparative studies would be needed to address these topics.

Finally, the model has been found to be very safe (Killeen et al., 2008), with no regular or frequent pattern of worsening, though an occasional finding has occurred per Table 2 on a single variable. SS is listed as having strong research support by various professional entities, based on their criteria sets, including Level A by the International Society for Traumatic Stress Studies, and "strong research support" by Divisions 12 and 50 of the American Psychological Association.

Summary and Discussion

In the pages above, we explored the topic of treatment outcome studies for complex PTSD/SUD. Below is a recap of some of the key findings, although this is clearly an early stage literature with far more research needed to draw firm conclusions.

The majority of treatments developed for these complex PTSD/SUD clients are present-focused approaches, emphasizing stabilization, coping skills, and psychoeducation, and, by design, not including past-focused (e.g., exposure-based) emotionally intense components. These models, all of which have had one or more empirical studies, are HWR/BT, ICBT, SS, TARGET, and TREM.

In recent years, a few models have also been developed or studied that include a past-focused component: CTPCD, later named COPE, CC, and SDPT. Each of these represents major adaptations of classic exposure-based models to make them safe and effective for PTSD/SUD populations, who are perceived as more vulnerable and challenging to treat than PTSD-alone. Each of the resulting models is a present-focused plus past-focused combination, not a past-focused intervention delivered alone.

Overall, the studies in this review represent a more complex clientele than has been studied in most of the gold standard PTSD-alone outcome literature thus far. A typical description

comes from study #13: "In addition to co-occurring SUD/psychiatric disorders, most had experienced child abuse, been homeless, served jail time, and suffered interpersonal abuse in the past 6 months; SUD was primarily drugs rather than alcohol (with methamphetamine common)."

Thirty-five studies are described (Table 1) and their outcomes listed (Table 2). Overall, results show numerous positive outcomes across the domains of PTSD, SUD, and other variables, including psychopathology, cognitions, and coping. However, it also appears that SUD is harder to treat than PTSD (most models having more effect on the PTSD than SUD when studied in controlled or randomized trials). The "controls" in these trials have almost uniformly been SUD treatments, whether as treatment-as-usual SUD treatments or formal manualized SUD treatments (e.g., relapse prevention or individual drug counseling). Thus, it may be the case that the PTSD/SUD treatments were duplicating the effort already being focused on SUD. However, it may also be the case that SUD is simply harder to treat. The conceptualization of SUD (especially substance dependence) as a "chronic relapsing illness," much like diabetes, rather than a resolvable acute syndrome (as PTSD is currently conceptualized in gold standard PTSD-alone treatments currently), may be useful to keep in mind in future research.

All treatments studied showed a positive effect in pilot studies. In controlled trials or RCTs, most treatments evidenced at least one variable or scale in which it was superior to the control, although some did not. Also, *both* the study treatment and the control showed improvement on various outcomes in various studies, highlighting the point that it is not always differential outcomes that are important, but also looking at ways in which both show effects.

SS is the most studied model, with 22 of the 35 studies. It is the only treatment thus far that had an effect on both PTSD and SUD relative to a control (in controlled trials or RCTs). In some studies it shows a superior effect on PTSD and in one study it is superior just on SUD. Six of the SS studies, including the large CTN study (#21), were partial-dose studies with less than 50% of the SS content delivered, a fact omitted in prior literature reviews that covered SS. Overall, various positive SS outcomes are listed in Table 2 across a diverse range of studies. Two studies have found that greater dosage has been shown to positively affect outcomes (#13, #19), and in two studies SS obtained higher attendance than the control (#18, 21). A few isolated negative outcomes were found on single variables; but overall research shows it to be a highly safe model. SS studies have largely been group modality studies, typically open groups, with clinicians native to the setting, and by independent investigators. As such, the literature on it largely represents effectiveness rather than efficacy studies, and evidences its ability to produce positive outcomes in real-world conditions. However, more studies are clearly needed.

Several important aspects were beyond the scope of this review: comparison of attendance patterns, effect sizes (degree of change), and statistical meta-analysis. However, given the current state of the literature (see the next point), meta-analysis appears premature.

The studies reviewed are impressive in being the first generation of research to focus on the complex PTSD/SUD clientele that have consistently been excluded from most prior outcome research. However, the studies contain notable weaknesses in both design and reporting. They often lack end-of-treatment outcomes (which are the most relevant to understand the effect of models and to improve them). In addition, they are typically pilot studies conducted in conjunction with variable amounts of other treatments that are unspecified, generally do not report on the full array of comorbid conditions in their samples, and tend not to use urinalysis to verify SUD self-reports.

A Public Health Perspective

Beyond the above findings, it is useful to address the treatment needs of these clients from a broader public health lens. There is no model yet in existence nor is there one likely to be developed that can resolve quickly what for many of these clients are decades of abuse, neglect, violence, substance use, and the host of associated life problems that co-occur with these, such as homelessness, criminal justice involvement, job problems, poverty, discrimination, and physical health problems. They are a multiply burdened segment of the population with high chronicity (Brown, Huba, & Melchior, 1995). They often have the least resources for care and receive

treatment from some of the least trained clinical staff. They often end up in public health systems of care.

Thus, some important questions for the next generation of research include the following, in terms of behavioral treatments.

What length of treatment is actually needed for these clients? As shown in Table 1, treatments in this study had wide-ranging length, but few treatments were actually very brief, suggesting that for complex PTSD/SUD clients, longer treatment is perceived as necessary. In keeping with this, Dialectical Behavior Therapy, one of the most widely adopted treatments for complex populations, is designed as one year of approximately 182 hours of group and individual treatment (see Landes, Garovoy & Burkman, this issue). Various PTSD-alone gold standard treatments have been identified as short-term models of 12–20 sessions, but they are gold standard only for a narrow segment of PTSD clients, and certainly not as yet gold standard, much less empirically validated, for the types of high complexity clients covered in this review. (There have been a few initial studies in which past-focused models have been tried with complex PTSD/SUD clients per Tables 1 and 2. But they have always been combined with present-focused models and made into longer treatments, as described earlier.)

What is consistently missing from the outcome literature is a clear picture of treatments that clients had *prior to* the study treatment and *after* the study treatment. Many if not most of these clients are "repeat customers" who cycle through many rounds of treatment, yet this is not captured in the current zeitgeist of how models are studied. It is as if we are watching just the middle few minutes of a movie and have missed the much larger story before and after. Even studies with follow-up periods rarely report on what treatments client received during that time in type, amount, and level of helpfulness.

Complex comorbid clients at the severe end of the spectrum may need models that provide ongoing support rather than a time-limited course. Certainly for less severe, less complex clients, treatment may work as envisioned in manuals with a limited number of sessions. But others may need support for a long time. This is reflected in the wisdom of 12-step approaches that provide ongoing, free, continuous support to help maintain abstinence from substances and that grew up as a grass-roots model developed by addicts themselves. In the PTSD field and mental health broadly, there is currently no widespread supportive resource of this type. Findings consistently show that SUD clients, including those with PTSD, who attend 12-step groups are more likely to sustain positive outcomes. For clients in the severe end of the spectrum, SUD may be more of a disorder like diabetes that requires long-term management. Becoming creative about developing resources for complex clients (beyond 12-step groups) may be an important public health goal. Some of the models identified in this review can perhaps be used in such ways.

It is crucial to focus more on which treatments, and what about those treatments, are most *appealing, easy to implement,* and *low cost* for clinicians and clients in public health systems of care, in relation to a given unit of outcome. "Horse race" comparisons (which rarely evidence powerful or consistent differences between well-developed models) are increasingly less relevant than determining which models clients want to engage in and which their workforce can deliver, within the realities of the setting. Major reviews and several decades of research indicate that well-crafted models do not typically outperform each other (Benish, Imel & Wampold, 2007; Bradley et al., 2005; Garfield & Bergin, 1998; Imel, Wampold, Miller & Fleming, 2008; Powers, Halpern, Ferenschak, Gillihan & Foa, 2010). However, they may differ in other important ways in terms of these other aspects (appeal, ease of implementation, and cost). A model that has slightly less effect on outcome but is much stronger on these factors may be a good public health choice. Thus far, such aspects have not been researched in the PTSD/SUD field in relation to treatment models.

It is also essential to attend more to the clinicians treating these clients, many of whom have substantial histories of trauma and/or addiction themselves. They typically manage large caseloads of complex clients, often without sufficient support or training. There is little empirical research on how to best select and retain them, and to support them in their work. The advent of evidence-based manuals is important, but their workforce needs go beyond manuals.

Overall, as this review shows, there have been creative and strongly humanitarian attempts to create various treatment manuals that are sensitive to the trauma, comorbidity, and widespread

suffering endured by complex PTSD/SUD clients. Manualized models can bring a high level of innovation and inspiration to clinical work. The hope is that in the decades ahead, empirical efforts will continue to expand our understanding of how to best help the broadest range of these clients.

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Appendix

Table 1
Description of Studies

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(1) *Seeking Safety* **Pilot** Najavits et al., 1998	**Open group** 24 sessions × 1.5 hours. = **36 hours** in 3 months.	**27 outpatient women** with current PTSD + current substance *dependence* (plus had to be active substance user in prior 30 days); 12% minority.	**Yes** Severe on PTSD, SUD, social functioning, childhood trauma. Most unemployed, with Axis II disorders. All substance dependent, most drug dependent.	**Minimal** History of schizophrenia, organic mental disorder; currently on methadone maintenance or mandated to treatment.
(2) *Seeking Safety* **Pilot** Zlotnick et al., 2003	**Open group** 25 sessions × 1.5 hours. = **37.5 hours** in 3 months).	**17 incarcerated women** with current PTSD, and substance *dependence* 30 days prior to prison; 33% minority.	**Yes** Majority were repeat offenders; all had substance dependence, primarily cocaine; most never graduated high school; all had childhood trauma, repeated trauma, majority physical and sexual abuse.	**Minimal** Actively psychotic, diagnosed organic brain impairment.
(3) *Seeking Safety* **Pilot** Young et al., 2003	**Group** (open at community sites; closed at jail sites). Community settings were 25 session × 1.5 hours in 6 months; jail was 25 sessions × 1.5 hours in 6 weeks = **37.5 hours**.	**220 women in SUD treatment**, with vast majority having experienced trauma; 53% minority.	**Yes** Primarily unmarried mothers, 35% with parental rights terminated by legal system, due primarily to SUD; 69% had problems with multiple substances, and substantial percentage used substance(s) daily; 77% had prior SUD treatment; 35% had major depression, 19% bipolar I or II.	**Unclear/None** Exclusionary criteria not reported.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(4) *Seeking Safety* **Pilot** Cook et al., 2006	**Group** 25 sessions; length and timing not specified; assume **25 hours**.	**25 mean and women veterans** with current? PTSD and SUD at Veterans Affairs (VA) substance abuse outpatient clinic; ethnicity not reported.	**Yes** (alcohol, cocaine, and heroin use disorders; older veteran cohort, mean age of 50).	**Unclear/None** Exclusionary criteria not reported.
(5) *Seeking Safety* **Pilot** Patitz et al., under review	**Closed group** 25 sessions × 2 hours = **37.5 hours** in 12 weeks.	**24 outpatient rural women** with SUD (verified by ASI plus intake history) and trauma symptoms (verified by the TSI); 0% minority.	**Yes** Rural, low-income, all had complex trauma, unable to succeed in SUD recovery using 12-step or other addiction models, used various substances (alcohol, methamphetamine most common).	**Minimal** Active psychotic symptoms, e.g., delusions, hallucinations.
(6) *Seeking Safety* **Pilot** Daoust et al., 2011	**Open group** 28 sessions using French translation of SS × 3 hours = **84 hours**.	**18 men and women hospital outpatients** with current PTSD and current SUD; 1% minority.	**Yes** Primarily physical, sexual, and/or childhood trauma (latter 78%); 22% in prison in their lifetime. Primary substances: alcohol, opiates, cannabis, cocaine.	**Minimal** Psychosis, no permanent residency, or being actively involved in criminal activities.
(7) *Seeking Safety* **Pilot** Wolff et al., 2012	**Closed group** 28 sessions × 1.5 hours = **42 hours** in 14 weeks (used 23 of the 25 SS topics).	**74 incarcerated women** with mental illness in addition to PTSD (88% full, 12% subthreshold); SUD; 64% minority.	**Yes** Most were violent offenders with serious mental illness, including bipolar/psychotic; child sexual abuse; average of 15 life stressors; in minimum, medium, or maximum security.	**Unclear/None** Exclusionary criteria not reported.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(8) *Seeking Safety* **Pilot** Najavits et al., 2013	**Individual** 25 weekly sessions × 50 minutes = **25 hours** in 6 months.	**7 men and women outpatients** with current PTSD and current *pathological gambling disorder;* 29% minority.	**Yes** Childhood onset of PTSD; all experienced physical, sexual, and other trauma types; low-income, chronic and severe.	**Minimal** History of diagnosed and verified bipolar 1 disorder or psychotic disorder; institutionalized < 3 weeks in prior 3 months ("outpatient").
(9) *Peer-led Seeking Safety* **Pilot** Najavits et al. under review	**Closed group** 25 sessions × 1 hour = **25 hours**.	**18 women in residential SUD program** for mothers and their children; 22% minority.	**Yes** All with multiple traumas, predominantly childhood repeated physical and/or sexual abuse; substance dependence (on intake to the facility); and low- income.	**Major** Had to be in the residential program for 90 days, and planned to remain for at least 6 months (to complete the project).
(10) *Partial-dose (40%) Seeking Safety* **Pilot** Norman et al. 2010	**Open group** 10 weekly sessions × 1.5 hours=**15 hours** in 10 weeks.	**9 men veterans** with current PTSD and SUD at a VA hospital; 36% minority.	**Yes** Severe on both PTSD and depression measures at baseline.	**Unclear/None** Exclusionary criteria not reported.
(11) *Partial-dose (32%) Seeking Safety* **Pilot** Searcy & Lipps, 2012	**Open group** Twice per week × 1 hour during 28-day stay = **8 hours**.	**40 men and women in 28-day SUD residential program** with substance *dependence* and PTSD symptoms; 10% minority.	**Yes** Majority unemployed, with past or present legal problems, 22% attempted suicide in past; both drugs and alcohol prominent (predominantly stimulants, alcohol, opiates).	**None** All clients in the program were offered the option to participate; no exclusionary criteria.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(12) *Unclear dose Seeking Safety* **Pilot** Benton et al., 2011, 2012	**Closed group** Weekly sessions of 1.5 hours over 3 months (but no attendance data reported, nor which topics from SS) = **19.5 hours** (assume 13 weeks).	**20 outpatient women in a SUD clinic**, with current PTSD and current SUD, all of whom had already completed the clinic's 8-week SUD IOP (up to six months prior); 50% had PTSD at baseline; 30% minority.	**Yes** Majority unemployed, and "high proportion of childhood sexual abuse".	**Minimal** History of schizophrenia, active bipolar disorder, impending incarceration, or life-threatening/unstable medical illness.
(13) *Seeking Safety* **Controlled trial** (one site of WCDVS[c] study) Gatz et al., 2007	**Group** 31 sessions × 1.5 hours = **46.5 hours;** sessions were held twice per week.	**313 women in residential treatment** with SUD and co-occurring mental health disorder (both in past 5 years, and at least one in past 30 days), experienced physical or sexual abuse; had at least two prior treatment episodes. Sample was n = 136 in SS vs. n = 177 comparison women; all received trauma-informed, integrated SUD/mental health services; 63% minority.	**Yes** In addition to co-occurring SUD/psychiatric disorders, most had experienced child abuse, been homeless, served jail time, suffered interpersonal abuse in past 6 months; SUD primarily drugs rather than alcohol (methamphetamine common).	**Unclear/None** Exclusionary criteria not reported.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(14) *Seeking Safety (delivered by case managers)* **Controlled trial** Desai et al., 2008, 2009	**Group or individual** (clinicians could conduct either modality) 25 weekly sessions over 6 months; assume 1 hour per session (length not specified) = **25 hours**.	**450 homeless women veterans** with addiction and/or psychiatric problems, all receiving intensive case management (ICM). Two cohorts: n = 359 in ICM, followed by 91 in SS plus ICM; 65% minority.	**Yes** Homeless, plus high lifetime trauma rates (average of 9); 68% had been raped; 35% reported trauma related to prostitution.	**None/Minimal** "Unstable to participate" as decided by the study investigator.
(15) *Seeking Safety* **Controlled trial** Lynch et al., 2012	**Open group** 24 sessions × 2 hours = **48 hours** in 12 weeks.	**114 incarcerated women** with moderate or higher PTSD symptoms (≥ 30 on PCL), history of SUD; 16% minority.	**Yes** Most repeat offenders, victims of multiple violent crimes and sexual assault; majority had severe, ≥ 50 PCL symptoms, and depression; primary drug was methamphetamine.	**Unclear/None** Exclusionary criteria not reported.
(16) *Seeking Safety* **RCT (hybrid)** Hien, Cohen et al., 2004	**Individual** 12 twice weekly sessions × 1 hour = **24 hours** in 3 months.	**107 community outpatient women** with current PTSD (88% full; 12% subthreshold) + current SUD; had to be active substance user in prior 30 days); 75.6% minority.	**Yes** Severe on PTSD, most with childhood trauma; all with substance *dependence*, most with drug dependence; most unemployed with low social functioning.	**Minimal** Actively psychotic, organic mental disorder; significant suicidal or homicidal intent.
(17) *Seeking Safety* **RCT** Najavits et al., 2006	**Individual** 25 sessions of 50 minutes **= 21 hours** in 3 months (twice-weekly sessions).	**33 outpatient adolescents** with current PTSD and current SUD (94% with substance *dependence)*, plus active substance use in prior 60 days; n = 18 in SS plus TAU versus n = 15 TAU only; 21% minority.	**Yes** Childhood PTSD; most had sexual and physical abuse; most had drug rather than alcohol dependence.	**Minimal** History of bipolar I disorder (mania), psychotic disorder; currently mandated to treatment.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(18) *Seeking Safety* **RCT** Boden et al., 2012	**Open group** 24 sessions in 3 months; session length unclear, assume 1.15 hours = **30 hours**.	**117 men outpatient veterans** with current SUD and current PTSD (all full PTSD, except n = 9 subthreshold); 81% minority.	**Yes** Majority unemployed, with both drug and alcohol problems, older veteran cohort (mean age over 50), 40% homeless; "treatment-resistant".	**Minimal** Acute psychosis, mania, dementia, or suicidal intent.
(19) *Partial-dose (% varied) Seeking Safety* **RCT** Zlotnick et al., 2009	**Open group** 90 minutes while in prison, varying dosage; average was 15.6 sessions = **23.4 hours** total in 6–8 weeks.	**49 incarcerated women** with current PTSD (full, 83.5%, or subthreshold, 16.5%) and current SUD (88% *dependence);* n = 27 in SS plus TAU versus 22 in TAU alone. TAU was mandatory in the prison and high-dose (180–240 treatment hours); 53% minority.	**Yes** Repeat offenders; childhood PTSD, majority with sexual/physical repeated trauma, childhood SUD, chronic, both alcohol and drug dependence.	**Minimal** Actively psychotic at time of recruitment; organic brain impairment diagnosis.
(20) *Partial-dose (24%) Seeking Safety* **RCT** Ghee et al., 2009	**Group** 6 sessions; each session 1.5 hours = **9 hours** (held over 3–4 weeks).	**104 women in residential SUD treatment** (51 SS plus TAU vs. 52 TAU); 49% minority.	**Yes** "Histories of intergenerational substance abuse, untreated histories of sexual abuse, severe physical abuse, or concomitant mental health needs;" 98% of study sample unemployed; most low income; many low education.	**Minimal** No active psychosis or severe medical (physical) condition.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(21) *Partial-dose (48%) Seeking Safety* **RCT** Hien et al., 2009	**Open group** 6 twice weekly sessions × 1.5 hours = **18 hours** in 1.5 months.	**353 outpatient women** with current PTSD (80% full; 20% subthreshold) + current *abuse or dependence* (plus could have subthreshold PTSD (DSM-IV Criterion A, B, F and *either* C or D); had to be active substance user in prior 6 months); 54.4% minority.	**Yes** Severe on PTSD, SUD, social functioning, childhood trauma. Most unemployed. All substance dependent, most with drug dependence.	**Minimal** Actively psychotic, organic mental disorder; significant suicidal or homicidal intent, litigation re PTSD.
(22) *Helping Women Recover (HWR) plus Beyond Trauma (BT), called Women's Integrated Treatment (WIT)* **Pilot** Covington et al., 2008	**Group plus video** Unclear: assume **at least 28 hours** (BT and HWR total 28 sessions), but no listing of dose, duration, timing, length of session, whether groups were open or closed, attendance at WIT, or how video was used. The residential SUD program is listed as 12 months. Half the sample mandated to treatment.	**202 women in residential SUD treatment** who had already completed 45 days in the residential SUD program ("stabilization"); 59% minority.	**Yes** Majority had multiple traumas, criminal history (e.g., prior arrest), lacked stable housing prior to prison, had methamphetamine as their primary drug problem; had problems with 2 or more substances; an average of 10 years substance problems; 28% had attempted suicide.	**Major** Completion of 45 days residential SUD program stabilization. Other than that, no statement of inclusionary/ exclusionary criteria.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(23) *Helping Women Recover (HWR) plus Beyond Trauma (BT), called Gender Responsive Treatment (GRT)* **RCT** Messina et al., 2010	**Unclear if group, individual or both (appears to be latter)**. Dosage "approximately" 20 hours per week for "approximately" 6 months" = 520 hours [same as for TAU]. Length of sessions and dose of HWR versus BT (they are separate manuals) not reported; attendance data not reported for GRT or TAU. Clients were mandated to GRT.	**115 women mandated to prison-based SUD treatment**, which was either GRT or SUD therapeutic community; 60 in GRT versus 55 in TAU. At baseline, 95% of the full sample had SUD; 26% had PTSD; 52% minority.	**Yes** Majority unemployed prior to prison, had methamphetamine as primary drug problem prior to prison, had histories of sexual and physical abuse, and had been incarcerated an average of 4.7 years lifetime.	**Minimal/unspecified** Membership in prison gang; segregated for violence or weapons charges in past year; or in prison due to felony or immigration (all eligibility within the prison progam); but no exclusionary criteria reported for the study itself.
(24) *Integrated CBT for PTSD and SUD (ICBT) plus SUD intensive outpatient program* **Pilot** McGovern et al., 2009	**Individual** Unclear dosage: methods section states 8–12 sessions are needed; Figure 2 indicates up to 14 sessions conducted. Length and timing of sessions not stated. Assume 14 session × 1 hour = **14 hours**.	**11 men and women in SUD intensive outpatient program**, with current PTSD; 0% minority.	**Yes** Majority had child sexual assault; severe PTSD (based on initial CAPS score).	**Unclear/None** Exclusionary criteria not reported.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(25) *Integrated CBT for PTSD and SUD (ICBT) plus SUD IOP or methadone maintenance treatment* **RCT** McGovern et al., 2011	**Individual** ICBT was 8 modules delivered weekly over "approximately" 12-14 sessions (pg. 212) but unclear as later is stated as 8-12 weeks of weekly sessions (pg. 214); sessions were 50 minutes = **11.67 hours** [assuming 14 sessions × 50 minutes]. IAC (comparison condition) appears to be lower dose: "10-12 weekly sessions" delivered over 8–12 weeks (pg. 214) = 10 sessions [assuming 12 50-minute sessions].	**53 men and women in SUD intensive outpatient or methadone maintenance treatment**, with current PTSD (and CAPS score ≥ 44); 32 in ICBT versus 21 in Individual Addiction Counseling (IAC, a manualized addiction-only model); 9% minority.	**Yes** Majority had childhood sexual assault; severe PTSD (based on initial CAPS score).	**Major** All had to be active in SUD intensive outpatient treatment or methadone maintenance; no acute psychotic symptoms; no suicide attempt or psychiatric hospitalization in past month (unless latter directly related to substance intoxication or detoxification and currently stable); and medical and legal situations were stable.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(26) *Trauma Adaptive Recovery Group Education and Therapy (TARGET)* **RCT** Frisman et al., 2008	**Group** 8 or 9 weekly sessions; length unclear; assume 1.15 hours = **11.25 hours**. Small incentives related to TARGET (e.g., keychain, pen) handed out at three sessions; and clinicians periodically brought refreshments to group.	**213 outpatient men and women in SUD treatment**, who experienced a trauma (lifetime), plus met either (a) PTSD (b) DESNOS plus at least one or more Axis I disorders or (c) major depressive disorder, dysthymic disorder, or dissociative disorder. Assigned to TARGET (n = 141) or Trauma-Sensitive Care as Usual (TSU) n = 72; 44% minority.	**Yes** Low income, most unemployed, had experienced homelessness (lifetime), had been arrested at some point.	**Unclear/None** Exclusionary criteria not reported.
(27) *Trauma Recovery and Empowerment Model (TREM), modified and partial-dose version, plus Copeland's trauma self-help book* **Controlled trial** (one WCDVS study site)[c] Toussaint et al., 2007	**Group and individual** 24 group TREM sessions (16 sessions twice/week for 8 weeks; then 8 sessions/week); plus up to 24 individual sessions with a counselor to review the TREM workbook material; length of group and individual sessions not specified. Assuming 1.25 hour per group session (per Fallot & Harris, 2000), and 1 hour individual session total = **30-54 hours**.	**170 women in residential treatment** meeting WCDVS criteria (see study #14); had at least two prior treatment episodes. Sample was n = 64 in TREM vs. n = 106 comparison women; all women in the study received trauma-informed, integrated SUD/mental health services; 47% minority.	**Yes** All with current substance dependence, and mothers of children under age 13; most unemployed. All, per the WCDVS study, had SUD and co-occurring mental health disorder, experienced physical or sexual abuse; and at least two prior treatment episodes.	**Unclear/None** Exclusionary criteria not reported.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(28) *Trauma Recovery Empowerment Model (TREM) as part of Boston Consortium Model (BCM)* **Controlled trial** (one WCDVS study site)[c] Amaro et al., 2007a, 2007b	**Group plus individual case management** BCM group is **101.25 group hours** comprising 5 manualized modules: (1) 25 TREM sessions modified to include 3 sessions for HIV/AIDS prevention) [31.25 hours]; (2) 3 sessions of women's leadership training [15 hours]; (3) 8 sessions of economic success in recovery [16 hours]; (4) 10 sessions of Pathways to Family Reunification and Recovery [15 hours]; (5) 12 sessions of Nurturing Program for Families [24 hours], **plus an unspecified amount of individual case management**.	**342 women in residential, outpatient, or methadone program**; n = 181 women in BCM plus TAU versus 161 women in TAU alone. (TAU was weekly group and/or individual treatment lasting 6-12 months). All met WCDVS criteria (see study #14); 65.5% minority.	**Yes** Most with less than high school education, unemployed; all with SUD and co-occurring mental health disorder, experienced physical or sexual abuse; had at least two prior treatment episodes.	**Unclear/Minimal** Based on clinician advice, excluded women "in an especially sensitive state, that is, those who may not have been able to give reasonable answers to the interview and those for whom the interview could have triggered the reexperience of traumatic events."

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(29) *Trauma Recovery and Empowerment Model (TREM) plus individual integrated trauma services.* **Controlled trial** (one WCDVS study site)[c] Fallot et al., 2011	**Group (open initially then closed) plus individual trauma services** TREM group was 33 weekly sessions × 1.25 hours = **41.25 total group hours** in 8 months; 2-3 co-leaders per group; **plus individual sessions of unspecified duration and frequency** (integrated trauma service counseling).	**251 women recruited from community agencies**; unspecified as to level of care (i.e., unclear if outpatient, day program, or residential); 153 in TREM + TAU + integrated trauma services versus 98 in TAU [same inclusion criteria as study #28]; 85% minority.	**Yes** Most unemployed, with history of both child and adult sexual and physical abuse; average of 5 prior hospitalizations.	**Unclear/None** Exclusionary criteria not reported.
(30) *Concurrent Treatment of PTSD and Cocaine Dependence (CTPCD)*[j] Present- and past-focused **Pilot** Brady et al., 2001	**Individual** 16 sessions × 1.5 hours = **24 hours**, conducted at varying pace (1–2 sessions per week). Paid for session attendance.	**39 men and women outpatients** with current PTSD and current cocaine dependence, plus had to attend at least 1 session of the study therapy; 51% minority.	**Yes** All had substance dependence; majority had co-occurring affective disorder, and had experienced rape.	**Moderate** Suicidal or homicidal *ideation,* psychosis, dissociative identity disorder, dementia, illiteracy, or medical instability.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(31) *Seeking Safety plus Exposure Therapy Revised* Present- and past focused **Pilot** Najavits et al., 2005	**Individual** 30 sessions × 1 hour = **30 hours** in 5 months.	**5 outpatient men** with current PTSD and current substance *dependence* (plus active substance use in prior 60 days); 0% minority.	**Yes** All had childhood-based PTSD; average of near-daily substance use; most had active suicidal ideation and/or plan; all had substance dependence, primarily drug rather than alcohol; chronic and severe).	**Minimal** History of bipolar I disorder (mania), psychotic disorder; currently mandated to treatment.
(32) *Substance Dependence PTSD Therapy (SDPT)* Present- and past-focused **RCT** Triffleman, 2000	**Individual** 20 sessions 2 times per week × 1 hour = **40 hours**.	**19 men and women outpatients** with a lifetime diagnosis of substance dependence, at least current partial PTSD (2/3 of symptoms), and attended at least one session of study treatment. Participants were randomized to SDTP (n = 10) or 12-Step Facilitation (n = 9); 37% minority.	**Yes** Most unemployed; SUD history was primarily drugs rather than alcohol; high level of impairment on numerous baseline variables.	**Moderate** Severe major depression, evidence of dissociative identity disorder, untreated mania, acute psychosis, acute suicidality or homicidality requiring continuing involvement in other ongoing psychotherapy or hospitalization.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(33) *PTSD exposure therapy in context of SUD coping skills treatment.* Past-focused in context of required present-focused **RCT** Coffey et al., 2006	**Individual** 1 educational session and then 6 PTSD exposure sessions × 1 hour = **7 hours** [preceded and followed by a laboratory cue exposure], provided in context of required SUD coping skills treatment (see details in column E).	**43 men and women outpatients** with current PTSD and current alcohol dependence; plus alcohol use in prior 60 days; randomized to exposure (n = X) versus relaxation training, with both study conditions in context of required present-focused SUD coping skills treatment); 35% minority.	**Yes** Majority with childhood-based PTSD, poor, drug dependence in addition to alcohol dependence, multiple prior inpatient treatments.	**Major** Required to participate in SUD treatment (3x/week group coping skills therapy plus 1 individual session every 1–2 weeks), and dropped from the study if they ended the SUD treatment; plus required abstinence from all substances for 4 days prior to the initial laboratory session, verified by urinalysis; *severe* major depression (i.e., several symptoms in excess of *DSM–IV* major depression and symptoms markedly interfering with daily living). Also, excluded if PTSD diagnosis was from combat or if they were now or had ever engaged in PTSD exposure treatment; current psychotic disorder; or manic episode.

Table 1
Continued

(a) Model/ Study type/ Study author	(b) Study treatment: modality, dosage, total hours (and incentives for attending sessions, if any)	(c) Sample[a]	(d) Complex sample (severe, chronic, highly comorbid, etc.)	(e) Exclusions from study[b]
(34) *Concurrent Prolonged Exposure COPE* Present and past-focused **RCT** Mills et al., 2012	**Individual** 13 sessions weekly [but to improve attendance, scheduling extended up to 9 months] × 1.5 hours = **19.5 hours**.	**103 men and women outpatients** with current PTSD and SUD (substance dependence); n = 55 in COPE plus TAU versus n-48 in TAU; minority unclear (6% listed as Aboriginal but other ethnicities not reported).	**Yes** Had substance dependence; most had polysubstance use and history of injection drug use, had experienced sexual assault, had childhood and repeated trauma; had attempted suicide (lifetime); and were unemployed; chronic and severe.	**Moderate** Self-harm in past 6 months; currently suicidal (ideation plus plan and intent); current psychotic symptoms; cognitive impairment that might impede treatment.
(35) *Creating Change* Past-focused **Pilot** Najavits & Johnson, under review	**Individual** 17 sessions × 1 hour = **17 hours**, conducted over a 6 month timeframe (typically weekly, but allowing for scheduling issues).	**7 men and women outpatients** with current PTSD and current SUD, and active substance use in prior 30 days; 71% minority.	**Yes** All experienced sexual abuse; average age of first trauma was 5; chronic PTSD and SUD (e.g., average of over 20 years of more than one substance per day).	**Minimal** Current bipolar I disorder (i.e., full mania) uncontrolled by medication; or current psychosis.

Note. Studies are listed in the following order: by model starting with Seeking Safety, as that has the majority of studies, and alphabetical by model after that; all organized from pilots through randomized controlled trials, full dose before partial-dose, and by date.
[a]All recruited from community unless noted otherwise; sample size is at baseline; numbers at end-of-treatment or used for analysis may be lower.
[b]Minimal exclusions defined as: no exclusion due to suicidal ideation, self-harm, substance dependence nor any other major limits.
[c]WCDVS = Women Co-Occurring Disorders and Violence Study (Cocozza et al., 2005; Morissey et al., 2006).

Table 2
Study Results

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(1) SS pilot Najavits et al., 1998	**Majority (63%)** of those enrolled (of n = 27 recruited, the n = 17 who completed the minimum dose of >6 sessions).	No	• **Yes** on drug use (ASI composite), abstinence (SUI, **verified by urinalysis**) and cognitions (BASU mean).	• **Yes** on suicidal thoughts and risk (SBQ items), social adjustment (SAS total and subscale extended family role), coping (CSI problem-solving subscale). • **Strong treatment satisfaction.**	*3 months from end-of-treatment; analysis from baseline (listed as "3 months")* • **Yes on SUD:** drugs (ASI composite), cognitions (BASU mean), and alcohol from end of treatment to follow-up (ASI composite). • **Yes on PTSD:** (TSC-40 total and depression subscale). • **Negative outcome:** Increase in somatization (BSI subscale) at end of treatment and follow-up.
(2) SS pilot Zlotnick et al., 2003	**100% of enrolled** (full intent to treat).	• **Yes** level of PTSD symptoms and majority no longer met PTSD diagnosis (CAPS).	Not assessed (due to prison environment).	Not assessed (no other outcome variables). • **Strong treatment satisfaction.**	*Baseline to 6 weeks and 3 months (both timed from release from prison); unclear when release was in relation to end of treatment; All analyses baseline to follow-ups;(listed as "6 weeks" and "3 months")* • **Yes on SUD:** at both 6 weeks and 3 months, on drug and alcohol severity, and also majority not using substances (SCID, **verified by urinalysis**). • **Yes on PTSD:** at both 6 weeks and 3 months, on level of symptoms (CAPS).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(3) SS pilot Young et al., 2003	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (TSC-40 total scale and 5 of 6 subscales); and rate of PTSD diagnosis decreased.	Not assessed.	• **Yes** on psychopathology (BSI total and 6 of 9 subscales.)	Not assessed.
(4) SS pilot Cook et al., 2006	**Majority (72%) of enrolled** (of the 25. enrolled, n = 18 who attended at least 14 sessions of SS and were still coming at the end of therapy).	• **Yes** on symptoms (PCL).	• **Yes** on abstinence (**verified by urinalysis**).	• **Yes** on Quality of Life Inventory. • **Strong treatment satisfaction.**	Not assessed.
(5) SS pilot Patitz et al., under review	**Majority (96%) of sample** (n = 23 of 24 enrolled).	• **Yes** on symptoms (all 10 subscales of TSI).	Not assessed.	Not assessed. Satisfaction not formally assessed.	Not assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(6) SS pilot Daoust et al., 2011	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (PCL arousal subscale; TSC-40 total score, and subscales dissociation, and sexual abuse trauma index).	• **Yes** on screened symptoms (MAST and DAST).	• **Yes** on functioning (BASIS-32 subscale daily role). • **Strong treatment satisfaction.**	Not assessed.
(7) SS pilot Wolff et al., 2012	**Majority (67%)** of the n = 111 enrolled (n = 74 who completed SS, i.e., were enrolled at the beginning and end of SS, and no more than 2 unexcused absences per prison policy).	• **Yes** on symptoms (PCL for full sample and subgroups such as SMI, violent offenders, lower education, etc.). Also majority with PTSD at start no longer had PTSD at end (PCL).	Not assessed due to prison setting.	• **Yes** on psychopathology (BSI Global Severity Index). • **Strong treatment satisfaction.**	Not assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(8) SS pilot Najavits et al., 2013	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (PCL intrusion subscale; TSI mean and subscales anxiety, dissociation, sexual abuse trauma index, sex problems) and cognitions (WAS benevolence subscale).	• **Yes** on cognitions (Gamblers Beliefs Questionnaire mean and subscale illusion of control).	• **Yes** on functioning (Basis-32 mean and depression/anxiety subscale), psychopathology (BSI mean and subscales anxiety and depression; ASI psychiatric composite); self-compassion (SCS mean and subscales isolation, over-identified, self-judgment). • **Negative outcome:** employment (ASI composite). **Strong treatment satisfaction.**	Not assessed.
(9) ***Peer-led*** SS pilot Najavits et al. under review	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (TSC-40 total and all 6 subscales).	Not assessed (due to residential nature of the program).	• **Yes** on psychopathology (BSI total and 6 of 9 subscales); and SCS (subscales self-judgment, isolation, and over-identified). **Strong treatment satisfaction.**	Not assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(10) ***Partial-dose (40%)*** SS pilot Norman et al., 2010	**Majority (64%)** of the 14 enrolled (n = 9 who completed treatment and the end of treatment assessment).	• **Yes** on symptoms (PCL).	• **Yes** on alcohol (number of drinking days, drinks per episode).	• **Yes** on depression (BDI). Satisfaction not formally assessed.	*3 and 6 months (appears to be timed from end of treatment).* • **Yes on PTSD:** (PCL). Unclear on SUD (low assessment completion).
(11) ***Partial-dose (32%)*** SS pilot Searcy & Lipps, 2012	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (TSC-40 total and all 6 subscales).	Not assessed (due to residential nature of the program).	Not assessed Treatment satisfaction was not formally assessed.	Not assessed.
(12) ***Unclear dose*** SS pilot Benton et al., 2011, 2012	◊ **Unclear** Results reported only for those who completed at least one session. No data on how many did not attend at least one session.	◊ No on PTSD (MPSSR; TSC-40).	◊ No on SUD (ADOM, i.e., number of days using substances in past month, but most were abstinent at baseline, per clinic policy and completion of SUD IOP prior to SS).	◊ No on other variables: functioning (BASIS-32 total, subscales). **Strong treatment satisfaction.**	*6-month follow-up from end of treatment; analysis from baseline for all variables, plus end of treatment to follow-up for ADOM and BASIS-32 sleep subscale only; (listed as "6 months")* • **Yes on PTSD** symptoms and diagnosis (MPSSR diagnostic cutoff, total, and subscales re-experiencing and arousal; TSC-40 depression and sleep subscales, with the latter also significant from end of treatment to follow-up). • **No on SUD.** • **Yes on other variables:** functioning (BASIS-32 subscales relation to self and others, and psychosis). • **Negative outcome:** end of treatment to follow-up there was an increase in alcohol use.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(13) SS controlled trial Gatz et al., 2007	**100% of enrolled** (full intent-to-treat analysis).	**Not rated** (no end-of-treatment assessment).	**Not rated** (no end-of-treatment assessment).	**Not rated** (no end-of-treatment assessment). **Strong treatment satisfaction** (per Brown et al., 2007).	*8 months from end of treatment; analysis from baseline (listed as "12 months")* **Yes on PTSD:** • **SS outperformed the control** on symptoms (PSS). **Yes on SUD:** • Both conditions improved on drug and alcohol (ASI composites). **Yes on other variables:** • **SS outperformed the control** on treatment attendance. • Both conditions improved on psychopathology (BSI Global Severity Index).
(14) ***(delivered by case managers)*** SS controlled trial Desai et al., 2008, 2009	**100% of enrolled** (full intent-to-treat analysis).	**Yes** • **SS outperformed the control** on symptoms (PCL total, and avoidance subscale). • Both SS and the control improved on PCL subscale hypervigilance.	**Yes** • Both SS and the control improved on drug and alcohol (ASI composites).	**Yes** • **SS outperformed the control** on social support. • Both SS and the control improved on psychopathology (SCL, ASI psychiatric composite), days homeless, self-esteem, and health (SF-12 medical score). Treatment satisfaction was not formally assessed.	*6 month follow-up from end of treatment; analyses are baseline through follow-up (listed as "12 months").* **Yes on PTSD:** • **SS outperformed the control on symptoms (PCL total and subscales avoidance and arousal).** • Both conditions improved on PCL intrusion. **Yes on SUD:** • Both SS and the control on alcohol and drugs (ASI composites). **Yes on other variables:** • **SS outperformed the control on social support, days worked, and psychopathology (SCL-30).** • Both conditions improved on health (SF-12 medical score), psychopathology (ASI psychiatric composite and SF 12 mental score), days homeless and self-esteem.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(15) SS controlled trial Lynch et al., 2012	**100% of enrolled** (full intent-to-treat analysis).	**Yes** • **SS outperformed control** on symptoms (PCL).	Not assessed due to prison setting.	**Yes** • **SS outperformed control** on all other variables assessed: depression (CES-D); relationship functioning (IIP); adaptive coping, and maladaptive coping (scores on Brief COPE); and on amount of reliable change. Treatment satisfaction was not formally assessed.	Not assessed.
(16) SS RCT hybrid Hien, Cohen et al., 2004		**Yes** • **SS outperformed TAU** on frequency and severity of symptoms (PSS-SR and CAPS). • Both SS and RP improved on the above variables.	**Yes** • **SS outperformed TAU** on severity (SUI total) **verified by urinalysis**). • Both SS and RP improved on the above variables.	**Yes** • **SS outperformed TAU** on psychopathology **(**BSI total, HDRS totals). • Both SS and RP improved on the above variables.	**Yes on PTSD:** • **SS outperformed TAU** with sustained improvements on frequency and severity of symptoms (PSS-SR and CAPS) at 6- and 9-month follow-ups. • Both SS and RP improved on the above variables. **Yes on SUD:** • **SS and RP outperformed TAU** with sustained improvements on drug use severity (SUI) at 6- and 9-month follow-ups. • Both SS and RP improved on the above variables.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(17) SS RCT Najavits et al., 2006	**100% of enrolled** (full intent-to-treat analysis).	**Yes** ● **SS outperformed the control** on cognitions (WAS benevolence subscale).	**Yes** ● **SS outperformed the control** on substance use problems (7 subscales of the PEI including polydrug use, preoccupation with drugs, loss of control, etc.); as well as Axis I SUD symptoms (APS)); and cognitions (RFU).	**Yes** ● **SS outperformed the control** on Axis I anorexia, somatization, and Axis II personality disorder factor and obsessive-compulsive (APS score/subscale). **Moderate treatment satisfaction.**	*3 months from end of treatment; analysis from baseline (listed as "3 months")* **Yes on SUD:** ● **SS outperformed the control** substance use problems (7 subscales of PEI including polydrug use, preoccupation with drugs, loss of control, etc.); as well as Axis I SUD symptoms (APS); and cognitions (RFU). **Yes on trauma/PTSD:** ● **SS outperformed the control** on symptoms (TSCC subscales sexual concerns and sexual distress) and cognitions (WAS subscale benevolence). **Yes on other variables:** ● **SS outperformed the control** on psychopathology (APS subscales Axis I anorexia, somatization, major depression).
(18) SS RCT Boden et al., 2012	**100% of eligible randomized sample** (full intent-to-treat analysis).	No Neither SS nor control improved on symptoms (IES-R).	**Yes** ● **SS outperformed the control** on drug use (ASI composite). ● Both SS and control improved on alcohol (ASI composite).	**Yes** ● **SS outperformed the control** on all other variables: attendance, coping (CRI), and client satisfaction (CSQ). **Strong treatment satisfaction.**	*3 month follow-up from end-of-treatment; analysis from baseline. ("6 month follow-up")* **Yes on PTSD:** ● Both SS and control improved on symptoms (IES-R). **Yes on SUD:** ● **SS outperformed the control** on drugs (ASI composite; 31% greater reduction). ● Both SS and control improved on alcohol (ASI composite). No other variables were assessed at this timepoint.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(19) ***Partial-dose (% varied)*** SS RCT Zlotnick et al., 2009	**100% of those randomized** (full intent-to-treat analysis).	Not assessed (no outcome assessment conducted at end of active phase of treatment).	Not assessed (no outcome assessment conducted at end of active phase of treatment).	Not assessed (no outcome assessment conducted at end of active phase of treatment). **Treatment satisfaction was strong** (and was the only variable rated at the end of the active phase of treatment).	*3 follow-ups:* *(A) 1–1.5 months from end of active phase (group treatment in prison, listed as "12 weeks after intake");* *(B) 4.25-4.75 months from end of active phase (listed as "3 months post-release from prison").* *(C) 7.25-7.75 months from end of active phase (listed as "6 months post-release from prison").* *All analyses are from baseline unless otherwise indicated.* **Yes on PTSD:** • Both conditions improved on PTSD (CAPS total score) at A, B, and C timepoints. • **SS outperformed control** on complex trauma symptoms (TSC-40) in that SS had improvement at each timepoint A, B, and C, whereas control had it only at A. **Yes on SUD:** • Both conditions improved on drug use (ASI composite) at the two available timepoints (B and C). **Yes on other variables:** • Both conditions improved on psychopathology (BSI total) at timepoints A, B, and C. • **SS outperformed control** on psychopathology (BSI total), improving from A to B, and A to C, whereas control did not. • Both conditions improved on legal problems (ASI composite) at timepoints B and C. • **Negative outcome:** Control outperformed SS on alcohol (ASI composite) at one timepoint (B).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(20) ***Partial-dose (24%)*** SS RCT Ghee et al., 2009	**Majority (71%)** of those enrolled (of 51 women, the n = 36 who attended at least 5 of the 6 Seeking Safety sessions).	**Yes** • **SS outperformed the control** on symptoms (MPSS; and TSC-40 sexual abuse trauma index (the latter was the only subscale analyzed).	Unclear No pre-to-post SUD outcome; and the majority in both conditions did not provide an endpoint urine sample. No difference in percent negative urinalyses between the two conditions (using the standard assumption that a missing urine is coded positive).	Not assessed.	Not assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(21) ***Partial-dose (48%) SS*** **RCT** Hien et al., 2009	**100% of enrolled** (full intent-to-treat analysis).	**Yes** • Both SS and WHE improved on PTSD frequency and severity total scores (PSS-SR and CAPS).	**No for overall sample** • Neither SS nor Control (WHE) improved on drug use (SUI verified by urinalysis and saliva testing) or alcohol or drug (ASI composites). **Yes on secondary analyses (see next row)**.	**Yes on other variables** • **SS outperformed WHE** on HIV sexual risk (RBS total HIV Risk), eating disorders (EDEQ total), and therapeutic alliance (HAQ-II total). • Both SS and control (WHE) reduced binge eating (EDEQ subscale).	**Yes on PTSD:** • Both SS and WHE sustained improvements on PTSD (PSS-SR, CAPS). **No on SUD:** • Neither SS nor Control (WHE) improved on drug use (SUI verified by urinalysis and saliva testing) or alcohol or drug (ASI composites).
" "	**End of treatment secondary analyses**† (each below a separate paper). **Yes on PTSD:** • **SS outperformed WHE** on reducing PTSD severity and frequency and subscale arousal (PSS-SR) among alcohol misusers (n = 111). **Yes on SUD:** • **SS outperformed WHE** on alcohol and cocaine severity (ASI composite) among heavy substance use group with PTSD improvements (n = 174). • **SS outperformed WHE** on alcohol and cocaine severity (ASI composite) among treatment titrators (n = 86). • **SS outperformed WHE** on alcohol (ASI composite) among 12-Step attendees who attended 12-step regularly after treatment. But **WHE outperformed SS** on alcohol (ASI composite) among those who did not attend 12-step regularly after treatment. • **SS outperformed WHE** on stimulant use outcomes (ASI); among heavy stimulant users; no differences for nonstimulant and light stimulant users. • **SS outperformed WHE** in mediation effects: i.e., SS outperformed WHE in reducing PTSD which in turn was associated with lower alcohol and cocaine use; the effects were greatest among those who received the most sessions. **Yes on other variables:** • **SS outperformed WHE** on reducing unsafe sexual occasions (RBS) among those with high risk sexual behavior at baseline. • **SS outperformed WHE** on alliance (HAQ-II), as noted in column E above, and higher alliance was related to decreased PTSD and higher treatment attendance.				

†Secondary analyses are reported on this study because it is the only study with sufficient sample size to provide rigorous secondary analyses in relation to a specific treatment model.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(22) WIT pilot Covington et al., 2008	◊ **A minority (21.8%; n = 44 of the n = 202 eligible sample)** Of n= 202 eligible, only those who completed the residential SUD program (n = 157 of the 202) plus completed the residential program "successfully" (defined as having "completed their treatment plans or goals" before existing the residential SUD program; n = 86 of the 157), plus completed both parts of WIT (HWR and BT) and all assessments (n = 44).	◊ **Yes on** symptoms (TSC-40 subscales anxiety, dissociation, depression, sleep; *for those who completed both HWR and BT, i.e., the WIT model, plus successfully completed the SUD residential program, plus did all assessment points; see at left).*	◊ No data reported.	◊ **Yes on** depression (BDI; *for those who completed both HWR and BT (i.e., the WIT model) plus successfully completed the SUD residential program plus did all assessment points; see at left).* ◊ **Negative outcome:** unclear; none reported for the sample addressed, but no report on those who dropped out of WIT.	Not assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(23) GRT RCT Messina et al., 2010	**100% of randomized** (full intent to treat).	Not assessed.	Not assessed.	Not assessed. Treatment satisfaction not assessed.	*Follow-ups were average of 9 months and 14 months from parole, i.e. release from prison (which was not necessarily end of treatment); analysis is baseline through 12 months (follow-ups listed as "6 and 12 months" after prison release).* PTSD not assessed. **Yes on SUD:** Both GRT and TAU improved on alcohol and drug (ASI composites). **Yes on other variables:** • Both GRT and TAU improved on psychopathology (ASI psychiatric composite). • GRT improved on family (ASI composite) but TAU did not (but on within-group, not between-group analysis). • **Negative outcome:** TAU improved on Self-Efficacy but GRT did not (but on within-group, not between-group analysis).
(24) ICBT pilot McGovern et al., 2009	◊ **A minority (47.8%) of the eligible sample** (of n = 23 eligible, n = 11 who completed at least two sessions of IGBT and had at least one follow-up assessment).	◊ **Yes** on symptoms (CAPS total and subscales reexperiencing, avoidance, arousal).	◊ **Yes** on alcohol and drugs (ASI composites).	Not assessed. Treatment satisfaction not assessed.	◊ *3 months from end of treatment; primary analysis is end of treatment to follow-up.* • **Yes on PTSD:** symptoms (CAPS total and subscale arousal). No on SUD on alcohol or drugs (ASI composites). No other variables assessed.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(25) ICBT RCT McGovern et al., 2011	◊ Design states intent to treat. However, **52% more participants were randomized to ICBT** than to IDC (with no rationale nor description of the randomization procedure), resulting in very unequal sample sizes at baseline.	Not reported.	Not reported.	Not reported. Treatment satisfaction not assessed.	◊ *All below are approximately 3 months from end of treatment; analysis from baseline (listed as "6 months").* ◊ Sample sizes are not reported for any outcome analyses, other than noting that 53% of the sample was available at follow-up. **Yes on PTSD:** • **ICBT outperformed IDC** on diagnosis and re-experiencing subscale (CAPS). • Both ICBT and IDC improved on symptoms (CAPS total and subscales avoidance and arousal). **Yes on SUD:** • Both ICBT and IDC improved (days of drug use. **Yes on other variables:** • Both ICBT and IDC improved on psychopathology (ASI composite) and depression (BDI).
(26) TARGET RCT Frisman et al., 2008	◊ Design states intent to treat. However, **98% more participants were randomized to TARGET** than to TAU, resulting in very unequal sample sizes at baseline. (Reason stated was to improve attendance at TARGET).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	◊ *Follow-up approximately 4 and 10 months from end of treatment; analysis from baseline (listed as "6 months" and "12 months" from baseline).* Unclear on SUD: • Both conditions appear to improve (GAIN subscale substance frequency index; and percentages on 3 items: drink to intoxication, use any drugs, and substance abuse). Unclear on PTSD. Unclear on other variables. • Both conditions appear to improve on anxiety and depression (GAIN subscales).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(27) TREM controlled trial Toussaint et al., 2007	**100% of enrolled** included in outcome analysis (full intent-to-treat analysis).	Not reported (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	*Follow-up approximately 2 and 8 months from end of treatment; analysis from baseline (listed as "6 months" and "12 months" from baseline).* Unclear on PTSD: No difference between conditions at either follow-up point, and no across-time statistical testing reported (PSS). Unclear on SUD: No difference between conditions at either follow-up point, and no across-time statistical testing reported (ASI drug, alcohol composites). **Yes on another variable:** **TREM outperformed control** on psychopathology (BSI subscale GSI) at 8 months after treatment.
(28) BCM/ TREM controlled trial Amaro et al., 2007a, 2007b	**100% of enrolled** (full intent-to-treat analysis).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment). The authors report strong satisfaction with BCM (2007a); however, two of three satisfaction ratings were not significantly different between the two conditions.	*Follow-ups 6 and 12 months from baseline; unclear how these timepoints relate time-wise to end of BCM or TREM analysis from baseline.* **Yes/Unclear on PTSD:** **BCM outperformed the control** in the across-time analysis from baseline through 12 months on symptoms (PSS); unclear at 6 months. **Yes on SUD:** Both conditions improved on alcohol and drugs (ASI composites) from baseline through 12 months. **Yes/Unclear on another variable:** **BCM outperformed the control** in the across-time analysis from baseline through 12 months on psychopathology (BSI GSI); unclear at 6 months.

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(29) TREM controlled trial Fallot et al., 2011	**100% of enrolled** (full intent to treat).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	Not rated (no end-of-treatment assessment).	*2 months before end of treatment (listed as 6 months) and 4 months after treatment ended (listed as 12 months); analysis from baseline through 4 months.* **Yes on SUD:** ***(but reported only on those positive for SUD at baseline; less than half the full sample)***. • **TREM plus integrated trauma services + TAU outperformed TAU** on alcohol and drug use (ASI composites) for the subsample who were using at baseline. **Yes on PTSD:** Both conditions improved on PTSD (PSS). **Yes on other variables:** • psychopathology (BSI scores: GSI, subscale depression, hostility). **Negative outcome:** • Unclear. Means for TREM on alcohol and drugs are in direction of worsening from 6 months to 12 months (in contrast to the control), but no analyses address 6 versus 12 months for any variables.
(30) CTPCD pilot Brady et al., 2001	◊ **A minority (38.5%) of the original sample** (from the original n = 39, they report on the n = 15 who completed 10 or more sessions, i.e., 62.5%, of the treatment).	◊ **Yes for treatment completers** on symptoms (CAPS total and three subscales; IES intrusion subscale; and Mississippi Scale).	◊ **Yes for treatment completers** on alcohol and drugs (ASI composites).	◊ **Yes for treatment completers** on psychopathology (ASI psychiatric composite and BDI).	*Follow-up 6 months from end of treatment; analysis from baseline (listed as "6 months").* ◊ **Yes for treatment completers**; at follow-up this is 13% of the original sample (n = 7). • **PTSD symptoms:** (CAPS subscale hyperarousal and Mississippi Scale). • **SUD alcohol and drug** (ASI composites). • **Other variables:** psychopathology (BDI); and employment (ASI composite).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(31) SS pilot Najavits et al., 2005	**100% of enrolled** (full intent-to-treat analysis).	• **Yes** on symptoms (TSC-40 total; subscales anxiety, dissociation, and sexual trauma index) and cognitions (WAS subscale meaningfulness).	• **Yes** on drugs (ASI composite, **verified by urinalysis**).	• **Yes** family/social problems (ASI composite), functioning (GAF), psychopathology (BSI hostility subscale), and overall change (CGIS). **Strong treatment satisfaction.**	Not assessed.
(32) SDPT pilot Triffleman, 2000	◊ **Unclear** Results reported only for those who completed at least one session. No data on how many did not attend at least one session.	◊ **Yes** Both SDP and 12SF improved on symptoms and diagnosis (CAPS total, number of symptoms, and percent positive for PTSD).	◊ **Yes** Both SDP and 12SF improved on one item (ASI number of days of substance use).	◊ **Yes** Both SDP and 12SF improved on psychopathology (ASI psychiatric composite).	*1 month from end of treatment; analysis is baseline to follow-up.* • **Yes on SUD:** Both SDP and 12SF improved on drug (ASI composite), number of days using a substance. • **Yes on PTSD:** Both SDP and 12SF improved on symptoms and diagnosis (CAPS total, number of symptoms, and percent positive for PTSD). • **Yes on another variable:** Both SDP and 12SF improved on psychopathology (ASI psychiatric composite).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(33) Exposure plus SUD treatment RCT Coffey et al., 2006	◊ **A minority (39.5%)** of the original sample. (Of n = 43 enrolled, the n = 17 who attended the initial lab session plus all 6 clinical sessions, i.e., 50% of those assigned to exposure, 63% to relaxation).	◊ **Yes** **Exposure plus SUD treatment outperformed SUD alone** for treatment completers (IES-R). ◊ **Negative outcome:** None listed, but unclear due to reporting of results only for treatment completers.	Not assessed (no end of treatment SUD assessment).	Not assessed.	Not assessed (no follow-up).
(34) COPE RCT Mills et al., 2012	**100% of randomized** (full intent-to-treat analysis).	No difference between COPE and TAU on symptoms or diagnosis (CAPS) at the timepoint closest to end of treatment (3 months).	No difference between COPE and TAU on symptoms or diagnosis (CIDI), nor number of drug classes used (OTI) at the time closest to end of treatment (3 months).	No difference between COPE and TAU on symptoms or depression (BDI-II), nor anxiety (STAI) at the timepoint closest to end of treatment (3 months). No within-group analysis provided from baseline to this timepoint.	*6 months from end of treatment, analysis from baseline (listed as "9 months").* **Yes on PTSD:** • **COPE outperformed TAU** on symptoms (CAPS). • Both COPE and the control improved on diagnosis (CAPS). **Yes on SUD:** • Both conditions improved on severity and diagnosis (on CIDI), and number of drug classes used (OTI). **Yes on other variables:** • Both conditions improved on depression (BDI-II) and anxiety (STAI).

Table 2
Continued

(A) Study number (see Table 1)	(B) Outcome results are reported on what per cent of the original sample recruited?	(C) Positive outcomes for *PTSD/trauma* (pre- to end-of-treatment)?	(D) Positive outcomes for *substance use/addiction* (pre- to end-of-treatment)?	(E) Positive *other outcomes* (pre- to end-of-treatment)? Also treatment satisfaction?	(F) Positive outcomes at *follow-up*[2] for PTSD/trauma, SUD, and other variables (and any outcomes indicating a negative outcome (*worsening* over time, or the control outperforming the experimental treatment)
(35) CC pilot Najavits & Johnson, under review	**100% of enrolled** included in outcome analysis (full intent-to-treat analysis).	• **Yes** on symptoms (PCL total and avoidance subscale; TSC-40 total and 5 subscales); and cognitions (WAS total).	• **Yes** on cognitions (BASU total).	• **Yes** on functioning (BASIS-32 total, and subscales depression/anxiety and daily living), psychopathology (BSI total and 6 subscales), coping (CSI social support subscale), self-harm cognitions (SBQ). **Strong treatment satisfaction**.	Not assessed.

Note.
1. We are only reporting significant differences. Any null findings ("no difference") are not reported, as these often reflect limited power/sample size. Also, no trends are reported (only results of $p < .05$) and only results on psychometrically valid instruments.
2. Unless otherwise indicated, all follow-ups listed in follow-up column are timed from end of treatment to be comparable across studies.
3. ◊This symbol indicates absence of a sufficient sample (less than half of those enrolled) and thus caution needed in interpreting the study results.
4. Scale abbreviations: **APS** Adolescent Psychopathology Scale; **ASI** Addiction Severity Index; **BASIS-32** Behavior and Symptom Identification Scale (32 item version); **BASU** Beliefs About Substance Use; **BDI-II** Beck Depression Inventory, 2nd edition; **BSI** Brief Symptom Inventory; **BSI GSI** Brief Symptom Inventory Global Severity Index; **CAPS** Clinician Administered PTSD Scale; **CIDI** Composite International Diagnostic Interview; **CGIS** Clinical Global Impressions Scale; **CRI** Coping Responses Inventory; **CSI** Coping Strategies Inventory; **CSQ** Client Satisfaction Questionnaire; **DATS** Drug Abuse Screening Test; **EDEQ** Eating Disorders Examination Questionnaire; **HAQ II** Helping Alliance Questionnaire version 2; **HDRS** Hamilton Rating Scale for Depression; **IES-R** Impact of Events Scale-Revised; **IIP** Inventory of Interpersonal Problems; **GAF** Global Assessment of Functioning; **GAIN** Global Appraisal of Individual Needs; **MAST** Michigan Alcohol Screening Test; **MPSS** Modified PTSD Symptom Scale; **OTI** Opiate Treatment Index; **PCL** PTSD Checklist; **PEI** Personal Experiences Inventory; **PSDS** Posttraumatic Stress Diagnostic Scale; **PSS** PTSD Symptom Scale and **PSS-R** revised version; **PTCI** Post-Traumatic Cognitions Inventory; **RFU** Reasons for Using; **SAS** Social Adjustment Scale; **SBQ** Suicidal Behaviors Questionnaire; **SCID** Structured Clinical Interview for DSMIV; **SCS** Self-Compassion Scale; **STAI** Stait-Trait Anxiety Inventory; **SUI** Substance Use Inventory; **TSC-40** Trauma Symptom Checklist 40; **TSCC** Trauma Symptom Checklist for Children; **TSI** Trauma Symptom Inventory; **WAS** World Assumptions Scale.