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Overview and Empirical Foundation

Bonnie, a 35-year-old homemaker referred by her doctor, reports loss of interest in her daily activities and feeling "wound up" most of the time. She spends a good part of each day cleaning and only goes out to shop at night, when the stores are less crowded. During your assessment, Bonnie reports that, although she has always been quite anxious, her anxiety became a more severe problem a few years ago when her oldest daughter turned 12. She notes that between ages 12 and 14 she had been sexually abused by her uncle. Currently she suffers from frequent nightmares and flashbacks. In addition, she avoids any reminders of her sexual abuse, including family photos, men who remind her of her uncle, and the soap that he used. She also acknowledges "losing time" during the day, although she has learned to hide this from her family. She tried psychotherapy in the past, but always dropped out because of her difficulty trusting anyone other than her husband and daughter. She also had been losing time during therapy sessions and was afraid to share this information with her therapists because she feared she would be labeled "crazy." Bonnie meets diagnostic criteria for posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and major depressive disorder. She also has a history of binge eating and alcohol misuse, although she currently drinks little alcohol and has not had an eating binge for the past year. Bonnie says she has "had it with feeling so anxious and depressed all of the time" and wants to "feel better" as quickly as possible. Her physician told her that you could help her achieve her goals, and she is willing to give treatment a "real try this time."

The best treatment for clients with multiple problems like Bonnie is one that has as much empirical support as possible. For Bonnie, cognitive-behavioral therapy (CBT) offers the best possibility for resolution of her PTSD and associated difficulties. In this chapter, we lay the groundwork necessary for you to implement CBT for PTSD. We first provide an overview of CBT in general, then outline the core components of CBT for PTSD. We also provide a summary of the research supporting CBT for PTSD. It is important for you to be informed about the research so that you can answer clients'

questions about the evidence and convey the proper level of confidence in the interventions. Our review of the research is written with this aim in mind. Finally, we address questions about other interventions with some empirical support, such as eye movement desensitization and reprocessing therapy.

What Is CBT?

CBT is a structured form of psychotherapy resulting from a marriage between behavior modification strategies, which are rooted in behavioral science (or "behavior analysis"), and cognitive therapy, which is linked to cognitive models of psychopathology. The main premise supporting CBT is that emotional problems or disorders such as PTSD result from learned responses and can be altered by new learning. Thus, by teaching clients like Bonnie to change overt behavior and covert thought processes, you can effect changes in problematic emotions and behaviors. Although the specifics of CBT vary when you implement it with different clients, several defining features remain constant. These include (1) a reliance on hypothesis testing, goal setting, and data collection; (2) the formation of a collaborative alliance; (3) an emphasis on learning new responses to life situations (i.e., skills); (4) a focus on concrete and observable goals; and (5) a focus on changing current and future reactions.

These common features reflect both the role of empiricism as a foundation underlying CBT and a reliance on the "scientist-practitioner" model. CBT scientists influence practice by formulating specific models, with specific hypotheses, about the etiology and maintenance of particular disorders, and by developing new interventions based on these models. They also test these interventions with groups of individuals. CBT interventions ideally are studied in randomized controlled trials (RCTs), which are considered one of the most rigorous forms of testing the efficacy of interventions using the scientific method.

As a CBT practitioner, you will function as a clinician-scientist by formulating and testing hypotheses on a case-by-case basis and blending results from research trials with systematic observations of individual clients. Although a mainstay of traditional behavior therapy, this scientific approach to the individual client has received less attention in modern treatment development efforts. As the field has moved toward designing and testing treatments for specific mental disorders, less attention has been paid to how to decide which problems to address and how to organize a practical treatment plan for an individual client. Manuals for specific treatments rarely offer specific guidance about how to systematically integrate research findings with individual client information. Most often such guidance is provided through expert clinical supervision, which is not available to many clinicians. One of our goals for this book is to help fill this gap with respect to delivery of CBT for PTSD. We hope our guidance will help you to "read between the lines" of the treatment manuals to feel more confident in your ability to implement CBT effectively and make scientifically as well as clinically sound decisions in your daily practice.

An additional defining feature of CBT is its structure. CBT tends to be more structured than many other forms of therapy, which stems from its emphasis on the role of learning new behaviors as central to the change process of psychotherapy. As with many learning processes, following a structured approach of cultivating awareness, setting goals, practicing specific activities, and assessing the outcome of one's change efforts can help to strategically achieve the learning objectives. Maintaining structure

during this process helps both you and your clients proceed through treatment goals logically and consistently, and it has been found to be critical to CBT's efficacy. However, as Linehan (1993a) noted, therapy needs to balance structure with flexibility to be optimally effective. An approach that adheres too rigidly to the structure may fail to address your client's most pressing concerns and may increase risk for derailment, which can take the form of exacerbated distress and/or dysfunction, escalation of crises, noncompliance, refusal, or dropout. Yet an approach that is too flexible risks aiding the client's avoidance of challenging or unpleasant, but necessary, therapy tasks.

For example, if Bonnie often comes to sessions distraught about arguments with her daughter, this focus could lead you away from concentrating on those therapy tasks that can help Bonnie achieve her treatment goals. In deciding how to respond, you must weigh Bonnie's desire to discuss the arguments with your knowledge that Bonnie's fear of certain treatment components may lead her to avoid them, even if unintentionally. Focusing attention on acute problems can distract from attending to therapy tasks that ultimately are critical to reducing her distress. Effective implementation of CBT, therefore, involves cultivating a knack for optimally balancing structure with flexibility.

What Is CBT for PTSD?

CBT for PTSD aims to change the behaviors and cognitions that developed in response to trauma and are presumed to maintain PTSD. Several variants of CBT for PTSD have been developed. Different forms can be recognized by their core component—cognitive restructuring or exposure therapy—which is the mainstay of treatment, or they may be referred to by specific names such as *cognitive processing therapy* (Resick & Schnicke, 1993) or *prolonged exposure therapy* (Foa & Rothbaum, 1998). Yet most forms of CBT for PTSD consist of the following three elements emphasized to varying degrees: psychoeducation, exposure, and cognitive restructuring. Each holds true to the defining characteristics of CBT listed earlier. In this book, we teach you how to use each of these core components to treat PTSD.

Like all CBT, CBT for PTSD emphasizes forming a collaborative alliance in which you, as a therapist, serve as a source of knowledge and expertise, an empathic confidante, and a skills coach, all in one. Your goal is to empower your clients to eventually carry the newly learned behavioral and cognitive changes forward into their lives. As a caring and nurturing therapist, you may find it tempting to adopt a protective, even paternalistic stance toward your clients who are trauma survivors, particularly if they appear emotionally frail and vulnerable. Or, you may be accustomed to engaging clients in a supportive and empathic, but passive and nondirective manner. Such approaches are not consistent with the collaborative approach that is the bedrock of CBT. Establishing a collaborative relationship from the start is especially important for trauma survivors, who often feel a loss of control and disempowerment because of their traumatic experiences. Among the multiple functions a collaborative relationship serves are to (1) convey a high degree of concern, respect, and confidence in your client's ability to master life tasks; (2) facilitate voluntary engagement in difficult change efforts during therapy; and (3) set the stage for the client to later assume full control of implementing the changes in her own life.

As a first step in building the collaborative alliance, CBT routinely begins with a psychoeducational phase. This entails providing your client with feedback on your assessment and sharing information about the cognitive-behavioral model of PTSD

and how it relates to the client's presenting issues. Your aim is to convey a *personalized* rationale for the main targets of treatment—avoidance behavior and unrealistic or unhelpful thinking—which, according to the CBT model, are key factors that maintain PTSD. This will prepare your client to be an educated and active participant in treatment. Understanding both the generic treatment rationale and its specific application and relevance to her own emotions and behaviors will empower her to carry out difficult changes. In other words, effective psychoeducation arms your client with both a rational basis for treatment activities and an emotional sense of being understood (and validated) by you and the treatment. The rationale enables your client to make informed therapy decisions and promotes positive client expectancies that treatment will lead to change. The validation helps build the relationship and commitment to change that, together, you will rely on to press forward during the most challenging moments in trauma-focused therapy.

Addressing avoidance of exposure targets involves encouraging clients to approach feared stimuli, so that they learn that safe (but feared) stimuli need not be avoided. During exposure, your clients will approach stimuli (1) for prolonged periods of time to violate or challenge their expectations that a feared outcome will occur and (2) over repeated trials to promote greater depth of learning, optimally in different contexts. Exposure can take several forms. During imaginal exposure, clients repeatedly recount trauma memories, whereas during *in vivo* (live) exposure, clients confront specific situations or stimuli in real life. Finally, with interoceptive exposure, clients allow themselves to experience physical sensations that previously were avoided. Exposure may involve variations in the way that stimuli are presented. For example, exposure to feared stimuli may occur in sessions spaced over time, such as 1–2 hours per day over many weeks, or concentrated in longer daily sessions over a shorter period (typically referred to as *massed exposure*), such as several hours per day for 2 weeks. Presentation of stimuli also may vary in the progression up a hierarchy of intensity, which may proceed gradually or rapidly advance to the most distressing stimuli.

Cognitive restructuring teaches trauma survivors to become aware of and change unhelpful thoughts. You will help your clients learn to observe their thoughts, recognize and then systematically challenge unhelpful ways of thinking, and formulate adaptive responses. Cognitive restructuring for PTSD sometimes is organized around specific trauma-related themes, as in cognitive processing therapy (Resick & Schnicke, 1993), though it may be applied to all distressing thoughts resulting from traumatic experiences, as well as to those unrelated to trauma.

Summary of Research on CBT for PTSD

Many therapies have been developed to help trauma survivors. CBT for PTSD, however, has accumulated the most evidence in support of its efficacy not only for treatment of PTSD but also for common co-occurring problems. CBT for PTSD is challenging to deliver because you must convince clients to come face to face with their trauma memories, something they often have avoided for extended periods of time. Helping your clients complete aversive tasks is easier, however, when the research shows that the tasks will help. The research offers substantial evidence to support the rationale for treatment, which should increase your confidence in CBT for PTSD. This evidence also provides clients with some reassurance that, despite their fear, this treatment is worth trying.

Over the past 13 years, eight PTSD treatment guidelines have been developed by various groups in several countries (see Forbes et al., 2010, for review of seven of the eight guidelines). The most recent of these guidelines was released in 2017 by the American Psychological Association. Importantly, the American Psychological Association guidelines used Institute of Medicine recommendations for generating guidelines worthy of public trust. As such, they were based both on research and client preferences and were designed to be transparent and free of conflict of interest. Although some differences emerge across the different guidelines, there are significant consistencies despite the 13 years covered by the guidelines. Most notable is the uniform robust recommendation for trauma-focused CBT. For instance, the American Psychological Association guidelines strongly recommend use of CBT, cognitive processing therapy, cognitive therapy, and prolonged exposure therapy. All these treatments fall within the CBT family of interventions for PTSD.

Evidence Supporting CBT for PTSD

Several main conclusions emerge from a careful review of the research on CBT for PTSD.

1. *For a variety of trauma populations, CBT, consisting of some form of exposure and/or cognitive restructuring, appears to be more effective than no treatment, supportive counseling, or relaxation* (American Psychological Association, 2017). These populations include sexual assault survivors (Foa et al., 1999; Foa, Rothbaum, Riggs, & Murdock, 1991; Resick, Nishith, Weaver, Astin, & Feuer, 2002; Bass et al., 2013), childhood abuse survivors (Cloitre et al., 2010; Cloitre, Koenen, Cohen, & Han, 2002; McDonagh et al., 2005), motor vehicle crash survivors (Blanchard et al., 2003; Ehlers et al., 2003), veterans (Boudewyns & Hyer, 1990; Cooper & Clum, 1989; Keane, Fairbank, Caddell, & Zimering, 1989; Sharpless & Barber, 2011), and survivors of mixed traumatic events (Bryant, Moulds, Guthrie, Dang, & Nixon, 2003; Bryant et al., 2011). For example, Resick et al. (2002), whose research participants were rape survivors, compared CBT with a strong cognitive restructuring focus (i.e., cognitive processing therapy) to CBT with a strong exposure focus (i.e., prolonged exposure) and to a waiting-list control. Both therapies were superior to the waiting list. Approximately 80% of clients who completed either form of CBT no longer met criteria for PTSD, and most showed marked improvement in depression.

As a clinician, you also may be interested in a more conservative analysis that includes all the clients randomized to a treatment rather than only those who complete treatment (commonly referred to as an *intent-to-treat analysis*). This gives you a closer estimate of what you can expect when you attempt to implement the treatment with everyone who presents to your practice—how many will ultimately benefit, taking into account even those who drop out of the treatment. In the Resick et al. study, approximately half of women who began either therapy no longer met diagnostic criteria for PTSD following treatment and at follow-up. In contrast only 2% in the waiting-list group had lost the PTSD diagnosis. Bryant et al. (2003) had similar results in an RCT that compared exposure alone, exposure plus cognitive restructuring, and supportive counseling in civilians with PTSD resulting from various traumatic events. At follow-up, 65–80% of participants who *completed* either form of CBT were free of a PTSD diagnosis, compared to fewer than 40% of those who *completed* supportive counseling. In the intent-to-treat analysis, 50–60% of CBT participants who began treatment were diagnosis-free at follow-up, compared to approximately 20% of those who began supportive counseling. Importantly, similar findings have been observed across diverse

settings, suggesting that CBT can be implemented widely. For instance, Bass et al. (2013) compared group cognitive processing therapy to individual support services for sexual assault survivors living in villages in the Democratic Republic of Congo. At baseline, 60% of the women in the villages assigned cognitive processing therapy met criteria for probable PTSD as did 83% in villages assigned to the individual support control condition. At 6-month follow-up rates of probable PTSD were 9% and 42%, respectively, for cognitive processing therapy and individual support.

2. *There is no clear evidence that any form of CBT is superior to other forms of CBT* (American Psychological Association, 2017). For example, although Foa et al. (1999) found that exposure alone was superior to exposure plus stress management skills training for sexual assault survivors, Bryant et al. (2003) reported finding that imaginal exposure plus cognitive restructuring was superior to imaginal exposure alone. Similarly, whereas Marks and colleagues found that exposure (either alone or with cognitive restructuring) was superior to cognitive restructuring alone in a mixed civilian trauma sample, several other investigators found that exposure and cognitive restructuring did not differ in efficacy (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998; Tarrier et al., 1999; Resick et al., 2002; Paunovic & Ost, 2001). Finally, a meta-analysis of prolonged exposure found that there were no significant differences in effect sizes for exposure compared to other forms of CBT, such as cognitive processing therapy and cognitive therapy (Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010), although exposure yielded large effects compared to control conditions. In summary, no form of trauma-focused CBT has consistently yielded superior findings to any other form of trauma-focused CBT.

3. *CBT that includes exposure has amassed the greatest amount of empirical support in a wide range of trauma populations* (Foa, Rothbaum, & Furr, 2003; McLean & Foa, 2011). For this reason, we view exposure as the cornerstone of PTSD treatment, and it is the foundation of treatment as described in this book.

In summary, the literature offers convincing support for the efficacy of CBT based on exposure, cognitive restructuring, or both. As a whole, the research suggests that any form of CBT is associated with substantially greater likelihood of ending treatment without a diagnosis of PTSD, compared with no treatment or supportive counseling.

Translating Research into Practice: Exposure Alone, in Combination, or Not at All?

Experts have been divided on the relative merits of treatment that emphasizes exposure, cognitive restructuring, or both. Thus, we recommend that clinicians learn both sets of skills and actively consider *both* strategies when formulating a PTSD treatment plan. Notably, this position is consistent with the American Psychological Association guidelines, which recommend forms of CBT that emphasize exposure, cognitive restructuring, or their combination.

Why Should You Consider Both Exposure and Cognitive Restructuring Instead of Exposure Alone?

Exposure is an extremely potent means of altering dysfunctional cognitions, and many clients can be successfully treated using exposure alone. In some cases, however, PTSD

is not eliminated by exposure alone. Clients with PTSD also often present with many other problems that can be obstacles to using exposure, such as intense anger or profound shame, and in many cases, exposure is not effective for these problems. You must be prepared to address distress and obstacles in clients who do not respond to exposure, or who are unable to engage effectively in exposure. Using an alternative technique with strong empirical support, such as cognitive restructuring, makes sense in such cases.

Another important consideration is research suggesting that exposure and cognitive restructuring may differ in their power to address various emotions. For example, exposure may be more effective for modifying anxiety and beliefs about danger, whereas cognitive restructuring may be more effective for modifying guilt and thoughts about responsibility (Resick et al., 2002; Smucker, Grunert, & Weis, 2003). Likewise, cognitive restructuring may be more effective when PTSD is predominantly characterized by shame or anger rather than fear (Smucker et al., 2003). Therefore, you should consider cognitive restructuring in clients who exhibit intense guilt, shame, or anger, or when response to exposure alone is suboptimal.

As research does not clearly support the efficacy of one variant of CBT for PTSD over another, we believe that the important clinical question is not *whether* to use exposure or cognitive restructuring, but rather *how much* of each should be included in the treatment of a given client and when each should be presented.

Finally, individual clients vary in their willingness to engage in each method and their ability to use each method, and it is difficult to predict preferences, abilities, and responses to each intervention. Whereas some individuals find cognitive restructuring complex and confusing, others find it difficult to engage with their emotions during exposure. Thus, having both tools available enhances your ability to offer clients the treatment that is best matched to their preferences and abilities and to thereby to treat their PTSD effectively. In summary, science indicates that either exposure or cognitive restructuring on its own can be effective for PTSD. Yet the "art" of implementing CBT is in determining when exposure and cognitive restructuring are best suited for individual clients, such as Bonnie, and in what configuration to present them in treatment. We demonstrate how to use cognitive-behavioral models of PTSD as your guide in formulating and adjusting your treatment plan to match clinical information, client preferences and needs, and assessment data.

Is *In Vivo* Exposure Necessary?

Some clinicians working with trauma survivors focus on imaginal exposure (i.e., exposure to trauma memories) to the exclusion of *in vivo* exposure (i.e., exposure to real-life situations or stimuli). Available data suggest, however, that imaginal exposure combined with *in vivo* exposure generally is more effective than imaginal exposure alone (Devilly & Foa, 2001; Bryant et al., 2003; Tarrier et al., 1999).

Combined exposure may be more effective because PTSD often involves fears of real-life situations, as well as fears of memories. *In vivo* exposure provides the opportunity for exposure to such situational cues. For example, a survivor of a motor vehicle crash who reduces his distress while recalling the crash during imaginal exposure will nonetheless remain functionally impaired if he continues to avoid riding in a car. In addition, including *in vivo* exposure might also promote durability of fear reduction by broadening the contextual cues under which fear reduction occurs (Bouton & Nelson, 1998; Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014). This may be particularly true

when imaginal exposure and *in vivo* exposure are combined (e.g., if Bonnie practices imaginal exposure in a bedroom that resembles the one in which she was assaulted). Thus, including *in vivo* exposure is likely to promote generalization and durability of fear reduction, the greatest reduction in PTSD symptoms (Foa et al., 2003), and optimal functional outcomes.

Aren't There Other Forms of CBT with Some Research Support?

Other forms of CBT, such as eye movement desensitization and reprocessing therapy (EMDR) and narrative exposure therapy, also have garnered some empirical support. EMDR aims to facilitate the processing of traumatic memories by having clients focus on external stimuli, such as a moving visual object (e.g., finger moving back and forth), while they revisit traumatic memories (Shapiro, 2018). EMDR also includes some cognitive restructuring. Narrative exposure therapy (Neuner, Schauer, Klaschik, Karunakara, & Elbert, 2004) aims to help clients contextualize their traumatic experiences by creating a coherent life narrative with an emphasis on traumatic experiences; narrative exposure therapy has most often been used with refugees in community settings. As can be seen by these descriptions, each of these interventions includes some emphasis on exposure to traumatic memories, although the exposure procedures vary.

We do not focus on EMDR or other interventions in this book because they have less empirical support and are covered in depth elsewhere (e.g., Shapiro, 2018). For instance, as noted above, the American Psychological Association guidelines strongly *recommend* CBT, prolonged exposure, cognitive processing therapy, and cognitive therapy. In contrast, the guidelines *suggest* use of EMDR, brief eclectic psychotherapy, and narrative exposure therapy, indicating a conditional recommendation in contrast to a strong one. The American Psychological Association guidelines also stated that insufficient evidence existed to recommend either the Seeking Safety program (Najavits, 2001) or relaxation as a primary treatment for PTSD. The difference in evidentiary strength for EMDR and narrative exposure therapy also can be detected by comparing different PTSD guidelines. More specifically, whereas several of the PTSD guidelines do strongly recommend EMDR, that recommendation is not consistent across all the guidelines, which contrasts with the uniform recommendation for CBT.

Thus, although some clinicians report finding EMDR and other therapies for PTSD very useful, given the strength of evidence for CBT, we believe other interventions should be used only when standard CBT fails and/or when there are particularly good reasons to think that a client might prefer a different approach or find it more useful.

Conclusion

The last 30 years have seen significant advances in treatments for PTSD, and by far the most efficacious intervention among developments is CBT. As a result, a disorder that for many would have once been a chronic condition with extremely poor long-term psychosocial outcomes, often can now be significantly altered within a few months. Familiarity with the compelling evidence that CBT for PTSD can produce improvements in PTSD will help you implement CBT with your clients on a case-by-case basis.