

The Building Blocks of Treatment in Cognitive-Behavioral Therapy

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Abstract: Cognitive behavioral therapy (CBT) is a set of treatments that focus on altering thoughts, sensations, emotions and behaviors by addressing identified maintenance mechanisms such as distorted thinking or avoidance. The current article describes the history of CBT and provides a description of many of the basic techniques used in CBT. These include: psychoeducation, self-monitoring, cognitive restructuring, in vivo exposure, imaginal exposure, and homework assignments.

Cognitive-behavioral therapy (CBT) is probably better called cognitive and behavioral therapies, given that there are many treatments and traditions that fall under the rubric of CBT. These therapies have different emphases on theory (e.g., cognitive versus behavioral) and application (e.g., practical vs. theoretical). Historically, behavior therapy developed out of learning theory traditions of Pavlov (1) and Skinner (2), both of whom considered learning's implications for psychopathology. More direct clinical applications of behavioral principles were developed by Mowrer (3), Watson and Rayner (4), and later by Wolpe (5) and others. The integration of notions of cognitive concepts with behavior therapy included work by Ellis (6) and Beck (7). From its outset, cognitive therapy was built on principles included in behavior therapy (see 7), but with more emphasis on the issue of correcting cognitive distortions. Over the last 30 years, there have been many advances and developments in both behavioral and cognitive aspects of the treatment, including an abundance of treatment outcome studies demonstrating CBT's efficacy for most forms of psychopathology including anxiety disorders, depression, eating disorders, schizophrenia, personality disorders and more (for a review of meta-analyses see Butler et al. [8]). There has also been substantial progress in demonstrating the durability of CBT over long periods of time from 1 to 10 years for many treatments (9). In addition,

progress has been made in understanding the psychological mechanisms involved in treatment (e.g., 10), though there is still much to understand.

The basic tenets of CBT theory of mental illness is that psychopathology is comprised of maladaptive associations among thoughts, behaviors and emotions that are maintained by cognitive (attention, interpretation, memory) and behavioral processes (avoidance, reinforcement, etc.). Within CBT theories, there are different emphases on aspects of the characteristics of psychopathology and their maintenance mechanisms (e.g., 11–14). In general, CBT theories are stronger in their hypotheses regarding maintenance than etiology, and most interventions are aimed at interrupting or modifying cognitive, behavioral, emotional, and physiological processes that are involved in maintenance of pathological beliefs, emotions and behaviors.

It is important to note that techniques, while essential aspects of CBT, are conducted within the context of a therapeutic relationship. In many forms of CBT, the therapeutic relationship is established during the initial evaluation and sessions. Data suggest that the therapeutic alliance in CBT is quite strong and positive, and that therapists are seen as warm, caring and authoritative (though not authoritarian) (15), which is indeed the goal. In addition, the therapeutic stance is one of genuineness (as opposed to radical neutrality), transparency

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(the therapist provides a general framework of what will happen in therapy, and discusses the plan for each session at the beginning of the session), and collaborative empiricism (explicitly working together towards a common goal of understanding the patient's problems by testing out hypotheses generated by the patient and therapist). Socratic questioning is used with the goal of having patients contemplate and process information fully, making them more likely to remember and apply it. Most CBT therapies do not emphasize discussions of the therapeutic relationship as a facilitator of change unless there are reasons to believe that ignoring such issues will interfere with the treatment from the outset (e.g., 16–18). In fact, data suggest that the therapeutic alliance in CBT may be caused by facilitating cognitive change and symptom reduction rather than focusing on the alliance per se, at least in some forms of CBT (e.g., 19). At the same time, all would agree that therapy should occur in the context of a positive therapeutic relationship (c.f., Chapter 3 in Beck et al. [20]).

There are a number of techniques that are common to most (though not all) forms of CBT. These include psychoeducation, monitoring, cognitive restructuring, *in vivo* exposure, imaginal exposure, behavioral activation and homework assignments. These techniques are tailored to the individual patient to target the core problems that appear to be maintaining pathological emotions, thoughts and behaviors. An individualized case conceptualization is essential, where one takes into consideration both the presenting disorders and the patients' unique contributions to the problems they are experiencing. Most metaphors should be generated for the specific patient to help them understand and apply the principles and techniques of CBT.

Psychoeducation. One of the basic concepts in CBT is that one can understand most forms of psychopathology and problematic behaviors within the context of the empirical findings from experimental psychopathology, emotion theory, social psychology, cognitive psychology, decision theory, and other areas of psychology. Helping the patient understand what we theorize about the nature and treatment of the disorder and the general findings from the treatment outcome literature helps to socialize the patient to the CBT empirical stance

of treatment, provides a context for self-understanding, explains the techniques and concepts that will be discussed throughout treatment, and provides a balanced, realistic optimism regarding improvement of symptoms from participation in the treatment (e.g., that the average person participating in treatment has at least a 50% reduction in symptoms and that approximately 60–80% of patients respond substantially to the treatment). These benefits should thereby help improve motivation and adherence to treatment. Frequently, psychoeducation is provided in the first session of treatment and as homework via written literature.

Monitoring. Self-monitoring is one of the most basic and essential parts of CBT. Monitoring is used as both an assessment procedure and as a treatment strategy. As an assessment, monitoring identifies the context and content of thoughts, behaviors, physiological sensations and emotions related to the areas of concern and monitors changes or progress in these areas. As a treatment strategy, monitoring helps the individual become aware of patterns and helps provide a context both to focus on difficult emotions (as exposure) and to distance from them (in order to examine them non-judgmentally). The basic assignment in most forms of monitoring is that each time the patient feels an intense emotion, he or she should record details regarding the time, place and context (i.e., what was the trigger), the intensity and duration of the experience, and the thoughts, physical sensations and responses that occurred (i.e., behavioral or cognitive strategies used to attempt to cope with the reactions). The amount of information gathered varies within and between each patient, according to the experience and each individual's abilities and needs. A patient's noncompliance with monitoring is detrimental to treatment for a number of reasons: it may reflect a lack of motivation, avoidance of affect, not understanding the rationale of the assignment or treatment, or fears of completing the assignment inaccurately. Patient resistance should be the last consideration in order to give the patient the benefit of the doubt in most cases. Where necessary, one can simplify and/or problem solve to attain compliance rather than eliminate the monitoring altogether. The issue of homework compliance is important in most forms of CBT.

Cognitive restructuring: In some forms of CBT (e.g., 21) cognitive restructuring is the most essential and theoretically the main mechanism of change. The general principle behind cognitive restructuring is examining a specific incident and the thoughts that occurred during that incident (sometimes elicited by the thought record). The patient is asked to recall in detail the context of the situation that led to an intensification of his or her emotional experience (e.g., “I felt depressed and anxious when I went to school”). This is to facilitate elicitation of “hot” cognitions: thoughts that are emotionally laden. Then, the patient is asked to describe what thoughts came to mind within that context (e.g., “I thought I will never pass the exam”). The thoughts are then evaluated for their basis in logic and reality, with the goal of helping the patient reevaluate distorted thoughts in a way that is more accurate, and likely to decrease the negative emotional reaction that they had within the situation (e.g., “How many times have you failed before? What is the worst thing that would happen if you failed?” leading to answers like “Well, I got an 80 once when I was sick,” with the therapist then asking, “So what is the likelihood that you will get a 60?” and the patient saying, “Yeah, I guess I exaggerate a lot when I feel bad. I really will do ok on the exam”). There are a number of variations of how cognitive restructuring is done. The most traditional method with Beckian CBT is via the thought record (also used for monitoring described above, but with a greater emphasis on the thoughts and evaluations of the thoughts). In some forms of CBT, part of the evaluation process is labeling the type of cognitive distortion that characterizes the specific thought such as all or none thinking, disqualifying the positive, mental filtering, jumping to conclusions, catastrophizing, emotional reasoning, should statements, and personalization (e.g., 22). Others skip the labeling step and go directly to working with the patient in developing rational responses to the thoughts. After the development of realistic, rational responses, the patient is asked to reevaluate the intensity of the emotional experience in order to determine whether the changes in appraisal/thinking impacted the patient emotionally. In different forms of CBT and situations, the cognitive restructuring is conducted either during

or prior to an exposure or behavioral experiment. In some treatments, the restructuring is conducted in stages: initial evaluations of thoughts are conducted prior to an exposure or experiment and then the thoughts are re-evaluated after. Some conduct cognitive challenging in stages: first monitoring and identification of themes, then identification of distortions and rational responses. Others prefer more active, immediate development of rational responses. Either way, there is an art in conducting the cognitive challenging. Both the need for careful, Socratic challenging is important, as is the need to ensure that the patient is not feeling derided or harshly confronted by the questioning. However, there are some forms of CBT which encourage direct confrontation (6). In patients who have chronic concerns, possibly related to personality issues, cognitive challenging is continued through the examination and restructuring of core beliefs (i.e., consistent thought patterns about oneself, the environment or the future) via a number of techniques (21).

In vivo exposure. *In vivo* exposures are used commonly in CBT for the anxiety disorders (specific phobias, social anxiety disorder, panic disorder with agoraphobia, posttraumatic stress disorder, obsessive compulsive disorder) as well as with a number of other issues including hypochondriasis. For each type of anxiety, there are specific types of *in vivo* exercises which are appropriate. For example, in panic disorder exposure to the “fear of fear” or fear of bodily sensations through exercises which elicit sensations such as shortness of breath, heart racing, etc., are typically viewed as important components of treatment for panic disorder. There are a number of theories as to how exposures work, which include modern learning theory (23), emotional processing theory (12), information processing theory (e.g., 11), and dual process theories (e.g., 14). There are debates within the field of CBT regarding the differences between “behavioral experiments” and “exposures.” It is clear that traditional behavioral theories solely based on habituation are not sufficient theoretically or clinically. This means that in most CBT treatment today, the habituation rationale is only a partial explanation provided to the patient, and emphasizes on optimizing learning of new information which

conflicts with prior beliefs is an important aspect of any exposure. Methods for such optimization include ensuring that the exposure is designed to tap into the idiographic fears or concerns of the patient and ensuring that the patient is not engaging in any subtle avoidance or superstitious behaviors (i.e., safety behaviors). As an example, if a patient with OCD presents with contamination concerns, one needs to understand what the patient fears will occur due to contamination (is it disgust from dirt or body fluids, fear of contracting AIDS, fear of worms from dirt, etc.?). Then, one needs to ensure that once the patient has agreed to engage in exposures to the contaminant which creates a perceived level of risk (e.g., a book from a library on AIDS for someone who is afraid of contracting AIDS). Finally it is essential that they do not engage in behaviors that will “spoil” the exposure. This could mean anything from telling oneself that there cannot be anything wrong with a specific book because the therapist approves of touching it, avoiding touching a specific area of the book that looks like it could have a stain on it, or washing one’s hands immediately after touching the book. All of these behaviors would interfere with the potential learning that the book did not cause AIDS and that such feared objects are likely not dangerous. Overall, the main concept underlying exposure is captured by the following quote by Eleanor Roosevelt in 1960: “You gain strength, courage and confidence by every experience in which you really stop to look fear in the face. You must do the thing you think you cannot do.”

Imaginal exposure. Two of the most common forms of imaginal exposure are to memories of traumatic events (in PTSD; see 24), and imaginal exposure to exaggerated feared outcomes (commonly done in OCD, but also can be done for many other problems). In imaginal exposures, individuals are asked to repeatedly listen to imagined situations which evoke negative emotional states. There are likely many positive consequences of such an exercise, including: increased tolerance and willingness to experiencing negative emotions, creation of a coherent narrative of one’s trauma or fear, distinction between thoughts and reality, decreased probability and cost of the events occurring/recurring. Imaginal exposure in PTSD will be covered more

fully in another section below (see pp. 274–281 this issue). Briefly, the main concept is that one conceptualization of PTSD is that fear of the memory prevents adequate processing of the memory and does not allow full integration of the content and emotion with other experiences. Therefore, the memory is avoided and intrudes frequently, leading to symptoms of PTSD. Thus, imaginal exposure in this context includes systematic retelling of the memory of the trauma, focusing on emotionally laden areas that the patient needs to process more fully. This type of treatment has been shown to be very effective for many individuals with PTSD.

For individuals with other anxiety disorders, imagining future catastrophes can also be a useful way of processing negative beliefs. For example, if someone is worried about being criticized by others due to a minor faux pas, the therapist can build an imaginal scenario with the patient in which the patient allows himself to make a minor faux pas and this then leads to extreme criticism by his co-workers, family and strangers on the street. After recording a detailed, emotionally laden account, the patient is then asked to listen to the recording repeatedly for approximately 45 minutes a day for a week. If conducted well, the patient initially reports significant anxiety when listening to the scenario, and reports substantial decreases in anxiety over the week. In such cases, patients often state that they no longer believe that their fears are realistic or likely.

Behavioral activation. Behavioral activation is typically considered one of the core components of CBT for depression (20), and has been shown to be an effective treatment for depression by itself (25). One theory proposes that behavioral activation is a form of exposure for depressed patients who fear failure and therefore do not attempt to engage in pleasure or mastery activities (26). As in all CBT techniques, there are different methods for conducting behavioral activation. One of the most common forms of behavioral activation is initiated by monitoring daily activities via a weekly record. Patients are asked to complete an hour by hour log of what they do with their day each day for at least a week (typically completed at the end of the day). In addition, they are asked to rate the level of pleasure and the level of mastery that they experience

with each activity. The therapist then looks at the week of activities with the patient to see how she is conducting her week. Frequently activities such as lying in bed, watching TV, or surfing the internet dominate a depressed person's life. Therefore, the therapist works with the patient to determine new activities that will increase pleasure or mastery (usually in a graded fashion so as to not set up goals which are likely to fail). Activities that the patient engaged in prior to being depressed and/or exercise are often included. In many cases, this is a process of evaluating and collaboratively generating new activities that can occur across a number of sessions of therapy.

Homework assignments. Homework is one of the *sine qua non* of CBT. Its importance has been researched relatively thoroughly (27), and books have been written only about assigning homework in CBT (28). The basic concept behind homework assignments is that most cognitive, behavioral, emotional patterns of living cannot be changed via treatment occurring one hour a week. Thus, applications of the principles and concepts learned in the therapy session are practiced and generalized into the real world via specific homework exercises. These exercises include many of the above-described procedures (reading handouts, monitoring, cognitive challenging, exposures, etc.). One of the common metaphors for the use of homework in CBT is that engaging in CBT is like learning a new language. As such, one needs to immerse oneself in the language if one is to be fluent enough to use it in difficult situations. While the therapy sessions may provide the basics of grammar and vocabulary for the language, only using it in every opportunity one can will one truly master it and be able to use it independently even long after treatment.

Discussion

The above account provides only a superficial, shallow gloss of treatments which are the building blocks of a rich, creative and effective set of treatments which have been developed over the last 50 plus years. The demand in CBT for assessment, application of idiographically-tailored empirically validated techniques (followed by further assessment) and the desire to help achieve maximal

benefit for the therapy is reflected both on the local (case-by-case therapeutic stance) and macro (treatment studies) levels. Thus, there is constant work on evaluating what is working within CBT and how it can be improved. The current status of CBT for specific disorders will be discussed in the varied articles in this special section. One of the wonderful aspects of the scientific approach that CBT takes is that for all of the treatments discussed, empirical evaluation using rigorous techniques is occurring, and we can all hope for continued improvements in alleviating the suffering of more patients in the short and long run.

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