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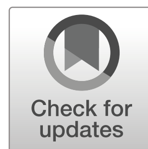

Cognitive-Behavioral Therapy for Alcohol and Other Substance Use Disorders: the Beck Model in Action

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Abstract

The Beckian model of cognitive-behavioral therapy (CBT) for alcohol and other substance use disorders is highly consistent with generic CBT in terms of its structure, emphasis on the therapeutic relationship and case conceptualization, and focusing on teaching patients psychological self-monitoring and self-change skills. The model is distinctive because it zeroes in on the substance use issue per se by identifying and managing high-risk situations, modifying maladaptive automatic thoughts and beliefs (about substances, cravings, "permission-giving," etc.), learning ways to resist acting on cravings and urges, interfering with substance-related behavioral patterns, limiting the damage from lapses, and learning adaptive life habits. CBT practitioners are more effective with this population when they respond with empathic understanding, even when the patients are ambivalent about being in treatment, are at a lower "stage of change," and therefore are not fully collaborative and/or are not optimally forthcoming or sincere in their self-report. The CBT method of guided discovery is highly congruent with the methods of motivational interviewing, and CBT can be compatible and complementary with 12-step facilitation and pharmacotherapy. The outcome research on CBT for alcohol and other substance use disorders is not as extensive as that for other disorders, and the data (while promising) indicate that more work needs to be done in terms of preventing early termination and maintaining improvement for the long term. A number of studies suggest that CBT is at its best when helping patients manage their alcohol and/or substance use problems in the context of also providing effective treatment for their comorbid depression.

Keywords Alcohol · Substance use · Motivational interviewing · Beliefs · Craving · Stages of change

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Introduction

The Beckian model of cognitive-behavioral therapy (CBT) as applied to alcohol and other substance use disorders (Beck, Wright, Newman, & Liese, 1993) closely resembles generic CBT in its session structure, dedication to the establishment of a positive therapeutic relationship, use of a case conceptualization, teaching of psychological skills, and the role of homework. The following are ways in which the model specifically targets alcohol and other substance use problems per se:

1. CBT readily works in concert with 12-step and other group and recovery approaches (e.g., SMART Recovery) and with pharmacotherapy aimed to reduce physiological cravings and/or to mute the effects of the problem drugs themselves. Thus, CBT is not necessarily a stand-alone treatment, as it may serve as an important part of a comprehensive approach to care. The complementarity of these approaches is more important than their theoretical differences. Their conjoint use helps provide a therapeutic bridge between the biology, beliefs, and behaviors pertinent to substance use disorders.
2. CBT attends to the patient's beliefs about drugs, cravings, and their "relationship" with drug use. For example, by modifying patients' "permission-giving" beliefs, therapists help the patients to be more vigilant about and committed to their sobriety goals.
3. Substance use—especially over the long term—tends to cause and/or exacerbate problems in patients' lives, while simultaneously interfering with active, effective problem-solving. CBT helps patients to become better problem solvers and to make lifestyle changes that are more conducive to sustained recovery and wellness.
4. CBT helps patients to tolerate and ride out their cravings for alcohol and other drugs and to increase their sense of self-efficacy in the process.
5. When patients experience lapses or relapses, CBT reduces helplessness and hopelessness. Patients are taught to limit damage and to resume their treatment plan as soon as possible.

Many of the CBT processes and interventions described below are applicable to any presenting problem, though they have been modified to address substance use issues in particular. As such, the methods below can be used readily in cases of comorbidity. Further, the Beckian model described herein is also applicable to behavioral addictions such as compulsive gambling, video-gaming, and viewing of pornography. Patients with such behavioral addictions are taught to recognize and self-monitor urges (similar to cravings), to reduce exposures to high-risk situations, to identify and re-assess their permission-giving beliefs about their excessive behaviors, to learn to postpone acting on impulse, and to enact alternative behaviors that reduce arousal, enhance self-efficacy, and have a better chance of resulting in positive outcomes. Similarly, the Beckian model is relevant to certain eating disorders (e.g., binge-eating, nocturnal eating) in its focus on learning behavioral and cognitive self-management skills, while validating the need to eat moderately, rather than over-compensating with excessive restriction.

Goal-Setting and the Stages of Change

One of the fundamental elements of implementing clinical techniques and maximizing their potential for success involves the collaborative setting of goals. Therapists cannot assume that patients will agree that a goal of treatment is a reduction in or abstinence from drinking and/or using other drugs. In fact, in some instances, patients will not even acknowledge maladaptive drinking and/or using, instead presenting with another clinical complaint such as depression, anxiety, or problems with anger. This is where the astute CBT clinician has to be aware of the *Stages of Change* model (see Norcross, Krebs, & Prochaska, 2011) to craft the treatment plan so that it fits the patient well. When patients are at the level of *pre-contemplation*, they are largely unaware of their addictive behavior and therefore unmotivated to change. However, they may be willing to discuss other therapeutic topics they believe are more relevant to their lives, and these topics can serve as points of entry for therapists who are trying to create an authentic therapeutic agenda, perhaps until such times as the patients progress to a higher stage of change. The next level up is the *contemplation* stage, in which patients may acknowledge that they drink and/or use other drugs excessively, but they minimize this as a problem and/or state that they will consider making a change at a later time (e.g., "One of these days I know I should cut back"). Here, therapists can give positive verbal reinforcement for the patients' disclosure and offer to assist in ways that the patients may feel are not too intrusive or controlling, such as by recommending a self-monitoring homework assignment (e.g., keeping a running log of the patient's drinking and other drug use).

Going up the ladder of the stages of change to the third level, we have the *preparation* stage, where patients are aware of their problem with alcohol and other drugs, they are motivated to make therapeutic changes now, and they are ready to begin the work, though they may express shaky confidence or apprehension. With the therapist's guidance and support, patients can progress to the *action* stage, in which they learn and practice a range of self-help methods for the express purpose of reducing or stopping their problematic use of alcohol and other substances. The highest level of change is the *maintenance* stage, where patients continue to "work their program" on an ongoing basis, mindful that relapses can happen at any time, regardless of how long it has been since they last drank or used. Norcross et al. (2011) explain that patients do not necessarily progress through these stages linearly, as they may sometimes lapse and regress or jump head. Regardless, therapists who are sensitive to this phenomenon will have a better chance of establishing and maintaining a productive collaboration with their patients.

Setting a session agenda with patients is part of establishing and pursuing goals, both in session and through the course of treatment and beyond. It is good practice for CBT practitioners to inquire routinely about the patient's mood (including extremes thereof, such as suicidality) and episodes of drinking or using other drugs that may have occurred since the previous session. Even when patients seem to be doing well in terms of mood and sobriety, it is still important to assess for relapses. When patients maintain that they have been abstinent from drinking and using, there are still many useful topics pertinent to well-functioning and recovery that therapists can suggest as part of the session's agenda. Such topics include (but are not limited to):

- Episodes of dealing with *temptations* to drink or use other drugs
- *Close calls*, in which the patients *almost* gave in to the temptation to drink or use
- How the patients spend their time (How productive? How healthy? How goal-oriented?)
- Specific action the patient has been taking in the pursuit of productive, healthy goals
- Reviewing the patient's homework (and later creating new homework)
- How the patients are communicating and getting along with others in their lives
- Anticipating and planning for potential high-risk situations in the coming week

By introducing topics such as these, therapists can combat the problematic phenomenon of the "empty session," in which patients claim they are okay and state that there is not much to talk about (perhaps angling for a shortened session).

Guided Discovery and "Motivational Interviewing"

Although the treatment approach known as motivational interviewing is its own brand (Miller & Rollnick, 2002), there is significant overlap with the aspect of CBT known as "guided discovery" (also known as the Socratic Method, see Beck, Rush, Shaw, & Emery, 1979; Overholser, 1988). The fact that CBT takes a psycho-educational approach does not imply that it is largely didactic. The more elegant approach is to help guide patients to reflect on their own patterns of perceptions and beliefs and to re-evaluate them in their own way. This approach inherently is part of good CBT, but it is especially important in order to engage patients who are at relatively lower stages of change and therefore may be quite ambivalent about addressing their addiction-related issues.

Some of the central elements of guided discovery and motivational interviewing include:

1. Asking the patients how they arrived at their ideas (e.g., their specific interpretations and general beliefs) and then collaboratively evaluating the strengths and vulnerabilities of their reasoning, leading to the consideration of additional or alternative ideas
2. Appealing to the patient's self-interest in considering making changes, rather than simply stating what is functional and what is dysfunctional as per normative standards
3. Utilizing and validating the patient's own words as leverage in making a related therapeutic point. This increases the chances that the patient will be more agreeable with the therapist's comments and decreases the chances that the patient will view the therapist's comments as being contrary, judgmental, or adversarial
4. Making a seemingly off-handed comment "in passing" that is actually an important therapeutic message. This method enables the patient to hear a therapeutic message that might ordinarily run counter to their beliefs, without viewing it as a challenge
5. Not expecting that the patient will accept the therapist's message now, but rather being content to "plant the seed" for the patient's further consideration over time

When patients are not fully committed to treatment for their problematic drinking and substance use, therapists can be most empathic by avoiding making such comments as, "You're not *ready* to change" or "You don't really *want* to change," statements that can feel unduly invalidating and confrontational. Instead, it is important for therapists to acknowledge that the patients may be *ambivalent* about change and that this is an understandable state of mind.

Targets of Intervention

CBT does not necessarily represent a comprehensive etiological model of substance misuse. A person's development of a substance use disorder is complex and multivariate, including biological factors at the micro level and sociological variables at the macro level. The Beck et al. (1993) model focuses on psychological factors that contribute to a person's risk of substance use, each of which suggests a potential area for therapeutic intervention. These include:

1. *High-risk situations*, both external (e.g., environmental stimuli) and internal (e.g., problematic mood states)
2. *Dysfunctional beliefs* about drugs, and about one's "relationship" with drugs
3. *Automatic thoughts* that increase arousal and the impulse to use drugs
4. Physiological *cravings and urges* to use alcohol and other drugs
5. *"Permission-giving beliefs"* that patients hold to justify and trigger their drug use
6. *Rituals* and general behavioral strategies linked to the using of substances
7. Adverse psychological reactions to a *lapse or relapse* that lead to a vicious cycle

These seven factors are explained in greater detail below, along with summary descriptions of corresponding cognitive-behavioral interventions.

High-Risk Situations (External and Internal)

Similar to 12-step approaches, patients in CBT are assigned the task of identifying the "people, places, and things" that they associate with their drinking and other substance use. Therapists encourage their patients to structure their lives so that they can avert coming into contact with as many of these external high-risk stimuli as possible. Not all external, high-risk stimuli can be avoided at all times; thus, the patients will need to learn coping skills to remain abstinent even if they have contact with these stimuli. The patient's physiological and mood states represent their *internal* high-risk situations. Many patients have a low tolerance for discomfort and will seek to "medicate" themselves with alcohol and other drugs in order to reduce anxiety, loneliness, dysphoria, boredom, guilt, shame, and/or anger. These internal states need to be managed through appropriate cognitive and behavioral means for the patients to increase their chances of remaining abstinent. This is the area in which standard CBT techniques for anxiety and depression are highly applicable (see Beck, 2011). Similarly, some patients try to accentuate their positive feelings with alcohol

and other drugs. Thus, it is an important behavioral experiment for patients to experience good moods without chemical enhancement.

Dysfunctional Beliefs about Alcohol and Other Substances

CBT therapists help patients assess and modify their faulty beliefs about substances. Some of the maladaptive beliefs are about the substances themselves, such as when patients believe that, "Drinking beer will not harm my recovery, because beer really isn't alcohol," and "Heroin is safe if you snort it, rather than injecting it." Other dysfunctional beliefs are about the patient's "relationship" with drugs, such as, "If I stop using drugs I will be too inhibited to talk to people; I need the drugs to be social." Perhaps the most challenging beliefs to address are those that are indicative of a serious comorbid psychological disorder, as suggested by a belief such as, "I am a bad person, so I do not care if I ruin my life or die from using drugs." In such cases, CBT addresses the patient's low self-esteem, helplessness, and passive (or active) suicidality.

Automatic Thoughts That Increase Arousal and Impulse to Use Substances

These are the instantaneous thoughts and images people have when they perceive an opportunity to use alcohol or other drugs. Often these are brief, exclamatory thoughts, such as, "Who cares?" or "I need something now!" or a range of profanities. Such thoughts lead to increased activation of the patient's sympathetic nervous system (e.g., sweating, increased heart rate) and an increased craving for the chemical fix (see the next point of intervention below). In CBT, patients are taught to recognize these automatic thoughts and to prepare rational responses to reduce arousal, to relax, and to take time to think carefully about the situation. One patient discovered that he could reduce the intensity of his automatic thoughts if he generated a mental image of his two children, and another patient would think, "My *commitment* (to sobriety) is stronger than my *need* (to get drunk)." Rational responses of this sort remind patients to re-evaluate their dysfunctional automatic thoughts, rather than reflexively act on them. This technique does not eliminate the temptation to use alcohol and other drugs, but it reduces the chances that the patient will act impulsively without thinking.

Physiological Cravings and Urges to Use Alcohol and Other Substances

These are physiological sensations that create an uncomfortable, unresolved sense of "appetite" to alter one's state of mind through the use of psychoactive chemicals (Newman, 2004). Many patients believe that they cannot cope with their cravings and that they must act on their urges. Patients can be taught to wait for the cravings to lessen by learning the technique known as "distract and delay," where they divert their attention onto meaningful, high-priority tasks or small, non-addictive pleasures until the uncomfortable cravings and urges lessen naturally. Patients are taught that each time they allow a craving to run its natural course without "feeding" it with alcohol and other

drugs, they are succeeding in reducing the power of future cravings. However, patients must be alerted that certain high-risk situations will occasionally cause cravings and urges to "spike." Thus, they need to be ready with a coping plan.

Permission-Giving Beliefs that Patients Use to Justify Their Substance Use

Patients often struggle with the psychological conflict over the choice to drink and use drugs or to abstain. They want to remain sober, but they also want to lessen the pain of withdrawal and to experience mind-altering effects. One of the maladaptive ways that patients "resolve" the conflict is through their "permission-giving" beliefs, where they tell themselves that it is okay to drink or use drugs *this* time. Examples of such permission-giving beliefs are:

- "I will only use a little."
- "Nobody will know this time."
- "I have been 'good' for a long time, and now I deserve to get high."
- "I'm just going to 'test' myself to see if I can handle this drug now."

These beliefs tip the decision-making scale in favor of drinking and using and thus serve as a major threat to sobriety, even in patients who purport to want treatment. To counteract these permission-giving beliefs, patients in CBT will need to develop clear, unambiguous, well-rehearsed rational responses that support abstinence and that highlight the dysfunctionality of the permission-giving beliefs. These can be written on flashcards, entered into one's phone for ready access, or recited in the form of role-play exercises with the therapist. Examples of such rational responses are:

- "There is no such thing as using *only a little*. If I start using it will lead to *more* using and I will be in trouble."
- "*I* will know that I used, and others will inevitably discover my failure."
- "I need to keep my 'sobriety streak' alive. I deserve a better life."
- Testing myself is a setup for failure. The true test is to continue the streak, which is now at 90 days, and this represents something of which I am proud.

Rituals and General Behavioral Strategies Linked to the Using of Substances

Part of the case conceptualization of patients' substance use is an evaluation of the behavioral rituals the patients engage in surrounding their use of alcohol and other drugs. These behaviors may be at the social level (e.g., going to a specific bar at a particular time of night) and/or the individual level (e.g., assembling their drug paraphernalia in the bathroom, with the water running, and the door locked). "Interventions in this area are intended to avoid, abort, interrupt, or otherwise counteract the progression of such rituals" (Newman, 2004; p. 215). This typically requires patients to restructure their routines and environment so that the acquisition of alcohol and other drugs is made as inconvenient as possible. For example, patients can empty their households of alcohol, drugs, and drug paraphernalia.

Adverse Psychological Reactions to a Lapse or Relapse

If the patients lapse or relapse into drug use, all is not lost. They will still have the opportunity to limit the damage and to make a renewed commitment to sobriety. Unfortunately, the patients' cravings will now be stronger, and many of their dysfunctional beliefs will be activated (e.g., "I am a hopeless failure, and I will never recover"). Nevertheless, it is erroneous for patients to believe that they *cannot* stop drinking or using once they have begun and that a lapse into drinking and using *necessarily* will become a full-blown relapse. Patients in CBT are taught to *study* their lapses, rather than feel helpless. They document where they had their lapse, what and how much they used, with whom, what their permission-giving beliefs were, how they felt, and so on. These data help patients learn important lessons from their lapse as they utilize their coping skills and re-commit themselves to their treatment program.

The Therapeutic Relationship

Therapists can facilitate the development of rapport with their patients by making it clear that they are interested in the patients' quality of life as a whole and not just in getting the patients to cease and desist enacting their addictive behaviors. Many patients seeking treatment for alcohol and other substance use problems have comorbid diagnoses (Evans & Sullivan, 2001; Mueser, Noordsy, & Drake, 2003; Newman, 2008), thus making it appropriate to address such concerns as the patient's dysphoric mood, feelings of shame and low self-esteem, difficulties in coping with general life stressors, family problems, and the like. Therapists call patients' attention to their addictions as being key factors in their emotional, interpersonal, and physical malaise, toward the goal of enhancing the patients' motivation to change. At the same time, therapists express empathy for the patients' difficulties in achieving abstinence.

Addictions and trust are not close companions. For example, one of the common manifestations of an addiction is denial, where a person who engages in addictive behavior either does not recognize the problem or the related harm (and therefore does not admit to there being a problem) or tries to hide the truth of their behavior out of a sense of shame and/or a desire to continue the addictive behavior unimpeded. Inaccurate and/or incomplete reporting is a frequent phenomenon with this population, a situation to which therapists must remain sensitive while not becoming cynically mistrustful of their patients. By the same token, therapists cannot expect patients who suffer from addictions to trust them immediately. Therapists should bear in mind the sorts of learning experiences that many of their patients have had that work against the development of trust in others. For example, a patient may have been raised in a household where one or both parents used illicit drugs and often lied to the patient about it. The patient may learn, "If you can't trust your own parents, you can't trust anyone." Effective CBT practitioners do not take umbrage when patients mistrust them. Instead, they conceptualize the problem based on the patient's history and current life situation, try to offer accurate empathy, and continue to act in a trustworthy manner, whether the patients acknowledge this or not.

The basic elements of trust building and trust maintenance include behaviors that consistently demonstrate the therapist's genuine involvement in the therapeutic process

and their commitment to be available to the patient. Such behaviors include the following: (1) being available for therapy sessions on a regular basis, (2) being on time for sessions (even if the patient generally is not), (3) returning patients' telephone calls in a prompt manner, (4) being available for emergency intervention (or having accessible back-up coverage), (5) showing concern and being willing to try to contact the patient if he or she fails to keep an appointment, and (6) remaining in touch with the patient (and available for the resumption of sessions) if inpatient hospitalization, detoxification treatment, halfway house rehabilitation, or re-incarceration takes place during the course of the therapeutic relationship.

Specific Interventions

A good starting point in therapy is to teach patients how to think like a social scientist whose subject is oneself. *Self-monitoring* is both an assessment tool (patients collect data about themselves, such as their frequency and amount of drinking) as well as an intervention through which patients learn to be more observant of their habits. This skill can generalize to other techniques, such as self-instruction (rather than self-condemnation), and rational responding (e.g., catching their permission-giving beliefs and counteracting them on the spot). Self-monitoring sets the stage for the patients to use a full array of interventions.

The following sub-sections briefly describe several commonly used interventions. Each can be aimed toward at least one of the seven targets noted above. These interventions often can be introduced in session and furthered as part of the patients' homework assignments. They can be used in individual therapy, as well as in the context of group therapy (see Liese, Beck, & Seaton, 2002; Wenzel, Liese, Beck, & Friedman-Wheeler, 2012).

Stimulus Control

It is important for patients to systematically reduce exposure to stimulus triggers that increase urges, cravings, and opportunities to drink and/or use. Stimulus triggers have alternatively been described as "external high-risk situations" and "people, places, and things" that the patients associate with their addictive behaviors. The first step involves asking the patients to identify their triggers, many of which increase arousal and cravings, while also activating their problematic beliefs.

While it may not be possible to avoid all such triggers, patients can learn to *plan* their activities in such a way that they reduce the *likelihood* of being exposed to the problematic stimuli. This requires awareness and motivation. The person who once used drugs can no longer keep drug paraphernalia at home. The person who is trying to quit drinking has to have a routine for declining offers of drinks in social situations. Therapists can help their patients devise methods for steering clear of the addictive triggers that can be avoided and for applying coping skills in those instances when the triggers cannot readily be avoided. A modified *Serenity Prayer* that describes this process might go as follows: "I pledge to be strong enough to stay away from the high-risk situations I *can* avoid, to be calm in the face of high-risk situations that I *cannot* avoid, and to be wise enough to know the difference."

Targeting Problematic Beliefs

Patients who are new to CBT often do not sufficiently appreciate the role their thinking—in particular their *belief systems*—plays in precipitating and maintaining their addictive habits. They often view their addictive behaviors as autonomous (i.e., independent of their volition and decision-making) and/or the result of extrinsic factors such as "a stressful situation." They do not readily reflect on their own attitudes about the addictive behavior, and therefore, they do not try to use the power of their own thought processes as a therapeutic counterweight to their cravings and urges. Thus, CBT practitioners make it a point early in the treatment process to teach their patients about the importance of their cognitions, emphasizing that by assessing and modifying their own automatic thoughts and beliefs, patients can become more adept at refraining from the addictive behaviors, without necessarily feeling angry or hopeless about it. Having said that, we have heard our patients claim that "just changing my thoughts isn't going to make me stop wanting to use drugs." Therapists would be wise to heed this warning, pessimistic though it seems. Indeed, patients who suffer from addictions will need to use as many techniques as possible to help free themselves of their malady, with the targeting of problematic beliefs being just one of them, albeit an important one. To be optimally empathic, therapists must be willing to admit that the discomfort that comes from trying to refrain from drinking or using does not entirely abate in the moment simply because of a change of thinking. However—and this is the optimistic piece that patients need to hear—a constructive change in thinking can improve a person's accurate understanding of the problems he or she is facing, clarify goals and intentions amid the seeming chaos of cravings and urges, increase self-respect in the face of suffering, and bolster hope that an honest, committed, concerted effort can indeed lead to recovery.

As noted, maladaptive addiction-related beliefs include:

1. Faulty beliefs about the nature of alcohol and other drugs
2. Faulty beliefs about one's "relationship" to the addictive substance(s)
3. Faulty beliefs about cravings and urges
4. "Permission-giving" beliefs

The following are examples of each category of beliefs, along with brief descriptions of more adaptive beliefs therapists hope that the patients will entertain, test, and adopt for their own lives.

Faulty Beliefs about the Nature of Alcohol and Other Drugs These include misconceptions that patients have (or misrepresentations they make) about psychoactive substances that help the patients feel somehow protected or safe, when in fact they are at risk. An example is, "Marijuana is less harmful than alcohol, and it doesn't cause any consequences, so it's fine if I smoke every day." When patients express such a belief, therapists can "flag" it and then invite the patients to examine it closer. For example, the facts may show that the patient loses a lot of valuable time when high on cannabis and has also gained weight owing to binge-eating when under the influence. The purpose of this examination of the facts is to teach the patients to become healthy

skeptics about the cognitions that support their addictive habits and to open a dialog about new ways of construing the matter.

Faulty Beliefs About One's Relationship to Addictive Substances This category of dysfunctional beliefs represents the nexus between the patient's problematic views of their addictive behaviors and their dysfunctional views about themselves, the latter of which may be conceptualized via the concept of "schemas" (Beck, Freeman, & Davis, 2004; Young, Klosko, & Weishaar, 2003). For example, patients who maintain schemas of *defectiveness and social exclusion* may believe that only by getting high can they tolerate social interactions (including sex) without experiencing morbid fears of rejection. Similarly, patients with *abandonment* and/or *dependency* schemas who misuse alcohol and other drugs may hold that their attempts to get clean will result in their being shunned by their friends and lover(s) who drink and use, thus leaving them unbearably alone. Likewise, patients who believe that they are fundamentally *bad* or *unlovable* may profess to hate themselves, stating that they do not deserve to recover from their addictions. This type of problematic belief is often seen in patients with serious co-morbid clinical diagnoses. Good CBT dictates an approach that provides "dual treatment" for the "dual diagnosis," thus helping patients not only with their addictive behaviors, but also with their harmful views of themselves. The hope is that by improving the patients' self-respect and self-efficacy through schema work, they will be more motivated to work on reducing or ending their addictions. This work is done in parallel, rather than in sequence (Evans & Sullivan, 2001; Mueser et al., 2003).

Faulty Beliefs about Cravings and Urges Cravings and urges refer to the physiological sensations that create an uncomfortable, unresolved sense of "appetite" to alter one's state through the use of psychoactive chemicals. Anecdotally, the following are among the most commonly encountered maladaptive beliefs about cravings and urges:

- "The only way to stop a craving or an urge is to feed it. Otherwise is just gets worse."
- "Cravings and urges are intolerable."
- "An unsatisfied craving or urge can make me crazy."

As one may infer from the above, many patients have a "linear model" of cravings and urges, in which they view the cravings and urges as taking an ever-ascending course that is unalterable and unmitigated unless satisfied by engaging in the addictive behavior.

In response, therapists help their patients to look at concrete evidence from prior experiences in which they had a craving or urge but could not act on it, with the result being that the craving and urge *subsided on its own*. For most patients, in most situations (with the exception of extreme chemical dependency which requires medical supervision for safe withdrawal), cravings and urges will lessen over time if they are not "obeyed" or "fed," the patient's subjective discomfort notwithstanding. Many patients are incredulous when told that they can learn to "ride out the wave" of high physiological arousal that they associate with the temptation to engage in the addictive behavior, but their own personal histories usually provide evidence that they have done it before,

and that they can do it again. If they combine this knowledge with the other techniques described in this chapter, along with social support (e.g., a 12-step meeting, seeing a counselor, talking to a friend), patients can do the behavioral experiment of timing how long it takes for their urges and cravings to peak and decline. Succeeding in this endeavor is a victory both of self-assessment and self-help. Later, we will discuss the "delay and distract" technique, in which patients lengthen the time they are willing to endure the urges and cravings.

Permission-Giving Beliefs This type of belief is also known as a "rationalization" (not to be confused with "rational responding"), in which the patients spuriously justify their addictive behaviors, at least under certain conditions. Some of these rationalizations are of the sort that imply, "You really can't blame me, after all…" and others take the form of, "It was the lesser of two evils, and it could have been much worse, so I actually made a good choice, all things considered." As patients wrestle with the question of, "Should I or should I not (drink or use)?" they sometimes break the stalemate via permission-giving beliefs such as:

- "I've been 'good' (abstinent) for so long. I really deserve to have a little fun right now."
- "I haven't used in quite some time. I wonder if I'm still addicted. I should test myself."
- "I am feeling so bad right now. I really need to [drink or use] right now in order to feel better. It's the only way, and who could blame me?"
- "It's a 'special occasion.' I won't do this regularly. I'm still on track with my recovery."
- "Nobody will know, so it won't hurt anyone, and I'm fine with it."

Therapists listen for these sorts of comments from patients, whereupon they respectfully identify them as "permission-giving beliefs," and then invite the patients to try to think about the situation in a different way. Patients will need to develop well-rehearsed rational responses to counteract the permission-giving beliefs. They can generate these collaboratively with their therapists in session and add more for homework. Some examples include, "There's no such thing as *only* one drink; it generally leads me to more drinking" and "I can only pass the 'test' if I don't try to test myself in the first place." Additionally, patients are taught to notice when they use words such as "only," "just," and "a little bit" in their self-statements, as these are tip-offs that they might be engaging in permission-giving. Patients are instructed to repeat their comments *without* those words and to listen for the qualitative difference. For example, "I *only* want one drink," becomes "I want one drink," and "I *just* want to use *a little bit*," becomes "I want to use." This exercise drives home the stark reality of what the patients are proposing to do, without the minimization of the problems that is part-and-parcel of permission-giving.

Rational Responding for Automatic Thoughts and Maladaptive Beliefs

Patients who learn how to produce rational responses (examples of which we have noted above) generally feel an improved sense of self-efficacy and experience more

hope, as documented in the literature on CBT for depression (e.g., Tang, Beberman, DeRubeis, & Pham, 2005). Rational responding is applied to all of the categories of dysfunctional beliefs noted above, along with the more spontaneous automatic thoughts that arise in the spur of the moment.

Therapists teach patients to view their emotions and physiological reactions that they associate with drinking and using (anger, anxiety, shakiness, loneliness, boredom, cravings, etc.) as *cues* to ask themselves the question, "What is going through my mind right now that could be contributing to my feeling this way?" The goal is to teach the patients the skill of spotting their *automatic thoughts* in given situations, to evaluate these thoughts, to test their validity, and to modify them to a more constructive form. Patterns in automatic thoughts may help patients to ascertain their dysfunctional beliefs, some of which may pertain to the addictions per se, and some of which may adversely affect their emotional lives (see Beck et al., 2004; Young et al., 2003). With training and practice, patients can learn to spot and counteract the thoughts that otherwise would maintain and/or exacerbate their symptoms. Patients use a series of questions (adapted from the Automatic Thought Record, see Beck, 2011) to help themselves reconsider the validity and/or utility of their thoughts. Such questions include:

- "What are some other plausible ways I can look at this situation?"
- "What concrete, factual evidence supports or refutes my automatic thoughts?"
- "What constructive action can I take to deal with this situation?"
- "What sincere, realistic advice would I give to a good friend in the same situation?"
- "What is the worst case scenario in this situation? What is the best case scenario? Now that I have considered both extremes, neither of which is statistically likely to occur, what the most *likely* outcome?"
- "What are the pros and cons of continuing to believe my automatic thoughts? What are the pros and cons of trying to change my automatic thoughts to make them more constructive and hopeful?"

These question serve as "prompts," and when patients become adept at using them on demand, they improve their ability to reflect on their thoughts, feelings (including cravings), and actions, rather than acting reflexively. A couple of good, all-purpose rational responses are, "Be reflective, not reflexive" and "My first thought is not the final word."

Activity Monitoring and Scheduling

Addictions have a major impact on how people spend their time. When in the throes of the addictive behavior, patients tend to engage in activities that support the problem behavior (e.g., drug-related rituals), while concurrently failing to take part sufficiently in activities that promote pro-social life goals, such as employment, attending school, engaging in hobbies, community service, and stable relationships. Additionally, these patients often find that their sleep–wake cycle is significantly disturbed, which further impedes their ability to lead effective lives. The use of *activity monitoring and scheduling* can be a useful basic strategy for understanding and modifying addictive behaviors and for increasing productive behaviors.

Therapists give their patients the straightforward rationale that addictions take up much of their valuable time that could be better spent doing things that make their lives more functional. By keeping a log of the patient's activities, therapist and patient can assess the impact of the addiction(s) and can also see the strengths in the patient's lifestyle that need to be bolstered. One method to monitor and schedule activities is to use the Daily Activity Schedule (DAS: Beck et al., 1979; Beck, 2011). The DAS is a grid that divides each of the 7 days of the week into 1-hour blocks, into which the patients are instructed to record what they were doing during this time. Patients are asked to rate each activity (from 0 to 10) in terms of how much of a sense of mastery or accomplishment they derived from this use of their time, as well as how much pleasure or enjoyment they felt. These ratings indicate the level of reward or satisfaction across various activities. Patients are also asked to indicate how long (and in which specific hours) they slept and in which time slots they engaged in drinking and using other drugs.

The DAS can be used for at least three purposes. First, it serves as a journal of the patient's present activities and offers a baseline for understanding how the patient uses his or her time for addictive and healthy activities alike. Second, the DAS can serve as a prospective guide for planning upcoming activities, such as those that are less conducive to or incompatible with the problem behavior. Third, the DAS can be used to evaluate the extent to which the patient has been following his or her proposed schedule successfully. Frequently, a failure to follow through with planned activities comes about as a result of the addictive behaviors taking up too much time and/or impairing the patient's functioning. On the other hand, when patients begin to succeed in planning and completing productive, non-addictive activities that give them satisfaction and build self-efficacy, they begin to view themselves as less helpless and hopeless, more in control of themselves and their lives, and less dependent on alcohol and/or substances.

Delay and Distract (the D&D Technique)

Patients who suffer from addictions often act on impulse when they experience a craving or an urge. In the process, they reinforce the belief that they are incapable of enacting coping skills. To counter this, therapists explain that anything the patient can learn to do "to put time and distance" between an impulse and its corresponding action is therapeutic. The *delay and distract* technique (also known as "D&D") fills this role. This technique teaches patients how to focus on something *other* than acting to satisfy their temptation of the moment, with the goal of improving endurance in coping with urges and postponing the addictive behavior long enough for the urge to subside on its own. Enacting the D&D technique can help patients survive a discrete period of elevated urges while they seek support from others, such as by going to a 12-step meeting.

Therapists ask their patients to generate a list of activities in which to engage *instead of* acting on the addictive urge and then to make use of these activities for as long as they can at key moments when they would otherwise use alcohol or other drugs. A non-exhaustive sample of such "D&D" activities could include:

1. Return phone calls, text messages, and e-mails
2. Read something interesting, such as the sports page, an on-line blog, or my writings from previous CBT homework assignments

3. Mentally picture the faces of the people who are counting on me to make positive changes and recover. Imagine them cheering me on
4. Watch something on television or on my computer, such as Comedy Central
5. Do push-ups and sit-ups
6. Suck on a mint
7. Brush my teeth and take a shower
8. Get on the exercise bike
9. Go for a walk
10. Go grocery shopping
11. Work on a crossword puzzle
12. Practice a musical instrument or sing
13. Write in my journal, explaining how I feel and what I'm thinking right now
14. Listen to at least 30 minutes of music while resting
15. Go to a 12-step meeting or call [fill in the name of the sponsor]
16. Stretch (e.g., yoga). Practice breathing control. Do my mindfulness exercises
17. Do something spiritual, such as reading the Bible

When patient engage in habitual behavioral rituals pertinent to the addiction, the D&D technique is used to avoid, abort, interrupt, or otherwise counteract the progression of the ritual. When patients break their drug-using routines, they buy themselves time so they can implement their self-help skills and seek appropriate social support.

Advantages–Disadvantages Analysis ("A–D Analysis")

In order to highlight the pros and cons of drinking and using (and therefore to make them points of discussion in session), the therapist draws (or provides a template of) a four-cell matrix in which one axis is represented by "pro" and "con," and the other axis reflects "using" or "not using." Therapist and patient then work together to brainstorm items for each of the four cells, until each one is well-represented.

It is sometimes a good idea to begin by generating items in the "advantages of drinking/using" cell, as patients are more often capable of listing many of their beliefs on this topic, and this provides the therapist with useful data. Further, focusing on this cell also demonstrates the therapist's willingness to understand the patient's position, which may ultimately gain the patient's good will and reciprocity in discussing beliefs pertinent to the other cells in the A-D analysis. The patients' responses in this cell also often provide the therapist with examples of their problematic beliefs, which themselves can then be subjected to the technique of rational responding (e.g., via the Automatic Thought Record). For example, one patient offered that an advantage of using cocaine was that, "It gives me self-esteem." While the therapist can certainly understand that the patient may enjoy a chemically induced sense of strength—especially when the patient so rarely feels this way naturally—the idea that being high on cocaine represents any sort of substantive self-esteem begs for a re-evaluation.

There is no need to add up the pros and cons and to come up with a "conclusion" or a determination about which side of the argument has "won." It will suffice simply to

spell out the patient's thoughts on the matter and to come up with more and more items that will raise the patient's awareness about a full range of implications for his or her addictive behavior.

Personal Skills Enhancement

Recovery from alcohol and other substance misuse is not just about achieving abstinence. It is also about effecting positive lifestyle changes that promote general psychological wellness, which by extension reinforce the patients' sense of confidence in living a more satisfying life. Thus, CBT for alcohol and substance use disorders includes methods for teaching patients to improve such skills as communication and problem-solving.

Communication skills can be addressed quite directly, such as by recommending that patients practice (1) speaking directly and honestly, rather than being evasive; (2) reducing or refraining from using profanity (in order to communicate more respect for self and others); and (3) being able to turn down offers by others to drink or use. Role-playing in session is an excellent way to practice such scenarios.

Problem-solving skills (see Nezu, Nezu, & D'Zurilla, 2013) are often sorely missing in patients who have learned over time to obey their impulses, rather than to reflect and make careful decisions about their actions, and who have used alcohol and other drugs as an escape from facing and managing problems. Compounding the matter is the fact that addictive habits themselves tend to cause more problems over time, resulting in an accumulation of difficulties that the patients fail to address effectively.

The following six steps comprise the basic sequence of problem-solving procedures (see Nezu et al., 2013):

1. Defining the problem in clear, specific terms
2. Brainstorming a number of possible solutions
3. Examining the pros and cons of each brainstormed solution
4. Choosing a solution that is well supported by the "pros,' even if it is difficult
5. Implementing the solution after some appropriate planning, preparation, and practice, perhaps in session
6. Evaluating the results and assessing for further solutions that are required

This is a long repetitive process that requires patience and fortitude. Therapists must remain supportive and encouraging if patients are to persevere in learning these skills.

Homework

CBT practitioners provide their patients with an *education* in how to help themselves, including *homework* to reinforce the skills they are learning in session. Via homework, patients learn to maintain their therapeutic gains long after the completion of formal sessions (Rees, McEvoy, & Nathan, 2005). It is often the case that the techniques that are taught in session can double as homework assignments between sessions (e.g., brainstorming solutions to problems; rationally responding to maladaptive thoughts and beliefs). Other assignments may require that the patients take what they learn in the "lab" (the therapist's office) and apply it in the "field" (the patient's

everyday life), such as the D&D technique, or stimulus control to reduce exposure to high-risk situations.

It is good practice for the therapist to provide a rationale for the homework assignment, along with some instructions. Sometimes, if the therapist introduces the assignment with sufficient time remaining in the session, it is possible to start the homework assignment in the therapist's office as a way to jump-start the patient's participation in the task.

Clinical Trials

The clinical outcome data on CBT for alcohol and substance use disorders is promising, but mixed. In a major, meta-analysis of randomized controlled trials for substance use disorders, Magill and Ray (2009) found that 58% of patients in the CBT condition fared significantly better than patients in the comparison condition and that 79% of patients had significantly better outcomes than those receiving no treatment. As a caveat, the authors reported that the positive effects had diminished at 6-month follow-up and more so at 12-month follow-up. This is consistent with Mueser et al. (2003), whose summary of a number of studies suggested that treatment for patients with dual disorders requires a long-term program with extended follow-up. Nevertheless, CBT focuses on skill acquisition, which assists in maintenance of gains, and there are supportive data suggesting durable therapeutic effects for substance use disorders at 1 year posttreatment (e.g., Epstein, Hawkins, Covi, Umbritch, & Preston, 2003).

There is evidence that CBT demonstrates superior efficacy in treating adults with substance use disorders compared to alternative treatment approaches *specifically when the patients are also clinically depressed* (Carroll et al., 1994; Lydecker et al., 2010; Maude-Griffin et al., 1998). The Maude-Griffin et al. (1998) randomized, controlled trial evaluated the comparative efficacy of CBT (using the Beck et al., 1993 manual) versus 12-step facilitation (12SF). The CBT group (12 weeks of treatment) was found more likely to achieve abstinence from crack cocaine than participants in 12SF. In order to be counted as a positive responder, patients had to report at least 30 days abstinence from cocaine and produce a cocaine-free urine sample. The sample represented a population considered to be ecologically valid, comprising a large proportion of unemployed, poorly housed patients. Similarly, a study found that alcohol-dependent individuals with elevated depressive symptoms who received CBT had better outcomes on alcohol use when they experienced an increased sense of self-efficacy in coping with negative mood states (Ramsey, Brown, Stuart, Burgess, & Miller, 2002). In an uncontrolled study of parolees receiving mandated treatment for substance abuse relapse prevention, the patient population was divided (post-hoc) into those who showed low distress versus high distress on measures of depression and anxiety at intake (Nishith, Mueser, Srsic, & Beck, 1997). The authors reported that patients in the high-distress group showed significant decreases in substance use, whereas the low-distress group did not. Nishith and her colleagues concluded that these data supported the hypothesis that CBT may be a more potent intervention for substance-abusing patients whose depression is prominent.

Deas and Thomas (2001) reviewed the controlled treatment studies for adolescents with substance use disorders. The authors found that the most promising results were obtained using cognitive-behavioral and family-based interventions. Kaminer and

Waldron (2006) note that a number of randomized controlled trials examining manual-guided CBT for youths offer support for the efficacy of both individual and group modalities. The authors emphasize that the reductions in substance use produced in the reviewed studies are not only statistically significant but also clinically meaningful.

Overall, the data on CBT for substance use disorders is not as extensive as the literature on CBT for many other disorders, and the outcomes present a complicated picture depending on the length of treatment, the specific substance(s) the patients misuse, and the presence or absence of comorbid mood disorders. Some studies show that CBT works best together with pharmacotherapy such as naltrexone (Anton et al., 1999; Anton et al., 2001) and disulfiram (Carroll et al., 2000; Carroll, Nich, Ball, McCance, & Rounsaville, 1998). Some studies emphasize the delayed emergence of CBT's efficacy at follow-up (Baker, Boggs & Lewin, 2001; Carroll et al., 1994), whereas the Magill and Ray (2009) meta-analysis reported a diminishing of CBT's efficacy in the absence of continued contact after termination. Additional studies provide evidence of the therapeutic benefits of CBT, but not as being significantly greater than other active treatments (e.g., Wells, Peterson, Gainey, Hawkins, & Catalano, 1994), while a multi-site study presented less encouraging data on CBT (e.g., Crits-Christoph et al., 1999). The latter study posited that the CBT condition could have been bolstered by placing greater attention on the therapeutic relationship, preventing attrition, and including therapists with greater prior experience specifically in addictions treatment. CBT has indeed emphasized alliance-enhancing methods in order to improve outcomes with difficult-to-engage patients (see Gilbert & Leahy, 2007).

Conclusion

Substance use disorders are serious, chronic problems that require powerful clinical interventions. Sufferers often experience a deterioration of their life situations and commonly meet criteria for comorbid psychiatric disorders. CBT can be an important part of the treatment package for patients who suffer from addictions, as it may be readily combined with pharmacotherapy and support group participation. Empirical evidence indicates that CBT has the potential to be an efficacious treatment for alcohol and other substance misuse, especially with adolescents and with adult patients who present with comorbid mood disorders. To produce more robust clinical results, CBT likely will need to go beyond a short-term model to including longer-time follow-up treatment, and further efforts will need to be made to bolster the therapeutic relationship and to limit attrition from treatment.

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