

## CHAPTER 17

# Advances in Cognitive-Behavioral Therapy for Substance Use Disorders and Addictive Behaviors

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It has been more than two decades since the publication of our text *Cognitive Therapy of Substance Abuse* (Beck, Wright, Newman, & Liese, 1993). Certainly our most exciting advance over these years is reflected in the title of this chapter; we have shifted our focus from exclusively “substance abuse” to the broad spectrum of “addictive behaviors.” When our text was published, one year prior to publication of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 1994), the word “addiction” was still considered a lay term. Back then, “behavioral addictions” were nowhere to be found in the DSM. At that time, which was considered the height of the cocaine epidemic, we focused exclusively on chemical addictions. However, over the years we have learned that addictions extend well beyond consumption of chemical substances to include an array of behaviors (e.g., gambling and Internet gaming). Now it is widely accepted that individuals who struggle with chemical and behavioral addictions have common cognitive features (e.g., Fortune & Goodie, 2012; Goodie & Fortune, 2013;

Grant, Potenza, Weinstein, & Gorelick, 2010; Merrill, Read, & Barnett, 2013; Shorey, Anderson, & Stuart, 2012).

Another advance (also reflected in the title of this chapter) has been to shift our emphasis from cognitive therapy to cognitive-*behavioral* therapy (e.g., Liese, 2014). The first author (BSL) recalls a discussion with Dr. Aaron Beck at a restaurant in the early 1990s, when Dr. Beck explained that he hoped to see “the end of cognitive therapy.” Naturally, this came as a surprise to BSL, who asked, “Why on Earth would you want an end to cognitive therapy?” Dr. Beck’s response was humble and forthright. He said, “I just want therapists to do good therapy. Someday we’ll refer to all *good therapy* simply as *psychotherapy*.” The point here is that Dr. Beck was more interested in formulating good therapy than branding his own therapy. Hence, we have moved away from the brand name cognitive therapy (CT) toward the generic cognitive-behavioral therapy (CBT). It should be noted that Beck’s daughter, Judy Beck (a highly respected scholar in her own right), refers to her own work now as cognitive behavior therapy (J. S. Beck, 2011).

So what is an addiction? The definition of addiction depends on your source. In fact, this term has been included in DSM only since 2013. According to DSM-5 (American Psychiatric Association, 2013), an addiction involves cognitive, behavioral, and affective symptoms; intense activation of the brain’s reward system; social impairment; risky behavior; continued use despite associated problems; and lowered levels of self-control, likely reflecting impairments of brain inhibitory mechanisms. This most recent edition of DSM (APA, 2013) includes other noteworthy changes from its predecessor. For example, rather than dividing addictions into two categories, abuse and dependence, substance use disorders (SUDs) and addictions are considered to be on a continuum from mild (2–3 symptoms), to moderate (4–5 symptoms), to severe (6 or more symptoms). Craving, defined as strong urges to use, has been added. Additionally, gambling disorder has been included as the first behavioral addiction, and Internet gaming disorder is included as another potential behavioral addiction in the “Conditions for Further Study” section in (APA, 2013, pp. 795–798).

Various researchers have focused their efforts on studying the full range of chemical and behavioral addictions. Perhaps most notable of these is Howard Shaffer, who introduced the addiction syndrome (Shaffer et al., 2004; Shaffer, LaPlante, & Nelson, 2012). The addiction syndrome is characterized by complex patterns that underlie all addictive processes. Rather than viewing each addiction (e.g., cocaine, alcohol, opioids, nicotine, gambling) as unique and separate, all addictions are regarded as having similar distal (past) and proximal (recent) antecedents, as well as consequences (e.g., expressions, manifestations, and sequelae). In other words, there are different manifestations of the addiction syndrome, but all reflect similar underlying processes. Evidence for the addiction syndrome includes shared

neurobiological elements (e.g., the brain's reward system is similarly activated by both addictive substances and behaviors), shared psychosocial elements (e.g., individuals with addictions tend to have similar psychological problems), and shared experiences (e.g., the course of addictive behaviors tends to be similar across addictions). The addiction syndrome provides a broad conceptualization of addiction that focuses on commonalities between the various addictive processes. According to this model, certain behaviors and chemicals have the potential to produce desirable, robust, reliable, and subjective *shifts* (Shaffer et al., 2012, p. xxxi). As in DSM-5, it is assumed that both chemical and behavioral *shifters* similarly activate the brain's reward centers.

Addictive behaviors adversely affect millions of people. Alcohol is the most widely consumed potentially addictive substance (besides caffeine), with slightly over half of adult Americans reporting past month use. The National Survey on Drug Use and Health (NSDUH, 2015) reported that in 2014, 6.2% of all respondents were heavy alcohol users. Approximately 10.2% of Americans reported using an illicit drug in the past month (primarily marijuana and nonmedical prescription pain relievers). Tobacco use has slightly decreased since prior years but is still present in 66.9 million Americans ages 12 or older. Rates of behavioral addictions generally appear to be lower. Approximately 1% of the adult population has a severe gambling problem (Kessler et al., 2008), but 6 to 9% of young adults experience problems related to gambling (Barnes, Welte, Hoffman, & Tidwell, 2010). Internet gaming disorder is under consideration as an addictive behavior in DSM-5; prevalence rates vary in Europe and North America but may be as high as 8% for males and 5% for females in Asian countries (DSM-5, 2013).

What are the consequences of SUDs and addictive behaviors? There are many shared biological, psychological, and social consequences of different types of addictive behaviors. However, each addictive behavior may lead to unique consequences that warrant mentioning. Excessive alcohol consumption is among the highest contributors to disease burden. Long-term consequences include liver disease (e.g., cirrhosis), heart disease, cancer, hepatitis, and pancreatitis. Short-term consequences of excessive alcohol consumption may include accidents, injuries, and academic or occupational difficulties. Excessive gambling may lead to financial problems and overwhelming debt. Individuals who smoke cigarettes experience a variety of medical illnesses, including but not limited to pulmonary and heart disease. Intravenous drug use may lead to infections (e.g., sepsis) and ultimately death.

Although marijuana is largely considered to be a "safe" substance in comparison to alcohol and other drugs, it is not without negative effects. Short-term consequences include difficulty thinking, problem solving, and impaired memory, while the long-term consequences may be impaired

academic functioning for those who used heavily during adolescence (Meier et al., 2012). Other physical ailments may include breathing problems, increased heart rate, and child developmental delay for those who were exposed to marijuana in utero (National Institute on Drug Abuse [NIDA], 2016).

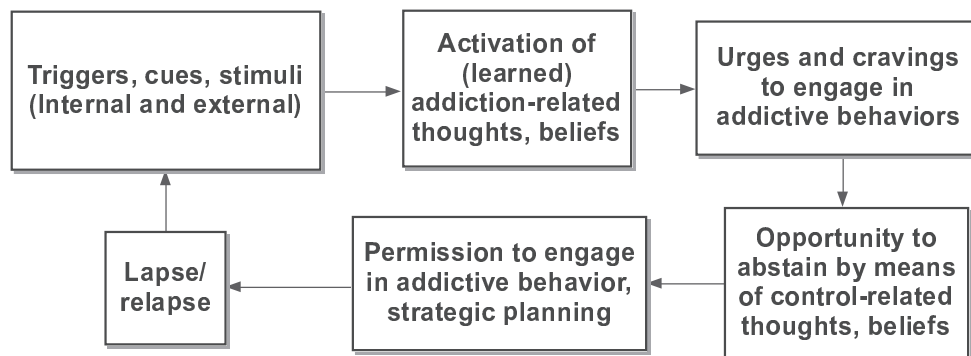
Mark Griffiths is another researcher who focuses on mechanisms underlying chemical and behavioral addictions. Griffiths (2005) describes six components of addiction that include (1) salience, (2) mood modification, (3) tolerance, (4) withdrawal, (5) conflict, and (6) relapse. *Salience* refers to the high degree of importance placed on the addictive behavior by the addicted person. The addictive behavior may become the most significant activity in life, dominating thoughts, feelings, and behaviors. Addicted individuals may spend most of their time engaging in addictive behaviors or thinking about future opportunities to do so. *Mood modification* occurs when the addictive behavior or substance use creates a subjective experience of momentary satisfaction (the “high”), which may eventually lead to self-medication in attempts to feel better, happier, or less depressed. *Tolerance* occurs when individuals require increasing amounts of a behavior or substance to attain former desired effects (e.g., requiring increased amounts of cocaine to achieve the same high or increasing the bet amount in gambling). *Withdrawal* symptoms are the psychological and physiological states that occur after discontinuing the activity or substance. It is important to note that physical withdrawal symptoms may occur in both substance and behavioral addictions. For example, in one study of pathological gamblers, 65% reported at least one physical symptom such as headaches, upset stomach, or loss of appetite while attempting to decrease or discontinue gambling (Rosenthal & Lesieur, 1992). *Conflict* refers to both *interpersonal* and *intrapersonal* struggles resulting from addictive behaviors. Interpersonal difficulties may occur between addicted individuals and those around them, and intrapersonal conflict may occur when individuals are distressed about the consequences that result from their addictive behaviors. *Relapse* occurs when the individual reverts to previous patterns of addiction activity, violating a commitment to reduce or abstain from that activity. Griffiths (2005) asserts that the presence of all six components is necessary for a behavior to be defined as an addiction, and if the behavior does not interfere with one’s functioning, it is likely not an addiction.

## CBT MODEL OF SUDs AND ADDICTIVE BEHAVIORS

Our basic cognitive-behavioral model of SUDs and addictive behaviors (Figure 17.1) has not changed much over the last twenty-four years. In fact, our work with thousands of addicted individuals across diverse addictive

behaviors has continually validated this model. We regularly observe that SUDs and addictive behaviors are maintained by self-reinforcing cycles of thoughts, feelings, and behaviors. The pattern is simple: following triggers that may be internal or external, learned addiction-related thoughts and beliefs are activated. These thoughts and beliefs contribute to urges and cravings to engage in addictive behaviors. And despite opportunities to abstain, addicted individuals continue to engage in their self-defeating behaviors, often with permission-granting thoughts that lead to lapse and relapse cycles.

A fictitious case example of binge eating (often characterized as addictive behavior) will help to illustrate our model. “Mary” is a 55-year-old divorced woman who lives alone and works at a factory job where she makes just enough money to pay her bills. Mary has struggled with addictions her whole life. At the present time, she only struggles with binge eating, though in the past she has been addicted to marijuana, alcohol, cocaine, cigarettes, gambling, and shopping. Figure 17.2 reflects Mary’s typical thoughts, feelings, and behaviors associated with binge eating and her prior addictions. In Mary’s case, external triggers like being alone, and internal emotional triggers such as loneliness, boredom, and despair activate addiction-related thoughts such as “I can’t stand it,” “I want to feel better,” and “It’ll taste so good.” Mary’s beliefs that overeating provides relief from loneliness lead her to experience urges to eat and craving for her favorite foods. Not included in this basic model but pertinent to Mary’s beliefs are the distal antecedents that involve her relationship with food as a child. Growing up with unpredictably angry parents, Mary learned to view food as a source of comfort and fulfillment (more on the development of cognitive-behavioral patterns in the next section). After having these thoughts, Mary can choose to abstain from overeating (e.g. “I know I shouldn’t be eating right now”), but she overrides this restrictive thought with permission by saying “What

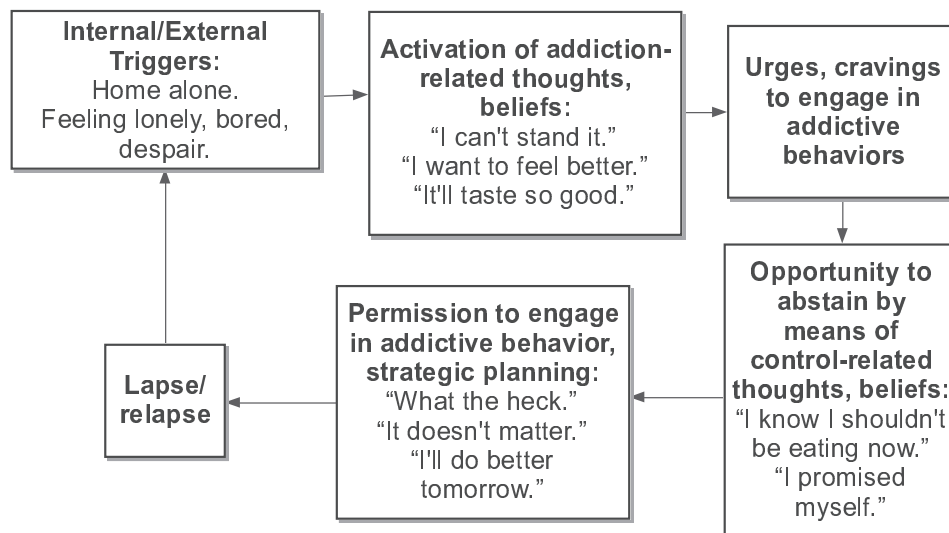


**FIGURE 17.1.** Basic CBT model of SUDs and addictive behaviors.

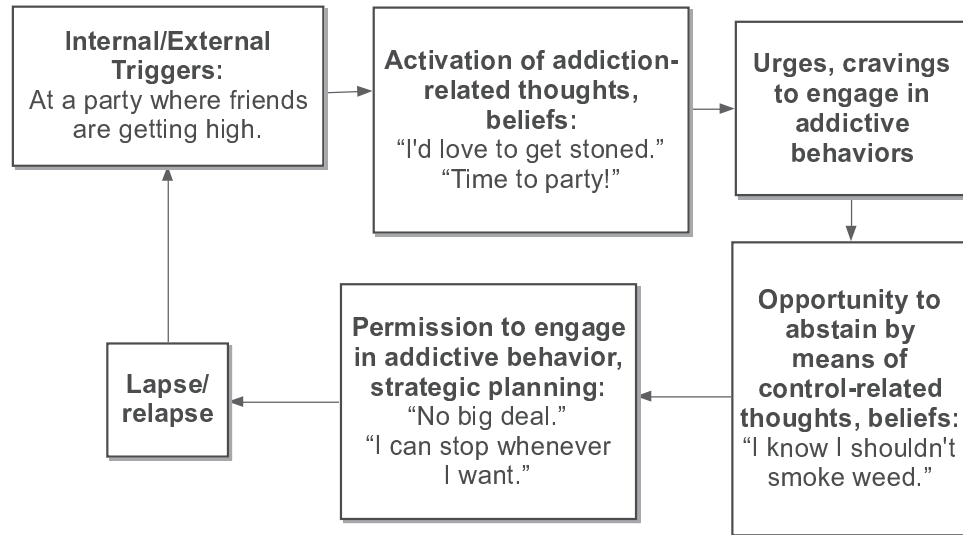
the heck. It doesn't matter anyway." Mary then engages in the instrumental behavior of driving to the grocery store and stocking up on her favorite junk foods (pizzas, chips, and ice cream). Finally, she binge eats all of the purchased food and then feels an even greater sense of despair.

This model is readily applied to other SUDs and addictive behaviors, including cigarette smoking, excessive drinking, problem gambling, and more. Figure 17.3 illustrates the fictitious case example of "Brian," who is addicted to marijuana. Brian regularly parties with friends who smoke marijuana. The sights, sounds, and smells of partying naturally trigger intense craving as Brian observes his friends getting high. Despite a desire to quit or cut down his marijuana consumption, he experiences automatic thoughts such as "I'd love to get stoned" and "Time to party." These thoughts cause strong craving for marijuana, but after having these thoughts Brian always has the option to abstain as he reminds himself, "I know I shouldn't be smoking weed." Brian instead gives himself permission to get high, thinking "No big deal" and "I can stop whenever I want." Brian proceeds to smoke several joints with his friends at the party.

In 1998, we introduced the developmental CBT model of substance use disorders and addictive behaviors (Liese & Franz, 1998). Since the introduction of this model, we have made some subtle modifications, somewhat influenced by the work of Shaffer et al. (2004, 2012), reflecting our greater understanding of distal and proximal antecedents. As can be seen in Figure 17.4, distal antecedents include neurobiological and psychosocial early-life experiences. These distal antecedents lead to cognitive, behavioral, and



**FIGURE 17.2.** Cognitive-behavioral model of binge eating and the case of Mary.



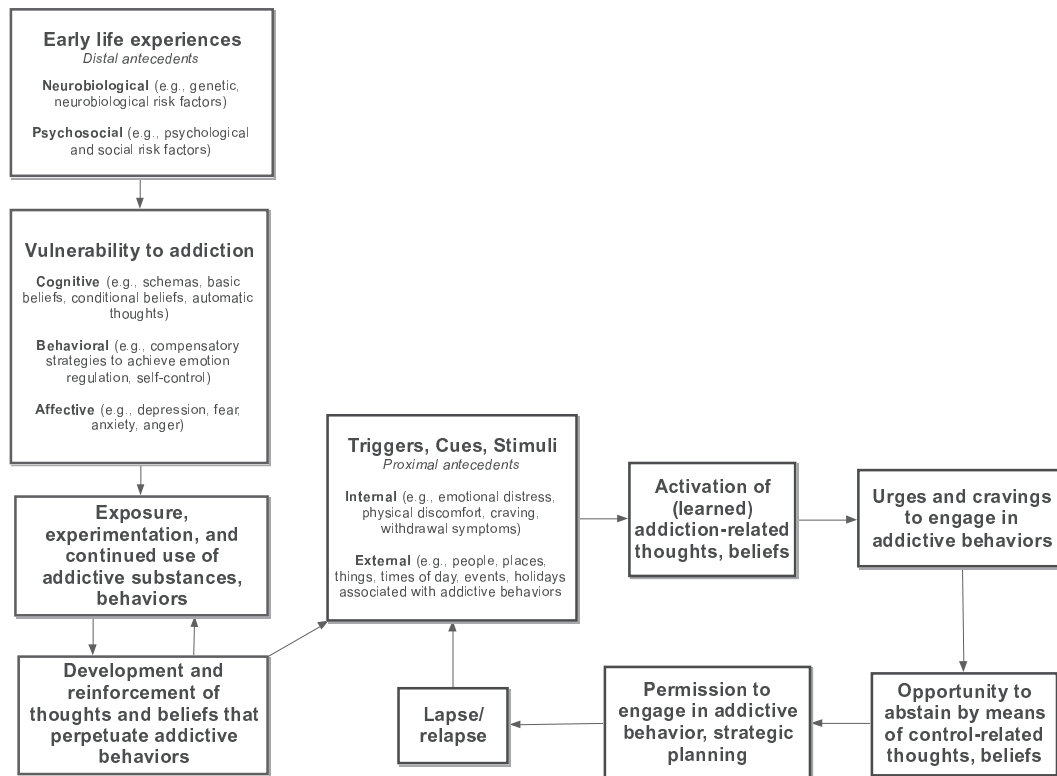
**FIGURE 17.3.** Cognitive-behavioral model of marijuana addiction and the case of Brian.

ffective vulnerabilities to addiction. Most individuals who are exposed to and experiment with addictive substances and behaviors do not develop addictions. However, those who are cognitively, behaviorally, and affectively vulnerable to addictions go on to develop thoughts and beliefs that perpetuate addictive behaviors. As mentioned earlier, Mary struggled with various addictive behaviors for most of her life. These likely functioned as compensatory strategies to deal with maladaptive cognitive, behavioral, and affective processes that developed in her volatile home environment. It should also be mentioned here that Mary has an extensive family history of problems related to substance misuse, making it likely that she is genetically at risk for addictions. No doubt, all of these distal antecedents have led Mary to pursue instant gratification wherever she might find it.

## CLINICAL APPLICATION OF CBT FOR SUDs AND ADDICTIVE BEHAVIORS

When we first began treating people with SUDs and addictive behaviors, we focused primarily on individual therapy. Then in the late 1990s another advance occurred: we began to develop *group* CBT for SUDs and addictive behaviors (Liese, Beck, & Seaton, 2002; Wenzel, Liese, Beck, & Friedman-Wheeler, 2012). Our first experiences with group CBT convinced us that both individual and group CBT were beneficial for people with addictions. Patients found each modality to be helpful, and many chose to participate





**FIGURE 17.4.** The developmental CBT model of SUDs and addictive behaviors.

in group and individual CBT concurrently, describing them as complementary. In this section, we discuss the clinical application of CBT for SUDs and addictive behaviors in both individual and group settings.

Cognitive-behavioral therapy for SUDs and addictive behaviors has five important components. While individual and group therapy for addictions differ in some important ways, both emphasize the importance of these components: (1) structure, (2) collaboration, (3) case conceptualization, (4) psychoeducation, and (5) specific techniques. Individual CBT sessions follow a carefully designed structure that includes the following elements: agenda setting, mood check, bridging from the last session (including any homework assigned), prioritizing and discussing agenda items, assigning new homework, feedback, and closure. At the beginning of each session, the therapist and patient work together to establish an agenda. Therapists ask questions like “What do you want to put on our agenda?” or “What would you like to work on today?” After generating a list of agenda items, they choose the items most important to the patient and discuss them with the intention of problem solving. It is important for patients to provide and prioritize agenda items for several reasons. First, doing so increases the



likelihood that essential issues and concerns are discussed in each session. Second, it sets the stage for sessions that will be well structured. And third, asking patients for agenda items shows that patients are ultimately responsible for identifying and articulating their problems. Following agenda setting, therapists conduct a brief mood check to determine how the patient feels. This is particularly important since addictive behaviors often function to regulate emotions. Homework is another important component of cognitive therapy. Patients are reminded that they are only in therapy one of many hours per week, and their time outside of therapy is their opportunity to fully acquire and practice skills discussed in session. As with setting the agenda, homework assignments are chosen in a collaborative manner, with therapist and patient working together to determine appropriate assignments that continue the work begun in session. At the end of sessions, therapists are encouraged to summarize and elicit feedback by asking, “What have you gotten out of today’s session?”

Group CBT for addictions is structured differently from individual CBT. Group CBT sessions average ninety minutes in length. Ideally, groups consist of five to eight members, and enrollment is open (i.e., “rolling”). Group members are welcome to concurrently pursue approaches that have been helpful in the past (e.g., individual psychotherapy, 12-step programs, SMART Recovery, and other mutual help programs). Individual members’ goals are variable, with some members seeking help with abstinence, others seeking to reduce the harm associated with their addictive behaviors, and still others seeking new skills (e.g., emotion regulation, interpersonal communication, and impulse control strategies).

The elements of group CBT for addictions include facilitator introductions, member introductions, a presentation of problem-solving strategies (based on group member needs), the assignment of homework, and closure. Facilitators introduce themselves at the beginning of each group, providing reminders of group purpose, structure, and rules (e.g., regarding confidentiality). Following facilitator introductions, group members introduce themselves to the rest of the group. In addition to their names, group members describe their addictive behaviors, including the status of these behaviors. They discuss their goals for therapy, and in doing so they reveal their stage of readiness to change (Norcross, Krebs, & Prochaska, 2011). For example, a member who states “I am taking steps to stop smoking” might be considered in the preparation stage of change, while a member who states “I might eventually cut down on my drinking, but not yet” might be considered in the contemplation stage of change. It is likely that personal goals and readiness to change will vary *between* members and *within* members. For example, some group members may only be contemplating abstinence from gambling but maintaining years of abstinence from alcohol and cocaine. At the same time, other group members will likely still be engaged in their addictive behaviors, and some might even report that

they don't yet need to change any behaviors (e.g., "I'm here because my wife is threatening divorce and I may learn something"). As a result, facilitators should be prepared to use harm-reduction strategies, skill-building strategies or abstinence-related strategies with patients.

Because cognitive-behavioral therapy tends to be more structured and goal-oriented than other types of therapy, it is important for therapists and patients to work in *collaboration* with one another throughout individual and group therapy. During individual therapy, collaboration involves the development of strong one-on-one relationships, while in group therapy this process is more complex. In the group context, the therapist must collaborate with individual group members and simultaneously facilitate collaboration between members.

Wishing to be helpful, some therapists urge patients to make changes before they are ready to do so. Insisting that patients change likely does more to alienate them than facilitate change. A common misconception of CBT is that change techniques are more important than collaboration, but in fact a collaborative relationship is the foundation on which therapy succeeds. Disregard for collaboration at the beginning of therapy will likely lead to patient dissatisfaction, disengagement from therapy, and dropout (Liese & Beck, 1996). Empathy is essential to collaboration in therapy. For example, consider a patient who presents in therapy with heavy drinking related to comorbid depression. A therapist who has difficulty understanding how depression can lead to addictive symptoms might blame the patient for relapse or for having difficulty practicing new skills. A high degree of empathy helps therapists better understand the kinds of thoughts that lead to relapses (e.g., "I'll never really feel better, so I may as well keep drinking") and difficulty completing homework (e.g., "I'm too hung over and depressed to get out of bed today. I'll just tell my therapist I couldn't get it done"). It is not uncommon for therapists to become frustrated with patients' addictive behaviors, relapses, and other self-destructive behaviors, especially if they are unfamiliar with addictive processes. It is essential for therapists to have a foundational knowledge of addictive behaviors and genuinely empathize with patients.

Also important to the collaborative process is setting mutual goals for therapy. Many patients initiate therapy hoping to change certain behaviors without realizing they are not ready to make these changes. Therapists are encouraged to work with patients to create appropriate and achievable goals. Although therapists might believe that abstinence from the substance or behavior is best for patients, it is important for therapists to "meet patients where they're at" in their readiness to change. This is not to imply that therapists have no say in helping the patient increase readiness, but therapists should be prepared to witness lapses and relapses without reacting negatively. Techniques such as motivational interviewing or harm reduction are appropriate when patients continue to engage in addictive

behaviors despite negative health, psychological, or social consequences. However, as with any negotiation in therapy, the goal-setting process might lead to ruptures in the alliance (Safran, Muran, & Eubanks-Carter, 2011). These ruptures might result from differences between therapists' and patients' beliefs about the appropriateness of each other's goals. Therapists should pay close attention to rupture markers (e.g., patient anger, dissatisfaction, or withdrawal) and attempt to thoroughly discuss and effectively repair ruptures. Ruptures may actually create opportunities to strengthen the therapeutic alliance and help patients make even further gains—as long as they are satisfactorily repaired (Safran et al., 2011; Stiles et al., 2004).

Also important to CBT for treating SUDs and addictions is the *case conceptualization*. Therapists should take all necessary steps to understand patients' presenting problems, current life issues, and developmental history in order to have a greater understanding of the processes contributing to current addictive behaviors. Essential to this process is therapist empathy in that therapists might misconstrue or ignore important information without empathetic listening. Therapists should convey the case conceptualization directly to patients in order to provide them with a clear understanding of the various processes contributing to their addictive behaviors (e.g., maladaptive thoughts, traumatic childhood experiences, current relationship difficulties). This conveying of information provides a greater sense of collaboration between therapists and patients and helps patients feel empowered to change by providing a greater understanding of the processes contributing to their addictive behaviors.

The case conceptualization helps therapists make decisions about the choice and timing of interventions. While some therapists are most concerned with targeting proximal (current) addiction triggers, thoughts, feelings, and behaviors, it is important to be cognizant of distal factors (i.e., childhood and past experiences) that contribute to current addictive behaviors. Take for example Mary, who grew up in an emotionally abusive home where she was told, "You are stupid." When Mary first experimented with drugs as an adolescent, she learned that she did not feel stupid while she was high on marijuana or other drugs. She also found that eating her favorite foods effectively distracted her from emotional distress. Drug use and food consumption were therefore influenced by her distal experiences. Important background information like this should not be ignored in conceptualizing her case. When Mary recognizes that she overeats in an effort to find comfort (as she learned to do as a child), she better understands that she needs to find comfort in healthier ways.

Comorbid disorders including depression, anxiety, personality disorders, and schizophrenia are common among individuals with SUDs and addictive behaviors. However, rather than treat the comorbid disorder as a separate entity, it is important for clinicians to treat all psychological problems concurrently. While some disorders such as schizophrenia or

bipolar disorder typically require pharmacotherapy, other disorders including depression, personality disorders, and anxiety are likely to respond well to CBT alone. Integrating the comorbid disorder into the case conceptualization helps clinicians understand how the disorder is contributing to the patient's addictive behaviors. Many addicted individuals report that they are "using drugs to self-medicate." Hence, acquiring skills to cope with emotional distress is especially important for patients who report that they are self-medicating. For example, individuals with social anxiety who use alcohol in social situations to reduce anxiety will likely benefit from interventions that challenge thoughts related to fear of social judgment. As they are able to challenge thoughts and beliefs that lead to anxiety, the need to self-medicate with alcohol likely decreases.

As is true regarding collaboration, case conceptualization is more complex in group therapy than individual therapy. In addition to conceptualizing individual group members, therapists must conceptualize group dynamics (e.g., cohesiveness, conflict, modeling, etc.) and then address these dynamics.

Also important for treating SUDs and addiction is *psychoeducation*, the deliberate facilitation of learning and skill acquisition. The process of psychoeducation is sometimes referred to as socialization because its aim is to profoundly influence how patients view themselves, their personal worlds, their relationships, and their future. Some examples of psychoeducation include discussing the general CBT model, the positive and negative effects of substance use, and how substance use may affect thoughts, feelings, and behaviors. Patients with addictive behaviors often struggle with personal issues for years prior to entering CBT, and many have engaged in other types of treatment (e.g., 12-step programs) that are not CBT-based. Clinicians are encouraged to work collaboratively as they orient patients to the CBT approach and to be patient with those who have difficulty understanding various concepts (e.g., schemas, basic beliefs, and automatic thoughts). Therapy is less effective when therapists and patients cannot understand each other's views, and therefore clinicians should regularly check patients' understanding—especially during sessions that are highly education-oriented. Ultimately, the goal of CBT for SUDs and addictions is to create a learning environment where skills are acquired and applied in the "real world" so the therapist is no longer needed.

A strongly emphasized concept in CBT is that *thoughts influence feelings and behaviors* (i.e., "You are what you think"). Many patients enter therapy blaming external circumstances for their problems or emotional difficulties, and it is important for therapists to emphasize that emotions are largely influenced by patients' own internal processes. For example, patients who continually attribute emotions and behaviors to external causes (e.g., "He hurt my feelings" or "I started drinking because everyone else at the party was drinking") should be reminded that their emotions

and behaviors are best understood as products of their own thoughts and beliefs. This will help patients in future high-risk situations to ask themselves, “What am I thinking that’s causing me to feel the way I do?” and “What are the thoughts leading to my addictive behaviors?”

*Techniques* are structured activities designed to facilitate skill development. Examples of techniques include the daily thought record, advantages–disadvantages analysis, scaling, functional analysis, and more. In some ways, these techniques are easier to teach in a group CBT setting because they can be learned from direct instruction or vicariously, as group members watch each other develop important skills. As previously mentioned, techniques are considered to be the “tools” that patients are taught and encouraged to practice during the course of therapy. It is hoped that they put these skills to use so that they will no longer need the therapist’s help and can conduct, for example, an advantages–disadvantage analysis on their own.

As mentioned earlier, the five main components of CBT (structure, collaboration, case conceptualization, psychoeducation, and techniques) work in conjunction with each other. For example, an accurate case conceptualization facilitates timely and effective psychoeducation, structure, and the appropriate application of techniques. At the same time, when shared with patients, it facilitates a more collaborative relationship. When therapy is well structured and collaborative, the case is well conceptualized, psychoeducation is effectively presented, and techniques are timely and customized to patients’ needs, patients tend to believe, “This therapy makes sense and is likely to help me.”

## RESEARCH ON CBT FOR SUDs AND ADDICTIVE BEHAVIORS

Cognitive-behavioral therapy for individuals with SUDs and addictions, including alcohol and illicit drug use disorders, has been shown to have significant effects in various meta-analyses (e.g., Magill & Ray, 2009). In the largest meta-analysis of randomized controlled trials (RCTs) for substance use disorders, Magill and Ray found that CBT had statistically significant effects compared to other treatment approaches. They reported that 58% of subjects receiving CBT did better than subjects in the comparison condition and that 79% of subjects treated with CBT did better than subjects receiving no treatment. Reflecting the chronic nature of addictions, they also found that effects for CBT diminished over time, with lower effects at six- to nine-month follow-ups and much lower effects at twelve months. These findings are analogous to research on chronic medical conditions (e.g., diabetes), where symptoms worsen when treatment is discontinued. Magill and Ray also found that women benefited more from CBT than men,

and CBT for marijuana use disorder demonstrated larger effect sizes than effect sizes found when treating other substance use disorders. And finally, no differences in effects were found between individual and group CBT modalities for treating addictions. It has been hypothesized that CBT leads to long-term and lasting changes due to its emphasis on skill development that may at first lead to abstinence but may also apply to a wide variety of co-occurring issues (Carrol & Onken, 2005). Another meta-analysis found relapse prevention, a CBT treatment that focuses on immediate and distal mechanisms that lead to relapse, effective in treating several substance use disorders, including alcohol, smoking, and polysubstance disorders (Irvin, Bowers, Dunn, & Wang, 1999). Another study demonstrated that despite initially revealing less significant effects than a contingency management treatment, CBT had more durable effects one year posttreatment (Epstein, Hawkins, Covi, Umbricht, & Preston, 2003).

CBT has also been shown to be effective in treating nicotine dependence (Webb, de Ybarra, Baker, Reis, & Carey, 2010; Marks & Sykes, 2002) and Internet gaming disorder (Young, 2013). Several studies have used CBT in addition to pharmacotherapy (e.g., nicotine replacement therapy) in treating nicotine dependence. For example, Marks and Sykes's (2002) randomized controlled trial of CBT with economically disadvantaged individuals found that one in five smokers who received CBT was fully abstinent twelve months postintervention. The authors also found that CBT was significantly more efficacious and cost effective than health education or advice alone. Webb and colleagues' (2010) RCT of group-based CBT for smoking cessation among African Americans found that in comparison to general health education, CBT showed higher abstinence over time.

Although Internet gaming disorder has yet to be examined in RCTs, a preliminary study found that after receiving twelve weeks of CBT for Internet addiction, 95% of participants were able to manage their symptoms and 78% kept those gains after six months (Young, 2013).

Compulsive buying might be well understood as an addictive behavior, though it is not currently characterized as such in DSM-5. It is easily argued that compulsive buying warrants further research and treatment, given the economic burden and psychological suffering often associated with it. Although there are no known RCTs that have examined CBT for compulsive buying, a preliminary trial found group CBT to be superior to a telephone guided self-help condition (Müller, Arikian, Zwaan, & Mitchell, 2013). Overall, CBT appears to be an effective treatment for a wide range of SUDs and addictive behaviors.

As previously discussed, addictive behaviors frequently co-occur with other psychological disorders. The prevalence of substance use disorders among individuals with a mood disorder or anxiety disorder is approximately 20% and 15%, respectively (Grant et al., 2004). The presence of a psychological disorder increases the risk of future nicotine, alcohol, or



drug dependence (Swendsen et al., 2010). Addictive behaviors may also increase one's risk for future mental illness, as they may lead to trauma exposure and negative side effects of the substances or behaviors. The DSM-5 also contains several "substance-induced" disorders (e.g., substance-induced mood disorder, psychotic disorder, sleep disorder), which are a direct result of substance use. RCTs have demonstrated that CBT for co-occurring disorders is effective in treating both disorders simultaneously. For example, one study found that integrated CBT for comorbid depression and substance dependence showed more substantial decreases in substance use over time compared to a 12-step facilitation treatment (Lydecker et al., 2010). Another study found that a CBT for depression demonstrated greater decreases in substance use and depressive symptoms and negative consequences from using over time compared to a usual care group (Hunter et al., 2012). It is not uncommon for CBT to be offered in conjunction with other interventions for individuals with comorbid disorders. For example, CBT may be combined with mindfulness meditation for individuals with comorbid anxiety or depression. Integrated CBT (ICBT) for comorbid posttraumatic stress disorder (PTSD) and substance use that included mindful relaxation and flexible thinking demonstrated reductions in PTSD symptoms and produced better outcomes in toxicology screens than the other two conditions (individual addiction counseling and standard care; McGovern et al., 2015). Those in the ICBT condition also self-reported less illicit drug use than the standard care group.

## CONCLUSIONS

In this chapter, we have described advances in cognitive-behavioral therapy for SUDs and addictive behaviors. Over the years we have made some changes to our approach, but most of these changes reflect advances in the field of addiction psychology. For example, in the past it had been thought that addictions must involve the ingestion of *substances* (e.g., alcohol, nicotine, marijuana, opioids), but recently experts have agreed that *behaviors* can be addictive (e.g., gambling, Internet gaming). Furthermore, it is now well understood that chemical and behavioral addictions can be equally refractory and devastating.

Almost twenty years ago, we published a chapter outlining lessons learned while providing cognitive therapy to people with SUDs and addictive behaviors (Liese & Franz, 1998). It should not come as a surprise that many of the lessons learned back then are still pertinent today. For example, when treating people with SUDs and addictions, we are continually reminded that addictive behaviors function as compensatory strategies for individuals who have not developed effective coping skills. Therefore, a substantial component of therapy must involve skill building (e.g., emotion



regulation, impulse control, interpersonal skills). We continue to understand that CBT consists of interrelated components that are all important (i.e., structure, collaboration, case conceptualization, psychoeducation, and techniques); none should be overlooked or minimized in treating SUDs and addictions. We regularly find that relationship ruptures are common when treating people with addictive behaviors. Ruptures may result when therapists become frustrated with patients or patients become frustrated with therapists—especially when they do not agree on goals or a time frame for making changes. It is essential for therapists to understand how these ruptures occur and to resolve them in ways that enable the therapeutic relationship to grow. Finally, given the pervasiveness of addictive behaviors and their comorbidity with other psychological conditions, all therapists should be open to participating in the diagnosis and treatment of SUDs and addictive behaviors (Liese & Reis, 2016).

Over a quarter-century ago, Dr. Beck wrote a now classic *American Psychologist* article as a thirty-year retrospective of cognitive therapy (Beck, 1991). The last two sentences of his article are poignant: “At this point in time, cognitive therapy is no longer fledgling and has demonstrated its capacity to fly under its own power. How far it will fly remains to be seen” (p. 374). We feel fortunate to have been in the right place at the right time with Dr. Beck, applying CBT to such an important and salient mental health issue. We are now confident in the value of CBT for treating SUDs and addictive behaviors and, like Beck back in 1991, we look forward to seeing how far it will fly.

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