

PSYCHOTHERAPIES FOR ADDICTION: EMPIRICALLY SUPPORTED INTERVENTIONS FOR THE ADDICTION SYNDROME

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The core aspect of the proposed addiction syndrome is that various addictive behaviors share similar biopsychosocial antecedents and consequences. The common etiologies and shared manifestations of addictive behaviors would suggest that a single treatment approach might cut across the unique expressions of the addiction syndrome (i.e., alcohol, drug, and gambling disorders); however, individual treatment components that are specific to each disorder might also continue to play a major role. The shared and unique consequences of the various expressions of the addiction syndrome provide an opportunity to evaluate what treatments work for which disorders and (most important) why a particular treatment or treatment component is effective.

In considering what works and why a particular psychotherapy is effective, it is critical to consider the common factors debate in the psychotherapy literature. Researchers proposed in 1936 that implicit common factors could explain psychotherapy outcomes across diverse treatment approaches (Rosenzweig, 1936). The common factors hypothesis basically states that small differences in psychotherapy outcomes across a range of very different treatments are best explained by aspects of psychotherapy that are common to all treatments, such as the therapeutic alliance and gains in self-understanding (Luborsky, 1995). In many ways, the common factors hypothesis is harmonious with the notion of an addiction syndrome. For example, the common factors hypothesis and the addiction syndrome model both propose that specific treatments might be equally as effective in treating the

addiction syndrome because of the shared antecedents and consequences of various addictive behaviors. Numerous meta-analyses and qualitative reviews of the literature (e.g., Wampold et al., 1997) have supported the common factors hypothesis, although many in the field who contend that specific treatment elements (i.e., non-common factors) are a critical component of empirically supported treatments have sharply criticized it (Beutler, 2002; Chambless & Ollendick, 2001). One of the many concerns of those who are opposed to the common factors hypothesis is that not all individuals respond to all treatments in the same way. This suggests that even if the net effect of treatment across active treatments is equal (a finding that supports the common factors hypothesis), it does not necessarily mean that all treatments work equally as well for all individuals (Beutler, 2002). It is the case that within-person variability (i.e., heterogeneity) in treatment response is one of the hallmarks of addiction treatment outcomes (Witkiewitz & Marlatt, 2007), and thus the notion that all treatments work equally as well for individuals with addictive disorders remains without support. Rather, research has suggested that several specific psychotherapies, which are the focus of this chapter, are effective for a variety of addictive behaviors in diverse settings and clinical populations.

In this chapter, we describe and review the research evidence in support of behavioral therapies (including cognitive-behavioral therapies [CBTs]), motivation enhancement interventions, 12-step approaches, and family psychotherapies as well as

how each of these treatments might be effective within an addiction syndrome model. Research has shown that all of the therapies reviewed in this chapter are effective for alcohol and drug use disorders, with some also showing efficacy in the treatment of gambling disorders.

BEHAVIORAL THERAPIES

Regardless of learning history or the neurobiological or genetic influences on addictions, the products of the addiction syndrome are behaviors. Gambling, drug use, drinking, sex, Internet use, and shopping are all examples of human behaviors. Given this simple fact, it is not surprising that behavioral and CBTs are two of the most effective psychotherapies for addiction. The range of different behavioral and CBTs is wide, far too many to describe in a single chapter. The component that is common to all of the behavioral therapies is a primary focus on learning history and current behavioral expression. Many of the behavioral therapies ask these questions: “What is maintaining the addictive behavior?” and “How can one change behavioral contingencies to reduce or eliminate the addictive behavior?” CBTs often add an additional focus on cognitions that are related to the addictive behaviors (e.g., expectancies for the outcome of using, self-efficacy to abstain from using). In this chapter, we focus on four specific behavioral therapies: aversion therapy, contingency management (CM), community reinforcement, and behavioral couples therapy. We propose that all of the behavioral therapies reviewed in this chapter are useful treatments from an addiction syndrome perspective because of their generality to various addictive behaviors.

Aversion Therapy

Aversion therapies rely on principles of classical conditioning, in that the goal of treatment is for clients to learn an association between something aversive and their drug or behavior of choice. Treatment providers have used electric shock, chemical therapies that induce nausea, and negative imagery as aversion therapies. Research has suggested that such therapies have demonstrated efficacy in the treatment of alcohol use disorders (see Miller &

Wilbourne, 2002, for a review of several studies) and nicotine dependence (see Piasecki, 2006, for a review). However, the efficacy data of aversion treatments for other addictive behaviors, including nonchemical expressions, are lacking or inconclusive because of ambiguities in measurement and lack of control groups (Toneatto & Ladouceur, 2003).

Contingency Management

The CM approach has three key components: monitoring an individual, offering tangible positive rewards, and withholding rewards. Monitoring includes conducting urinalysis or blood tests at a recommended frequency of two to three times per week. Immediately after results of the urinalysis or tests, a provider should offer tangible positive rewards in exchange for a negative test result (indicating no substance use). If the test result is positive (indicating substance use), then the provider should withhold rewards by revoking previously earned rewards or withholding additional rewards (Petry, 2001).

Multiple patient settings are suitable for CM, but inpatient or intensive outpatient settings are ideal so that the provider can monitor substance use directly and provide behavioral contingencies immediately after a test result (e.g., positive reinforcement for a clean urinalysis). Reinforcers for CM are generally vouchers or cash, but they can vary by practice. Vouchers can be redeemable for credit toward approved goods, gift certificates, or clinic privileges (such as a set parking spot, smoking breaks, or outdoor breaks). The magnitude of the reinforcer is also important to take into account: The reinforcer must be large enough to contend with the reinforcement that one gets from the behavior one is seeking to change (Petry, 2001). Once the user has remained abstinent for a few months, the provider can lessen the magnitude of the reinforcer (Litt, Kadden, Kabela-Cormier, & Petry, 2008).

CM has demonstrated a higher rate of early abstinence and a higher treatment retention rate than comparison treatments (Carroll et al., 2006; Litt et al., 2008). CM has also demonstrated effectiveness when combined with other treatments such as motivation enhancement therapy (MET), CBT, and coping skills training. Research has

indicated that MET combined with CBT and CM results in greater abstinence over time than CBT alone (Litt et al., 2008). The high rate of early abstinence through CM is a promising start because this new mindset of being able to abstain from drug use influences patients' self-efficacy, further motivating them to abstain (Litt et al., 2008). Once patients are able to maintain abstinence, combining CM with other skills-based treatments, such as MET and CBT, might yield greater long-term results.

As described in more detail later, research has suggested that CM (in combination with other treatments or by itself) is effective for a range of expressions of addiction. However, the effectiveness of CM for pathological gambling remains mainly untested, and in fact, pathological gambling has been an exclusion criteria in some CM trials (e.g., Petry et al., 2004) because of concerns that prize reinforcement is similar to gambling. Although more research on the utility of CM in the treatment of pathological gambling is needed, it is intriguing to note this example as one case in which the treatment of one expression of the addiction syndrome (e.g., cocaine dependence) might be ineffective or even harmful for another expression of the addiction syndrome.

Community Reinforcement Approach

The primary goal of the community reinforcement approach (CRA) is to manipulate and rearrange possible situations in the patient's environment, such that the user experiences greater reward from sober interactions than from substance use behaviors (Meyers & Squires, 2001). Patients are able to set achievable goals with social, recreational, familial, and vocational reinforcers (Meyers & Squires, 2001), helping them through each step of the recovery process. Community reinforcement and family training (CRAFT) is a derivative approach to CRA. Both CM and CRA are primarily aimed at the substance-using individual; however, CRAFT works with concerned family and friends by coaching them about the interactions and general behavioral approaches to use when they are with the substance user (Meyers, Villanueva, & Smith, 2005). Those who are concerned are trained in how to reinforce

wanted behaviors as well as how to discuss treatment, and when to ignore or avoid behaviors that are consistent with or reinforcing substance use (Meyers et al., 2005).

Treatment through community reinforcement is a multistep process. In this approach, clinicians and patients start by outlining environmental and internal triggers for substance use and acknowledging the consequences in relation to substance use. The clinician and patient then agree on a set timeframe for sobriety sampling (i.e., the patient's commitment to abstain for a specified trial period; Meyers & Squires, 2001). A large portion of the treatment involves behavioral skills training aimed at achieving brief, measurable goals. Following this step includes an examination of job satisfaction, social and recreational counseling, relapse prevention measures, and relationship counseling if a significant other is involved (Meyers et al., 2005).

People have compared the CRA with traditional 12-step programs. In early inpatient studies, CRA showed significant differences from the traditional program within the 1st month after hospital discharge (Hunt & Azrin, 1973). These changes illustrated that those in the CRA program spent less time drinking, less time institutionalized, more time working, and more time with family. After a 6-month follow-up, Meyers et al. (2005) reported that those in the CRA treatment reported drinking on 14% of days, but those who went through the 12-step program reported drinking on 79% of days. Later studies concluded that CRA proved even more effective when teamed with Antabuse Assurance (12-step counseling with disulfiram compliance training; Azrin, 1976; Azrin, Sisson, Meyers, & Godley, 1982).

Researchers have demonstrated the effectiveness of CRA, CM, and CRAFT across many populations—including inpatient, outpatient, and homeless populations—and when working with adolescents (Barry, Sullivan, & Petry, 2009; Meyers et al., 2005). The CRA, CM, and CRAFT approaches have demonstrated effectiveness in the treatment of alcohol use disorders (Litt, Kadden, Kabela-Cormier, & Petry, 2009), methamphetamine use disorders (Roll et al., 2006), cocaine use disorders (Barry et al., 2009; Higgins et al., 1993; McKay et al., 2010), heroin and

other opiate use disorders (Carroll et al., 2001; De Jong, Roozen, van Rossum, Krabbe, & Kerkhof, 2007; Peirce et al., 2006), marijuana use disorders (Carroll et al., 2006; Litt et al., 2008), nicotine dependence (Lamb, Kirby, Morral, Galbicka, & Iguchi, 2010), and gambling (Hodgins, Toneatto, Makarchuk, Skinner, & Vincent, 2007).

Behavioral Couples and Family Therapy

Family- or relationship-based behavioral treatment models draw heavily on principles of operant conditioning and view addictive behaviors as learned and maintained in social contexts. Treatment emphasizes the use of interpersonal CM by training an involved family member (e.g., partner, sibling, parent) to reward positive behaviors (e.g., drink reduction strategies), reduce negative reinforcement of drinking or drug use, and increase problem-solving and communication skills (McCrary & Epstein, 2008; O'Farrell & Fals-Stewart, 2006). Behavioral couples therapy is a highly structured treatment that often occurs in outpatient settings, and research has suggested that it is effective in group settings (Li, Armstrong, Chaim, Kelly, & Shenfeld, 2007). The essential ingredients of behavioral couples therapy include behavioral contracting (e.g., sobriety contracts), modeling and behavioral rehearsal, and practicing at-home skills with feedback from the therapist.

Research has suggested that both behavioral couples therapy and marital therapy approaches to addiction are effective across a variety of addictive behaviors. Several studies have indicated that behavioral couples therapy results in less frequent substance use, fewer substance-related problems, and better interpersonal functioning—including lower rates of separation or divorce and reductions in partner violence (see Fals-Stewart, O'Farrell, & Birchler, 2004, for a review). A recent meta-analysis of 12 randomized controlled trials of behavioral couples therapy indicated that behavioral couples therapy was superior to control conditions and produced larger effects than active individual treatments (Powers, Vedel, & Emmelkamp, 2008). In one of the studies included in the meta-analysis, Fals-Stewart, O'Farrell, Birchler, Córdova, and Kelley (2005) found that a brief version of behavioral

couples therapy (18 sessions) was as effective as a 24-session version in reducing days of heavy drinking and was more effective than comparison individual treatments. The brief version was also more cost effective than the full behavioral couples treatment and the individual treatments. Behavioral couples therapy is effective for homosexual couples (Fals-Stewart et al., 2009) and individuals with comorbid substance use disorders and posttraumatic stress disorder (Rotunda, O'Farrell, Murphy, & Babey, 2008) and also for engaging individuals in treatment (O'Farrell, Murphy, Alter, & Fals-Stewart, 2008). To our knowledge, there have been no clinical trials of behavioral couples therapy for pathological gambling.

Summary

Many key stakeholders have considered the behavior therapies we have described to be gold standard treatments for addictive behaviors. The generality of each treatment to a variety of different addictive behaviors is consistent with the tenets of the addiction syndrome model. Yet more work needs to be done to substantiate the relative value of an addiction syndrome in explaining response to behavioral treatments. Conversely, to evaluate the syndrome model in terms of the treatment literature, researchers will need to examine whether there are shared and unique outcomes that relate to specific behavioral treatments.

COGNITIVE-BEHAVIORAL THERAPIES

The goal of CBT is to equip clients with both the information and the skills needed to change problematic patterns of thought and behavior. There are many variants of CBT for addictive behaviors, as described in this section, all of which are based on theories of social learning (Bandura, 1977) and the cognitive model of emotional disorders (Beck, 1993). Social learning theory posits that individuals learn behavior via operant conditioning (reinforcement, punishment) and observational learning of social factors in the environment. Drawing from social learning theory, CBT approaches often focus on the social influences in the client's environment as well as the client's previous learning history. The

cognitive model of emotional disorders focuses on identifying thoughts, beliefs, and distortions that influence the client's feelings and behavior. Most CBT approaches focus on changing patterns of cognition to modify patterns of behavior, even when external situations remain the same.

CBT interventions for addictive behavior have three primary components: functional analysis, skills training, and relapse prevention. The functional analysis addresses how addictive behavior "functions" in the individual's daily life. It also examines the predictors and consequences of the addictive behavior. Skills training teaches the individual how to deal with the issues that surround his or her addictive behavior, such as training the individual to cope with cravings. Skills training exercises often include modeling and role playing, whereby the therapist models the skill and then the client and therapist practice the skills during session. Relapse prevention teaches the individual to identify and prevent high-risk situations for relapse.

Effectiveness of Cognitive–Behavioral Therapy

In a review of 24 studies that evaluated the effectiveness of CBT on substance use outcomes, Carroll (1996) found that CBT appeared to be more effective than no-treatment control groups and equally as effective as other active treatments. Carroll also found some evidence indicating that patient–treatment matching is effective, especially in dealing with more impaired substance abusers (e.g., severe levels of substance abuse, high levels of negative affect, and greater perceived deficits in coping skills).

A meta-analysis conducted by Irvin, Bowers, Dunn, and Wang (1999) that incorporated 26 studies testing 70 hypotheses found that CBT appeared to have more of an impact on improving psychosocial functioning than on reducing substance use, but overall both psychosocial functioning and substance use showed a considerable improvement over no-treatment and active control groups. Additionally, the meta-analysis found that the use of medication, especially for alcohol problems, contributed substantially to enhancing CBT treatment effectiveness and that CBT appeared to be more effective in the

treatment of alcohol use disorders than in the treatment of smoking or other substance use disorders.

Most recently, Magill and Ray (2009) conducted an updated meta-analysis of 59 research reports that described 52 randomized trials of CBT for adult substance use disorders. Overall, the review indicated that CBT produced a small, statistically significant effect over comparison treatments, with an estimated 58% of those who received CBT having better outcomes than those who received a comparison treatment. The largest effect size was found when CBT was compared with no treatment. Of the substances examined in the review (which included alcohol, marijuana, cocaine, stimulants, opiates, and polydrug abuse), the effects of CBT were greatest for marijuana use disorders. Magill and Ray also examined whether any treatment or client factors moderated the effectiveness of CBT. Treatment length was negatively associated with effect sizes, suggesting that longer treatments diminished the superiority of CBT in comparison to other treatments. Percentage of female participants in the sample was positively associated with effect sizes, indicating that women may benefit more from CBT than men. Finally, the effectiveness of CBT appeared to diminish over time, with lower effect sizes when follow-ups were conducted 6 and 12 months after treatment. Delivery method and treatment format were unrelated to CBT effectiveness.

Recent Extensions of Cognitive–Behavioral Therapy

Researchers have developed numerous extensions of CBT that incorporate many of the components of CBT, often in combination with other treatments. For example, CBT has been combined with a motivation enhancement approach (Miller, 2004) and also modified to incorporate training in mindfulness skills (Bowen et al., 2009).

Combined behavioral intervention. Although previous studies have indicated that CBT is an effective treatment for substance use disorders, Longabaugh and Morganstern (1999) proposed that incorporating components of other effective treatments into CBT would increase the effectiveness of the treatment. Specifically, they highlighted six different treatment

approaches that might bolster the effectiveness of CBT, including motivational interviewing (MI), mutual self-help groups, therapeutic approaches that incorporate one or more significant others into treatment (e.g., behavioral marital therapy, CRA), treatments that use classical conditioning procedures (e.g., cue exposure), general social skills training, and pharmacotherapy. The initial development of the combined behavioral intervention (CBI) as individual outpatient psychotherapy for alcohol dependence accounted for Longabaugh and Morganstern's suggestions with four phases of treatment (Miller, 2004). The first phase of CBI attempts to build motivation for change using MI techniques (described in the next section). The second phase consists of a functional analysis of the client's drinking, a review of the client's psychosocial functioning, and a survey of the client's strengths and resources. During this time, the clinician encourages and stresses the importance of abstinence and involvement in a mutual-help group. In addition, if possible, a supportive significant other is identified and involved in the client's treatment (Miller, 2004). The third phase includes the selection of a number of cognitive-behavioral skills training modules, using the information from the functional analysis and individual plan created during the second phase. The possible modules include assertiveness skills, communication skills, coping with craving and urges, drink refusal and social pressure, job finding, mood management, mutual-help group facilitation, and social support for sobriety (Miller, 2004). The final phase involves maintenance checkups between the client and clinician in which they review the progress to date, renew motivation for change, and reaffirm commitment to an original or revised change plan (Miller, 2004).

During the course of treatment, the clinician could also use a set of optional "pull-out" procedures. These procedures address matters that are not included in the formalized treatment plan but could influence outcome. They include sobriety sampling, raising therapist concerns, case management, dealing with resumed drinking, supporting medication adherence, responding to missed appointments, telephone consultation, and crisis intervention (Miller, 2004). The use of pull-out procedures and combinations of the nine optional skills training

modules make CBI an "individualized" manualized intervention, which is a significant advance in the addiction treatment field. Consistent with the syndrome model of addiction, it is possible to tailor CBI to the distal and proximal influences on an individual's addictive behavior.

Miller (2004) developed CBI for the COMBINE study (COMBINE Study Research Group, 2003), a National Institute on Alcohol Abuse and Alcoholism-funded study, to examine the effectiveness of CBI by itself and in combination with pharmacotherapy. Results indicated that CBI was effective, with or without adjunctive pharmacotherapy, and that concurrent CBI and pharmacotherapy were no more effective than CBI alone (Anton et al., 2006). Given the initial promise of CBI for adult alcohol dependence, adaptations of CBI for other drugs of abuse and for other populations (e.g., adolescents) should be developed and empirically tested.

Mindfulness-based approaches. Mindfulness meditation is an approach that has recently gained attention in treating a number of psychological problems (Kabat-Zinn et al., 1992; Törneke, 2002; Witkiewitz, Marlatt, & Walker, 2005). *Mindfulness* has been described as "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (Kabat-Zinn, 1994, p. 4). As originally proposed by Marlatt and Gordon (1985), meditation might be a component of maintaining lifestyle balance that serves to enhance CBT for substance use disorders. The integration of mindfulness and traditional cognitive-behavioral relapse prevention might enhance overall treatment efficacy by increasing awareness of sensations such as craving, emotional states, and physiological arousal (Marlatt, 2002). Although the use of meditation to reduce substance use is not new (Marlatt & Marques, 1977), there has been a recent surge in the application of mindfulness-based approaches to treat substance use disorders (Marcus & Zgierska, 2009; Zgierska & Marcus, 2010). To date, eight randomized controlled trials and a recent meta-analysis have indicated the effectiveness of mindfulness-based approaches in reducing substance use (Zgierska et al., 2009). Of the eight randomized controlled trials, only one was a test of a mindfulness-based

treatment designed specifically for substance use disorders (Bowen et al., 2009). Mindfulness-based relapse prevention (MBRP; Bowen, Chawla, & Marlatt, 2011) merges mindfulness practices with a cognitive-behavioral skills training program delivered in a group format for 2 hours per week for 8 weeks. The mindfulness practices in MBRP teach the client to be aware of triggers, monitor internal reactions, and foster more skillful behavioral choices. There is also a focus on acceptance of positive and negative physical, emotional, and cognitive states. For example, clients are encouraged to be aware of and accept craving, without giving in to the cravings by engaging in substance use. Indeed, secondary analyses of the data from the MBRP trial indicated that MBRP was effective at reducing the associations between depressed mood, craving, and substance use (Witkiewitz & Bowen, 2010), which in turn led to significant reductions in substance use compared with a treatment-as-usual control group (Bowen et al., 2009).

Summary

In general, CBT and its extensions (including CBI and MBRP) provide a great deal of support for the addiction syndrome model. Several trials have found CBT to be effective with a wide range of addictive behaviors, particularly alcohol dependence (Irvin et al., 2009). Other reviews have shown that treating the cognitive and behavioral influences on addiction appears to be effective regardless of the specific addictive behavior (Magill & Ray, 2009). As an example of the potential generality of cognitive-behavioral skills training, in our recent research we have found that drink refusal skills training is a particularly effective component of behavioral interventions for alcohol dependence (Witkiewitz, Hartzler, & Donovan, 2010). At first glance, drink refusal training might not seem very useful for a clinician treating a gambling disorder or heroin dependence, unless one considers the syndrome model and the underlying mechanisms by which drink refusal skills training interventions are effective. Our research has shown that drink refusal skills training appears to be effective through increasing client self-efficacy. Given that client self-efficacy is a common predictor of outcomes across multiple addictive

behaviors, then targeting self-efficacy might improve outcomes across expressions of the addiction syndrome. Thus, a behavioral gambling intervention that increases client self-efficacy might have similar positive effects on gambling problems. We derived this hypothesis using the addiction syndrome model, and likewise, the addiction syndrome model could further inform research on hypotheses of shared mechanisms of change after treatment for various expressions of the addiction syndrome.

MOTIVATIONAL INTERVIEWING, MOTIVATION ENHANCEMENT, AND BRIEF INTERVENTIONS

Many of the interventions described earlier in this chapter occur over multiple sessions. However, it is also possible to treat the addiction syndrome with far fewer sessions. Motivational interviewing and brief interventions often are administered in one or two sessions, whereas motivation enhancement treatment is delivered across four sessions.

Motivational Interviewing

MI is a therapeutic style designed to raise the client's awareness of problems, set goals, and offer options or strategies for achieving those goals (Thomas, 2002). During a motivational interview, a therapist works to reduce a client's ambivalence toward change using empathetic and encouraging statements to make the client feel comfortable and open to discussing any problems. One key feature of MI is the importance of recognizing, accepting, and working with a client's current stage of change (Prochaska & DiClemente, 1986). The transtheoretical model of behavior change proposes that individuals move through six distinct stages during the process of changing a problem behavior: (a) *precontemplation*, in which the individual is not considering change; (b) *contemplation*, in which the individual begins to acknowledge the problem and consider the possibilities of change; (c) *preparation* (also called *determination*), in which the individual makes the decision to make a change; (d) *action*, in which the individual actively works to modify the problem; (e) *maintenance*, in which the individual works to sustain the changes made; and (f) *relapse*,

in which the individual falls back on previous behavior patterns (Prochaska & DiClemente, 1986). MI approaches attempt to work with the client's current stage of change to elicit or support enhanced motivation for change. In other words, if an individual client is currently in the precontemplation stage, then a therapist would work on helping the client think about whether there is any need to change, whereas a therapist working with a client who is in the action stage would directly assist the client in making changes (e.g., creating treatment plans, providing self-help resources and support).

MI has several key components: collaboration, evocation, autonomy, confrontation, education, and authority. During MI sessions, the therapist must build a relationship with the client that is conducive to change (collaboration) and provide resources and motivate the client to change (evocation) while understanding that the client must be the one to make the choice (autonomy). The therapist must also bring reality to the client's awareness when he or she has an impaired perspective (confrontation), address the skills needed for change, and, in the end, tell the client what to do (authority). In addition to these key components, MI is client centered and based on five basic principles: expressing empathy, building discrepancy, avoiding argumentation, rolling with resistance, and supporting self-efficacy. Expressing empathy consists of listening actively to what the client is saying and trying to understand the client's perspective without judging or blaming. To develop discrepancy, the therapist directs the interview so that clients present their own arguments for change and how their current behavior impedes their ability to reach goals. It is important that the therapist avoid arguing with the client, and ideally the client will be the person in the room who is arguing for change. *Rolling with resistance* describes the therapist's need to meet resistance by viewing ambivalence as normal and acknowledging that change is difficult. Finally, the therapist supports self-efficacy by acknowledging that the client is responsible for choosing to change and that a therapist cannot force a client into carrying out the steps toward change (Thomas, 2002).

Motivation Enhancement Therapy

The MI techniques are more consistent with a therapeutic style than with a specific manualized technique. However, for the Project MATCH study (Project MATCH Research Group, 1993), the MI style was manualized into a four-session individual intervention for individuals with alcohol dependence (Miller, Zweben, DiClemente, & Rychtarik, 1992) and was later adapted into a program for drug abusers (Miller, 1995). The primary goal of MET is to evoke internal motivation for change by using motivational strategies and helping clients identify their own resources for change.

MET is broken down into three phases: building motivation for change, strengthening commitment to change, and following through with change. In Phase 1, the therapist uses a variety of MI techniques to elicit self-motivational statements (e.g., "I've been thinking a lot about how my behavior affects my family and how I could change"). In doing so, the therapist must practice empathic listening, question discrepancies, affirm the client, roll with resistance, and reframe or summarize the client's statements. Presenting feedback to the client (e.g., "On the basis of national averages, you drink more than 99.9% of people—does this surprise you?") is also a key part of Phase 1. In Phase 2, the therapist focuses on recognizing and encouraging change readiness, asking questions about change, and beginning to provide information and advice. The therapist will also discuss planning for change and work with the client on a change plan. Phase 2 ends with the therapist asking for a commitment to change from the client. In the final phase, Phase 3, the therapist and client review progress to date, focus on renewing motivation and commitment, and discuss options for further treatment. A recent meta-analysis of MET and MI studies concluded that MET is a moderately effective treatment (effect sizes ranged from .16 to .42) and that MET is more likely to produce significant results than general MI techniques when there is a specific behavioral target (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010).

Brief Interventions

The primary goal of a brief intervention is to reduce the risk of harm resulting from addictive behavior

by focusing on specific intermediate goals (e.g., reduce drinking to fewer than 2 days per week) that can be achieved in a brief amount of time, while acknowledging a final treatment goal that addresses a single behavioral objective (e.g., stop drinking and enroll in an outpatient treatment program). Individuals with varying levels of training (e.g., peers, nurses, physicians, school counselors, social workers) can conduct brief interventions in a variety of different settings (e.g., schools, hospitals, workplaces, primary care clinics). Brief interventions are typically conducted face to face (individually or in groups) and are sometimes supplemented by self-help workbooks or manuals. Many variations of brief interventions have been shown to be effective (see Saitz & Galanter, 2007, for an overview).

One of the most appealing aspects of brief interventions is the ability to disseminate them widely at little or no cost to the individual. For example, personalized mailed interventions (e.g., Larimer et al., 2007), computerized or Internet-based brief interventions (e.g., Hester, Squires, & Delaney, 2005), and interventions via mobile devices (see Heron & Smyth, 2010) are feasible and have demonstrated success in reducing addictive behavior.

Although the format of brief interventions varies greatly across setting, six common components and five basic steps are critical for a brief intervention to be effective (Center for Substance Abuse Treatment, 1999). The six components are summarized using the FRAMES acronym: (a) *feedback* is given about the current risks or impairments, (b) *responsibility* for change is placed on the client, (c) the person delivering the intervention provides *advice*, (d) a *menu* of alternative options for change is offered to the client, (e) an *empathic* style is used, and (f) attempts are made to enhance *self-efficacy*. Accomplishing the FRAMES components typically takes five steps:

1. Introduce the issues in the appropriate context (e.g., missing work because of substance use if the brief intervention is in the workplace; health concerns if the brief intervention is in a health setting).
2. Screen and assess the behavior.
3. Provide feedback about the person's behavior.

4. Initiate a conversation about change and setting goals.
5. Summarize the interaction and provide closure to the intervention.

Individuals with varying levels of education and experience can be trained to conduct brief interventions (e.g., Babor, Higgins-Biddle, Higgins, Gassman, & Gould, 2004; Mello et al., 2009; Seale, Shellenberger, Boltri, Okosun, & Barton, 2005). Essential skills for conducting brief interventions include an empathic understanding of difficulties with behavior change and acceptance of client difficulties, active listening skills, the ability to focus on intermediate goals, and a working knowledge of the stages of change model as well as information about potential referral sources for the client. It is important for individuals delivering a brief intervention to remember that brief interventions often represent the first stage of a person's behavioral change attempt, and research has indicated that individuals who receive a brief intervention are significantly more likely to enter substance abuse treatment than those who do not receive a brief intervention (Krupski et al., 2010). Thus, brief interventions can be useful tools for opening the door to further treatment.

Summary

For any given client, there might be innumerable behavioral problems with similar origins (e.g., cocaine abuse and gambling both used in response to negative affect). An individual trained in MI and conducting a brief intervention could generalize from one behavior to another without needing to learn an entirely new set of tools (e.g., first studying a manual for cocaine dependence and then studying a gambling treatment manual). Rather, the motivational interviewer or brief interventionist can draw from the common elements and basic steps in addressing a given problem at a given time. Future research should examine whether prioritizing intermediate goals on the basis of the degree of potential harm caused by a given behavior is useful. Research is also needed in regard to setting a final goal that addresses multiple manifestations of the addiction syndrome.

TWELVE-STEP APPROACHES

Twelve-step approaches, including Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) fellowship, 12-step facilitation (TSF), and other recovery approaches that use AA–NA principles (e.g., Minnesota model) are the most widely used addiction interventions in the United States. AA and NA provide readily accessible (including Internet groups) and free therapeutic advice for millions of individuals worldwide. According to the AA website, AA has more than 2 million members in 116,773 AA groups. As of May 2010, there were 58,000 weekly NA meetings in 131 countries.

The 12 steps of these approaches are shown as Exhibit 2.1 in Volume 1, Chapter 2, this handbook. Although many of the 12 steps focus on the importance of spirituality and identifying a higher power, it is interesting to note that within 12-step approaches many practices are consistent with aspects of cognitive–behavioral treatments. Some of these include acknowledging and challenging maladaptive thoughts, identifying high-risk situations for relapse, creating a social support network, developing coping skills, and evaluating beliefs, attitudes, and behaviors that contribute to addiction.

TSF is a manualized psychotherapy (individual or group) that introduces clients to the 12-step approach and support system (Nowinski, Baker, & Carroll, 1994). The two primary goals of TSF are acceptance and surrender (Humphreys, 1999). Acceptance goals include the acceptance by clients that they suffer from a chronic and progressive illness, that they have lost the ability to control their drinking or drug use, and that there is no effective cure for substance dependence and complete abstinence is the only viable alternative. Surrender goals include the acknowledgment that a higher power and fellowship with an AA–NA group provide the best chance for sustained recovery (Nowinski et al., 1994). In the CBI described earlier, TSF was included in the CBI manual (Miller, 2004) as an optional module that focused more broadly on encouraging involvement in any mutual-help organizations, including AA and NA. The module includes information about the history of AA and NA and the structure of most AA, NA, and other

mutual-help groups (e.g., SMART Recovery, Secular Organizations for Sobriety). It also provides encouragement, referrals, and support for people becoming involved with mutual-help programs.

Research on the effectiveness of 12-step approaches is somewhat mixed (Kaskutas, 2009). A Cochrane Group review (Ferri, Amato, & Davoli, 2006) concluded that experimental evidence to support 12-step programs is lacking, whereas the Project MATCH Research Group (1997, 1998) found that TSF was equally as effective as CBT and superior to MET in the treatment of alcohol dependence. Likewise, a narrative review of 12-step and comparable self-help treatments for substance use disorders concluded that these approaches have a growing body of evidence to support their effectiveness (Kelly, 2003).

The great divide between behavioral and 12-step approaches in addiction treatment and research is one potential explanation for the lack of consistent evidence for 12-step approaches. For example, Morgenstern and McCrady (1992) conducted an experiment in which disease model and behavioral model experts rated the importance of disease and behavioral processes in the treatment of alcohol and drug addictions. The behavioral model processes include cue exposure, relapse prevention, and aversion therapy and are based on the principle that problem drug and alcohol use are learned behaviors. The disease model processes include such components as reducing denial of alcohol-related problems and facilitating a spiritual experience in recovery and are taken from proponents of AA. The results found that disease model experts favored an integration of treatment methods, and behavioral model experts favored only behavioral model processes, rating disease model processes as either unimportant or even detrimental.

The divide between behavioral and 12-step approaches might also be the result of differences in training. Most addiction researchers have training in cognitive–behavioral techniques, whereas many front-line addiction treatment specialists are individuals in recovery who have training in the 12-step tradition. Fortunately, the divide between CBT research and 12-step practice has been shrinking, with evidence coming from several efforts, including the National Institute on Alcohol Abuse and

Alcoholism, which has set aside research funding for 12-step research, and the Hazelden Foundation (a traditionally 12-step-oriented treatment and training institute), which provides training in cognitive-behavioral techniques.

Summary

The 12-step approach and the addiction syndrome model are quite different with respect to the underlying models and hypotheses derived from each perspective. Twelve-step approaches rely on the disease model of addiction and are quite limited in the scope of potential treatment avenues (e.g., attending meetings, giving up your will to a higher power, and “working the steps”). The addiction syndrome suggests multiple etiologies, incorporates several models of addiction (e.g., the disease, diathesis-stress, environmental and behavioral, and neurobiological models), and proposes multiple treatment avenues (including psychotherapy, pharmacotherapy). However, they are also very similar with respect to the notion of shared manifestations and sequelae. The 12 steps are the same in AA, Gamblers Anonymous, NA, and other 12-step groups, suggesting that going through the 12 steps is effective regardless of the expression of the addiction syndrome.

FAMILY PSYCHOTHERAPIES

In addition to the CRAFT and behavioral couples therapy approaches described earlier, researchers and practitioners have developed a number of family-based psychotherapies and shown them to be efficacious in the treatment of adolescent substance abuse. The interventions with the most empirical support are the focus of this chapter, namely brief strategic family therapy, multisystemic family therapy, and multidimensional family therapy. A recent review of the evidence (Becker & Curry, 2008) indicated that of these treatments, the ecological models of multisystemic and multidimensional family therapies had the best outcomes, on the basis of both treatment effectiveness and quality of research design.

Brief Strategic Family Therapy

The goal of brief strategic family therapy (BSFT) is to treat co-occurring addictive behavior and other

behavioral problems (e.g., conduct disorder) by focusing on both the symptoms (e.g., drug use, delinquency) and the system in which the drug use occurs (e.g., family interactions). The three basic principles of BSFT include recognizing that (a) the person with an addiction and related problems is part of a family system, (b) the patterns of interactions in the family influence the behavior of individual family members, and (c) interventions must carefully target the patterns of interaction that are most directly linked to the person’s addictive behavior (Szapocznik, Hervis, & Schwartz, 2003).

The administration of BSFT often occurs over the course of eight to 24 sessions with the family. The therapist’s initial goal is to form a therapeutic family system in which the therapist plays an integral role as both a member of the system and the leader. However, one-person BSFT, in which the therapist works with a single family member, has been shown to be effective at reducing adolescent drug use and improving total family functioning (Szapocznik, Kurtines, Foote, Perez-Vidal, & Hervis, 1986). Regardless of how many family members are present, the key to effective BSFT is being strategic about treating the primary presenting problems by being practical and problem focused and by having a well-organized plan. The brief nature of the treatment requires the therapist to identify the targets within each session that are going to achieve immediate and long-lasting interactional changes (Szapocznik et al., 2003).

Several studies have demonstrated efficacy and effectiveness of BSFT in a variety of clinical populations among various minority groups (see Austin, Macgowan, & Wagner, 2005, for a systematic review of studies). However, meta-analyses that have taken into account effect sizes and quality of the research design have indicated mixed findings regarding BSFT’s effectiveness (Becker & Curry, 2008; Vaughn & Howard, 2004). The use of more methodologically rigorous designs is needed for controlled evaluations of BSFT.

Multisystemic Family Therapy

Multisystemic family therapy (MST) is a social-ecological approach to treating substance use and other antisocial behavior in youths and adolescents.

The primary aims of MST are to address risk factors for substance use and antisocial behavior in multiple contexts using a comprehensive and integrated approach. The targets of the intervention often include improving parenting practices, enhancing family emotional relations, decreasing the association between the adolescent and deviant peers, increasing the association between the adolescent and prosocial peers, improving adolescents' performance in school, encouraging involvement in school-based extracurricular activities, and developing a social network of family, friends, and neighbors to help support positive changes that occur during MST (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 1998). MST is a sharp contrast to the brief and focused approach of BSFT, with MST services typically lasting approximately 4 months. Treatment typically occurs in the family's home, where the MST therapists may have multiple contacts with the family every week. MST therapists also work extensively with peers, the school, extended family, community groups, and local agencies affiliated with the adolescent. In many ways, the MST therapist serves as a case manager who attempts to integrate the multiple influences on the adolescent and the adolescent's behavior (Henggeler et al., 1998).

As mentioned earlier, several studies have demonstrated the effectiveness of MST. MST studies have used methodologically rigorous designs, such as using objective measures of outcomes in a randomized design with an active comparison group (Liddle et al., 2001). An early meta-analysis by Stanton and Shadish (1997) found that the effect sizes for MST were among the highest of the treatments included in their review. Likewise, the meta-analyses of Vaughn and Howard (2004) and Becker and Curry (2008) both concluded that MST had strong evidence of clinically meaningful effects, such as significant reductions in adolescent drug use.

Multidimensional Family Therapy

The primary goals and strategies of multidimensional family therapy (MDFT) are very similar to those of MST. Both approaches are social-ecological interventions that take a comprehensive and integrated

approach to treating adolescent substance use and co-occurring mental disorders. However, MDFT is a manualized intervention conducted in outpatient or partial hospitalization settings. The MDFT's duration is similar to that of MST, with an average of two to three sessions per week, for a total of 2 to 6 hours of treatment per week, over the course of 5 months (Liddle & Hogue, 2000). The MDFT therapist also meets with the adolescent individually during the course of treatment and provides minisessions via multiple phone contacts during the course of the intervention. Consistent with MST, recent meta-analyses have identified MDFT as one of the most effective family treatments for adolescent substance abuse (Becker & Curry, 2008; Vaughn & Howard, 2004). MDFT is also highly cost effective (Liddle & Dakof, 2002).

Summary

The addiction syndrome proposes that distal antecedents—including neurobiological, genetic, and psychosocial factors—play an important role in the underlying vulnerability to the eventual expression of the addiction syndrome. In many ways, working with families targets these distal antecedents of addiction as well as the proximal antecedents. For example, targeting distal antecedents might include working with the family to improve communication patterns and identify parental psychopathology that might require additional treatment for the parent to be effective at monitoring the adolescent. At the same time, the family therapist is targeting proximal antecedents, including deviant peer associations, truancy, and family structure. Likewise, the family treatments reviewed earlier are appropriate for the shared manifestations of the addiction syndrome model, particularly the social and psychological clusters.

CONCLUSION

The available research on psychotherapies for addictive behaviors provides support for and informs the addiction syndrome model, and how the addiction syndrome can inform what is known about psychotherapy is important to consider. In general, psychotherapies are a highly valuable tool in the treatment

of the addiction syndrome. As described in this chapter, a variety of psychotherapeutic techniques are effective in reducing or eliminating addictive behavior problems. An important next step in researching the effects of these psychotherapies in treating the addiction syndrome is to examine the active ingredients, or mechanisms, of change during treatment (Kazdin & Nock, 2003). Specifically, understanding how a particular psychotherapy is effective can help elucidate the etiology and maintenance of the addiction syndrome. Likewise, future research on the moderators of treatment effectiveness will be critical in moving the field toward understanding why treatments work and for whom. The notion of shared manifestations of the addiction syndrome might be useful in this process by guiding the selection of potential treatment mediators and moderators. It could be the case that multiple manifestations of the addiction syndrome share the same mechanisms of change. For example, reducing comorbid psychopathology (from the psychological cluster) might be one mechanism of addictive behavior change across multiple addictive behaviors. Likewise, certain genetic expressions (from the biological cluster) may moderate the effectiveness of specific treatments (e.g., Ray, Chin, & Miotto, 2010). Alternatively, more proximal mechanisms (e.g., current motivation) might moderate distal mechanisms (e.g., alcohol dependence severity) and lead to the need for treatment matching (e.g., Witkiewitz, Hartzler, & Donovan, 2010).

As described in the Introduction to this handbook, it might be the case that psychotherapy cocktails as a multimodal approach to the addiction syndrome will be necessary to treat the addiction syndrome. Yet, few research studies have examined multicomponent psychotherapies, and thus we were limited in this chapter to evaluating single psychotherapy approaches in isolation. Dismantling studies that evaluate what works in psychotherapy might help in this regard.

Psychotherapies for various expressions of addictive behaviors have several general advantages. First, many of the skills learned in psychotherapy are not specific to a particular behavioral target; rather, these skills often generalize to other behaviors. For example, an individual who learns to cope with

negative moods without drinking will likely use these same coping strategies in other areas (e.g., not gambling in response to a negative mood). Following from this idea, many of the psychotherapies described here have significant and sustained effects in other areas of psychosocial functioning. Behavioral couples therapy is effective at reducing harmful drinking and also results in greater satisfaction with one's partner. Likewise, family therapy techniques often address substance use and delinquent behavior. Cognitive-behavioral psychotherapies provide an array of coping skills for dealing with daily living in addition to reducing substance use. Second, these psychotherapies can easily be adapted to the unique expressions of the addiction syndrome without requiring a therapist to receive extensive additional training. Thus, an individual therapist who receives training in using CBT for alcohol dependence will be able to use many of the same techniques when treating a client with cocaine dependence. Third, there are various dissemination and administration options for many of the psychotherapies for addiction, including over the phone, via the Internet, or even by mail. Internet-based training provides the opportunity for therapists across the world to learn a variety of psychotherapy techniques, thus making evidence-based psychotherapy available to individuals worldwide. Fourth, individuals with minimal training in counseling have demonstrated that they can learn to administer psychotherapies; thus, front-line health workers across several fields (e.g., nurses, dental hygienists) can be trained to provide interventions for individuals with addiction problems who might otherwise never seek treatment for their addictive behavior.

As a final note, whether the addiction syndrome model will be useful for treatment providers or seekers is unclear at this time. In its current form, the model does not provide any specific treatment recommendations and does not propose suggestions for how to change the process of addiction. The addiction syndrome model does provide guidance for future research. To evaluate the practical utility of the addiction syndrome model, there needs to be more research on the shared manifestations, including research on the mechanisms and moderators of addictive behavior change.

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