

# Integrated Treatment of Substance Use and Psychiatric Disorders

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Epidemiological studies find that psychiatric disorders, including mental disorders and substance use disorders, are common among adults and highly comorbid. Integrated treatment refers to the focus of treatment on two or more conditions and to the use of multiple treatments such as the combination of psychotherapy and pharmacotherapy. Integrated treatment for comorbidity has been found to be consistently superior compared to treatment of individual disorders with separate treatment plans. This article focuses on a review of the risks for developing comorbid disorders and the combinations of treatments that appear to be most effective for clients with particular comorbid disorders.

*Keywords:* Comorbidity, psychiatric disorders, substance use disorders

## INTRODUCTION

Epidemiological and clinical studies find that psychiatric disorders and substance use disorders (SUDs) are highly comorbid (a condition referred to as “dual” or “co-occurring” disorders). Kessler, Chiu, Demler, Merikangas, and Walters (2005) report that 27% of people have at least one psychiatric disorder, and 45% of people with psychiatric conditions actually have two or more disorders. SUDs are highly comorbid with borderline and antisocial personality disorders, bipolar, psychotic, depression, and anxiety disorders. Other important epidemiological findings are a strong comorbid association between social anxiety disorder and cannabis use disorder (Kessler et al.). This is especially significant because social anxiety disorder and cannabis use disorder often onset in adolescence.

The rate of comorbidity of psychiatric and SUDs in clinical samples is much higher. Sheidow, McCart, Zajac, and Davis (2012) report that 36% to 40% of young adults with a serious mental health condition or young adults seeking treatment meet criteria for a SUD. Severity is also higher among patients with comorbid disorders. Moss, Chen, and Yi (2012) used the National Epidemiologic Survey of Alcohol and Related Conditions (NESARC) data and reported that

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“chronic severe” people, the most severe alcohol dependent people in their sample, consistently score lowest on a measure of mental adjustment compared to their less severe counterparts. Among adolescents in treatment studies, more than 60% have comorbid substance use and non-SUD with more than 50% having a conduct disorder and 15% having major depression or attention-deficit/hyperactivity disorder (ADHD; Grella, Hser, Joshi, & Rounds-Bryant et al., 2001). It is logical that the presence of comorbid disorders indicates a need for the simultaneous treatment of both conditions, sometimes referred to as integrated treatment of dual disorders. Orford (2008) and others have recently called for the need to recognize addiction as a multiply determined disorder that cannot be adequately treated by applying the narrow biomedical model of prescribing one medication or one psychosocial treatment. The presence of co-occurring conditions increases severity and complicates recovery (Daley & Moss, 2002; Grella et al., 2001), and a natural outgrowth of increased severity has been a greater use of integrated treatment, compared to separate treatment of combined conditions (Baigent, 2012; Torrens, Fonseca, Mateu, & Farre, 2012). The logic for use of integrated treatment is that multiple approaches will be more comprehensive in treating a condition that is really an interaction of disorders. Furthermore, treatment in one facility by multiple clinicians allows for continuous communication and more accurate recommendations for particular clients. *Integrated treatment* refers to the focus of treatment on two or more conditions and to the use of multiple treatments such as the combination of psychotherapy and pharmacotherapy. Findings related to an integrated treatment approach versus single focused treatments are robust for demonstrating the superiority of the integrated approach (Baker, Hides, & Lubman, 2010; Mangrum, Spence, & Lopez, 2006; Mueser, Noordsy, Fox, & Wolfe, 2003; van der Bosch & Vereul, 2007; Ziedonis, 2004).

Integrated treatment of dual disorders often involves an interdisciplinary team, including social workers in various roles, such as psychotherapists, student counselors, and case managers. Social workers are often at the forefront of every mode of treatment that focuses on the services critical to the reduction of substance abuse and mental impairment. It is important for social workers to understand how comorbid disorders interact because social workers often work directly with substance abusers in residential settings and with hospitalized mental health patients and are the health care workers most likely to be responsible for patient discharge planning. Similarly, more than any other profession, social workers perform case management duties for comorbid clients in the community. Lastly, social workers who are in direct practice with mental health clients who abuse substances in outpatient care can benefit from an understanding of how comorbidity increases severity of all conditions and, thereby, compromises recovery and risk for relapse.

This article focuses on a review of the risks for developing comorbid disorders and how their interaction operates to exacerbate the symptoms and behaviors associated with each. We also present information on the need for higher intensity treatments for comorbid clients and the combinations of treatments that appear to be most effective for clients with particular comorbid disorders.

### COMORBID SUDs AMONG PEOPLE WITH NON-SUD PSYCHIATRIC DISORDERS

As shown above comorbid SUDs and non-SUD conditions are common, and it is important to understand the specifics of their interaction to provide effective treatment. The following sections will review interaction of these conditions with regard to (a) primary versus secondary based on age of onset, (b) genetic risk for development of comorbidity, (c) neurological and psychological interaction of comorbid disorders, (d) the physiology and psychology of addiction, (e) treatment intensity of services necessary for effective treatment of comorbidity, and (f) evidence-based treatments for psychotic, affective, and anxiety disorders that are comorbid with SUDs.

### Primary and Secondary Disorders based on Age of Onset

Epidemiological research indicates that comorbid disorders onset in early adolescence, primarily with the non-substance-related disorder preceding the substance-related disorder. Kessler (2004) reports that the average age of onset for mental disorders is 11 years whereas SUDs do not onset on average until age 21. In a 10-year longitudinal study using the National Comorbidity Study sample Swendsen et al. (2010) found much higher risks for onset of alcohol and drug use disorders later in life among people with bipolar disorder, post-traumatic stress disorder (PTSD), intermittent explosive disorder, and oppositional defiant disorder. The same investigators found much higher risk of alcohol use disorder (AUD) among people with major depression and for drug use disorders among people with conduct disorder and ADHD.

In adulthood SUDs are highly comorbid with borderline personality disorder and antisocial personality disorder (Grant et al., 2009; Hasin, Stinson, Ogburn, & Grant, 2007; Huang et al., 2009; Lenzenwenger, Lane, Loranger, & Kessler, 2007). The traits that characterize these disorders are failure to plan ahead, sensation seeking, risk taking, and behavioral and affective dysregulation. These adult symptoms parallel findings for adolescents. For example, 50% to 60% of adolescents who use substances have a preexisting conduct disorder or ADHD. Although mood and anxiety disorders contribute to the development of SUDs during adolescence, it is noteworthy that the impulsive, risk-taking behaviors of childhood disruptive disorders place people at highest risk for developing SUDs later in life.

### Genetic and Environmental Risk for Development of Comorbid Disorders

A strong genetic predisposition exists along with environmental risks for the development of comorbid disorders (Kessler, 2004). Kendler et al. (2011) studied twins to determine that people with behavioral disorders of childhood such as conduct disorder and ADHD, and antisocial personality disorder (ASPD) of adulthood have a genetic predisposition to develop drug and AUDs whereas people with major depression share an environmental risk for developing an AUD.

An important line of research suggests that genetic and familial risk for the development and exacerbation of SUDs becomes more prominent in the late teens. One theory as to why this occurs is that in early and mid-adolescence the protective effects of parental monitoring reduces behavior associated with poor decision making. However, impulsive behavior and poor judgment associated with a genetic predisposition for engaging in substance use is given free reign as people age and are no longer under the influence of parental supervision (Bornolova, Hicks, Iacono, & McGue, 2012).

Of course developmental experiences and trauma can exacerbate SUDs among patients with already existing psychiatric illness, or contribute to the onset of both conditions. Patock-Peckham and Morgan-Lopez (2010) studied college students and found that the quality of parental bonds, including care, rejection, overprotection, and neglect affected behavior and contributed to antisocial behavior and alcohol use. In their study women with a caring mother were less likely to have antisocial tendencies and had fewer alcohol-related problems compared to women who felt neglected/rejected by parents. Similarly, men who perceived their fathers as neglectful had more alcohol-related problems, and men with rejecting mothers and overprotective fathers were more likely to exhibit antisocial behavior that was linked to higher levels of alcohol use.

In clinical samples, childhood emotional and physical neglect is related to having multiple SUDs, higher levels of aggression, suicidal behavior, and psychosis (Martinotti et al., 2009). Patients with bipolar disorder who report being physically abused in childhood are at greater risk for developing SUDs (Gao et al., 2010), especially cannabis dependence. Other clinical studies found that patients with higher levels of childhood trauma have higher rates of PTSD, substance dependence, especially alcohol, cocaine, and cannabis, and are more likely to report injecting

drugs (Khoury, Tang, Bradley, Cubells, & Ressler, 2010; Wu, Schairer, Dellor, & Grella, 2010). Women who report having been raped report higher levels of PTSD, major depression, and alcohol abuse compared to others with child-victimization histories but who have not been raped (Zinzow et al., 2012).

### Neurological and Psychological Interaction of SUD and Non-SUD Psychiatric Disorders

The severity associated with having both substance and non-substance-related symptoms is heightened because the interaction of two conditions produces a synergistic effect. The interaction of two disorders results in an overall condition that is harder to treat and makes recovery more difficult (Grella et al., 2001; Murthy & Chand, 2012). Furthermore, the interaction of psychiatric disorders and SUDs takes place physiologically and psychologically.

Over the past 20 years research into the nature of addiction has revealed that substance dependence is primarily a disease of the brain (Volkow, 2012). We now know that most drugs of abuse act to increase the release of the neurotransmitter dopamine, although the exact mechanism by which this occurs for all drugs is not the same (Van den Oever, Spijker, & Smit, 2012). Dopamine, known as the, “pleasure” and “antistress” molecule (Blum et al., 2012) is responsible for producing the euphoria associated with drug use. People find that, after using drugs, they want to repeat the stress relieving and pleasurable experience associated with drug use. Addiction is the result of the sequence of using-craving-tolerance-withdrawal and desire for continued use.

Similar to the effect of drugs on dopamine, alcohol and the designer drug ecstasy have been found to damage neurons associated with the neurotransmitter serotonin, which is primarily responsible for regulating mood (Badawy, 2003; Urban et al., 2012). Badawy’s (2003) review indicates that alcohol can deplete serotonin to the point of inducing aggression, even in people who are non-alcohol-dependent. Urban et al. (2012) conclude that even moderate use of ecstasy affects serotonin to the point of negatively affect mood, cognition, and impulse control.

Other important neurologic effects include the impact of the two most abused drugs (excluding nicotine) on the endocannabinoid system: alcohol and cannabis. Endocannabinoids, or internally produced cannabinoids, function the same way as do exogenous cannabinoids, such as those found in marijuana. Cannabinoid receptors are located on nerve endings in the high density areas of the brain and influence pleasure, memory, concentration, cognition, coordination, movement, and sensory and time perception. Overstimulation of these receptors produces the “high” associated with cannabis use and chronic use interferes with the normal function of the system (Volkow, 2013).

Pava and Woodward (2012) discuss the similarity between the way marijuana and alcohol affect endocannabinoids and report that alcohol too causes the release of endocannabinoids and that overuse of alcohol decreases the human body’s natural physiologic response to emotional stress as a result of damage to the endocannabinoid system. What is most important is that patients who are comorbid are already dealing with higher symptom levels compared to patients with only one disorder, and the impairment of their natural ability to cope with stress causes an even greater risk for relapse. More information on the effect of drugs on the brain can be found at <http://www.drugabuse.gov/>.

### The Physiology and Psychology of Addiction

The neurology of addiction suggests that the connection between addiction and the psychological state of depression during withdrawal is likely to be related more to the desire to regain a normal mood than to get “high” (Taber, Black, Porrino, & Hurley, 2012). Consistent with this, Dennhardt

and Murphy (2011) studied depression and alcohol use among college students and found that a depressed mood was associated with increased alcohol problems. Whites and African Americans in this study reacted similarly with regard to the primary finding that depression contributes to drinking, which leads to more depression, followed by more drinking to correct one's mood. However, African Americans reported a particularly reduced ability to cope with stress and negative emotions, and this was associated with their increased drinking. Therapists for African American college students should explore this symptom complex and account for this finding in treatment planning.

One other particular manifestation of the interaction of substance and psychological symptoms is the similarity between cannabis withdrawal and depression. Until recently cannabis withdrawal symptoms were considered to be of questionable significance (American Psychiatric Association [APA], 2000). However, a withdrawal syndrome for cannabis is proposed for the newest revision of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* of the APA. The proposed syndrome includes depressed mood, irritability, anger, sleep disturbance, restlessness, decreased appetite, and other physiologic symptoms such as headache, all of which are consistent with depression.

Furthermore, a condition associated with heavy use of marijuana referred to as "amotivational syndrome" has long been-recognized in clinical practice. The condition was first identified among teenage cannabis users and is a descriptive one that associates cannabis use with loss of educational and occupational goals and with a general impedance of normal maturation during adolescence (Schwartz, 1987).

Recent studies suggest that chronic use of virtually all drugs of abuse decreases the growth and proliferation of neurons, impairing the ability to learn new ways of coping (Mandyam & Koob, 2012). This process results in two conditions that reinforce addiction. First, the decrease in nerve cells reduces the effectiveness of drugs of abuse for helping the user to "get straight." Second, the strength of memory related to how the drug improved mood in the past, coupled with a reduced capacity for learning, reinforces compulsive use of the drug in a desperate attempt to stabilize mood. These findings are critical for understanding the significance of substance abuse among adolescents and young adults whose brains are still developing, and why they should abstain from substance use.

From a psychological perspective the withdrawal from drugs and subsequent cravings for them increases the potential for continued use among those who are addicted, and for relapse among those who are trying to maintain abstinence and recovery. Gould (2010) discusses drug-stimulus cues that occur because of the strong mental associations between the intense pleasure associated with drug use and the surroundings in which drug use takes place. These cues reassert themselves during experiences reminiscent of drug use, and the cues trigger drug-seeking behavior. This relationship is reflected in the well-known tenet of Alcoholics Anonymous (AA) and Narcotics Anonymous to avoid the "people, places, and things" associated with substance use.

### Treatment Duration and Intensity for Comorbid Substance and Psychiatric Disorders

Because of the differences between patients with single disorders and patients with comorbid disorders, patients with comorbid disorders have sometimes been referred to as "system misfits," and efforts have been made to develop instruments that account for comorbidity during the process of placing them into appropriate treatments. Minkoff, Zweben, Rosenthal, and Ries (2003) describe the efforts of the American Society of Addiction Medicine (ASAM), which publishes placement criteria for assigning patients who abuse substances to different levels of treatment. ASAM is working to revise the classification system to account for comorbidity of psychiatric disorder.

Minkoff et al. indicate that the effort came about because the prevalence of comorbidity is so high that it is now considered the expectation rather than the exception.

The longer patients stay in treatment the more likely they are to remain in recovery from substance abuse and have reduced psychiatric symptoms. However, patients who are comorbid are consistently found to be more noncompliant or to drop out of treatment before their peers who are noncomorbid. Daley and Zuckoff (1999) found that psychiatric inpatients with comorbid SUDs had significantly lower rates of entry to ambulatory care after hospitalization, lower rates of session attendance, higher rates of early treatment drop-out, and higher rates of psychiatric rehospitalization. Cooper, Moisan, and Gregoire (2007) studied treatment compliance among patients with schizophrenia and found that more than 50% had either stopped taking medication or were noncompliant in other ways. Patients who were compliant after 1 year of treatment were more likely not to have a SUD and to have been treated with medication treatment of at least moderate intensity.

Importantly, longitudinal research consistently finds that treatment effects for chronic, relapsing diseases such as addiction degrade over time. D. M. Donovan et al. (2008) address this issue by suggesting that patients remain in treatment, possibly in a low-intensity treatment during periods of remission. In this way, if stress increases or patients report cravings and lapses that threaten recovery, treatment can be adjusted early in the process to help the patient maintain stability. Case management services, which are provided by some social workers, can be used for providing services on a continuing basis and can be effective for decreasing drug use and psychosocial needs among their clients even when they exhibit low levels of motivation for treatment (Jones, Svikis, Rosado, Tuten, & Kulstad, 2004). Case management is also a very important component of maintaining clients in the community and decreasing need for inpatient treatment. In a study of a very large Veteran population with depression, increased intensity of outpatient monitoring following discharge from hospitalization was found to have a moderately protective effect against rehospitalization for Veterans with depression who also had a SUD.

The intensity and type of outpatient living arrangements, for example, community living facilities, have been found to affect substance use outcomes and functioning. Moos, King, and Patterson (1996) studied a Veteran sample and found that SUD was a predictor of readmission to hospital for acute care. However, Veterans with comorbid psychiatric and SUDs that spent more time in the hospital during their inpatient treatment and more time in community living facilities following discharge were less likely to be readmitted over a 2-year period. Furthermore, patients who are comorbid who received higher amounts of outpatient treatment following discharge from an inpatient stay were less likely to be readmitted for acute care.

Although consistent participation in outpatient treatment has been found to be important for psychosocial functioning and staying in recovery from substance abuse, participation in mutual support programs has also been found to independently improve these outcomes (Moos, Schaefer, Andrassy, & Moos, 2001). Furthermore, adjustment to community life following inpatient treatment is improved by participation in self-help programs. However, the use of self-help care has been found to vary based on the intensity of service to which patients are referred.

Research suggests that comorbid patients discharged to low-intensity outpatient treatment programs attend more self-help activities, and such participation has been found beneficial for reducing use of drug and alcohol and for improving social and family functioning (Timko & Sempel, 2004). These investigators suggest that patients released to high-intensity treatment programs have more formal psychiatric treatments available to them, for example, medication, access to mental health professionals and so on, but that high-intensity programs should place more emphasis on supporting referrals to community-based interventions such as 12-Step programs. Timko and Sempel (2004) also indicate that low-intensity treatment programs can improve service to their clients by emphasizing the importance of abstinence from drugs and alcohol and maintenance of mental health to their clients and that participation in 12-Step activities is one way to achieve these goals.

Treatment of comorbid psychiatric and SUDs requires high-intensity and integrated interventions. Moos (2007) has drawn attention to the need for combining treatments to increase therapeutic effect by calling for more emphasis on “empirically supported treatment processes” rather than empirically supported treatments. The current authors recently completed a review of evidence-based practices for treatment of comorbidity and concluded that effective treatment planning can only be achieved by recognizing that the most effective treatment for comorbid patients is a multifaceted endeavor. Effective treatment for comorbid conditions must combine different therapeutic “technologies,” that is, psychotherapy (e.g., motivational interviewing [MI], cognitive-behavioral therapy [CBT]), pharmacotherapy (e.g., antidepressants), and behavioral treatments (e.g., contingency management [CM]). The combinations of different technologies increase therapeutic effect by exerting a synergistic impact on symptoms (Kelly, Daley, & Douaihy, 2012).

### Evidence-Based Treatments for Comorbidity

Because social workers are mainly involved in delivering case management and individual, group and/or family services to clients with co-occurring disorders (COD) we focus on behavioral approaches (with and without medication). Readers interested in more detailed information regarding the psychosocial, medication, and/or combined therapies for COD are referred to Mueser and Gingerich in this volume, Douaihy et al. in this volume, Fox et al. (2010), Kelly et al. (2012), Mueser, Noordsy, Drake, and Fox (2003), Daley and Moss (2002), Daley and Thase (2004), Najavits (2000), Nunes, Selzer, Levounis, and Davies (2010), and Weiss and Connery (2011).

The sections that follow provide an overview of integrated treatment of SUDS combined with (a) psychotic disorders, (b) mood disorders (depression and bipolar disorder), and (c) anxiety disorders.

### Interventions for Psychotic Disorders and SUDs

Combined interventions are needed for treatment of psychotic disorders and SUDs with the understanding that medications can treat the symptoms of psychosis, but behavioral approaches must be implemented to help patients deal with the many challenges in recovery from schizophrenia and SUD. These challenges include managing persistent psychotic symptoms, dealing with negative symptoms adversely affecting on social relationships, managing cravings for substances, social pressures to use drugs, and so on.

Most drugs of abuse can cause or exacerbate psychotic symptoms. Although substance-induced psychoses are usually transient and may resolve without treatment, patients who experience them should be evaluated by a psychiatrist and treated because of the severe impairment in functioning associated with psychosis and risk for injury. Medications for psychotic illness are sometimes necessary to hasten the return-to-normal cognition (Leweke, Gerth, & Klosterkötter, 2004; Shoptaw, Kao, & Ling, 2009). Patients who experience transient psychosis due to drug use are likely to have a recurrence if they continue to use drugs, and they must be informed of the dangers (Post & Kopanda, 1976). They should be treated with the recommendation that they remain abstinent from illicit drugs.

The illicit drugs used most by patients with schizophrenia are alcohol, cannabis, and cocaine (Green, Young, & Kavanagh, 2005). Wilson and Cadet (2009) have described the schizophrenia and cannabis comorbidity as an epidemic. For patients with schizophrenia, experienced clinicians indicate that treatment should be integrated with an emphasis on engaging patients through motivational counseling (Drake, Mueser, Brunette, & McHugo, 2004; Mueser et al., 2003).

It is helpful to use the transtheoretical model (Prochaska & Velicer, 1997) in this process. Often referred to as stage of change, this model categorizes clients into five stages related to

their perspective on substance use. Clients who do not view substance use as a problem are considered in the precontemplative stage, whereas those who are recognizing their substance use as a problem are considered in one of several increasing categories that include contemplation, planning, action or a maintenance phase as they consider participating, or are actually engaging in using alternative behaviors to drug use. This model “meets clients where they are” and is a critical element of maintaining a therapeutic alliance so clients remain active in therapy and stay in treatment rather than drop out.

Other treatments for psychotic patients are Motivational Interviewing (MI; Miller & Rollnick, 2013), Cognitive-behavioral therapy (CBT) (Beck, Wright, Newman, & Liese, 1993), CM (Stitzer & Vandrey, 2008), and various models of family therapy. For an excellent review of these treatment models please see Wells et al. in this volume. Group therapies are also helpful, especially as part of follow up treatments that include 12-Step activities (Moos & Moos, 2005; Mueser et al., 2003; Ouimette, Brown, & Najavits, 1998).

One recent, large-scale study found that a combined MI, CBT, and family therapy approach can be effective in reducing substance use among patients with schizophrenia for at least one year (Barrowclough et al., 2010). Bellack and Gearon (1998) developed a combined MI/CM approach (Behavioral Treatment for Substance Abuse in Severe and Persistent Mental Illness [BTSAS]) that includes relapse prevention strategies and short-term goal setting. Patient self-determination in goal setting has been emphasized as a critical part of this approach (Tenhula, Bennett, & Strong-Kinnaman, 2009). BTSAS is effective in retaining patients in treatment and reducing substance use. A case management component has been proposed for BTSAS that may improve the ease of implementation and its effectiveness (Bellack, Bennett, Gearon, Brown, & Yang, 2006).

Leweke, Gerth, and Klosterkötter (2004) discuss the possibility that patients with schizophrenia are more vulnerable to the deleterious effect of cannabis because of sensitivities in the endogenous cannabinoid system and because of their particular reactions to exogenous cannabinoids. They conclude that it is critical for patients who are psychotic to receive intensive case management services and specialized psychotherapeutic programs, and clients with schizophrenia should be strongly encouraged to stop their use of cannabis. Furthermore, the recommendation for intensive case management is important because, as noted above, it has been shown to reduce the need for rehospitalization.

### Treatment for Depression and SUDs

Selective serotonin reuptake inhibitor (SSRI) antidepressants in combination with CBT have been found to be highly effective for treating clients with an AUD and depression (Cornelius et al., 1997; Moak et al., 2003). Despite the positive findings on the use of SSRIs antidepressants in these studies, contradictory evidence exists for the direct effect of SSRI antidepressants on drinking outcomes (Mariani & Levin, 2004; Torrens, Fonseca, Mateu, & Farre, 2005). In fact, the preponderance of the evidence suggests that people with AUD and depression drink less when treated with antidepressants as a result of their depression improving.

One finding that supports this theory exists as the result of a study that did not include CBT. Mason, Kocsis, Ritvo, and Cutler (1996) used a first-generation antidepressant (desipramine) and found clients on desipramine drank less alcohol over the course of the 24-week study. This study is significant because it did not have an active psychotherapy component. Importantly, evidence exists that antidepressant treatment may be more effective against drinking outcomes when patients have been abstinent from alcohol for at least 2 weeks (Pettinatti, 2004). This is logical because of the negative effect alcohol has on neurotransmission, as previously discussed.

Regarding treatment of other SUDs, Schmitz and colleagues (Schmitz, Averill, et al., 2001; Schmitz, Stotts, Rhoades, & Grabowski, 2001) found CBT and relapse prevention psychotherapy improved depressive symptoms and reduced cocaine use in the samples they studied. CM too



has been found to be effective for patients providing drug-free urines among cocaine users with depression, and residential treatment is consistently found to be effective for reducing depression among opioid users (Torrens et al., 2005).

### Psychotherapy for Bipolar Disorder and SUDs

One behavioral treatment has been developed specifically for bipolar disorder, Interpersonal and Social Rhythm Therapy (IPSRT) (Frank, Swartz, & Kupfer, 2000). IPSRT focuses on helping patients with bipolar disorder gaining insight in the relationship between mood and interpersonal changes. The treatment assumes that the patient will be cooperative with highly structured interventions as the treatment emphasizes the therapist providing psychoeducation. The effect of IPSRT is to stabilize circadian rhythm by structuring daily routines, including sleep cycles and by addressing interpersonal problems. The patient and therapist work together to incorporate strategies for managing daily activities into the patient routine. IPSRT has been found to be more effective for preventing relapse, improving functioning in relationships, and increasing life satisfaction than medication management alone (Chambless & Hollon, 1998; Miklowitz, Otto, Frank, Reilly-Harrington, Kogan, et al., 2007; Miklowitz, Otto, Frank, Reilly-Harrington, Wisniewski, et al., 2007). Although there have been no studies using IPSRT with patients with bipolar disorder who abuse substances it is likely to be effective because reducing psychiatric symptoms has been consistently found to be associated with reduced use of substances.

Weiss, Najavits, and Greenfield (1999) developed Integrated Group Therapy (IGT), a CBT-based treatment for bipolar disorder and SUD. Along with medication, IGT has shown efficacy for reducing substance use and mood symptoms in several studies (Weiss et al., 2000; 2004; 2009).

### Psychotherapy and Behavioral Treatment of Anxiety Disorders

Research shows that, as long as therapists are well trained and supervised and use manual-based therapies, CBT is highly effective for all *DSM*-defined anxiety disorders (Hofmann & Smits, 2008; Stewart & Chambless, 2009). One trend that is emerging is that provocative therapies such as imaginal exposure and homework for CBT can be beneficial but should not be used prior to control of substance use because the anxiety associated with the therapy may exacerbate substance abuse. Imaginal exposure is a specialized therapy that involves the patient recalling aspects of the trauma he or she experienced in sessions with a qualified therapist who provides encouragement and support. The technique is beneficial because the patient's anxiety decreases as the patient endures continual exposure to the memory while realizing that experiencing the exposure is a nonthreatening event.

Hesse (2009) reviewed the available studies on integrated psychological treatment for comorbid anxiety and SUD and indicates that psychological intervention increased days abstinent from substances, decreased symptoms, and improved retention in treatment. Hesse concluded that psychological intervention alone is not sufficient for treatment of anxiety and SUD and that there is a need for other integrated treatments for this comorbidity. Combining CBT with antidepressants has the most evidence-based support for treatment of comorbid opioid and anxiety disorder (Fatseas, Denis, Lavie, & Auriacombe, 2010).

### Psychotherapy and Behavior Therapy of PTSD

Comorbid PTSD and SUD have been studied in clinical trials more than any other anxiety disorder combined with a SUD. This dual disorder is prevalent in clinical populations with current

comorbidities estimated to be between 14% and 41% (Shafer & Najavits, 2007). Symptoms tend to be more severe in patients who are comorbid compared to patients who have only one or the other disorder (Jacobsen, Southwick, & Kosten, 2001). Women are more likely to need treatment for PTSD (Bromet, Sonnega, & Kessler, 1998), although combat Veterans with PTSD have high rates of AUDs (Jacobsen et al., 2001). Research suggests that with the exception of combat Veterans with AUD, substance-related comorbidities of patients with PTSD are more likely to be with harder drugs such as amphetamines and opioids, rather than with alcohol and cannabis (Mills, Teesson, Ross, & Peters, 2006; Najavits, Weiss, & Shaw, 1997).

PTSD often causes or exacerbates substance use compared to the reverse temporal order (Back, Brady, Jaanimagl, & Jackson, 2006). A review of treatment studies for PTSD and SUD (Tiet & Mautsach, 2007) indicates that, although cue-exposure therapies are considered first-line psychotherapies for PTSD, they should only be used for participants with comorbid PTSD/SUD after substance abuse is under control because increasing PTSD symptoms often stimulate drug cravings and heighten the risk for substance abuse. A strategy for controlling substance use prior to uncovering therapies is to use CM, which can lead to reduction of drug use (Mancino, McGaugh, Feldman, Poling, & Oliveto, 2010).

Once substance abuse symptoms are under control, the technique of imaginal exposure (described above) is an important intervention strategy. It is critical to complete treatment by decreasing trauma-related anxiety because cravings for substances increase among patients with PTSD in response to trauma-related cues. Treatment studies have found that patients who received a course of imaginal exposure therapy reported less distress and decreased alcohol cravings compared to a control group (Coffey, Schumacher, Brimo, & Brady, 2005; Coffey, Stasiewicz, Hughes, & Brimo, 2006; Saladin et al., 2003).

Manualized group therapies have also been found to have some effectiveness. In a recent treatment study by Hien et al. (2010) women with PTSD and a SUD. Treatment as usual (TAU) consisted of 12 sessions that focused on women's health education compared to 12 sessions of a specific psychotherapy titled Seeking Safety (SS). These investigators found no overall differences between the groups but found that participants with the most severe substance abuse in SS decreased their substance use more than those in the control condition. This finding suggests that such specialized treatment may be especially helpful for patients with severe comorbid PTSD and SUD.

One other model associated with physical or sexual abuse is Trauma Recovery and Empowerment Model (TREM). TREM is a 33-session group treatment that focuses on support for the impact of abuse while enhancing empowerment through developing coping skills (Fallot & Harris, 2002). A recent review of treatment for PTSD and alcohol dependence emphasizes the importance of using a multifaceted approach to treatment, including structured psychotherapeutic approaches like SS and TREM in conjunction with SSRI antidepressants or topiramate (McCarthy & Petrakis, 2010). This strategy is similar to that indicated for treatment of comorbid PTSD and opioid dependence (Trafton, Minkel, & Humphreys, 2006).

Other treatment models have been developed, although they have little empirical support. These treatments combine MI, CBT, psychodynamic, case management, and 12-Step treatments (Back, Dansky, Carroll, Foa, & Brady, 2001; Brady, Dansky, Back, Foa, & Carroll, 2001; B. Donovan, Padin-Rivera, & Kowaliw, 2001; Triffleman, Carroll, & Kellogg, 1999; Zatzick et al., 2004). Although they have not been rigorously tested, the preponderance of the evidence suggests that an integration of evidence-based practices, such as proposed by these models of therapy, is likely to reduce symptoms among clients with comorbidity.

### Treatment of SUD and Generalized Anxiety Disorder

Simon (2009) suggests that patients with generalized anxiety disorder (GAD) should be treated aggressively to reduce the risk that GAD will progress to major depression. One complication of

the SUD/GAD comorbidity is that GAD cannot be accurately evaluated during active withdrawal from substances. However, Brady and Verduin (2005) suggest that antidepressants should be considered in conjunction with psychotherapy, if GAD symptoms persist following detoxification.

Affect Focused Body Psychotherapy (ABP; Thornquist & Bunkan, 1990) is a specific psychotherapy that has been used with patients with GAD. ABP is based on exploring affect related to anxiety and integrates bodily techniques into a psychodynamic treatment. One study found patients in the ABP group were improved over the TAU condition. Interestingly, the TAU condition used a problem-solving approach and focused on directive counseling, whereas the ABP approach was less directive and focused on emotional support. An analysis of the content of the therapies found that the supportive, exploratory aspects of the ABP treatment were more important than the content of the ABP itself (Berg, Sandahl, & Clinton, 2008).

### Behavioral Treatment of Social Anxiety Disorder and AUD

Alcohol is more likely to be abused than other drug by patients with social anxiety disorder (SoAD) because of its tranquilizing effects (Schneier et al., 2010; Zvolensky & Schmidt, 2004). One possible exception to this may be adolescents with SoAd. Adolescents often have the support of cannabis use by their social network, as well as easier access to cannabis than to alcohol. Whatever illicit drug is used for self-medication, comorbid SoAD and SUD is a significant public health problem. The combination of SoAD and AUD alone affects 2.4% of the general population.

Randall, Thomas, and Thevos (2001) conducted a study of comorbid SoAD and alcohol dependence using individual CBT with patients who were comorbid using the manualized treatment used in Project MATCH (Kadden et al., 1992). The groups received either CBT for alcohol dependence or a CBT that focused on alcohol dependence and SoAD. The investigators hypothesized that patients in the group that focused on treatment of both disorders would decrease their alcohol use in response to reduced social anxiety. Randall et al. (2001) found that both groups improved on percent of heavy drinking days as well as days abstinent from alcohol. In addition, both groups improved on social anxiety over 12 weeks of treatment and maintained their improvement over a 3-month follow-up period. The investigators noted that the experimental group may not have improved as much as they would have because they may have drunk more because of exposure to anxiety-provoking situations as a result of homework they performed for their therapy.

One other interesting finding from the Randall et al. (2001) study should be noted. Although attendance at AA meetings was not encouraged, data on AA meeting attendance during the treatment was collected. AA attendance increased in both groups during active treatment and decreased again following the active phase of the study. Indirect evidence exists that it is necessary to focus on both types of symptoms when treating anxiety disorder and SUD. One study of a comorbid sample randomized patients to treatment in an intensive outpatient program for AUD (Schade et al., 2005). One group received treatment that focused on psychotherapy for anxiety only and TAU for alcohol dependence while the other received only TAU for alcohol dependence. Although the treatment group that received treatment for anxiety had a significantly greater reduction of anxiety, no difference was found between the groups on alcohol relapse rates.

Taken together, the findings by Randall et al. (2001) and Schade et al. (2005) suggest that CBT programs that include a focus on anxiety and substance use appear to be more effective than CBT that addresses only anxiety-related symptoms. Another take-home message for clinicians is that group-based interventions, whether it be CBT or other group interventions, should be combined with support for 12-Step activities. D. M. Donovan and Floyd (2008) discuss ways to promote involvement in mutual self-help groups.

### Treatment of Obsessive–Compulsive Disorder and Comorbid SUDs

Fals-Stewart and Schafer (1992) found that patients with obsessive–compulsive disorder (OCD) are highly vulnerable to abuse of drugs or alcohol because they often find their symptoms to be confusing or even nonsensical. They therefore, may be unwilling to even report them to their doctor. As a result they do not receive treatment but may use drugs for self-medication. Furthermore, because these symptoms are often not reported the prevalence of OCD among substance abusers is likely to be higher than what is otherwise indicated.

When it is detected, CBT is effective against OCD (Hofmann & Smits, 2008) and should be used routinely in the treatment of OCD. The Fals-Stewart and Schafer (1992) study used a three-arm design with patients diagnosed with OCD and SUD in a residential setting. It included behavior therapy and TAU with two control conditions, TAU and another being TAU and relaxation training. These investigators found the combined treatment condition was more effective than the two control conditions for reducing substance use during follow-up. At least one recent review notes the effectiveness of SSRI antidepressants for treating OCD and recommends their use. It includes information on how their effectiveness can be augmented by other medications, if needed (Simpson, 2010).

### Behavioral Treatment of Panic Disorder and SUD

Recent studies have found that exposure therapy, consisting of exposure to avoided emotions, is beneficial to developing and practicing distress tolerance skills for panic, as well as the negative mood states associated with drug craving (Otto, Smits, & Reese, 2004). One model of treatment developed for this type of intervention is Panic-Focused Psychodynamic Psychotherapy (PFPP). PFPP focuses on recognizing the effect of anger in a person's life and the emotional conflicts related to feelings such as autonomy and loss or abandonment. One study of PFPP found that 73% of patients assigned to PFPP experienced a significant decrease in panic severity compared to 39% of patients who received a similar amount of relaxation treatment (Milrod et al., 2007). Although it is likely that PFPP would be effective with comorbid clients this has not been tested empirically.

### The Value of Combining and Intensifying Treatments

Compared to participants in usual care alone, CM treatment added to TAU for patients who use cannabis and stimulants results in better treatment retention, more drug-free urines, and more patients who maintain complete abstinence from drugs. These findings are also relevant to patients in methadone maintenance programs (Alessi, Rash, & Petry, 2011; Pierce et al., 2006; Petry et al., 2005).

Aase, Jason, and Robinson (2008) reviewed the literature and found that 12-Step participation was effective for reducing substance use and mental illness because the social support provided by the 12-Step programs helped the patient stay in recovery. Twelve-step participation has been found to be very effective for patients with dual diagnoses, and findings suggest that the best approach may be to encourage 12-Step participation to assist with sobriety while providing other needed services. Donovan and Floyd (2008) discussed methods for improving 12-Step participation and indicate that 12-Step Facilitation (TSF) should be routinely integrated into treatment of addiction.

We have already noted the importance of combining models into high-intensity treatments for clients with comorbid schizophrenia and substance abuse. Studies have found that a model known as Combined Behavioral Intervention (CBI), which is an integration of CBT, MI, and TSF, complements the effects of naltrexone alone and results in reduced drinking among participants who are alcohol dependent (Gueorguieva et al., 2010). Similarly, Longabaugh, Wirtz, Gulliver,

and Davidson (2009) studied a psychotherapy called Broad Spectrum Treatment (BST) that was developed to include elements of CBT, Motivational Enhancement Therapy (MET), and TSF. The design of BST is a step forward for treatment of comorbidity as it combines effective elements of the same technology, that is, psychotherapy for treatment of patients with addictions. It is becoming increasingly clear that integrating the best elements of different evidence-based psychotherapies is necessary to produce more effective outcomes.

### HOW SOCIAL WORKERS CAN HELP PREVENT RELAPSE FOR COMORBID CLIENTS

As has been discussed, the interaction of emotions with addiction increases the risk for relapse among clients in recovery. Conner, Sorensen, and Leonard (2005) found that depression level is predictive of drinking severity and that even modest improvements in depressive states during the 12 weeks of treatment in Project MATCH were associated with dramatic reductions in alcohol. This is reminiscent of previously cited findings regarding depression and alcohol abuse (Cornelius et al., 1997; Dennhardt & Murphy, 2011; Moak et al., 2003).

Social workers are more likely to help their clients stay in recovery by keeping a low level of emotionality in their own relationship with their client and to intervene in ways that reinforce the value of the patient experiencing a low level of emotionality in their other relationships. Karno and Longabaugh (2003) report that therapeutic relationships that were characterized as having low levels of emotionality during the 12 weeks of treatment in Project MATCH were associated with greater improvements in depression and alcohol use. The authors suggest that low emotionality is associated with low arousal that was found strongly associated with improvement (see Mueser & Gingerich, this issue for additional discussion of this topic).

Taken together, these findings suggest that the most therapeutic approach social workers can take with clients who abuse substances is one that decreases emotionality. This is best achieved by decreasing resistance in the client–social worker relationship. An approach that emphasizes empathy and egalitarianism, flexibility, and self-determination is one that decreases resistance and this is consistent with a MI approach. MI is a “style of relating” and reflects how therapists interact with clients more than it is a model of psychotherapy with a focus on content that must be covered to ensure that the treatment is being properly conducted.

In our specialized world social workers often function solely in a case management role, and we have noted the very important role case management plays in treatment of comorbid disorders, especially in the treatment of comorbid schizophrenia and SUDs. However, all social workers, no matter their specialty, will do well to remember that the history of our profession is based on providing tangible services in helping meet the needs of our clients in their environment. This mission emphasizes our continuing attention to making referrals to effective treatments and case management.

We have discussed issues related to determining intensity of treatment. For social workers who specialize in treating clients who abuse substances in inpatient, residential, and partial hospitalization settings group therapies and TSF are emphasized and are effective (Moos & Moos, 2005; Ouimette, Moos, & Finney, 1998). For social workers working in outpatient settings the most important conclusion may be that they can increase their therapeutic effect by combining treatments. This is especially true for social workers who are part of an interdisciplinary team. This means that, in general, it is important to integrate MI, CBT and family therapies as psychotherapies, possibly with CM and TSF as adjunctive treatments. Of course, where specific therapies exist for particular comorbidities such as PTSD and SUDs, specific models of group and psychotherapies may be needed (e.g., SS). As noted by Wells et al. (this issue) some of these require specialized trainings but most are readily available.

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