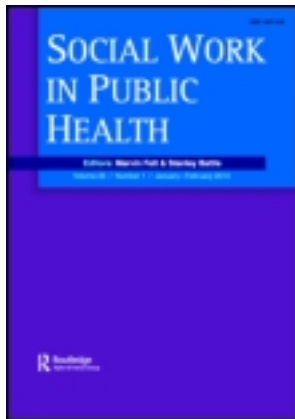


This article was downloaded by: [Ms Kim T. Mueser]

On: 04 June 2013, At: 03:46

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Social Work in Public Health

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/whsp20>

Treatment of Co-Occurring Psychotic and Substance Use Disorders

Kim T. Mueser^a & Susan Gingerich^b

^a Center for Psychiatric Rehabilitation, Boston University, Boston, Massachusetts, USA

^b Private Practice, Narberth, Pennsylvania, USA

To cite this article: Kim T. Mueser & Susan Gingerich (2013): Treatment of Co-Occurring Psychotic and Substance Use Disorders, *Social Work in Public Health*, 28:3-4, 424-439

To link to this article: <http://dx.doi.org/10.1080/19371918.2013.774676>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Treatment of Co-Occurring Psychotic and Substance Use Disorders

Kim T. Mueser

Center for Psychiatric Rehabilitation, Boston University, Boston, Massachusetts, USA

Susan Gingerich

Private Practice, Narberth, Pennsylvania, USA

People with psychotic disorders and other serious mental illnesses, such as schizophrenia, bipolar disorder, and severe major depression, have high rates of co-occurring substance use disorder, which can wreak havoc in their lives. In this article the authors describe strategies for assessing substance use problems in people with serious mental illnesses, and then address the treatment of these co-occurring disorders. The authors review principles of treatment of co-occurring disorders, including integration of mental health and substance abuse services, adopting a low-stress and harm-reduction approach, enhancing motivation, using cognitive-behavioral therapy strategies to teach more effective interpersonal and coping skills, supporting functional recovery, and engaging the social network. The authors include a section on how social workers may play a key role in assessment, treatment, or referral for co-occurring disorders in a variety of settings. Throughout the article the authors emphasize that belief in the possibility of recovery from co-occurring disorders and instilling hope in clients, their family members, and other treatment providers, are vital to the effective treatment of co-occurring disorders.

Keywords: Dual diagnosis, dual disorders, schizophrenia, bipolar disorder, cognitive-behavioral therapy, motivational interviewing, harm reduction, stages of change, stages of treatment, rehabilitation

INTRODUCTION

There is a high prevalence of substance use disorders (SUDs; including alcohol and drug abuse and dependence) among people with psychotic disorders and other serious mental illnesses, including schizophrenia, schizoaffective disorder, bipolar disorder, and major depression. Although the lifetime prevalence of SUDs in the general population is approximately 15%, about 50% of people with a psychotic disorder develop a drug or alcohol use disorder at some point in their lives (Kessler, Chiu, Demler, & Walters, 2005; Regier et al., 1990; Rush & Koegl, 2008). Substance abuse and dependence are among the most common comorbid disorders for people with severe mental illness.

Substance abuse is associated with a wide range of negative effects in people with a psychotic disorder, including the precipitation of relapses and hospitalizations, worsening family and social

Address correspondence to Kim T. Mueser, PhD, Center for Psychiatric Rehabilitation, Boston University, 940 Commonwealth Ave. West, Boston, MA 02215, USA. E-mail: mueser@bu.edu

functioning, medical problems, housing instability and homelessness, and legal problems (Drake & Brunette, 1998). People with comorbid SUDs are less adherent to medications for their psychiatric disorder (Swartz et al., 1998) and frequently drop out of treatment (Miner, Rosenthal, Hellerstein, & Muenz, 1997). A final consequence of comorbid SUDs is that these individuals are vulnerable to premature mortality, due to a combination of factors including increased vulnerability to medical illnesses, accidental deaths, and suicide (Schmidt, Hesse, & Lykke, 2011). Thus, the treatment of substance use disorders in people with a psychotic disorder is a high priority.

This article reviews strategies for the assessment and treatment planning of people with a psychotic disorder or another serious mental illness, followed by a discussion of effective treatment approaches. We focus on explicating the essential features of comprehensive and integrated treatment for co-occurring disorders and include information about how social workers may be involved directly or indirectly in the assessment and treatment of such disorders. Specific treatment strategies are described, and resources to facilitate the implementation of treatment are recommended.

ASSESSMENT

The accurate assessment of substance abuse problems in people with a psychotic disorder is a crucial first step in treating both disorders. Because denial and minimization of the effects of substance abuse are a common feature of addiction, people with co-occurring disorders often do not report or underreport the extent of their substance use, and the effects on their lives. Furthermore, the acute and withdrawal effects of alcohol and drugs, such as stimulants, cannabis, and hallucinogens, can mimic many of the symptoms of major mental illnesses, as summarized in Table 1, thereby compromising the ability to reliably evaluate psychiatric disorders (Corty, Lehman, & Myers, 1993). Therefore, SUDs are often missed in people with a serious mental illness when routine assessment of these problems is not incorporated into standard practice (Chen et al., 1992).

There is no single assessment method that can be relied upon for identifying SUDs in people with a serious mental illness. Rather, a combination of methods is most effective, as each approach has its own advantages and disadvantages (Bennett, 2009). Simply inquiring about recent and past substance abuse in a routine, matter-of-fact manner is critical, because many individuals are quite honest about their use. When inquiring about substance use, it may be helpful to first talk about past use, and to then discuss more recent use, as it is common for people to minimize the extent of their most recent use, but discussion of past use often opens them up to the topic and may be revealing about current use (Fowler, Carr, Carter, & Lewin, 1998). When talking about substance use, it is important to avoid taking a judgmental stance. It is more effective to view substance use as a common, even “normal” behavior, and to explain the importance of understanding the person’s use of substances to develop the most effective treatment plan for that person.

Self-report screening instruments can be useful for identifying substance use problems in people with a psychotic disorder. Several substance abuse-scanning instruments developed for the general population have good sensitivity and specificity in detecting addictive disorders in people with serious mental illness, such as the Alcohol Use Identification Test (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001), the Michigan Alcoholism Screening Test (Selzer, 1971), and the Drug Abuse Screening Test (Skinner, 1982). In addition, screening instruments have been designed specifically for people with serious mental illness, such as the Dartmouth Assessment of Lifestyle Instrument (Rosenberg et al., 1998). Screening evaluations can be administered either in clinical interviews or computer-based assessments, with computer-based evaluations being slightly faster and associated with high participant satisfaction (Wolford et al., 2008). When using substance abuse screening instruments, clinicians should be aware of the fact that people with a severe mental illness are highly sensitive to the effects of even modest amounts of alcohol or drugs,

TABLE 1
Cognitive, Mood, and Perceptual Effects of Commonly Abused Substances

<i>Type of Substance</i>	<i>Effects</i>
Alcohol: Beer, wine, "hard" liquor	<ul style="list-style-type: none"> • Drowsiness • Slurred speech • Loss of motor coordination • Slowed reaction time • Relaxation • Depression
Cannabis: Marijuana, hash, THC	<ul style="list-style-type: none"> • Mild euphoria • Relaxation • Anxiety or panic • Perceptual distortions • Racing or paranoid thoughts • Slowed reaction time • Reduced memory
Stimulants: Cocaine, "speed" (amphetamine)	<ul style="list-style-type: none"> • Alertness • Energy • Feeling "high" • Anxiety • Nervousness • Psychotic symptoms
Hallucinogens: LSD, ecstasy, PCP, MDA, mescaline, peyote	<ul style="list-style-type: none"> • Perceptual distortions or hallucinations • Impaired judgment • Feelings of unreality
Sedatives: Benzodiazepines, hypnotics	<ul style="list-style-type: none"> • Drowsiness • Slurred speech • Reduced motor coordination • Slowed reaction time • Relaxation • Depression
Narcotics: Heroin, morphine, codeine	<ul style="list-style-type: none"> • Euphoria • Drowsiness • Relaxation • Feeling "high" or "spacey" • Slowed reaction time

THC = Tetrahydrocannabinol; LSD = Lysergic acid diethylamide; PCP = Phenylcyclidine; MDA = 3,4-methylenedioxyamphetamine.

and thus individuals with co-occurring disorders may score relatively low on these screening instruments, despite having an active substance use disorder (Corse, Hirschinger, & Zanis, 1995).

Laboratory tests of substance use can also be helpful in detecting substance use disorders in this population. Urine tests (to detect a variety of different drugs) and saliva or breathalyzer tests (to detect the presence of alcohol) can identify substance use but do not provide information about the effects of such use. Although such laboratory tests can be helpful and are often used in emergency room and inpatient admission settings, they are used less frequently in mental health treatment centers.

Obtaining data from other people who know the individual can also provide critical information about the possible presence of a SUD. Family members and friends often have valuable infor-

mation about an individual's substance use habits, as do clinicians. Although no single source of information is reliable, gathering data from multiple perspective can enable to the clinician to determine whether substance use problems are likely.

Another tool for detecting SUDs are clinician rating scales developed specifically for evaluating alcohol and drug use disorders in people with serious mental illness. For example, the Alcohol Use Scale and Drug Use Scale incorporate the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria into the assessment of the SUD over the past 6 months (Mueser, Noordsy, Drake, & Fox, 2003) and have been found to have high sensitivity and specificity, and to be clinically useful in identifying which individuals are most in need of treatment of their co-occurring addiction (Drake, Mueser, & McHugo, 1996).

A final strategy that is useful for identifying substance use problems in people with serious mental illness is for the clinician to be aware of common correlates and consequences of substance abuse in this population. In general, the same demographic correlates of substance abuse in the general population are also present in people with a psychotic disorder. Substance use problems are more common in men than women and are associated with younger age, lower levels of education (mainly for drugs), and single marital status (Kavanagh et al., 2004; Mueser et al., 2000). In addition to the consequences of alcohol and drug use reviewed at the beginning of this article (e.g., relapses and hospitalizations, homelessness, social, legal, and medical problems), substance abuse in people with a psychotic disorder is associated with antisocial personality disorder (Hodgins, Tiihonen, & Ross, 2005; Mueser et al., 1999), which contributes to more severe addiction problems among clients with a co-occurring disorder (Mueser et al., 2006). Familiarity with these correlates and consequences of substance abuse can heighten the clinician's suspicion of possible substance use problems when working with clients with a serious mental illness (Mueser et al., 2003).

TREATMENT

Abundant evidence shows that the treatment of co-occurring psychotic and substance use disorders by separate clinicians, often working for different agencies, is ineffective (Ridgely, Goldman, & Willenbring, 1990). Numerous problems are associated with attempting to treat serious mental illness and addiction in a parallel or sequential fashion, including poor follow-through on referrals to other agencies for treatment, lack of coordination between treatments providers, and high rates of dropout from traditional addiction treatment of people with a serious mental illness (Polcin, 1992). The limitations of traditional separate treatment approaches are widely accepted, and there is now broad agreement that integrated treatment is critical for helping people with co-occurring disorders make progress toward recovery.

Integrated treatment is defined as when the same clinician (or team of clinicians) treats both disorders at the same time and assumes the responsibility for integrating the treatments for the two disorders. Over the past 15 years, a number of models of integrated treatment for co-occurring disorders have been developed (Bellack, Bennett, & Gearon, 2007; Graham et al., 2004; Mueser et al., 2003; Weiss & Connery, 2011), and a growing research literature supports the effectiveness of integrated treatment for co-occurring disorders (Dixon et al., 2010; Drake, O'Neal, & Wallach, 2008). Although integrated treatment programs differ along a number of dimensions, they also share a core set of common features that reflect more general principles of integrated treatment. These principles include:

- taking a low-stress and harm-reduction approach,
- motivation-based treatment (including a stage-wise approach),
- use of cognitive-behavioral treatment strategies,

- supporting functional recovery, and
- engaging the individual's social network.

Each of these principles is briefly described below.

Low-Stress and Harm-Reduction Approach

People with a psychotic disorder are highly sensitive to interpersonal stress (Nuechterlein & Dawson, 1984), which can precipitate increases in symptoms and dropout from treatment. It is important, therefore, that the treatment of co-occurring disorders minimize such types of stress (e.g., raised voice tones, "in your face" individual or group confrontation, strong criticism such as accusations of lying), and is instead conducted in an empathic manner aimed at understanding the person's experiences. This does not mean that expressions of negative feelings are not allowed, or that inconsistencies in people's behavior are not pointed out. Rather, these types of communication are conducted in a calm, direct, but gentle way to maintain the therapeutic relationship with the client, while still conveying important information to the person, with an interest in understanding his or her perspective.

For many people with a co-occurring disorder, progress toward recovery takes place gradually, over a period of many months, if not years. As addressed in the next section, motivation to work on substance use problems is often low, while people may be engaging in a wide range of high-risk behaviors (e.g., trading sex for money or drugs, IV drug use) that threaten their mental and physical well-being. The increased mortality of people with co-occurring disorder, combined with their low motivation to change, makes taking a harm-reduction approach to treatment essential (Marlatt, 1998).

Taking a harm-reduction approach to treatment involves first recognizing that many clients do not initially accept abstinence from substances as a personal goal, and understanding that motivation to work on substance use problems often develops gradually over time, in the context of a therapeutic relationship. Second, harm-reduction involves making efforts to reduce the most immediately harmful effects of substance abuse on the client's physical safety and health, without necessarily reducing the substance use behavior itself. Examples of harm-reduction strategies include providing access to clean needles for IV drug users, supporting a shift to a less harmful substance (e.g., changing from heroin to cannabis), identifying places where clients are less likely to be victimized when using substances, and teaching safe-sex skills to clients who trade sex for drugs or money (Denning, 2000; Mueser et al., 2003).

Motivational Enhancement and Taking a Stage-Wise Approach

People with a SUD often lack the motivation to work on their addiction, and this problem can be even greater in people with serious mental illness. For treatment to be most effective, it must enhance motivation for change and match the intervention strategies to the individual's current level of motivation. Instilling hope for recovery from co-occurring disorders is an important goal throughout all of treatment.

The stages of change concept has provided useful guidance in understanding how to match treatment to the individual's motivation for change (Prochaska, 1984). This concept proposes that people go through a series of discrete motivational stages when in the process of changing a health behavior such as using substances, smoking, diet, or learning how to manage the symptoms of a mental illness. These stages of change include:

- precontemplation (the person is not thinking about change),
- contemplation (the person is thinking about change),

TABLE 2
Stages of Treatment

<i>Stage</i>	<i>Definition</i>	<i>Goal</i>
Engagement	Client has not established a relationship with a clinician who can provide integrated treatment	To establish a working alliance
Persuasion	A working alliance has been established, but the client is continuing to abuse substances	To develop the client's awareness that substance use is a problem and create motivation to change
Active treatment	The client has begun to reduce his or her use of substances or has temporarily achieved abstinence	To facilitate further reduction or continued abstinence
Relapse prevention	The client has succeeded in achieving abstinence from substance use or use without harm	To help client maintain sobriety and extend the recovery to other areas of functioning

- preparation (the person is making plans to change his or her behavior),
- action (the person is in the process of making behavioral changes), and
- maintenance (the person is maintaining desired changes in behavior).

The stages of change concept has been adapted to describe the stages of treatment that people with co-occurring disorders progress through in the process of recovering from their disorders (Osher & Kofoed, 1989). The stages of treatment overlap with the stages of change but differ in that they provide specific treatment recommendations for helping people move on to the next stage of change. The stages of treatment have been operationalized behaviorally to facilitate their recognition (McHugo, Drake, Burton, & Ackerson, 1995; Mueser et al., 2003), and include the following: engagement persuasion, active treatment, and relapse prevention. Table 2 contains a brief description of each stage of treatment and the stage-wise goals for the clinician. As each of the stages of treatment has a specific goal associated with it, the attainment of these goals informs the choice of which interventions to use. Selecting strategies consistent with the goal at each stage of treatment can optimize treatment effectiveness, as described below (Mueser et al., 2003).

In the engagement stage, because a working relationship between the clinician and client does not yet exist, the primary focus is on establishing such a relationship, rather than persuading the person that he or she has a substance use problem. Strategies for engaging clients in treatment include assertive outreach into the community, provision of supports to meet basic needs (such as food, clothing, shelter, legal help), support for the person's social network (e.g., family, friends), and crisis resolution. Sometimes, coercive interventions, such as involuntary inpatient treatment or outpatient commitment, usually imposed by legal authorities, are a tool that can facilitate engagement in treatment.

In the persuasion stage, the client is not yet motivated to work on reducing substance use. Therefore, the emphasis in treatment at this stage is on developing the client's awareness of the effects of substance use and motivation for working on it, rather than teaching strategies aimed at resisting offers to use substances, coping with cravings, or participation in a self-help group, which assume some level of motivation for working on substance abuse. Strategies for enhancing motivation to work on substance use include:

- providing information about the nature of substance use and its interactions with mental illness,

- motivational interviewing (e.g., harnessing motivation to work on substance use by first identifying personal goals and then developing discrepancy between the attainment of those goals and continued use of substances; Miller & Rollnick, 2002),
- group interventions (such as persuasion groups, aimed at encouraging clients to share their experiences using substances with one another in order to explore the negative effects and the potential benefits of reduced substance use or abstinence; Mueser et al., 2003; Weiss & Connery, 2011), and
- social network interventions (aimed at educating significant other people about the interactions between substance use and serious mental illness, and building motivation to help the client work on his or her co-occurring disorders; see section below on Engaging the Social Network).

During the active treatment stage the client is motivated to work on substance use reduction or abstinence, and attention turns to this goal. A broad range of interventions can be used during this stage, such as teaching skills for dealing with offers to use substances and cravings (Roberts, Shaner, & Eckman, 1999), self-help groups for addiction or co-occurring disorders (Magura et al., 2003; Vogel, Knight, Laudet, & Magura, 1998), developing coping strategies for symptoms as an alternative to self-medicating with substances (Gingerich & Mueser, 2005), and developing a relapse prevention plan (Fox et al., 2010). As in the persuasion stage, individual, group, and family modalities can be used to implement these treatment strategies.

Although efforts to improve functioning across the broad range of life domains (e.g., work, social relationships) are important throughout all the stages of treatment, the relapse prevention stage signals a shift to a greater emphasis of treatment on these other areas. Success in addressing substance abuse often leads to motivation to work on other health areas, such as tobacco smoking (Venable, Carey, Carey, & Maisto, 2003). The effects of substance abuse on social relationships can result in people in this stage taking efforts to repair their relationships with important other people, such as children, other family members, and friends.

Cognitive-Behavioral Therapy Approaches

Cognitive-behavioral therapy (CBT) includes a range of techniques aimed at teaching people more effective skills for interacting with other people, coping with symptoms, and dealing with distressing feelings. The methods involved in CBT are based on theories of learning such as reinforcement and shaping (i.e., rewarding of successive approximations to a goal), social learning (i.e., the role of social modeling in acquiring social behaviors) (Bandura, 1969), and cognitive appraisal (i.e., the impact of interpretations or beliefs about events on people's emotional reactions to them, and subsequent behaviors) (Beck, Rush, Shaw, & Emery, 1979). CBT methods have been shown to be effective in the treatment of the broad range of mental illnesses, as well as SUDs. Examples of CBT methods that are especially helpful in treating co-occurring disorders include social skills training, coping skills training, developing new leisure and recreation activities, and cognitive restructuring. Each is described below.

People with co-occurring disorders can benefit from learning a variety of new skills for dealing with their urges to use substances and addressing needs related to their substance abuse. Substance use frequently occurs in social situations, and therefore skills for refusing substances in a variety of social situations can be useful. For example, skills for refusing offers to use substances at a party, an informal gathering with friends, an intimate situation, or when encountering a former dealer or drug connection can all be important, depending on the situations in which the person has used substances. Social skills training approaches can be effective at improving the interpersonal skills for dealing with these challenging situations (Bellack et al., 2007).

Aside from improved skills for dealing with substance use situations, CBT techniques are useful in addressing the motivations people have for using substances, including the need for social contact, acceptance, and closeness, as well as needs related to coping with persistent symptoms, and simply for some pleasure in life. People with co-occurring disorders often use substances in social situations to get acceptance from other people, and because they lack social contact with other people who do not use substance (Addington & Duchak, 1997). For these individuals, social skills training that addresses a broader range of interpersonal skills, including starting and maintaining conversations, demonstrating an interest in the other person and making friends, and getting closer to people (Bellack, Mueser, Gingerich, & Agresta, 2004), can enable clients with co-occurring disorders to develop relationships with others that are not based on using substances together.

Substance use is sometimes motivated by attempts to cope with persistent symptoms, such as auditory hallucinations, depression, anxiety, and sleep difficulties (Dixon, Haas, Weiden, Sweeney, & Frances, 1991). Drug and alcohol use can provide a temporary escape or relief from these symptoms but often worsens them in the long run. Teaching people with co-occurring disorders more effective coping strategies for their symptoms can reduce their temptation to use substances to manage these symptoms. There is a wide range of coping strategies to help people to manage psychiatric symptoms more effectively. Table 3 contains a few examples of strategies for coping with common persistent symptoms.

Some individuals develop effective coping strategies on their own, but many benefit from learning more coping strategies, which can be taught in a systematic fashion using a combination of demonstration in role-plays, role play practice and feedback, and collaboratively agreed-upon home assignments to practice coping strategies on one's own (Gingerich & Mueser, 2011). The more coping strategies an individual can use to deal with a particular symptom, the greater their coping efficacy, and the lower the chance they will use substances to cope with the symptom. Coping strategies can also be taught to manage persistent effects of cravings for substances, with strategies similar to those taught for auditory hallucinations being effective.

Drug and alcohol use disorders tend to develop in late adolescence or early adulthood, and for people who also have a co-occurring psychiatric disorder, these habits may become a primary outlet for leisure and recreation. Helping people reduce their dependency on alcohol and drug use and develop healthy and rewarding lives involves exploring and establishing new ways of having fun. CBT strategies can be used to help people explore and develop new leisure and recreational activities that can take the place of drug and alcohol use. Developing new ways of having fun takes time and requires some sampling of new activities to familiarize people with alternative things they may find enjoyable. In addition, as some people with co-occurring disorders may have reduced cognitive functioning that can interfere with anticipating and reminiscing about enjoyable activities (Burbridge & Barch, 2007), systematically teaching people how to look forward to and reflect back on enjoyable activities may facilitate the enjoyment associated with learning new leisure and recreational outlets (Bryant & Veroff, 2007; Pratt, Bartels, Mueser, & Forester, 2008).

CBT approaches can also be useful in teaching people how to recognize and challenge inaccurate or self-defeating thoughts or beliefs that can contribute to negative feelings and substance use (Barrowclough et al., 2010; Graham et al., 2004). The CBT technique of cognitive restructuring is based on the recognition that how people respond emotionally and behaviorally in situations is influenced by their thoughts or beliefs in those situations, and that thoughts and beliefs are sometimes inaccurate. Teaching people how to recognize the automatic thoughts that accompany feelings in different situations, and how to systematically evaluate and challenge those thoughts when inaccurate, can replace incorrect or distorted thinking with more accurate thoughts that are associated with less distress and more adaptive behavior. Cognitive restructuring can be a useful skill for helping people challenge thoughts that underlie negative feelings such as depression and anxiety, as well as negative reactions to hallucinations (e.g., the beliefs that the voices have control

TABLE 3
Examples of Coping Strategies for Persistent Symptoms

<i>Symptom</i>	<i>Examples of Coping Strategies</i>
Depression	<ul style="list-style-type: none"> • Setting goals for daily activities • Developing and referring to a list of personal strengths • Using positive self-talk • Exercising
Anxiety	<ul style="list-style-type: none"> • Getting re-involved in things one used to enjoy • Using relaxation techniques • Using problem solving for situations that create anxiety • Developing a plan for gradually exposing oneself to a situation that creates anxiety but is actually safe • Exercising • Practicing yoga and meditation
Hallucinations	<ul style="list-style-type: none"> • Setting aside a “worry time” each day • Normalization • Distraction • Reality testing • Positive self-talk • Relaxation techniques • Acceptance/mindfulness
Delusions (false beliefs)	<ul style="list-style-type: none"> • Shifting attention to something else • Asking oneself whether a disturbing thought may be related to a symptom • Avoiding jumping to conclusions • Brainstorming other possible explanations • Checking out one’s concerns with someone one trusts • Getting help examining the evidence for and against one’s belief
Sleep problems	<ul style="list-style-type: none"> • Developing good sleep hygiene (e.g., going to bed and getting up at the same time, exercising during the day, doing something relaxing before bed, avoiding caffeine after 5 PM, avoiding napping during the day) • Coping with excessive worry during waking time • Avoiding sleeping too much (e.g., creating more structure in one’s day, including a balance of responsibilities and fun activities during the day)
Low stamina/low energy	<ul style="list-style-type: none"> • Developing a daily schedule • Breaking down activities into small steps • Gradually increasing one’s schedule to include longer or more activities • Building in rewards for oneself • Using reminders • Increasing exercise • Planning to do things with another person • Making sure one is getting enough rest, but not sleeping too much
Anger	<ul style="list-style-type: none"> • Recognizing and responding to the <i>early</i> signs that one is feeling angry • Using strategies for staying calm when angry (e.g., relaxation techniques) • Identifying situations that commonly make one angry and learning how to handle them more effectively (e.g., using problem-solving) • Learning to directly express angry feelings in a constructive way (e.g., using social skills training)
Concentration problems	<ul style="list-style-type: none"> • Cutting down on distractions • Breaking down large tasks into smaller ones • Scheduling regular rest breaks • If losing track of a conversation, asking the person to slow down or repeat things • Repeating back part of the conversation to make sure one understands

over the person). Cognitive restructuring can also be useful in teaching people how to respond to urges to use substances, by teaching them how to challenge their own thoughts that using substances will be an effective way to eliminate their distress or solve their problems.

Supporting Functional Recovery

An important goal in treating people with co-occurring disorders is to help them to establish a worthwhile and meaningful life that is not centered on using substances. Often, the best way of accomplishing this is to explore personal goals and ambitions with individuals, and to then begin the work toward helping them make the desired changes in their lives, even while they may be contemplating changing their substance abuse habits. Therefore, supporting efforts to improve functional recovery is an important facet of treating people with co-occurring disorders.

A variety of different strategies can be used to help people with co-occurring disorders take steps toward improving their psychosocial functioning. The quality of social relationships, including parenting relationships, may be an important focus of work. For example, people with co-occurring disorders often have strained relationships with their children, and many no longer have parental rights. The desire to improve relationships with one's children, and to be a better parent, is one of the most common motivations for people to gain control over their substance abuse (Fox, 1999, 2010).

Another important area of functioning is work. Rehabilitation programs have been designed to help people with psychotic disorders get back to work, with the most effective approach being supported employment (Becker & Drake, 2003). Supported employment focuses on helping people find competitive jobs in the community, and then providing the supports necessary to enable them to succeed at the workplace. Supported employment programs for people with serious mental illness do not impose eligibility criteria on participants other than the desire for work. For example, supported employment programs do not require that clients be abstaining from alcohol or drugs to look for work. The job search usually begins soon after the client joins the program, with a focus on finding jobs related to the individual's interests and skills. Research has shown that people with co-occurring disorders benefit significantly more from supported employment than other vocational rehabilitation programs in terms of obtaining competitive employment, working more hours, and earning more wages (Mueser, Campbell, & Drake, 2011). Therefore, facilitating access to supported employment can support functional recovery in people with a co-occurring disorder.

Engaging Social Networks

Co-occurring disorders in a family member can take a heavy toll on relatives, who often play a critical role in helping clients get their basic needs met. Family support plays an important role in recovery from co-occurring disorders and is associated with a faster rate of remission of substance abuse, despite receipt of less intensive professional services (Clark, 2001). However, if the coping capacity of families is overwhelmed, they may withdraw their support, which can lead to housing instability, homelessness, and worse other outcomes. Therefore, an important goal in integrated treatment of co-occurring disorders is to reach out to family members and other significant persons to involve them in a partnership with treatment providers aimed at helping the client make progress toward recovery (Mueser et al., 2012).

Families have a range of different needs related to coping with a relative with a co-occurring disorder. Most fundamentally, families benefit from developing a collaborative, mutually respectful relationship with the treatment team that includes some involvement in treatment planning and access to team members when needed. Most families benefit from information aimed at helping

TABLE 4
Strategies for Improving Communication Among Family Members and Other Caring Persons

-
- Look at the person when talking
 - Keep communications direct and to the point
 - Speak only for yourself, and not other people
 - Frequently express positive feelings about specific behaviors to show appreciation for the other person and to reinforce small changes in desired directions
 - Use verbal feeling statements (good, happy, pleased, upset, mad, concerned, sad) to convey emotions clearly
 - Use “I” statements rather than blaming “you” statements when expressing upset feelings (“I felt angry when you . . .” instead of “You made me angry when you . . .”)
 - Avoid loud, heightened voice tones, yelling, sarcasm, and pejorative put-downs
 - Don’t assume you know what the other person will say before they say it
 - During a conflict or disagreement, use reflective listening (such as paraphrasing what the other person has said) to show understanding before giving your own perspective
 - If emotions get heated during a conflict, agree to take a break and talk about it later
-

them understand the nature of their relative’s mental illness, SUD, the interactions between the two, and the principles of treating the disorders. For example, family members may not know the role of medications in treating symptoms and preventing relapses of the mental illness even in clients who are continuing to use substances. Similarly, they may not be aware of the fact that even small amounts of alcohol or drugs can worsen symptoms and trigger relapses. In addition, because some family members may use substances together (e.g., couples, family members drinking during meals or on celebrations), it may be useful to explore with them whether changes in these shared behaviors may facilitate the client’s abstinence from substances.

The challenges inherent in helping a loved one cope with co-occurring disorders can lead to high levels of stress and tension in families, which can in turn worsen the course of the disorders (Fichter, Glynn, Weyer, Liberman & Frick, 1997). To reduce stress, families may benefit from learning more effective communication skills, based on established approaches to working with families with either a psychotic disorder or addiction. For example, effective communication skills can be used to reinforce a relative’s adherence to treatment for co-occurring disorders, and to keep hope alive that recovery is possible. Skills for effective family communication are summarized in Table 4.

Similarly, teach families a step-by-step approach to solving problems can facilitate collaborative work toward resolving individual and shared problems and goals. A widely taught set of problem solving steps include (Falloon, Boyd, & McGill, 1984): (a) define the problem to everyone’s satisfaction, (b) brainstorm possible solutions, (c) evaluate the pros and cons of the solutions, (d) choose the best solution(s), (e) make a plan to implement the selected solution(s), and (f) follow-up the plan at a later time, praise all efforts, and do additional problem solving if needed. Problem solving can be used to address a wide range of problems or goals related to recovery from a co-occurring disorder, such as identifying alternative leisure activities, determining strategies for dealing with persistent symptoms, looking for a job, finding new places to meet people, planning a family outing together, and responding to offers to use substances.

Curricula for teaching families about co-occurring disorders and their treatment, and clinical guidelines for working with families, either individually or in groups, are available from a variety of resources (McGovern et al., 2008; Mueser et al., 2003; O’Grady & Skinner, 2007).

Aside from reaching out to involved family members, it is important to attend to the broader impact of social networks on the lives of people with a co-occurring disorder. Substance use, especially drug use, frequently occurs in a social setting, and without addressing this context it may be difficult to help an individual develop a sober and drug-free lifestyle. Research has

found that individuals with co-occurring disorders who achieve remission of their substance abuse while receiving integrated treatment decrease the time they spend with substance using peers and increase time spent with people who support their abstinence (Trumbetta, Mueser, Quimby, Bebout, & Teague, 1999). In some circumstances, it may be possible to engage member of the client's social network in treatment and to cultivate support for the person's abstinence from substances. More often however, it may be necessary to help the client develop alternative social relationships that are more supportive of their recovery from co-occurring disorders. Self-help groups are one possible source of such support (Humphreys et al., 2004; Laudet, Magura, Cleland, Vogel, & Knight, 2003), although there are many other alternatives.

THE ROLE OF SOCIAL WORKERS IN THE TREATMENT OF CO-OCCURRING DISORDERS

Social workers are often directly involved as clinicians working with people with co-occurring disorders and have opportunities to conduct assessment and provide treatment based on the principles described above. In this role, social workers can also bring a vital knowledge of community resources that can be applied to helping individuals pursue their dual recovery. For example, a young woman with bipolar disorder and alcoholism who is motivated to maintain her sobriety and better manage her psychiatric disorder to be a better mother to her children could benefit from a social worker who could help her access local parenting programs and other related resources, thereby strengthening her skills and self-efficacy for achieving her goal. For another example, a social worker could help a man with schizophrenia who has legal problems due to drug abuse and its associated effects on his symptoms and behavior negotiate the legal system and obtain legal aid services, which could strengthen their therapeutic alliance and motivate the client to work on his co-occurring disorders in order to avoid incarceration.

Social workers are also often employed in other, nontreatment oriented settings where their knowledge of assessment and treatment co-occurring disorders can be critical. For example, a geriatric social worker working with a client with diabetes and severe depression would be aware that alcohol abuse often accompanies depression, and could gently explore the client's substance use and whether it may be contributing to his mood problems. As another example, an informed social worker in the child welfare system who is working with parents who have been reported for child neglect would be able to explore and identify possible signs of a serious mental illness, substance use problem, or co-occurring disorder in one or both parents, which could be contributing to the neglect. This could lead to facilitating appropriate referrals for treatment of the co-occurring disorders. There are countless settings where a social worker who is well versed in the assessment and treatment co-occurring disorders can play a key role in getting help for people with these disorders, including medical hospitals, emergency rooms, housing programs, community centers, and schools.

SUMMARY AND CONCLUSIONS

SUDs are common in people with psychotic disorders and other serious mental illnesses, and they can have a devastating effect on people's lives, and those who care about them. The high vulnerability to stress, and difficulties in psychosocial functioning associated with psychotic disorders even in the absence of substance abuse warrants special attention to the unique needs of this co-occurring disorder population. Table 5 summarizes key points for understanding, assessing, and treating people with co-occurring serious mental illness and substance abuse.

TABLE 5
Key Points in Treating People with Co-Occurring Mental Illness and Substance Use Disorders

-
- 50% of people with a psychotic disorder have a substance use disorder in their lifetime, and 25% to 35% have a current or recent substance use problem
 - People who are most likely to have co-occurring substance abuse include:
 - Men
 - Younger age
 - Lower educational level
 - Single marital status
 - Antisocial behavior pattern
 - The consequences of substance abuse in this population include:
 - Relapses and hospitalizations
 - Depression, demoralization, and suicidality
 - Problem in social functioning
 - Housing instability and homelessness
 - Legal problems
 - Medical problems
 - The primary motives for using substances in people with a psychotic disorder are:
 - Facilitation of social relationships
 - Self-medication of distressing symptoms
 - Pleasure and recreation
 - The most important methods for detecting substance use problems are:
 - Direct questioning about substance use behaviors
 - Self-report screening instruments
 - Reports from collaterals, including other clinicians and family members
 - Record reviews
 - Recognition of possible problem based on familiarity with the correlates and consequences of substance abuse
 - The principles of treating co-occurring disorders include:
 - Integration of mental health and substance abuse services at the team level
 - Low-stress and harm-reduction approach
 - Motivational enhancement and stage-wise treatment
 - Cognitive behavioral strategies to teach new social and coping skills
 - Supporting functional recovery
 - Engaging the social network
-

The special challenges associated with treating these co-occurring disorders may appear daunting to clinicians. However, tremendous progress has been made in recent years in the treatment of these disorders, and the good news is that recovery is possible. With attention to the principles of treatment outlined in this article, and the key points summarized in Table 5, there are valid reasons for being optimistic that people with co-occurring disorders can get on their own road to recovery and regain control over their lives. Clinicians have a responsibility to bring this message of hope to people with co-occurring disorders, their families, and other treatment providers. Helping clients develop their personal vision of recovery, marshaling the support of others who care, and believing in the inherent ability of everyone with a co-occurring disorder to recover, can make their dreams of living a worthwhile and rewarding life a reality.

REFERENCES

- Addington, J., & Duchak, V. (1997). Reasons for substance use in schizophrenia. *Acta Psychiatrica Scandinavica*, 96, 329–333.

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J., & Monteiro, M. G. (2001). *AUDIT: The Alcohol Use Disorders Identification Test: Guidelines for use in primary health care* (2nd ed.). Geneva, Switzerland: World Health Organization, Department of Mental Health and Substance Dependence.
- Bandura, A. (1969). *Principles of behavior modification*. New York, NY: Holt, Rinehart and Winston.
- Barrowclough, C., Haddock, G., Wykes, W., Beardmore, R., Conrod, P., Craig, T., . . . Tarrier, N. (2010). Integrated motivational interviewing and cognitive behavioural therapy for people with psychosis and comorbid substance misuse: Randomised controlled trial. *British Medical Journal*, *341*, c6325. doi:10.1136/bmj.c6325
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York, NY: Guilford Press.
- Becker, D. R., & Drake, R. E. (2003). *A working life for people with severe mental illness*. New York, NY: Oxford University Press.
- Bellack, A. S., Bennett, M. E., & Gearon, J. S. (2007). *Behavioral treatment for substance abuse in people with serious and persistent mental illness: A handbook for mental health professionals*. New York, NY: Taylor and Francis.
- Bellack, A. S., Mueser, K. T., Gingerich, S., & Agresta, J. (2004). *Social skills training for schizophrenia: A step-by-step guide* (2nd ed.). New York, NY: Guilford Press.
- Bennett, M. E. (2009). Assessment of substance use and substance use disorders in schizophrenia. *Clinical Schizophrenia & Related Psychoses*, *3*(2), 50–63.
- Bryant, F. B., & Veroff, J. (2007). *Savoring: A new model of positive experience*. Mahwah, NJ: Lawrence Erlbaum.
- Burbridge, J. A., & Barch, D. M. (2007). Anhedonia and the experience of emotion in individuals with schizophrenia. *Journal of Abnormal Psychology*, *116*, 30–42.
- Chen, C., Balogh, M., Bathija, J., Howanitz, E., Plutchik, R., & Conte, H. R. (1992). Substance abuse among psychiatric inpatients. *Comprehensive Psychiatry*, *33*, 60–64.
- Clark, R. E. (2001). Family support and substance use outcomes for persons with mental illness and substance use disorders. *Schizophrenia Bulletin*, *27*, 93–101.
- Corse, S. J., Hirschinger, N. B., & Zanis, D. (1995). The use of the Addiction Severity Index with people with severe mental illness. *Psychiatric Rehabilitation Journal*, *19*, 9–18.
- Corty, E., Lehman, A., & Myers, C. (1993). Influence of psychoactive substance use on the reliability of psychiatric diagnosis. *Journal of Consulting and Clinical Psychology*, *61*(1), 165–170.
- Denning, P. (2000). *Practicing harm reduction psychotherapy: An alternative approach to addictions*. New York, NY: Guilford.
- Dixon, L. B., Dickerson, F., Bellack, A. S., Bennett, M. E., Dickinson, D., Goldberg, R. W., . . . Kreyenbuhl, J. (2010). The 2009 PORT psychosocial treatment recommendations and summary statements. *Schizophrenia Bulletin*, *36*, 48–70.
- Dixon, L. B., Haas, G., Weiden, P. J., Sweeney, J., & Frances, A. J. (1991). Drug abuse in schizophrenic patients: Clinical correlates and reasons for use. *American Journal of Psychiatry*, *148*, 224–230.
- Drake, R. E., & Brunette, M. F. (1998). Complications of severe mental illness related to alcohol and other drug use disorders. In M. Galanter (Ed.), *Recent developments in alcoholism: Consequences of alcoholism* (Vol. 14, pp. 285–299). New York, NY: Plenum.
- Drake, R. E., Mueser, K. T., & McHugo, G. J. (1996). Clinician rating scales: Alcohol Use Scale (AUS), Drug Use Scale (DUS), and Substance Abuse Treatment Scale (SATS). In L. I. Sederer & B. Dickey (Eds.), *Outcomes assessment in clinical practice* (pp. 113–116). Baltimore, MD: Williams & Wilkins.
- Drake, R. E., O'Neal, E., & Wallach, M. A. (2008). A systematic review of psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment*, *34*, 123–138.
- Falloon, I. R. H., Boyd, J. L., & McGill, C. W. (1984). *Family care of schizophrenia: A problem-solving approach to the treatment of mental illness*. New York, NY: Guilford.
- Fichter, M. M., Glynn, S. M., Weyer, S., Liberman, R. P., & Frick, U. (1997). Family climate and expressed emotion in the course of alcoholism. *Family Process*, *36*, 203–221.
- Fowler, I. L., Carr, V. J., Carter, N. T., & Lewin, T. J. (1998). Patterns of current and lifetime substance use in schizophrenia. *Schizophrenia Bulletin*, *24*, 443–455.
- Fox, M. B. (1999). Missing out on motherhood. *Psychiatric Services*, *50*, 193–194.
- Fox, M. B. (2010). Second chance at motherhood. *Psychiatric Rehabilitation Journal*, *33*, 150–152.
- Fox, M. B., Drake, R. E., Mueser, K. T., Brunette, M. F., Becker, D. R., McGovern, M. P., . . . Acquilano, S. C. (2010). *Integrated dual disorders treatment manual: Best practices, skills, and resources for successful client care*. Center City, MN: Hazelden.
- Gingerich, S., & Mueser, K. T. (2005). *Coping skills group: A session-by-session guide*. Plainview, NY: Wellness Reproductions.

- Gingerich, S., & Mueser, K. T. (2011). *Illness management and recovery: Personalized skills and strategies for those with mental illness* (3rd ed.). Center City, MN: Hazelden.
- Graham, H. L., Copello, A., Birchwood, M. J., Mueser, K. T., Orford, J., McGovern, D., . . . Georgion, G. (2004). *Cognitive-Behavioural Integrated Treatment (C-BIT): A treatment manual for substance misuse in people with severe mental health problems*. Chichester, UK: John Wiley & Sons.
- Hodgins, S., Tiihonen, J., & Ross, D. (2005). The consequences of conduct disorder for males who develop schizophrenia: Associations with criminality, aggressive behavior, substance use, and psychiatric services. *Schizophrenia Research*, 78, 323–335.
- Humphreys, K., Wing, S., McCarty, D., Chappel, J., Gallant, L., Haberle, B., . . . Kivlahan, D. (2004). Self-help organizations for alcohol and drug problems: Toward evidence-based practice and policy. *Journal of Substance Abuse Treatment*, 26, 151–158.
- Kavanagh, D. J., Waghorn, G., Jenner, L., Chant, D. C., Carr, V., Evans, M., . . . McGrath, J. J. (2004). Demographic and clinical correlates of comorbid substance use disorders in psychosis: Multivariate analyses from an epidemiological sample. *Schizophrenia Research*, 66, 115–124.
- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62, 617–627.
- Laudet, A. B., Magura, S., Cleland, C. M., Vogel, H. S., & Knight, E. L. (2003). Predictors of retention in dual-focus self-help groups. *Community Mental Health Journal*, 39, 281–297.
- Magura, S., Laudet, A. B., Mahmood, D., Rosenblum, A., Vogel, H. S., & Knight, E. L. (2003). Role of self-help processes in achieving abstinence among dually diagnosed persons. *Addictive Behaviors*, 28, 399–413.
- Marlatt, G. A. (Ed.). (1998). *Harm reduction: Pragmatic strategies for managing high-risk behaviors*. New York, NY: Guilford.
- McGovern, M. P., Drake, R. E., Merrens, M. R., Mueser, K. T., Brunette, M. B., & Hendrick, R. (2008). *Hazelden Co-occurring Disorders Program: Integrated service for substance use and mental health problems*. Center City, MN: Hazelden.
- McHugo, G. J., Drake, R. E., Burton, H. L., & Ackerson, T. H. (1995). A scale for assessing the stage of substance abuse treatment in persons with severe mental illness. *Journal of Nervous and Mental Disease*, 183, 762–767.
- Miller, W. R., & Rollnick, S. (Eds.). (2002). *Motivational interviewing: Preparing people for change* (2nd ed.). New York, NY: Guilford.
- Miner, C. R., Rosenthal, R. N., Hellerstein, D. J., & Muenz, L. R. (1997). Prediction of compliance with outpatient referral in patients with schizophrenia and psychoactive substance use disorders. *Archives of General Psychiatry*, 54, 706–712.
- Mueser, K. T., Campbell, K., & Drake, R. E. (2011). The effectiveness of supported employment in people with dual disorders. *Journal of Dual Diagnosis*, 7, 90–102.
- Mueser, K. T., Crocker, A. G., Frisman, L. B., Drake, R. E., Covell, N. H., & Essock, S. M. (2006). Conduct disorder and antisocial personality disorder in persons with severe psychiatric and substance use disorders. *Schizophrenia Bulletin*, 32, 626–636.
- Mueser, K. T., Glynn, S. M., Cather, C., Xie, H., Zarate, R., Smith, M. F., . . . Feldman, J. (2012). A randomized controlled trial of family intervention for co-occurring substance use and severe psychiatric disorders. *Schizophrenia Bulletin*. doi: 10.1093/schbul/sbr203
- Mueser, K. T., Noordsy, D. L., Drake, R. E., & Fox, L. (2003). *Integrated treatment for dual disorders: A guide to effective practice*. New York, NY: Guilford Press.
- Mueser, K. T., Rosenberg, S. D., Drake, R. E., Miles, K. M., Wolford, G., Vidaver, R., & Carrieri, K. (1999). Conduct disorder, antisocial personality disorder, and substance use disorders in schizophrenia and major affective disorders. *Journal of Studies on Alcohol*, 60, 278–284.
- Mueser, K. T., Yarnold, P. R., Rosenberg, S. D., Swett, C., Miles, K. M., & Hill, D. (2000). Substance use disorder in hospitalized severely mentally ill psychiatric patients: Prevalence, correlates, and subgroups. *Schizophrenia Bulletin*, 26, 179–192.
- Nuechterlein, K. H., & Dawson, M. E. (1984). A heuristic vulnerability/stress model of schizophrenic episodes. *Schizophrenia Bulletin*, 10, 300–312.
- O'Grady, C. P., & Skinner, W. J. (2007). *Partnering with families affected by concurrent disorders*. Toronto, Canada: Centre for Addiction and Mental Health.
- Osher, F. C., & Kofoid, L. L. (1989). Treatment of patients with psychiatric and psychoactive substance use disorders. *Hospital and Community Psychiatry*, 40, 1025–1030.
- Polcin, D. L. (1992). Issues in the treatment of dual diagnosis clients who have chronic mental illness. *Professional Psychology: Research and Practice*, 23, 30–37.
- Pratt, S. I., Bartels, S. J., Mueser, K. T., & Forester, B. (2008). Helping Older People Experience Success (HOPES): An integrated model of psychosocial rehabilitation and health care management for older adults with serious mental illness. *American Journal of Psychiatric Rehabilitation*, 11, 41–60.

- Prochaska, J. O. (1984). *Systems of psychotherapy: A transtheoretical analysis*. Homewood, IL: Dorsey.
- Regier, D. A., Farmer, M. E., Rae, D. S., Locke, B. Z., Keith, S. J., Judd, L. L., & Goodwin, F. K. (1990). Comorbidity of mental disorders with alcohol and other drug abuse: Results from the Epidemiologic Catchment Area (ECA) study. *Journal of the American Medical Association, 264*, 2511–2518.
- Ridgely, M. S., Goldman, H. H., & Willenbring, M. (1990). Barriers to the care of persons with dual diagnoses: Organizational and financing issues. *Schizophrenia Bulletin, 16*, 123–132.
- Roberts, L. J., Shaner, A., & Eckman, T. A. (1999). *Overcoming addictions: Skills training for people with schizophrenia*. New York, NY: W.W. Norton.
- Rosenberg, S. D., Drake, R. E., Wolford, G. L., Mueser, K. T., Oxman, T. E., Vidaver, R. M., . . . Luckoor, R. (1998). The Dartmouth Assessment of Lifestyle Instrument (DALI): A substance use disorder screen for people with severe mental illness. *American Journal of Psychiatry, 155*, 232–238.
- Rush, B., & Koegl, C. J. (2008). Prevalence and profile of people with co-occurring mental and substance use disorders within a comprehensive mental health system. *Canadian Journal of Psychiatry, 53*, 810–821.
- Schmidt, L. M., Hesse, M., & Lykke, J. (2011). The impact of substance use disorders on the course of schizophrenia—A 15-year follow-up study. *Schizophrenia Research, 130*, 228–233.
- Selzer, M. L. (1971). The Michigan Alcoholism Screening Test: The quest for a new diagnostic instrument. *American Journal of Psychiatry, 127*, 1653–1658.
- Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behaviors, 7*, 363–371.
- Swartz, M. S., Swanson, J. W., Hiday, V. A., Borum, R., Wagner, H. R., & Burns, B. J. (1998). Taking the wrong drugs: The role of substance abuse and medication noncompliance in violence among severely mentally ill individuals. *Social Psychiatry and Psychiatric Epidemiology, 33*, S75–S80.
- Trumbetta, S. L., Mueser, K. T., Quimby, E., Bebout, R., & Teague, G. B. (1999). Social networks and clinical outcomes of dually diagnosed homeless persons. *Behavior Therapy, 30*, 407–430.
- Venable, P. A., Carey, M. P., Carey, K. B., & Maisto, S. A. (2003). Smoking among psychiatric outpatients: Relationship to substance use, diagnosis, and illness severity. *Psychology of Addictive Behaviors, 17*, 259–265.
- Vogel, H. S., Knight, E., Laudet, A. B., & Magura, S. (1998). Double Trouble in Recovery: Self-help for the dually diagnosed. *Psychiatric Rehabilitation Journal, 21*, 356–364.
- Weiss, R. D., & Connerly, H. S. (2011). *Integrated group therapy for bipolar disorder and substance abuse*. New York, NY: Guilford.
- Wolford, G., Rosenberg, S. D., Rosenberg, H. J., Swartz, M. S., Butterfield, M. I., Swanson, J. W., & Jankowski, M. K. (2008). A clinical trial comparing interviewer and computer-assisted assessment in clients with severe mental illness. *Psychiatric Services, 59*, 769–775.