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CO-OCCURRING MENTAL HEALTH AND SUBSTANCE USE DISORDERS: A REVIEW OF ISSUES AND CLINICAL APPROACHES FOR DUAL DIAGNOSIS

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OF ISSUES AND CLINICAL APPROACHES FOR DUAL DIAGNOSIS

by

Jacob A. Weatherford

B.A., Southern Illinois University Carbondale, 2010

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
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RESEARCH PAPER APPROVAL

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Approved by:

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TITLE: CO-OCCURRING MENTAL HEALTH AND SUBSTANCE USE DISORDERS: A REVIEW OF ISSUES AND CLINICAL APPROACHES FOR DUAL DIAGNOSIS

MAJOR PROFESSOR: Dr. Carl R. Flowers

Individuals with co-occurring mental illness and substance use disorder (SUD) encounter a number of challenges that significantly diminish their quality of life. As compared to persons with either a mental illness or SUD alone, those with co-occurring disorders often have significantly more impairment in functioning, more severe symptoms, and are at an increased risk of health problems, hospitalization, incarceration, and suicide, amongst other negative consequences. Furthermore, those with co-occurring disorders are often more difficult to engage and retain in treatment, and have a worse prognosis than those with a single disorder. Treatment facilities are often not equipped with adequate assessment instruments for detecting co-occurring disorders and clinicians may not be sufficiently trained to treat both disorders. This review examines the impact of co-occurring disorders for individuals with a dual diagnosis, as well as treatment approaches and interventions that have been researched and demonstrated efficacy in the treatment of persons with co-occurring disorders. Therapeutic approaches such as Cognitive Behavioral Therapy (CBT), Motivational Interviewing (MI), Contingency Management (CM), and Family Psychoeducation are discussed, as well as other interventions such as case management services, vocational services, and pharmacotherapy.

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CHAPTER 1

INTRODUCTION

The presence of a mental illness or substance use disorder (SUD) alone is a factor that can have a devastating impact on an individual's quality of life. When compounded by the other disorder, the effect presents an even more substantial threat to the individual's wellbeing. To make matters worse, mental illness and SUD co-occur at considerably high rates, and when both conditions are present, the dually diagnosed individual may face a number of challenges that significantly impair their quality of life. The presence of co-occurring disorders results in more severe symptoms, more significant impairment, poorer functioning, and a worse prognosis than individuals with only one disorder (Morojele, Saban, & Seedat, 2012).

To make matters worse, mental illness and SUD seem to co-occur at considerably high rates. Results from the 2010 National Survey on Drug Use and Health (NSDUH) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012) revealed that amongst 45.9 million adults aged 18 and older diagnosed with any mental illness, 25.8 percent were more likely to use illegal drugs in the past year, compared to 12.1 percent of adults who had no mental illness. Additionally, 20 percent of those with any mental illness also met criteria for SUD. Out of 20.3 million adults diagnosed with a SUD, 9.2 millions (45.1 percent) also had a co-occurring mental illness. Based on these findings, it would appear that the presence of either a mental illness or a SUD is associated with a great risk for also having the other disorder.

Treatment with this population is very challenging for clinicians, as keeping clients engaged in treatment can be a daunting task. Individuals with co-occurring disorders are also at a greater risk for relapse, hospitalization, incarceration, and homelessness, amongst other negative consequences (Drake, Mueser, Brunette, & McHugo, 2004). Comorbidity has also been

associated with symptom exacerbation of one or both conditions, increased illness severity, greater risk of suicide, as well as higher rates of treatment noncompliance (Morojele et al., 2012). One study has shown that less than 35% of dually diagnosed individuals in outpatient treatment successfully complete the program (as cited in Smelson et al., 2012, p. 127). Knowing what methods are effective for increasing client engagement, as well providing treatment methods that have demonstrated efficacy for reducing symptoms and improving quality of life, should be an integral part of any treatment program.

The current review is an in-depth examination of co-occurring mental illness and SUD. The purpose of this review is two-fold:

1. To discuss what co-occurring disorders are, their prevalence amongst the general population, and the implications for individuals with a dual diagnosis.
2. To review clinical approaches and interventions that have demonstrated efficacy for improving the quality of life for individuals with a dual diagnosis.

However, before we can begin to explore the impact of co-occurring mental illness and SUD, we must first understand mental illness and SUD as separate disorders to get a better picture of the effect of each disorder on the individual. After reviewing mental illness and SUD separately, co-occurring disorders will be discussed at length, including what defines a co-occurring disorder, prevalence, the negative consequences associated with them, and commonly occurring dual diagnoses.

Mental Illness

According to the SAMHSA (2012), mental illness is defined as “a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration” that has occurred in the past twelve months and meets diagnostic criteria as

outlined within the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). The NSDUH (2010) found that approximately 46 million adults over the age of 18 in the United States had a mental illness in the past year, representing 20 percent of the U.S. population. Furthermore, the report differentiates between any mental illness (AMI) and serious mental illness (SMI), with SMI resulting in much more functional impairment that has significantly interfered with the individual's major life activities; it was found that five percent (11.4 million) of all adults in the United States were diagnosed with a SMI in the past year.

As mentioned, mental illness is usually diagnosed based on criteria outlined in the DSM-IV and often takes many forms. Such mental disorders include mood disorders (major depressive disorder, bipolar disorder), anxiety disorders (obsessive-compulsive disorder, post-traumatic stress disorder), psychotic disorders (schizophrenia), and personality disorders (borderline and antisocial personality disorders), amongst others (DSM-IV-TR, 2000). Furthermore, in the same study it was found that 6.8 percent of adults over the age of 18 in the United States had a past year major depressive episode (defined by a period of at least two weeks where the individual experienced a depressed mood or loss of interest in daily activities, amongst other symptoms).

Substance Use Disorders

The term "substance-use disorder" is a proposed change to the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) that will encompass both "substance abuse" and "substance dependence," as currently defined by the DSM-IV-TR. Generally, a substance-use disorder is considered to be a functional impairment that results from an excessive use of mood-altering substances that affects many aspects of an individual's life. The person's use of substances may lead to an inability to acquire or maintain employment, it may cause considerable distress in their interpersonal relationships, or they may engage in dangerous

activities that could have severe adverse consequences, such as operating a vehicle under the influence of a substance. Furthermore, the person's use may become so excessive that they develop a physical and psychological dependence on the substance, and may be at risk of experiencing withdrawal symptoms if they attempt to discontinue use. For some substances, such as alcohol, immediate discontinuation of the substance after an extended period of use can result in withdrawal symptoms that are fatal.

The term "substance abuse" is often used as a blanket term that encompasses substance abuse, dependence, and even relatively minor problems with substance use that may not necessarily meet the diagnostic criteria for substance abuse or dependence. Often, facilities and counselors that serve this particular population are thought to be in the field of "substance abuse" treatment; however, substance abuse as a clinical diagnosis has a somewhat specific meaning. An individual may meet a diagnosis of substance abuse if their excessive use is repeated in spite of problems with the law, interpersonal relationships, obligations and responsibilities, and they continue to use in situations that are dangerous to themselves and others. To be diagnosed with a substance abuse disorder, the individual has to meet at least one of these criteria in a 12-month period. Even though their use may be causing repeated troubles, it need not necessarily be compulsive; the individual may not develop a significant tolerance and may be able to quit using without experiencing withdrawal symptoms.

Though both "substance abuse" and "substance dependence" are characterized by a problematic use of substances, there are a few notable differences. A substance dependence diagnosis is considered to be more severe, and may or may not include physiological dependence, determined by the presence of tolerance and/or withdrawal symptoms (DSM-IV-TR, 2000). Tolerance is defined by the need for a greater amount of a substance to achieve an

intoxication effect previously achieved with lesser amounts. Withdrawal is characterized by the experience of unpleasant mental and physical symptoms, such as illness-like symptoms and feelings of depression and anxiety; the individual may resume using the substance in order to alleviate these symptoms. In total, the seven criteria for substance dependence diagnosis as specified by the DSM-IV-TR is as follows:

1. Tolerance, defined by the need for larger amounts of the substance to achieve intoxication, and a lesser effect with previously used amounts of a substance.
2. Withdrawal, defined by the presence of illness-like symptoms and a craving for the substance or the substance is used to avoid withdrawal symptoms.
3. The substance is taken in larger amounts or over a longer period than intended.
4. There is a persistent desire or unsuccessful efforts to cut down or control substance use.
5. Considerable time and effort is spent to obtain, use, or recover from the effects of the substance.
6. Important social, occupational, or recreational activities are given up or reduced due to substance use.
7. Substance use is continued in spite of knowledge of the physical or psychological problems that result from use of the substance.

In order to meet diagnosis for substance dependence disorder, the individual must exhibit at least three of the criteria mentioned in a single 12-month period.

SAMSHA (2011) reported that in 2010, 22.1 million Americans over the age of 12 met criteria for substance abuse or dependence, representing 8.7 percent of the population. Out of the

22.1 million who met criteria for abuse or dependence, 4.5 million (7 percent) met criteria for alcohol abuse or dependence, 4.5 million (1.8 percent) met criteria for marijuana abuse or dependence, and 1.9 million met criteria for prescription pain reliever abuse or dependence. Figures also show that the younger the age of first use of alcohol for adults over age 21 correlated with past year abuse or dependence, with 15.1 percent who first used at age 14 or younger, 9.1 percent at ages 15 to 17, 4.4 percent at ages 18 to 20, and 2.7 percent at ages 21 or older. Out of 20.5 million Americans who needed but did not receive treatment for drug or alcohol use, 1.7 percent felt they needed treatment and made an effort, 3.3 felt they needed treatment but did not make an effort, and 95 percent did not perceive a need for treatment.

Co-Occurring Disorders

Co-occurring disorders, dual diagnosis, and comorbidity are all terms that have been used to refer to the presence of both mental illness and SUD diagnoses in individuals. “Comorbidity,” as defined by the National Institute on Drug Abuse (2011), “describes two or more disorders or illnesses occurring in the same person. They can occur at the same time or one after the other. Comorbidity also implies interactions between the illnesses that can worsen the course of both” (p. 1). Ding et al. (2011) also suggest that “co-occurring disorder” refers to individuals who “have one or more substance-related disorder, as well as one or more mental disorder.” The authors, in their study, used national hospital discharge data from the years 2003 to 2007 found that 44 percent of patients who were hospitalized for a SUD also had a co-occurring mental disorder. A few studies have found that in patients with a mental illness, 20 to 50 percent have a co-occurring SUD, and 50 to 75 percent of individuals with SUD have a co-occurring mental illness. Co-occurring disorders seems to occur more commonly amongst women and individuals of white race (Ding et al., 2011; Butler, Indig, Allnutt, & Mamoon, 2011).

When the two disorders occur simultaneously, they may influence each other in such a way that symptoms of one disorder may exacerbate symptoms of the other, thereby making relief of symptoms a very difficult objective to attain. The existence of co-occurring disorders is associated with an increased risk of health problems, more frequent hospitalizations, and longer hospital stays (Ding et al., 2011). The Drug Abuse Warning Network found that in all drug related emergency department visits, 10% of patients who had presented were diagnosed with co-occurring disorders (as cited in Clark, Power, Le Fauve, & Lopez, 2008). Individuals with co-occurring disorders also are at a greater risk of suicide, higher rates of relapse, and noncompliance with treatment; one study finds that only 35% of dually diagnosed individuals complete an outpatient treatment program (Smelson et al., 2012). In addition, they also have more severe symptoms, more significant impairment, and a worse prognosis than individuals with a single disorder (Morojele et al., 2012).

The presence of co-occurring disorders also appears to increase an individual's risk for being involved with the criminal justice system. Butler et al. (2011) found in a study of Australian prisoners that 29% of participants had a co-occurring mental illness and SUD in the past 12 months, and that the rate of co-occurring disorders are much higher amongst the prison population when compared to the general population. The results of this study also suggest that the presence of co-occurring disorders increases the risk of committing violent offenses, compared to mental illness or SUD alone. Another study examining a prison population in Kentucky found that prisoners with co-occurring mental illness and SUD had significantly more health problems (such as respiratory problems, cardiovascular disease, liver disease, and so on) and higher use of medical services when compared to prisons with no substance abuse or mental illness problems, with mental illness alone, and with SUD alone (Hiller et al., 2005).

Ding et al. (2012) found that the most common mental illnesses for individuals hospitalized with co-occurring disorders were mood disorders (74.3 percent), anxiety disorders, (21.2 percent), personality disorders, (10.6 percent), and psychotic disorders (8.2 percent). Reiger et al. (1990) found that 47 percent of individuals with a lifetime diagnosis of schizophrenia or schizophreniform disorder met criteria for substance abuse or dependence, as well as 83.6 percent of individuals with antisocial personality disorder, 23.7 percent of individuals with an anxiety disorder, and 32 percent of individuals with a mood disorder (including 60.7 percent of individuals with bipolar I disorder). One study has found that 60% of individuals with borderline personality disorder also meet criteria for SUD, and that anywhere from 5 to 32% of substance abusers also meet criteria for borderline personality disorder (Bornovalova & Daughters, 2007).

There are several issues that considerably complicate the treatment of co-occurring disorders. One such issue includes the under-detection, misdiagnosis, and inadequate treatment of co-occurring disorders, due in part to inadequate assessment instruments (Morojele et al., 2012). In addition to assessment tools that are not designed to detect and diagnose co-occurring disorders, SUDs and mental illness may occur together for a number of different reasons; Schuckit (2006) discusses four different issues regarding co-occurring disorders. First, the SUD and mental illness may be independent conditions that occur together either by chance or are the result of similar risk factors such as stress, genetics, environment, and so on, that influence the development of both. Second, the first condition might lead to the development of the other, such as the use of substances triggering a predisposition for mental illness. Third, the second condition might result from attempts to cope with symptoms of the first condition, such as the use of

substances to deal with feelings of depression or anxiety. Finally, symptoms of mental illness may be the result of significant usage of certain substances.

This last issue, referred to as “substance-induced disorders,” is a major factor that can make a correct diagnosis of co-occurring disorders a difficult task. Schuckit explains that substance-induced disorders are psychiatric symptoms that result from the use of certain types of substances. For example, use of stimulants such as amphetamines or cocaine can induce schizophrenia-like symptoms, and that withdrawal from the cessation of stimulants may resemble depressive symptoms. Schuckit reviews one study in which amphetamine administration in healthy subjects resulted in schizophrenia-like symptoms of delusions and hallucinations that had disappeared following six days of abstinence. He also mentions that cannabis can induce a psychosis that includes feelings of paranoia and depersonalization, and that cannabis could increase the risk of schizophrenia for those who have a predisposition. Finally, he reviews studies where excessive use of alcohol began to result in depressive symptoms in participants, including suicidal ideation. All depressive symptoms disappeared with abstinence.

The 2010 NSDUH showed that for adults over the age of 18 who had both a serious mental illness and SUD, 4.3 percent received treatment for the substance use only, 45 percent received mental health care only, 14.5 percent received treatment for both problems, and 36 percent received no treatment. Furthermore, substance abuse and mental health professionals often are not trained in the treatment of co-occurring disorders (Ding et al., 2012). Specific methods for detecting and diagnosing co-occurring disorders will not be discussed, though certain clinical approaches and interventions will be examined for their effectiveness in the treatment of dually diagnosed individuals.

CHAPTER 2

THERAPEUTIC APPROACHES

In this section, a review of the literature is conducted on specific psychotherapeutic models used in the treatment of co-occurring disorders. A number of different approaches have been researched that have demonstrated efficacy in achieving improved functioning and quality of life, as well as reduced use of substances and psychiatric symptoms. This review will focus primarily on four different models: Cognitive behavioral therapy, motivational interviewing, contingency management, and family psychoeducation. The basic techniques of each model will be described, as well as a review of the literature demonstrating each model's efficacy.

Cognitive Behavioral Therapy

Cognitive Behavior Therapy (CBT) is a widely used evidenced-based treatment that is concerned with identifying and changing irrational and defeating thoughts so that individuals can feel and behave in more positive ways. CBT is often used in both individual and groups formats and has been shown to have significant positive results on improved functioning for individuals with both mental illness and substance abuse issues. The main concept behind CBT is that individuals often get caught in distorted ways of thinking that often leads to unhealthy emotions, and subsequently, the individual may engage in behaviors that are self-destructive (SAMHSA, 2005). *Cognitive restructuring*, one of the primary techniques of CBT, is used to help individuals replace problematic thoughts with more rational ones so that they can experience healthier emotions and behave in ways that are more consistent with their goals and values. CBT has been applied to treatment for SUDs by helping individuals develop more rational thoughts to avoid intense emotions that often lead to substance use. Another technique used in CBT that has been

useful for clients with SUDs is *functional analysis*, in which the client identifies “triggers” that are associated with the use of substances and is likely to precipitate a relapse.

Functional analysis is the basis of a specific form of CBT known as Relapse Prevention Therapy. The term “relapse,” though often considered a return to substance use, has also been defined as “a breakdown or setback in a person’s attempt to change or modify any target behavior” (as cited in SAMHA, 2005, pg. 3). Relapse Prevention Therapy (RPT) helps individuals to recognize and avoid high-risk situations that could trigger a relapse, identify and implement positive coping strategies, and make lifestyle changes that will reduce the chances of returning to problematic behavior. SAMHSA also cites one study that found the use of RPT with participants who abused a variety of drugs resulted in greater positive results for the participants who had a higher severity of both psychiatric symptoms and substance use impairment.

Another form of CBT to note is Dialectical Behavior Therapy (DBT), which was originally developed as a therapeutic approach for individuals with borderline personality disorder. Borderline personality disorder is identified by a number of diagnostic criteria, one of which is impulsivity in self-destructive behaviors, especially substance use. DBT uses strategies such as mindfulness, distress tolerance, emotion regulation, and the development of interpersonal skills to help individuals with borderline personality cope with the intense negative emotions they often experience. Studies on DBT with co-occurring BPD and SUD have resulted in greater treatment retention, reduced use of substances, and improved functioning (Linehan et al., 1999).

As mentioned earlier, some individuals with co-occurring mental health and substance abuse issues may only be receiving treatment for one disorder. Because integrated treatment of co-occurring disorders is often the ideal, one study by Hepner, Hunter, Paddock, Zhou, and Watkins (2011) looked at training substance abuse counselors to implement CBT for clients

diagnosed with depression. Results demonstrated that the counselors were effectively able to trained to deliver manualized CBT in a group format. Treatment retention was also high, with many clients perceiving the treatment as helpful and 74% reporting a significantly improved quality of life. Another study of CBT combined with Motivational Enhance Therapy (MET), a time-limited form of motivational interviewing, also demonstrated significant positive outcomes for individuals with comorbid major depressive disorder and alcohol use disorder (AUD) (Cornelius et al., 2011).

Motivational Interviewing

Motivational interviewing (MI) is a client-centered counseling approach used to enhance intrinsic motivation that is based on four guiding principles: (1) Expressing empathy; (2) developing discrepancy; (3) rolling with resistance; (4) support self-efficacy. MI uses these principles in order to facilitate the relationship between counselor and client by accepting the client for who they are and not directly opposing their resistance. When the counselor/client relationship is developed, the counselor can begin to help the client perceive the discrepancies between their goals and values and their current behavior, with the intent of fostering motivation for change. Further, the counselor believes in and supports the client's capacity for change, which also serves to motivate change. (SAMHSA, 2005).

MI is also based on the idea that individuals are often in different stages of change in regards to their behavior. The stages of change are: (1) precontemplation; (2) contemplation; (3) preparation; (4) action; (5) maintenance. Individuals often move back and forth through the stages of change, beginning at precontemplation, where there is no desire to change the current behavior, all the way to maintenance, which is a sustained change in behavior for a significant

period of time. MI also uses certain techniques, such as a *decisional balance*, to weigh the pros and cons of change, as well as “change talk,” to encourage the idea of change.

SAMHSA, in its Treatment Improvement Protocol (TIP), *Substance Abuse Treatment for Persons With Co-Occurring Disorders* (2005), cites a number of studies that have shown MI’s effectiveness for enhancing motivation and improving treatment engagement for individuals with co-occurring disorders. Drake et al. (2004) also discussed the benefits of MI for increasing treatment engagement, and also cited other studies that have shown MI’s ability to decrease substance use, as well as reductions in psychiatric symptoms and hospitalizations; however, the authors point out that reductions in substance use were primarily for those who had become engaged, as opposed to those who did not. Furthermore, the authors point out that there is now a much stronger emphasis on MI as both an individual and component intervention. On the contrary, however, Drake et al. (2008) found more inconsistent results in a review of several other studies examining MI combined with CBT in an individual format, and that in some cases, initial positive outcomes were not sustained 18 months later.

Contingency Management

Contingency management (CM) is an approach that focuses on changing specific behaviors through a system of positive and negative consequences. Clients are reinforced for behaviors such as maintaining abstinence, attending treatment sessions, adhering to a medication regimen, and achieving treatment plan goals, amongst a variety of other behaviors. Clients are subsequently rewarded for positive behaviors through the use of praise, vouchers, prizes, and privileges, amongst other incentives. Token economies are also used, where points, checkmarks, stickers, and other rewards of no value can be acquired and exchanged for more tangible rewards.

Studies on CM have consistently shown positive outcomes in both individual and group formats for reducing the use of substances amongst clients; however, the use of CM for co-occurring disorders is fairly recent and has not yet demonstrated consistent outcomes for mental health issues (Drake, O'Neal, & Wallach, 2008). SAMSHA (2009) also suggests that the effectiveness of CM for co-occurring disorders is as of yet unclear. However, they also mention that CM techniques may have other implications for individuals with co-occurring disorders, referencing studies involving persons with co-occurring disorders where housing, payeeships, and other rewards were contingent upon abstinence. In these examples, participants were more likely to demonstrate abstinence through drug testing.

Family Psychoeducation

Family psychoeducation is an evidence-based practice that seeks to include family members of clients in treatment services for the purpose of providing education, skills, supports, and resources to improve individual and family functioning (SAMHSA, 2009; Drake et al., 2008). Drake et al. (2004) propose that family psychoeducation should be included from the beginning of treatment, especially in regards to individuals with co-occurring disorders who do not respond to other treatment approaches. SAMHSA (2009) mentions that family members of mentally ill clients often provide them with emotional support, financial support, and housing, amongst other things, but often lack necessary information, resources, and supports needed. Providing these to the family members of clients often results in improved patient outcomes. However, family psychoeducation has had limited use in routine clinical practice, and there has been insufficient research on family psychoeducation for individuals with co-occurring disorders. In one study, positive results for substance use and other outcomes appeared to have faded once the intervention was completed (as cited in Drake et al., 2008).

A study by Gottlieb, Mueser, and Glynn (2012) discussed that family members of individuals with co-occurring disorders are more likely to hold their relative responsible for their condition than relatives with only severe mental illness (SMI), and that this could result in more stressful family relationships that result frequent relapses, and could also lead to the loss of family support, unstable housing, and a more course for both co-occurring disorders. This study also examined the effectiveness of a form of family therapy called the Family Intervention of Dual Diagnosis (FIDD), which focuses on psychoeducation, goal setting, and skills for communication and problem solving for family members. The authors assert that in comparison to brief family psychoeducation, FIDD resulted in overall improved functioning for clients, as well as greater knowledge of co-occurring disorders for family members. Their study examined the case of one individual diagnosed with schizophrenia and cannabis dependence whose significant other had participated with him in the treatment intervention. Over the course of a year and half, the individual achieved abstinence from cannabis, improved social and vocational functioning, as well as improved his relationship with his significant other.

CHAPTER 3

TREATMENT INTERVENTIONS

Often times, individuals with comorbid conditions need interventions and services outside of the therapeutic relationship in order to overcome barriers to recovery and maintain progress beyond treatment. Clients have a variety of needs in order to live a more independent and satisfying life, which includes adequate housing, employment, financial assistance, and transportation, amongst others. Clients may also need medications that could be helpful in overcoming substance dependence or controlling psychiatric symptoms during and after treatment. A number of interventions for acquiring these needs are reviewed.

Case Management

Case management refers to a team-based approach to help clients obtain necessary services and supports needed for community reintegration. Case management services often help link clients with housing, employment, educational programs, financial assistance, transportation, money management, and a variety of other services necessary to help individuals overcome barriers to recovery and to promote their overall well-being (SAMHSA, 2008). In addition, case managers often maintain flexible schedules and perform home visits to help clients develop skills and supports in a more naturalistic setting, as opposed to the artificial environment of a treatment center. Two common models of case management used are Assertive Community Treatment (ACT) and intensive case management (Drake et al., 2008).

Studies on case management approaches, ACT in particular, have shown that they have been effective in reducing hospitalization, increasing housing stability and community tenure, improving quality of life, and that is no more expensive than standard care. In fact, these studies also suggest that many consumers are more satisfied with these services than standard care

(Drake et al., 2008; SAMHSA, 2008). However, ACT has also shown inconsistent results on substance use and mental health outcomes, and its effectiveness in reducing arrests and jail time also seems to be a little less clear (SAMHSA, 2008; Smith, Jennings, and Cimono, 2008).

One variation of ACT, the Arkansas Partnership Program (APP), provided case management services to criminally involved patients with co-occurring disorders in a residential program that focused on gradually transitioning patients back into community (Smith, Jennings, and Cimino, 2010). The results of a study that reviewed the APP demonstrated effectiveness in reducing criminal recidivism, substance use, and psychiatric symptoms, as well as maintaining housing and improving quality of life. Despite some of the flaws of traditional ACT, it provides services that are very beneficial to persons with co-occurring disorders, and studies show that these individuals need not only treatment to attain recovery, but also housing, social supports, and meaningful activities (Drake, Mueser, Brunette, & McHugo, 2004), all of which can be offered through case management approaches such as ACT.

Vocational Services

In their study examining the long-term outcomes of six-month remissions amongst participants with alcohol use disorder (AUD) and co-occurring SMI, Xie, Drake, McHugo, Xie, and Mohandas (2010) found that participation in competitive employment was one of several factors that preceded a six-month remission of AUD; another study noted that patients with co-occurring schizophrenia and SUD tended to benefit from psychosocial interventions such as supported employment (Green, Noordsy, Brunette, & O'Keefe, 2008). Xie et al. also reference other studies that suggest that the identity as a substance use and mental health patient can be replaced with identity as a worker, and that structure, self-esteem, and relationships also come

with employment. Furthermore, the authors propose that treatment programs should include vocational and employment services.

One particular model of supported employment for individuals with SMI is the Individual Placement and Support (IPS) model. The IPS model is an evidence-based approach to vocational rehabilitation (VR) that has been demonstrated to be more effective than other approaches in helping individuals with SMI to gain and retain employment (Rinaldi, Miller, & Perkins, 2010). The IPS model is based on seven principles: A focus on competitive employment, a rapid job search approach, eligibility based on client choice, attention to the client preference, on-going support that is based on the client's need, integrated VR and mental health services, and counseling on Social Security, Medicaid, and other benefits. One study adapting the IPS model for participants with co-occurring SMI and SUD found that participants who participated in the IPS model of supported employment had better competitive work outcomes than those in other VR programs, were more likely to obtain work more quickly, and were more likely to be working twenty or more hours per week at follow-up (Mueser, Campbell, & Drake, 2011).

Pharmacotherapy

Though Drake et al. (2004) note that pharmacological interventions are aimed at helping individuals control symptoms of co-occurring mental illness and SUDs, SAMHSA's *General Principles for the Use of Pharmacological Agents to Treat Individuals with Co-Occurring Mental and Substance Use Disorders* (2012) mentions that pharmacotherapy by itself is not enough, and that the best pharmacological strategy should be considered in the context of psychosocial, behavioral, and cognitive interventions that address co-occurring disorders. Furthermore, SAMHSA suggests that a risk/benefit assessment be considered, especially when prescribing medications with high potential for abuse to persons with co-occurring disorders.

However, it is also mentioned that these medications should not necessarily be denied on the basis of a SUD, especially if they could be beneficial to the individual. For example, Schuckit (2006) suggests that anti-psychotic medications can help control symptoms of substance-induced psychosis; however, he mentions that the use of anti-depressants in substance-induced depressive symptoms is not strongly supported.

Green et al. (2008), in their review of schizophrenia and SUD, mention that integrated treatments that include therapy, psychosocial interventions, and medication can be the most favorable approach. The authors elaborate that the use of typical anti-psychotic medications with patients who have co-occurring schizophrenia and SUD have often not been helpful, and perhaps has even worsened substance abuse in some patients. Clozapine, an atypical anti-psychotic, has demonstrated effectiveness in reducing use of alcohol, marijuana, cocaine, and other substances amongst patients with co-occurring schizophrenia and SUD. The authors note that other risks associated with uncontrolled use of substances, such as suicide, aggression, and blood-borne infection, have shown to be decreased during treatment with clozapine. Though Noordsy and Green (2003) note that dangerous interactions between psychotropic medications and substances of abuse appear to be uncommon and that newer medications are generally safer, Green et al. also mention that clozapine, when combined with high doses of sedatives such as alcohol or benzodiazepines, could lead to respiratory depression. The authors also discuss the use of disulfiram and naltrexone, pharmacological agents historically used in the treatment of alcohol dependence, as being efficacious for patients with co-occurring schizophrenia and AUD.

CHAPTER 4

DISCUSSION

In this chapter, the important findings of this review of the literature on co-occurring disorders will be discussed, particularly in regards to the implications of consequences and the treatment of individuals with co-occurring disorders. The limitations of correctly diagnosing co-occurring disorders will be highlighted, as well as the need for further research in this area to improve understanding of co-occurring disorders, as well as how to properly treat them when individuals are given a correct diagnosis of dual disorders.

Discussion

As noted earlier in this review, the presence of co-occurring disorders in individuals has implications for severe consequences in all aspects of life – social, psychological, vocational, medical, and legal. Co-occurring disorders results in poor social functioning and tends to create significant strain amongst families that often leaves family members feeling that the individual is hopeless and is a burden on the family. This could result in even further psychological impairment for individual with dual diagnosis, who is left with few supports or skills with which to cope, potentially exacerbating the use of substances as a coping mechanism. This may lead to poorer overall functioning, worse health, and increase the likelihood of incurring legal consequences. The individual may then end up in prison, resulting in a lack of adequate treatment, as well as acquiring a criminal record that may make employment very difficult to obtain on release. This further complicates matters since employment, as we discuss earlier, is an important predictor of success in recovery. Though co-occurring disorders may not follow this exact course, it is an example of consequences that could very well arise.

It appears then that the most reasonable solution is that individuals with comorbidity seek treatment; however, this is much easier said than done. First, persons with co-occurring disorders may not perceive a need for treatment. Clarke et al. (2008) regard this as the biggest barrier to treatment. Even when they do seek treatment, they may not be correctly diagnosed or recommended for services that match their needs. These individuals may be recommended to either a mental health or substance abuse clinician who may not be cross-trained at treating the other condition, or they may be recommended to separate mental health and substance abuse counselors, creating a disconnect in services that leaves the individual feeling unengaged. As many studies have highlighted, treatment engagement could be one of the single most important factors in helping dually diagnosed individuals to recover. Only once the individual becomes engaged in the treatment process can some of above-mentioned treatment approaches and interventions be used to their full potential. Furthermore, it seems that treatment services for co-occurring disorders should move towards becoming more fully integrated, not only focusing on both disorders, but all other aspects of the individual's life as well.

Recommendations

The goal of the treatment process very early on should be improving treatment engagement for individuals with dual diagnosis. There are a few methods that can be particularly effective for this purpose, such as motivational interviewing, discussed earlier. Another method discussed by Smelson et al. (2010) describes a brief intervention used to improve treatment engagement called Time-Limited Care Coordination (TLC). In this study, participants in inpatient psychiatric rehabilitation received five hours per week of TLC-specific services, including groups on Dual Recovery Therapy, Critical Time Intervention, and peer support for a period of eight weeks. In addition to a reduced use of drugs and alcohol, participants in TLC were

more likely to pursue outpatient services after their discharge from inpatient rehabilitation, with 69% of participants attending an outpatient appointment within fourteen days of discharge.

Many of the studies reviewed have emphasized not only that assessment instruments need to be further developed to detect co-occurring disorders, but that assessors and clinicians should always be cognizant to the possibility of dual diagnosis, even when individuals present for either mental illness or substance abuse alone (Kessler et al, 1996). Further, the Center for Substance Abuse Treatment states that “co-occurring disorders must be expected when evaluating any person, and clinical services should incorporate this assumption into all screening, assessment, and treatment planning” (as cited in Ding et al., 2011, p. 373). It is also suggested that dually diagnosed individuals who experience a high severity of symptoms may benefit most by being matched to a high-intensity program over a low-intensity program, though services offering high-intensity programs are becoming reduced due to high health care costs (Chen, Barnett, Sempel, & Timko, 2006). Prisons should also become better resourced and structured to diagnose and treat individuals with co-occurring disorders (Butler et al., 2011), as this could be a very important factor in getting treatment for individuals who might otherwise not receive it, as well as reducing the rate of recidivism for this population.

In addition to all of the above factors, it appears to be very important that individuals with co-occurring disorders receive integrated treatments that offer comprehensive services, including counseling, peer support groups, family education, vocational services, housing, and pharmacotherapy, amongst others (Drake et al., 2004). Furthermore, these services should focus on addressing both the mental illness and substance abuse disorder. One relatively new approach that shows promise is Integrated Dual Disorder Treatment (IDDT), a multidisciplinary approach that aims to provide comprehensive services to individuals with co-occurring disorders, as well

as their families (Boyle & Kroon, 2006). Despite the recent emphasis on integrated treatment services, Clark et al. (2008) suggest that this is far from the standard, and mention that for all individuals diagnosed with co-occurring disorders who receive treatment services, only 8.5% receive services for both disorders. It seems that in the past, funding schemes for mental health and substance abuse services has been separated at the federal level (Kessler et al., 1996).

Despite all the challenges associated with co-occurring disorders, it seems that dually diagnosed individuals can be incredibly resilient and gain long-term benefits from treatment services that address all of their needs. Xie et al. (2010) found that amongst individuals with co-occurring SMI and AUD receiving treatment services, a period of remission from alcohol abuse or dependence criteria for at least six months was associated with positive outcomes that tended to be relatively stable over a long period. This suggests that long-term recovery is a possibility for individuals with co-occurring disorder. It is important to note that these remission periods were preceded by involvement in treatment services, competitive employment, and an increase in life satisfaction, and following these remissions, other positive outcomes followed, such as a reduction of psychiatric symptoms and substance, decreases in hospitalizations and incarceration, and increases in social supports and contacts, as well as independent living.

Conclusions

Though there is still much to be achieved in regards to co-occurring disorders, the research conducted over the past few decades has given us significant insight into several ways to treat dually diagnosed individuals. Future research should continue to examine effective ways to assess and diagnose co-occurring disorders, as well as therapeutic approaches and other treatment interventions to treat individuals with dual diagnosis, especially those that integrate both mental illness and SUDs.

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