

C O-OCCURRENCE OF SUBSTANCE ABUSE AND MENTAL ILLNESS

Introduction

Co-occurrence of Substance Abuse and Mental Illness

Causes and Risk Factors

Assessment

Best Practices in Treatment

Treatment

Treatment Methods

Cognitive Behavioral Therapy

Behavioral Therapy

Skill Development

Family Therapy

Multisystemic Therapy

Individual Psychotherapy

Pharmacotherapy

Medical Detoxification

Complicating Factors in Treatment Efforts

Contraindicated Treatments

Cultural Considerations

Introduction

Children and adolescents may be involved with substances in a variety of ways. Experimentation with substances during adolescence is not uncommon. However, studies have shown that children who experiment with substances at a young age are more likely to use other drugs later in life (Focus Adolescent Services, 2000). Some adolescents' exposure may be limited to experimentation, but others will develop a dependency, even moving on to more dangerous drugs, and causing significant harm to themselves and possibly others.

The following information is attributed to Snyder & Sickmund (2006). In a national survey conducted in 2003, half of all high school seniors surveyed said they had tried illicit drugs at least once. The figure was slightly lower for 10th graders at 41% and for 8th graders at 23%. Marijuana was the most common drug used, with 46% of seniors saying they had tried it. More than three-quarters of seniors said they had tried alcohol. Recent heavy drinking was reported by 28% of seniors, 22% of 10th graders, and 12% of 8th graders.

Children and adolescents who become chronic substance users often develop psychological or social problems. Studies of males entering the juvenile justice system confirm the link between substance use and crime (Gehshan, 2001). Complicating matters even further is the fact that many adolescents who abuse substances also have a diagnosable mental health disorder. The Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS) asserts that co-occurring substance abuse and mental health disorders are characterized by the simultaneous presence of two independent medical disorders, at least one psychiatric disorders, as well as the presence of alcohol and other drug use disorders (*Report to Congress on the Prevention*

and Treatment of Co-occurring Substance Abuse Disorders and Mental Disorders, as cited by DMHMRSAS, 2005). According to the National Comorbidity Study, 41 to 65% of individuals with a lifetime substance abuse disorder also have a lifetime history of at least one mental disorder, and about 51% of those with one or more lifetime mental disorders also have a lifetime history of at least one substance use disorder (U.S. Department of Health and Human Services, 1999). These rates are highest in the 15 to 24 year-old age group (Kessler et al., as cited by the U.S. Department of Health and Human Services). One theory suggests that this population abuses drugs in an effort to self-medicate for a co-occurring mental disorder. In 2004, it was estimated that 1.4 million youth nationwide were in need of substance abuse treatment and less than 10% of those youth received services (Hills, 2007).

A co-occurring disorder refers to co-occurring substance-related and mental disorders (Center for Substance Abuse Treatment, 2005, p. 3). Co-occurring disorders exist when at least one disorder of each type can be established independent of the other and is not simply a cluster of symptoms resulting from a single disorder (Center for Substance Abuse Treatment, p. 3).

Substance use may be perceived differently than substance abuse. In the *DSM-IV-TR*, substance abuse is defined as a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances (American Psychiatric Association, 2000, p. 198). This section will utilize both terms as they were each utilized within the literature.

Co-occurrence of Substance Abuse and Mental Illness

According to epidemiologic data, nine percent of adolescent females and 20% of adolescent males meet the adult diagnostic criteria for an alcohol use disorder (Cohen et al., 1993). Among adolescents and young adults with a substance abuse disorder, 41 to 65% also have a mental health disorder (U.S. Department of Health and Human Services, 1999). Overall, the lifetime co-occurrence of mental and addictive disorders has been estimated at approximately 50% (Kessler et al., 1996).

In recent years, evaluations of youth with co-occurring substance abuse and mental health disorders reveal very distinct patterns. Adolescents with co-occurring disorders typically have an earlier onset of substance use, engage in substance use more frequently, use substances for longer periods, and have greater rates of family, school and legal issues (Hills, 2007).

As noted by the President's New Freedom Commission on Mental Health, if either the substance abuse or co-occurring disorder remains untreated, both usually worsen (2003). Additional complications often arise, including the risk for other medical problems, unemployment, homelessness, incarceration, suicide, and separation from families and friends (New Freedom Commission on Mental Health).

This co-morbidity and lack of adequate treatment have significant clinical implications. First, these children and adolescents are particularly vulnerable to relapses and rehospitalization (Mueser et al., 1997). Studies have found that the most common cause of psychiatric relapse today is the use of alcohol, marijuana, and cocaine; the most common cause of relapse to substance use is an untreated psychiatric disorder (Substance Abuse and Mental Health Services Administration [SAMHSA], 1997). In addition, individuals with co-occurring disorders exhibit greater depression and suicidality, violence, and noncompliance with medications and other treatments (Mueser et al.). They also face greater difficulties with social problems, such as housing instability and

homelessness, increased family burden, and increased vulnerability to HIV infection (Mueser, et al.). Thus, in order to ensure more positive outcomes, it is important that service providers recognize that adolescents with a dual diagnosis have special needs and may require a greater number of interventions and community resources.

Causes and Risk Factors

The National Comorbidity Survey is a large-scale government project designed to increase knowledge about the prevalence and characteristics of co-occurring disorders in the United States. According to Kessler et al. (1996), data from this study indicates that, in nearly 90% of individuals with a dual diagnosis of mental illness and substance use disorder, the mental disorder develops before the substance use disorder. In particular, children will often receive the diagnosis of mental illness in the pre-teen or early teen years, with the median age of around age 11. The substance use disorder has been found to develop a few years later, between the ages of 17 and 21.

It is important to note that a mental illness diagnosis does not ensure that a child will abuse alcohol or other drugs. However, the high statistical coincidence occurring in these two conditions is significant. This information has strong implications for early intervention efforts, as it demonstrates that a window of opportunity may exist for detecting a co-occurring disorder. Early identification and intervention with children and adolescents who have developed mental disorders may preclude the potential of later development of a substance-related disorder if prompt and effective treatment is provided (SAMHSA, 1997).

Certain mental health diagnoses have been associated with an increased risk of later substance abuse. Children with a diagnosis of attention deficit hyperactivity disorder (ADHD) and learning disorders, in combination with depression and anxiety disorders, have a high risk of having a co-occurring substance use disorder.

Adolescents with substance abuse disorders commonly suffer from co-occurring major depression, which impairs functioning, contributes to the severity of substance abuse, and interferes with substance treatment (Riggs & Davies, 2002). Unlike depression in many alcohol-dependent adults, depression in adolescents with substance abuse disorders does not appear to subside with abstinence, indicating that substance treatment alone is not adequate treatment for this type of depression (Riggs & Davies).

In response to these findings, experts have recommended that children and adolescents with these disorders be assessed carefully for substance-related disorders on a periodic basis (Belfer, 1993). Table 1 presents the psychiatric disorders commonly found in children and adolescents diagnosed with substance abuse disorders.

Research has been conducted to better understand the relationship between substance abuse and mental health disorders. Table 2 describes four possible reasons for the connection.

Due to scientific advances and study, a core concept has evolved, suggesting that addiction is a brain disease that develops over time as a result of the initially voluntary behavior of using drugs. Long-term substance use causes profound changes in brain structure and function that result in uncontrollable compulsive drug or alcohol craving, seeking, and using (Leshner, 2001). Recent studies have also shown that one form of substance abuse, binge drinking, damages the adolescent

Table 1

**Psychiatric Disorders Commonly Found Among Children and Adolescents
Diagnosed with Substance Use Disorders**

<p>Behavior Disorders</p> <ul style="list-style-type: none">• Conduct Disorder• Oppositional Defiant Disorder• Attention Deficit/Hyperactivity Disorder <p>Mood Disorders</p> <ul style="list-style-type: none">• Major Depressive Episodes• Dysthymic Disorder• Bipolar Disorder <p>Anxiety Disorders</p> <ul style="list-style-type: none">• Generalized Anxiety Disorder• Social Phobia• Posttraumatic Stress Disorder <p>Eating Disorders (Bulimia Nervosa)</p>

Source: Bukstein, 1998.

brain more than the adult brain. Examination of differences in the effects of alcohol on receptor activity in the hippocampus of adolescents and adults reveals the impact of alcohol on these age groups (White, 2004). These differences suggest that adolescents are more vulnerable than adults to the impact of alcohol on learning and memory. Heavy drinking in early or middle adolescence, with this consequent cortical damage, can lead to diminished control over cravings for alcohol and to poor decision-making (White). Thus, addiction must be viewed as a multifaceted disease.

Studies have also linked a gene to alcohol addiction. The CREB gene, so-named because it processes a protein called CREB, is involved in the process of alcohol tolerance, dependence, and withdrawal symptoms (Davis, 2004). Studies have linked this gene with anxiety-like behaviors and preference to alcohol. There is also data that supports the idea that some persons who abuse alcohol have different brain chemistries that predispose them to drinking (Personal Communication with Dr. Anita Everett, Former Inspector General for the Commonwealth of Virginia, July 2002).

According to Leshner (2001), over time the person abusing substances loses substantial control over his or her voluntary behavior. For many people these behaviors are truly uncontrollable, just like the behavioral demonstration of other brain diseases. Thus, once one is addicted, the nature of the illness, as well as treatment approaches, is not that different from other brain diseases.

While the relationship between mental illness and substance abuse has yet to be fully established, there are certain risk factors that increase the possibility of a child being dually-diagnosed. The first and possibly most significant of these elements is family influence. This may include various risk factors, such as genetic predispositions, parental psychopathology, parental substance abuse, and the availability of substances (SAMHSA, 1999). Parental substance use, troubled family relationships, and emotional or behavioral problems have been reported to be most

predictive of escalation to more serious abuse of alcohol or drugs (SAMHSA). It is important to note that addiction involves inseparable biological and behavioral components (Leshner, 2001).

Table 2

Theories behind the Relationship Between Substance Abuse and Mental Health Disorders

1. One disorder directly causes the other.

For example, the repeated use of cocaine may induce panic attacks, psychotic episodes, and depression that would not have occurred otherwise (Ciraulo & Shader, 1991).

2. The substance abuse is an attempt at self-medication.

This explanation appears to be the most prevalent. It suggests that the mental disorder indirectly leads to the substance abuse. Under this hypothesis, an individual attempts to diminish psychological distress or improve social functioning by using substances (Substance Abuse and Mental Health Services Administration [SAMHSA], 1997). The self-medication hypothesis is supported by the fact that in the vast majority of cases, the mental disorder develops before the substance abuse begins. However, a related view is that the substance use is the result of psychological difficulties such as impulsivity or impaired judgment (SAMHSA, 1999).

3. The two disorders develop independently, but have a significant impact on each other.

This explanation is best demonstrated by those youth who develop substance abuse early, and then later independently develop a mental health disorder such as schizophrenia.

While the substance abuse may be a stressor or may further decrease the youth's coping abilities, it cannot be considered a direct cause of the schizophrenia (SAMHSA, 1997).

4. The development of both disorders is related to the existence of an independent external factor.

A strong example of this is a youth who has suffered from severe childhood trauma, and consequently exhibits multiple psychological, emotional, and social difficulties (SAMHSA, 1997).

Source: Commission on Youth Graphic of Citations as noted, 2002.

This vulnerability to substance use may then be enhanced by the child's social development and peer influences. A child who is highly susceptible to peer pressure and negative influences is at a greater risk of developing a substance abuse problem (Leshner, 2001). These risk factors may differ in significance during different phases of development. Parental and peer influences are often critical in early phases of substance use, while the influence of peers may increase as the child gets older (SAMHSA, 1999). Recent studies have also revealed an association between higher levels of substance use and an adolescent's pubertal stage (not necessarily chronological age) because adolescents entering puberty sooner enter the risk period earlier than late maturers (Patton et al., 2005).

Another major risk factor for adolescent substance abuse is the presence of childhood conduct problems (Brook et al., as cited by Kamon, Budney, & Stanger, 2005). Substance abuse and conduct problems share important risk factors, including family conflict, poor parental monitoring, parental substance use, academic problems, and association with deviant peers (Anderson and Henry, Brook et al., as cited by Kamon, Budney, & Stanger). More than half of adolescents with substance abuse problems also experience conduct problems; such problems make treatment for substance abuse particularly challenging (Kaminer et al., as cited by Kamon, Budney, & Stanger).

Assessment

A large number of adolescents experiment with alcohol and other drugs before becoming adults (Bukstein, 1998). However, in order to receive a diagnosis of substance use disorder, these youth must demonstrate significant levels of impairment in their daily lives, such as poor social relationships, declining academic performance, or chronic substance-related absences, suspensions, or expulsions from school (Bukstein).

When assessing youth suspected of co-occurring disorders, the primary goal is to determine whether the use of substances exists and whether it fits the *DSM-IV* diagnostic criteria for substance use disorders (Bukstein, 1998). This determination should be based on a comprehensive developmental, social, and medical history. Evaluators should obtain the necessary information from a variety of sources, including the youth, parents, family members, school personnel, previous treatment records, and perhaps other involved agencies (SAMHSA, 1997).

Once clinicians have established that the child is using substances, they must then determine the nature of the use pattern. Under the *DSM-IV*, substance use disorders generally follow one of two tracks. The first diagnosis, substance abuse, is ascribed to a child when their repeated use of alcohol or other drugs leads to physical, emotional, or social problems, but does not include compulsive use or addiction. Further, when an individual persists in using alcohol or other drugs despite symptoms of tolerance and withdrawal or attempts to control the use, substance dependence is generally the diagnosis. Information regarding patterns of use, including age of onset, progression of use for specific substances, frequency, and variability of use, and the types of substances used, is necessary in making this diagnosis (Bukstein, 1998).

Because the most common feature of substance use disorders in adolescents is impairment in psychosocial and academic functioning, the evaluator must determine whether the difficulties the youth displays are attributable to the substance use, are the result of preexisting or current problems or are a combination of both (Bukstein, 1998). During a preliminary evaluation, clinicians should routinely screen for any co-occurring mental disorders. In addition, the assessment should also attempt to bring out any social and environmental factors, such as family or academic problems, that may be affecting the child or adolescent's functioning.

Recognition of co-occurring substance-related and mental disorders is often difficult, and clinicians will have to keep in mind several issues when conducting an evaluation. First, the youth may display denial, distortion, and minimization when discussing substance use; therefore, the details provided may not be reliable. Furthermore, in cases of co-occurring mental illness, the reasons for the distressing symptoms and behaviors may not be fully understood by the child and family, and therefore the information provided during the evaluation may not be particularly revealing (Bukstein, 1998). Moreover, the reports of substance use may be distorted by the cognitive and emotional aspects of any underlying mental illness, further decreasing the validity of any self-reports (Mueser et al., 1997).

Clinicians must also consider the fact that dually-diagnosed patients often present different symptoms than substance abusers who do not have mental illness (Mueser et al., 1997). They may use lower amounts of alcohol and/or drugs and experience different consequences from use. Furthermore, some research shows that the dually-diagnosed are less likely to develop dependence and tend to report less subjective distress resulting from their use (Mueser et al.). Based on these

differences, standard instruments may not identify the substance use disorder in these individuals, and the clinician may have to rely primarily on clinical interviews and patient histories.

Best Practices in Treatment

There are very few programs specifically designed to treat co-occurring disorders, and those that do exist are relatively new. Consequently, most methods have not been objectively evaluated for effectiveness with children and adolescents (SAMHSA, 1997). The studies that have been done have failed to demonstrate the superiority of any one treatment approach over another, and instead have shown only that some treatment is better than no treatment (Bukstein, 1998). However, researchers have identified certain treatment characteristics that are associated with more successful outcomes in dually-diagnosed children and adolescents (Bukstein). They include:

- Treatment of sufficient duration, intensiveness, and comprehensiveness to address the chronic nature of the disorders;
- Presence of after-care or follow-up treatment;
- Sensitivity to cultural, racial, and socioeconomic factors;
- Family involvement;
- Collaboration among service providers and agencies;
- Promotion of prosocial activities and drug-free lifestyle; and
- Involvement in self-help groups such as Alcoholics Anonymous and Narcotics Anonymous

The SAMHSA Best Prevention and Treatment Practices Expert Panel has also recommended that the following principles be used to form the basis of treatment for children and adolescents with a dual diagnosis (SAMHSA, 1997):

- *Prevention* – Early detection, education, and provision of services to high risk populations (i.e., children with learning disorders, persons experiencing trauma, including child or domestic abuse, persons with predisposing family conditions, etc.).
- *Education* – Both mental health and substance abuse treatment programs should educate clients regarding the risks and symptoms of dual disorders.
- *Cross-training* – Service providers should be trained to evaluate and treat mental illness and substance abuse concurrently.
- *Evaluation* – All elements of the treatment program should be thoroughly evaluated on a periodic basis.

Preliminary studies also support the use of integrated mental health and substance abuse treatment programs (Mueser et al., 1997). Under the integrated treatment approach, both the mental health and the substance abuse treatments are provided simultaneously within the same treatment plan, rather than being conducted in a consecutive or parallel manner (Mueser et al.). Integrated treatment is typically provided by same team, person, or organization, and most models include a variety of services within the treatment plan, such as case management, group interventions (persuasion groups, social skills training), behavioral strategies, and family/social intervention (Mueser, et al.). SAMHSA is informing health professionals to expect patients to present with simultaneous substance abuse and mental health disorders (Wachter, 2005). SAMHSA's Treatment Improvement Protocol 42: Substance Abuse Treatment for Persons with Co-occurring Disorder recommends the coordination of substance abuse and mental health interventions (Wachter). Although the effects of integrated mental health and substance abuse disorder treatment require additional study, optimal treatment involves an integration of treatment modalities rather than merely concurrent or consecutive treatment with specific modalities for either substance abuse

disorder or psychiatric disorders (*Journal of the American Academy of Child & Adolescent Psychiatry*, 2005).

Research has found that the integrated approach offers several advantages. Participants are more likely to maintain a connection with the program, which has been found to result in decreases in rehospitalization, increased sobriety, and decreased psychiatric symptoms (Hellerstein et al., 1995). In addition, participants have been found to demonstrate modest improvements in the areas of immediate and extended social relationships, self-reported satisfaction with family relationships, and psychiatric symptoms (Jerrell & Ridgely, 1995).

It is also important to note that different approaches to integrated treatment have been found to result in similar rates of improvement (Mueser et al., 1997). If supported, this finding could have important policy implications, because the choice of approach could then be based on the ease of implementation and the cost of the intervention method (Mueser et al.).

The research supporting integrated treatment programs can only be generalized, however, due to the existence of certain limitations (Mueser et al., 1997). Most of the studies used small sample sizes, lacked an experimental design, and failed to employ standardized instruments to assess diagnosis of substance abuse (Mueser et al.). Furthermore, most incorporated relatively brief follow-up periods (typically 18 months or less). This short-term design may downplay the effectiveness of the approach, as research shows that the benefits of this form of treatment become more visible as time progresses (Durrell et al., 1993).

Treatment

Children and adolescents with a dual diagnosis should be treated in the least restrictive environment possible. Consequently, several treatment settings are necessary to ensure an adequate continuum of care. The following paragraphs describe the most typical treatment settings.

Inpatient treatment – This is generally limited to children and adolescents with three types of difficulties: severe psychiatric disorders (such as acute psychosis and/or dangerous behaviors), a history of treatment failure in less restrictive environments, and a risk of withdrawal. Inpatient services include alcohol and drug detoxification programs, which typically accept active and often unmotivated users for a period of 3 to 7 days and provide medication to alleviate withdrawal (Sciacca, 1991). Completion of detoxification is frequently a criterion for admission to other forms of treatment. However, patients with dual diagnosis who have severe mental illness are often excluded from detoxification programs due to the lack of adequate staffing and staff training.

Residential treatment – This includes group homes as well as therapeutic communities. The environment is typically less restrictive than hospitalization, but still provides the youth with intensive services and support.

Partial hospitalization or day treatment – These programs allow the youth to remain in the community while receiving intensive treatment. They are often used as a transition for youth from a more restrictive setting back into the community.

Outpatient treatment – This form of treatment is most appropriate for youth whose history, clinical status, and environment allow for less intensive level of care. Treatment is focused

on the primary problem, and commonly uses a single method, such as individual or family therapy, or a limited combination of the two.

Community treatment – This may include school-based counseling and self-help groups, as well as pro-social organizations and recreational opportunities that are made available to the youth. It may be used either in conjunction with outpatient treatment, or as a transition from long-term treatment in more restrictive settings. The basic purpose of these programs is to facilitate transition to a drug-free lifestyle.

Source: Bukstein, 1998 and Sciacca, 1991.

Table 3 discusses the various factors that influence the choice of treatment setting for children and adolescents with dual diagnoses.

Table 3

Factors Influencing Choice of Treatment Setting For Children and Adolescents

- **Motivation and willingness of adolescent and family to cooperate with treatment**
Treatment, however, does not need to be voluntary to be effective, as sanctions or enticements from the family, the justice system, or other sources may increase treatment entry and retention rates (National Institute on Drug Abuse, 1999).
- **Adolescent's need for structure or limit-setting that cannot be provided in less restrictive environment**
- **Need to provide a safe environment for the youth**
- **Ability of the adolescent to care for him/herself**
- **Existence of complicating medical or psychiatric conditions**
- **Availability of services**
The number of facilities offering special programs for dually-diagnosed clients, has grown, but still remains inadequate. By 1999, 57% of facilities with a mental health focus provided dual diagnosis programs, and nearly half of substance abuse treatment facilities provided these programs (Drug and Alcohol Services Information Systems [DASIS] Report, 2002). Facilities offering hospital inpatient care have been found to be more likely to provide service for dually-diagnosed clients than other types of facilities (DASIS).
- **Placement preferences of the family**
- **Child or adolescent's treatment history**

Source: Bukstein, 1998, for listing of factors; description sources as noted.

Treatment Methods

Numerous methods are used to treat children and adolescents with a dual diagnosis. The most prevalent are discussed in the following paragraphs.

Cognitive Behavioral Therapy

This goal of cognitive behavioral therapy (CBT) is the identification and modification of maladaptive thinking patterns to reduce negative thoughts, feelings and behavior. For substance abusers, the focus of this intervention is generally relapse prevention (U.S. National Institute on Drug Abuse [NIDA], 1999). It is intended to help the adolescent develop greater self-control,

identify environmental and internal triggers leading to relapse, and develop strategies for dealing with stressors, triggers, and lapses into substance use. The role of the service provider is to aid the youth in anticipating the problems that they are likely to meet, and to help them to develop effective coping strategies. Studies have indicated that CBT has positive effects with adolescents treated for mental health disorders such as depression (Bukstein, 1998).

Studies have also shown that CBT is effective for adolescents who have been diagnosed with conduct disorder and co-existing substance abuse disorders (Kazdin, as cited by the *Journal of the American Academy of Child & Adolescent Psychiatry*, 2005). Cognitive behavioral therapy includes elements directed toward substance use such as relapse prevention, but also addresses social skills, anger control, and problem solving (*Journal of the American Academy of Child & Adolescent Psychiatry*).

Behavioral Therapy

The underlying goal of behavioral therapy is to allow the youth and the treatment provider to identify specific problems and areas of deficit and to work on improving these behaviors (Bukstein, 1998). Therapeutic activities are designed to achieve these goals, and may include fulfilling specific assignments, rehearsing desired behaviors, and recording and reviewing progress (NIDA, 1999). Positive reinforcers are provided at intervals based on attainment of the specified goals. This form of treatment is often incorporated into inpatient, residential, or partial hospitalization programs (Bukstein).

Once the youth leaves the residential or day treatment setting, parents must continue to exercise supervision of the adolescent's behavior and provide negative consequences for rule violations and rewards for desired behavior. Research shows that, if consistently applied, this type of therapy helps adolescents become drug-free and increases their ability to maintain abstinence after treatment ends (NIDA, 1999). Participants have also been found to show improvement in areas such as employment, school attendance, family relationships, depression, and institutionalization (NIDA). It is important to note that these gains have been largely attributed to the inclusion of family members in treatment and the use of a reward system to achieve substance abstinence (NIDA).

Skill Development

Because co-occurring disorders often disrupt normal skill development, treatment, and rehabilitation often include assistance in developing needed skills and functions that were passed by while the child was struggling with the untreated disorders (SAMHSA, 1997). Skill development is often delivered in the cognitive-behavioral format (Bukstein, 1998). The general focus of treatment includes educating the youth with relapse prevention skills, substance refusal skills, communication skills, problem-solving, anger control, and leisure time management. While it is frequently incorporated in treatment plans, there is little research available regarding which methods are most effective in dually-diagnosed populations.

Family Therapy

This type of therapy is often considered an essential part of treatment for adolescents with substance use disorders (Bukstein, 1998). While many theoretical approaches have been utilized, the goal of most programs is to provide education, to improve communication and functioning among family members, and to reestablish parental influence through parent management training (Bukstein). One popular form is multidimensional family therapy (MDFT), which is an outpatient, family-based treatment for teenagers with serious substance abuse issues (NIDA, 1999). This approach views drug use in terms of network of influences (individual, family, peer, community)

and encourages treatment across settings in multiple ways. Sessions may be held in a clinic, home, court, school, or other community locations.

For the affected youth, the emphasis of treatment is on skill-building, and the treatment plan often incorporates developmental tasks such as decision-making, negotiation, problem-solving skills, vocational skills, communication, and dealing with stress (NIDA, 1999). Parallel sessions are held with family members, in which parents examine their parenting style, learn to distinguish influence from control, and learn to have a positive and developmentally appropriate influence on their child. Research supports the use of this type of therapy for teenagers with substance use disorders, but there are no reports of its efficacy in populations with dual diagnosis (Schmidt et al., 1996; NIDA, 1999).

Multisystemic Therapy

One promising intervention program for youth with dual disorders is multisystemic therapy (MST). MST aims to address the multifaceted nature of antisocial behavior at the individual, family, and community levels (Ouimette, 2007). This form of therapy is intended to address serious antisocial behavior in children and adolescents who abuse substances. Therapeutic efforts target the child's behavior within the context of the family environment, the school environment, and the neighborhood and community (NIDA, 1999). Treatment occurs in each of the child's natural settings. Research has shown that MST significantly reduces adolescent drug use during treatment and for at least six months after treatment (NIDA). It has also been found to reduce the number of juvenile incarcerations and out-of-home placements (NIDA); however, this form of therapy has not been tested specifically in dually-diagnosed populations.

MST is associated with significant, long-term reduction of aggressive behaviors with chronic and violent juvenile offenders (Henggeler & Brondino, 2002). Clinical trials indicate that MST is an effective intervention for substance-abusing youth, particularly for marijuana abstinence (Henggeler & Brondino).

Individual Psychotherapy

Interpersonal therapy and psychodynamic therapies are methods of individual counseling that are often incorporated into the child or adolescent's treatment plan. The effectiveness of these two forms of treatment is suggested from case reports and clinical experience, but no controlled studies support the use of these methods in children and adolescents with dual-diagnosis (Bukstein, 1998).

Pharmacotherapy

Medications are often an important element of treatment for dually-diagnosed patients. The children who are most often prescribed medication are those with depression and mood disorders, ADHD, severe aggressive behavior, and anxiety disorders (Bukstein, 1998). Other factors that may prompt the use of medication are a significant family history of psychiatric disorder, past treatment failures and relapses, and past success using medication in treating the symptoms of the disorder (Bukstein).

According to NIDA (1999) conclusions, pharmacotherapy should be combined with counseling and other therapies. NIDA stipulates, however, that the use of medication should only be pursued as a last resort in the dually-diagnosed population, as substance use disorders may increase the potential for misuse and overdose. Further, medications should be prescribed only to those children and adolescents who displayed psychiatric symptoms prior to the substance use or only if the

symptoms are present during periods of abstinence. A definitive assessment requires that the youth remain abstinent from the use of substances for a set period, typically several weeks.

Research is being conducted on the effectiveness of medications in adolescents with co-occurring substance use and psychiatric disorders. Clinical trials with pemoline and bupropion for ADHD and fluoxetine for depression have shown promise (*Journal of the American Academy of Child & Adolescent Psychiatry*, 2005). Pemoline has shown promise in safely treating youth with ADHD and co-occurring substance use (Riggs, 2003). Pemoline is considered a significant treatment option for ADHD because of its low abuse potential and once-per-day dosing (Riggs). More recently, a trial of a stimulant medication demonstrated the efficacy of medication improving ADHD symptoms in adolescents with comorbid ADHD and substance abuse disorder. This study also demonstrated that medication treatment of ADHD alone, without specific substance abuse disorder or other psychosocial treatment, did not decrease substance use (*Journal of the American Academy of Child & Adolescent Psychiatry*).

Preliminary trials with lithium and selective serotonin reuptake inhibitors (SSRIs) produced considerable improvements in adolescents with substance abuse disorders and comorbid mood disorders (*Journal of the American Academy of Child & Adolescent Psychiatry*, 2005). Preliminary data shows that SSRIs are safe in treating adolescents with depression even if they are still using substances (Riggs, 2003). Conversely, tricyclic antidepressants are contraindicated for the treatment of depression and substance use due to their high potential for adverse interactions with substances, particularly marijuana (Riggs).

One controlled study was conducted to ascertain the effectiveness of lithium for adolescents with bipolar disorder and co-occurring substance abuse disorder. Lithium was found to be effective in stabilizing mania, even that which is accompanied by ongoing substance use (Riggs, 2003). However, it was not effective in treating the substance use or in inducing abstinence. It is important that the adolescent receive concurrent treatments for substance use and bipolar disorder (Riggs).

According to the Practice Parameter for the assessment and treatment of children and adolescents with substance use disorders, some commonly used pharmacological agents, such as psychostimulants and benzodiazepines, have valid abuse potential (*Journal of the American Academy of Child & Adolescent Psychiatry*, 2005). Alternative agents to psychostimulants should be considered because they possess lower potential for abuse. Behavior therapy, SSRIs, tricyclic antidepressants, or bupropion are preferred (*Journal of the American Academy of Child & Adolescent Psychiatry*).

When medication is utilized for the treatment of a co-occurring mental health disorder, a cautious approach, as well as an integrated treatment strategy, is crucial for effective treatment of the mental health and substance abuse disorder.

Medical Detoxification

This is a form of pharmacotherapy that may be pursued as the first stage in addiction treatment. The goal is to treat any withdrawal effects by substituting a legal drug for an illicit one during prolonged periods of abstinence. This approach is most frequently used for chronic abusers of highly addictive substances such as opium (i.e., methadone treatment) (Bukstein, 1998). Research has shown that detoxification will not by itself change long-term drug use, and must be incorporated into a long-term treatment plan (NIDA, 1999). Furthermore, it is important to note that substitutions such as methadone are infrequently used in children and adolescents, and are often

limited by law (Bukstein). Detoxification should be reserved for only the most severely dependent adolescents who have been resistant to other forms of treatment (Bukstein).

Complicating Factors in Treatment Efforts

There are many factors that can impact the success of treatment efforts in children with multiple diagnoses. One of the most significant is the national prevalence of separate mental health and substance abuse service delivery systems. Research has found that “coordination of treatment plans is the exception, not the rule” (SAMHSA, 1997).

Rather than utilizing the integrated treatment approach, many service agencies pursue parallel mental health and substance abuse treatment plans for dually-diagnosed children. Under this framework, the child receives concurrent treatment from two separate providers: one for substance abuse and the other for mental health. As a result, efforts are often complicated by a clash of treatment philosophies. Clinicians in the mental health system tend to support the self-medicating hypothesis, and place less emphasis on treating the substance abuse disorder and more on the mental disorder, believing that the substance abuse will subside once the mental disorder is treated (SAMHSA, 1997). However, substance abuse clinicians tend to adopt the opposite view, believing that the symptoms of the mental disorder are brought on by the use of substances. They will consequently focus their efforts on abstinence and relapse prevention (SAMHSA). Children being treated on these parallel tracks can easily get caught in the middle, and are often confronted with conflicting strategies, goals, and activities.

However, it is important to note that there are also difficulties presented for those agencies that pursue the integrated treatment approach. Mental health and substance abuse treatments often fall into separate funding streams, and the integrated approach may therefore complicate the funding process and cause the child to become ineligible for certain resources (SAMHSA, 1997). Agencies that adopt the integrated approach must support a policy of coordinated funding streams in order to ensure that children remain eligible for all available resources in the community.

There are also certain issues that impact the recognition and diagnosis of co-occurring disorders. First of all, parents often do not bring children in for treatment of an initial disorder if the behavior is not dangerous or disruptive (Greenbaum et al., 1966). Consequently, opportunities for prevention and early intervention are often missed. Furthermore, many clinicians are trained in either mental health or substance abuse exclusively and may not recognize the symptoms of the co-occurring disorder. As a result, one problem may be diagnosed, while the other is missed (SAMHSA, 1997).

The probability of successful outcome is also significantly impacted by the duration of treatment. Substance abusers who fail to complete treatment programs have a much higher likelihood of relapse (NIDA, 1999). Factors that have been associated with noncompletion of treatment in children and adolescents with dual diagnosis include a younger age of onset, more extensive alcohol use, abuse of multiple drugs, and deviant behavior (Bukstein, 1998). Clinicians should therefore make every effort to ensure that children and families remain engaged in treatment and should be alert for common predictors of relapse, such as specific thoughts, feelings, and cravings, less improvement in school or work, and less satisfactory leisure activities (NIDA). It is also important that clinicians recognize that treatment or improvement in one disorder may not lead to the improvement of the other. Rather, the interaction between mental illness and substance abuse may be negative, with the deterioration or relapse related to one disorder causing the other disorder

to be exacerbated. It is for this reason that experts emphasize the importance of long-term treatment plans that incorporate the possibility of relapses and rehospitalization (SAMHSA, 1997).

Contraindicated Treatments

Benzodiazepines, typically prescribed for anxiety, are usually contraindicated in the presence of a substance abuse disorder due to their addictive properties (SAMHSA, 1997). Tricyclic antidepressants are contraindicated for the treatment of depression or ADHD in adolescents who engage in substance use because of the risk of death in the event of an overdose (Riggs, 2003).

The following information is from the 2007 Biennial Report of the Hawaii Department of Health (Chorpita & Daleiden, 2007). For the treatment of substance abuse, studies have found no support for the following treatments: Client-Centered Therapy, Education, Group Therapy, Project CARE, or the Twelve-Step Program. Moreover, these findings also indicate that Group Therapy and Project CARE treatment approaches may negatively affect treatment outcomes for substance abuse.

Cultural Considerations

In research cited by Walton (2001), studies suggest that females may enter substance abuse treatment with unique needs. They present symptoms of greater psychological distress, such as low self-esteem and depression, and are much more likely to report prior physical and/or sexual abuse than their male counterparts. These issues must be effectively addressed within the context of treatment in order to improve outcomes.

In addition, Walton (2001) cites research which has found that women and minorities often enter treatment with fewer financial resources and positive social supports. For example, studies have found that many African Americans are at a higher risk of relapse because they often face more difficult social situations following treatment, such as high-stress and low-support environments resulting from low-income urban neighborhoods with higher crime rates.

Sources

American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, Washington, DC. American Psychiatric Association.

Belfer, M. (1993). Substance Abuse with Psychiatric Illness in Children and Adolescents. *American Journal of Orthopsychiatry*, 63, 70-79.

Bourdon, K., Rae, D., Narrow, W., Manderscheid, R., & Regier, D. (1994). *National Prevalence and Treatment of Mental and Addictive Disorders, Chapter 3, 25-26*. In Manderscheid, R.W., and Sonnenschein, M.A., *Mental Health, United States, 1994*, Rockville, MD: Center for Mental Health Services.

Bukstein, O. (1998). Summary of the Practice Parameters for the Assessment and Treatment of Children and Adolescents with Substance Use Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36 (suppl), 140S-156S.

- Center for Substance Abuse Treatment. (2005). *Substance Abuse Treatment for Persons with Co-occurring Disorders. Treatment Improvement Protocol Series, No. 42. DHHS. Publication No. (SMA) 05-3992*. Rockville, MD: Substance Abuse and Mental Health Services Administration (SAMSHA).
- Chorpita, B., & Daleiden, E. (2007). *2007 Biennial Report: Effective Psychosocial Interventions for Youth with Behavioral and Emotional Needs*. Child and Adolescent Mental Health Division, Hawaii Department of Health.
- Ciraulo, D., & Shader, R. (1991). Clinical Manual of Chemical Dependence. *American Psychiatric Press*, 204-209.
- Cohen, P., Cohen, J., Kasen, S., Velez, C., Hartmark, C., Johnson, J., et al. (1993). An Epidemiological Study of Disorders in Late Childhood and Adolescence—I. Age- And Gender-Specific Prevalence. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 34, 851-67.
- Davis, J. (2004). Researchers Identify Alcoholism Gene. *WebMD Medical News*. [Online]. Available: <http://my.webmd.com/content/article/87/99592.htm>. [June 2005].
- Drug and Alcohol Services Information System (DASIS). (2002). Facilities Offering Special Programs for Dually Diagnosed Clients. *The DASIS Report*, May 24, 2002.
- Durrell, J., Lechtenberg, B., Corse, S., & Frances, R. (1993). Intensive Case Management of Persons with Chronic Mental Illness Who Abuse Substances. *Hospital and Community Psychiatry*, 44, 780-82.
- Focus Adolescent Services. (2000). *Drugs and Teen Substance Abuse*. [Online]. Available: <http://www.focusas.com/SubstanceAbuse.html>. [October 2002].
- Gehshan, S. (2001). Substance Abuse Treatment in State Children's Health Insurance Programs. *National Conference of State Legislatures*. [Online]. Available: <http://www.ncsl.org/programs/health/forum/saschip.htm#appendix>. [August 2002].
- Greenbaum, P., Foster-Johnson, L., & Petrila, A. (1966). Co-occurring Addictive and Mental Disorders among Adolescents: Prevalence Research and Future Directions. *American Journal of Orthopsychiatry*, 66, 52-60.
- Hellerstein, D., Rosenthal, R., & Miner, C. (1995). Prospective Study of Integrated Outpatient Treatment for Substance-Abusing Schizophrenic Outpatients. *The American Journal on Addictions*, 4, 33-42.
- Henggeler, S., & Brondino, M. (2002). Four-year Follow-Up of Multisystemic Therapy With Substance-Abusing and Substance-Dependent Juvenile Offenders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41, 868-874.

- Hills, Holly. (2007). *Treating Adolescents with Co-Occurring Disorders*. Florida Certification Board/Southern Coast ATTC Monograph Series # 2. [Online]. Available:http://www.scattc.org/upload_documents/Treating_Adolescents_with_CoOccurring_Disorders.pdf. [January 2008].
- Jerrell, J., & Ridgely, M. (1995). Improvements in Functioning and Symptomatology in People with Dual Diagnoses. *Psychiatric Services, 46*, 233-38.
- Journal of the American Academy of Child & Adolescent Psychiatry*. (2005). Practice Parameter for the Assessment and Treatment of Children and Adolescents with Substance Use Disorders, *44* (6), 609-621.
- Kamon, J., Budney, A., & Stanger, C. (2005). A Contingency Management Intervention for Adolescent Marijuana Abuse and Conduct Problems. *Journal of the American Academy of Child & Adolescent Psychiatry, 44* (6), 513-521.
- Kessler, R., McGanagle, K., Zhao, S., Nelson, C., Hughes, M., Eshleman, S., Wittchen, H., & Kendler, K. (1994). Lifetime and 12-month Prevalence of *DSM-III-R* Psychiatric Disorders in the United States. *Archives of General Psychiatry, 51*, 8-19.
- Kessler, R., Nelson, C., McGonagle, K., Edlund, M., Frank, R., & Leaf, P. (1996). The Epidemiology of Co-Occurring Addictive and Mental Disorders in the National Comorbidity Survey: Implications for Prevention and Service Utilization. *American Journal of Orthopsychiatry, 66*, 17-31.
- Leshner A. (2001). Addiction is a Brain Disease-and It Matters. *Issues in Science and Technology, 17-19*.
- Mueser, K., Drake, R., & Miles, K. (1997). The Course and Treatment of Substance Use Disorder in Persons with Severe Mental Illness. In Onken, L.S., Blane, J.D., Genser, S., & Horton, A.M. (Eds.), *Treatment of Drug-Dependent Individuals with Comorbid Mental Disorders*. National Institute on Drug Abuse Research Monograph 172: U.S. Department of Health and Human Services.
- National Institute on Drug Abuse (NIDA). (1999). *Principles of Drug Addiction Treatment: A Research-Based Guide*. National Institute of Health.
- New Freedom Commission on Mental Health, *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD: 2003.
- Ouimette, P. (2007). *Co-Occurring Mental Health & Substance Abuse Disorders*. Washington State University Spokane, the Washington Institute for Mental Illness Research & Training. [Online]. Available: <http://www1.dshs.wa.gov/pdf/hrsa/mh/cobestpract.pdf>. [December 2007].
- Patton, G., McMorris, J., Taumbaou, W., Hemphill, S., Donath, S., & Catalano, R. (2005). Puberty and the Onset of Substance Use and Abuse. *Journal of the American Academy of Child & Adolescent Psychiatry, 44* (5), 460.

- Riggs, P. (2003). Treating Adolescents for Substance Abuse and Comorbid Psychiatric Disorders. *Science & Practice Perspectives*. University of Colorado School of Medicine. [Online]. Available: <http://www.nida.nih.gov/PDF/Perspectives/vol2no1/03Perspectives-Treating.pdf>. [December 2007].
- Riggs, P., & Davies, R. (2002). A Clinical Approach to Integrating Treatment for Adolescent Depression and Substance Abuse, Clinical Perspectives. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41 (10), 1253-1255.
- Schmidt, S., Liddle, H., & Dakof, G. (1996). Effects of Multidimensional Family Therapy: Relationship of Changes in Parenting Practices to Symptom Reduction in Adolescent Substance Abuse. *Journal of Family Psychology*, 10, 1-16.
- Sciacca, K. (1991). An Integrated Treatment Approach for Severely Mentally Ill Individuals with Substance Disorders. In *New Directions for Mental Health Services, No. 50*, Jossey-Bass, Publishers.
- Snyder, H., & Sickmund, M. (2006). *Juvenile Offenders and Victims: 2006 National Report*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (1997). National Advisory Council. *Improving Services for Individuals at Risk of, or with, Co-Occurring Substance-Related and Mental Health Disorders: A SAMHSA Conference Report and a National Strategy*. U.S. Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (1999). Office of Applied Studies. *The Relationship between Mental Health and Substance Abuse among Adolescents*. U.S. Department of Health and Human Services.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS). (2005). *Comprehensive State Plan: 2006-2012*.
- Wachter, K. (2005). Treat Substance Abuse, Mental Illness Together. *Internal Medicine News*, 38 (6), 40.
- Walton, M. (2001). Diversity in Relapse Prevention Needs: Gender and Race Comparisons Among Substance Abuse Treatment Patients. *American Journal of Drug and Alcohol Abuse*, 27, 225-240.
- White, A. (2004). *Alcohol and the Adolescent Brain*. Department of Psychiatry, Duke Medical Center. [Online]. Available: <http://www.duke.edu/~amwhite/Adolescence/adolescent5.html>. [January 2008].

Additional Resources

Bukstein, O. (1998). Summary of the Practice Parameters for the Assessment and Treatment of Children and Adolescents with Substance Use Disorder. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36 (suppl), 140S-156S.

Journal of the American Academy of Child & Adolescent Psychiatry. (2005). Practice Parameter for the Assessment and Treatment of Children and Adolescents with Substance Use Disorders, 44 (6), 609-621.

Substance Abuse and Mental Health Services Administration (SAMHSA). (1997). National Advisory Council. *Improving Services for Individuals at Risk of, or with, Co-Occurring Substance-Related and Mental Health Disorders: A SAMHSA Conference Report and A National Strategy*. U.S. Department of Health and Human Services.

Organizations/Weblinks

Governor's Office for Substance Abuse Prevention (GOSAP)

P.O. Box 1475 - 202 North Ninth Street, Fourth Floor - Richmond, VA 23219
804-786-9072
E-mail: gosap@governor.virginia.gov

Mid-Atlantic Addiction Technology Transfer Center (ATTC)

VCU Department of Psychiatry
P.O. Box 980469 - Richmond, VA 23298-0469
804-828-9910
E-mail: mid-attc@mindspring.com
<http://www.midattc.org>

National Alliance for the Mentally Ill (NAMI)

Colonial Place Three - 2107 Wilson Boulevard, Suite 300 - Arlington, VA 22201-3042
703-524-7600
<http://www.nami.org>

National Clearinghouse for Alcohol and Drug Information

P.O. Box 2345 - Rockville, MD 20847-2345
800-729-6686
<http://www.health.org>

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

6000 Executive Boulevard, Willco Building - Bethesda, MD 20892-7033
301-443-1124
<http://www.niaaa.nih.gov>

National Institute on Drug Abuse (NIDA)

6001 Executive Boulevard - Bethesda, MD 20892-9561
301-443-1124
<http://www.nida.nih.gov>

National Mental Health Association (NMHA)

2001 North Beauregard Street, 12th Floor - Alexandria, VA 22311
800-969-NMHA (6642)
E-mail: infoctr@nmha.org
<http://www.nmha.org>

Substance Abuse and Mental Health Services Administration (SAMHSA)

U.S. Department of Health and Human Services
5600 Fishers Lane - Rockville, MD 20857
800-487-4890
<http://www.samhsa.gov>

**The National GAINS Center for People with Co-Occurring Disorders in the Justice System
Policy Research, Inc.**

262 Delaware Avenue - Delmar, NY 12054
518-439-7415
E-mail: gains@prainc.com
<http://www.prainc.com>