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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. Children and adolescents who become chronic 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.

Co-occurrence of Substance Abuse and Mental Illness

According to epidemiologic data, nine percent of adolescent females and 20 percent 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 percent 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 percent (Kessler et al., 1996).

While the co-occurrence of substance abuse and mental health disorders often exacerbates personal difficulties, research indicates that individuals with a dual diagnosis are less likely to seek treatment. Findings from the Epidemiological Catchment Area (ECA) study indicated that only 37.4 percent of the individuals identified with co-occurring substance abuse and mental health disorders in Virginia sought treatment in inpatient or ambulatory service sectors during a one-year period (Bourdon et al., 1994).

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 of all, these children and adolescents are particularly vulnerable to relapses and rehospitalizations (Mueser et al., 1997). Studies have found that the most common cause of psychiatric relapse today is the use of alcohol, marijuana, and cocaine, and 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.

Etiology

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 percent 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 falling 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. 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 among children and adolescents diagnosed with substance abuse disorders.

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.

Research has not conclusively established 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). 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 especially have different brain chemistries that predispose them to drinking (Personal Communication with Dr. Anita Everett, 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.

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, 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 (Substance Abuse and Mental Health Services Administration, 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 (Substance Abuse and Mental Health Services Administration, 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 (Substance Abuse and Mental Health Services Administration, 1997).

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

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 (Substance Abuse and Mental Health Services Administration, 1999). Parent 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).

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 at an earlier point 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, 2005). 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, 2005).

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 conducting an assessment of children and adolescents suspected of co-occurring disorders, the primary goal is to determine whether the use of substances exists and whether it fits the diagnostic criteria within the *DSM-IV* 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 the clinician has 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. That is: 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 use of alcohol or other drugs despite symptoms of tolerance and withdrawal or attempts to control the use, substance dependence is generally diagnosed. 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, youths often 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 with children and adolescents for effectiveness (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
- The 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
- 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 (TIP) 42: Substance Abuse Treatment for Persons with Co-occurring Disorder recommends the coordination of substance abuse and mental health interventions (Wachter, 2005). 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. (Riggs and Davies, as cited by The Journal of the American Academy of Child and Adolescent Psychiatry [AACAP], 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. Table 3 describes the most typical treatment settings.

Table 3

Most Typical Treatment Settings For Children and Adolescents

- ***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 prosocial 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.

Table 4 discusses the various factors that influence the choice of treatment setting for children and adolescents with dual diagnoses.

Table 4

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 (NIDA, 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 percent of facilities with a mental health focus provided dual diagnosis programs, and nearly half of substance abuse treatment facilities provided these programs (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

There are numerous methods that 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 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 cognitive behavioral therapy has positive effects with adolescents treated for mental health disorders such as depression (Bukstein, 1998).

Studies have also shown that cognitive behavioral therapy 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 AACAP, 2005). Cognitive behavioral therapy includes elements

directed toward substance use such as relapse prevention, but also addresses social skills, anger control, and problem solving (AACAP).

Group Therapy

This form of therapy provides friendship, socialization, and support to youths who are recovering from co-occurring disorders. The discussion is intended to remind adolescents of negative consequences of substance use and the benefits of abstinence, and to provide advice and encouragement regarding treatment and recovery from mental disorders. Group therapies frequently take the form of self-help groups, such as the Twelve Step program, Alcoholics Anonymous, and Narcotics Anonymous. Although group therapy is a common ingredient in many integrated programs, no consensus exists as to the optimal format, content, or goals of these groups (Mueser et al., 1997). Research is needed to evaluate the benefits of different approaches and to explore whether certain clients are likely to gain more from a particular format.

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).

After 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).

Multisystemic Therapy (MST)

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 amount 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 reductions 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. They stipulate, 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 only be prescribed to those children and adolescents who displayed psychiatric symptoms prior to the substance use, or 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 of time, typically several weeks.

To date, little research has been done regarding 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 (AACAP, 2005). 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 (AACAP). Preliminary trials with lithium and selective serotonin reuptake inhibitors produced considerable improvements in adolescents with substance abuse disorders and comorbid mood disorders (AACAP).

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 (AACAP, 2005). Alternative agents to psychostimulants should be considered because they possess lower potential for abuse. Although many anxiety symptoms or disorders in adolescents can be treated successfully with psychosocial methods such as behavior therapy, selective serotonin reuptake inhibitors, tricyclic antidepressants, or buspirone are preferred to the use of benzodiazepines (AACAP).

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 of 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 of 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 rehospitalizations (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).

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 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.

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Additional Resources

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Organizations

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 (NCADI)

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. *Principles of Drug Addiction Treatment: A Research-Based Guide*. National Institute of Health: October 1999.

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 Ave. - Delmar, NY 12054

518-439-7415

E-mail: gains@prainc.com

<http://www.prainc.com>