Methamphetamine use and adolescents: treatment options and implications for counselors

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Methamphetamine use and adolescents: treatment options and implications for counselors

Abstract
Over the past decade, methamphetamine use as reported by the Substance Abuse and Mental Health Services Administration (SAMHSA) has increased by 250% nationally and 841% among adolescents admitted to treatment in the state of Iowa (SAMHSA, 2003). The purpose of this paper is to give an overview of treatment modalities and models which are in use within substance abuse settings and to provide recommendations for professional counselors. With the rising number of methamphetamine using adolescents in Iowa, it is important that effective treatment for abuse of this substance be developed. Substance abuse, community mental health and school counselors each will play a critical role in placing particular focus on awareness, education, screening, and treating methamphetamine use among Iowa adolescents.
METHAMPHETAMINE USE AND ADOLESCENTS: TREATMENT OPTIONS AND IMPLICATIONS FOR COUNSELORS

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Abstract

Over the past decade, methamphetamine use as reported by the Substance Abuse and Mental Health Services Administration (SAMHSA) has increased by 250% nationally and 841% among adolescents admitted to treatment in the state of Iowa (SAMHSA, 2003). The purpose of this paper is to give an overview of treatment modalities and models which are in use within substance abuse settings and to provide recommendations for professional counselors. With the rising number of methamphetamine using adolescents in Iowa, it is important that effective treatment for abuse of this substance be developed. Substance abuse, community mental health and school counselors each will play a critical role in placing particular focus on awareness, education, screening, and treating methamphetamine use among Iowa adolescents.
Methamphetamine Use

Methamphetamine Use and Adolescents:

Treatment Options and Implications for Counselors

Methamphetamine is the fastest growing substance of abuse in the United States. Nationally the rates of treatment admissions for amphetamine increased by nearly 250% over the past decade (Office of Applied Studies, 2001). However, methamphetamine abuse is also a very local problem. In the state of Iowa, the number of treatment admissions for amphetamine dependence grew by 841% between 1993-1999 (Office of Applied Studies, 2001). The state of Iowa ranked third in the nation for rates of methamphetamine admissions to treatment at 118 admissions per 100,000 (Cretzmeyer, Vaughan Sarrazin, Huber, Block, & Hall, 2003). Among adolescents ages 12-17, the number of clients in Iowa admitted for treatment identifying amphetamines as their drug of choice rose from 12 to 246 in the last ten years (Substance Abuse & Mental Health Services Administration (SAMHSA), 2003). Figure 1 illustrates the rising rate of amphetamines as the primary drug of abuse among 12-17 year old clients as compared to alcohol only and alcohol with a secondary drug.

Amphetamines are a class of central nervous system stimulants (SAMHSA, 1999). Methamphetamine is a powerful derivative of amphetamine. Its effects include increased energy and alertness and decreased appetite. Methamphetamine creates an intense sense of euphoria which can last up to 12 hours. Many users of
methamphetamine may stay awake for several days at a time when binging on the drug.

![Graph showing the number of admitted clients by primary substance of abuse from 1992 to 2002.](image)

*Figure 1*: Iowa 12-17 Year-Old Clients by Primary Substance of Abuse from 1992-2002. Note the trending rise in amphetamine use as compared to alcohol alone and alcohol with a secondary drug (SAMHSA, 2003).

The effects of chronic or heavy use of methamphetamine can lead to psychotic behavior including hallucinations, violent behavior, and paranoia. Physical effects of heavy methamphetamine use include rapid heart rate, hyperthermia, and shakes. Side effects include convulsions, stroke, cardiac arrhythmia and death (Office of Drug Control Policy, 2003).
Because of the strong effect that methamphetamine use has on brain chemistry, the long-term effects of heavy use are suspect. Larkin (2000) cited a study that suggested neuronal loss or damage present as long as 21 months after last use. Because of the area of the brain that is affected by a dopamine surge, methamphetamine use could be a predisposing factor for Parkinson’s disease (Larkin, 2000).

Given the potential for severe damage to the brain, it is important to examine the effects on physical, emotional and intellectual development among adolescent methamphetamine users. If this sort of long-lasting, neuronal damage happened to coincide with a developmental threshold in an adolescent, could there be permanent developmental damage? If so, what issues would emerge as important for counselors in school, mental health and substance abuse settings?

In addition to the physical damage that is inflicted through methamphetamine use, abuse of methamphetamine has been linked to a number of other concerns. People who abuse methamphetamine reported a greater level of sexual activity with greater numbers of partners (Molitor, Ruiz, Flynn, Mikanda, Sun, & Anderson, 1999; American Health Consultants, 2002), and increased risk for violent crime as both victim and perpetrator (Cretzmeyer, et al., 2003).

Withdrawal from methamphetamine may include depression, fatigue, anxiety and intense craving for the drug (Office of National Drug Control Policy, 2003).
For those clients who seek treatment another difficulty arises in that methamphetamine is one of the most difficult substances of abuse to treat. Many current treatment modalities are not structured to accommodate the need for long-term treatment necessitated by the brain effects caused by methamphetamine use. Difficulty in accessing treatment is another issue which effects methamphetamine users. SAMHSA has estimated that greater than 81% of those seeking treatment in Iowa have no health insurance (Cretzmeyer, et al., 2003).

Much attention has been focused on substance abuse prevention programs as a means of approaching this issue. While such a study is beyond the scope of this paper, one must examine factors that influence the individual’s decision to begin using.

For methamphetamine use, the factors contributing to first use are varied. Among the reasons cited are the availability and low cost of the substance, curiosity, increased productivity, and lack of parental supervision (Cretzmeyer, et al., 2003). While not directly related to methamphetamine users, Funk, McDermelt, Godley, and Adams (2003) cited significantly higher incidences of childhood maltreatment issues with earlier onset of substance use.

For all substance abuse treatment, the Center for Substance Abuse Treatment (CSAT) has identified a significant gap between the number of people who need substance abuse treatment and the number who are able to receive treatment. According to a CSAT report, an estimated one in 16 adolescents who needed
treatment were able to receive it (Kraft, Vicary, & Henry, 2001). Given this statistic, one may conclude that roughly 4000 adolescents in the state of Iowa were in need of treatment for amphetamine use in 2002.

It is safe to say that methamphetamine use in Iowa is at epidemic levels. Given the prevalence of the drug and its use among adolescents, this is an issue that will affect counselors in all settings. Given the treatment gap mentioned above, it would be helpful for all counselors to have information about intervention and treatment for methamphetamine abuse. While school and mental health counselors may not be direct providers of substance abuse treatment, a basic knowledge of these topics will assist the counselor to better assess, assist and make appropriate referral for students or clients who may have used methamphetamine.

The purpose of this paper is to give an overview of treatment modalities and models which are in use within substance abuse treatment settings. The author will draw conclusions based upon the research and his own clinical experience as to the possible effectiveness of the models and modalities discussed for use with adolescent methamphetamine users.

Issues Specific to Adolescent Substance Use

When discussing the treatment of adolescents for substance abuse, one must consider the developmental stage and related issues of the client. In this regard, one must be ready to tailor the treatment methods and setting depending if one is
treating a younger adolescent versus an older adolescent (SAMHSA, 2001).

Generally speaking, younger adolescents differ from older adolescents in their cognitive processes, developmental tasks, approach to education/vocation, self-identity and values.

For example, younger adolescents think in more concrete terms with little awareness of long-term consequences for actions where older adolescents are able to use more advanced reasoning and consequently are able to be more introspective. Younger adolescents identify more with same sex friendships, are just beginning to explore their own independence from their parents, have a stronger emphasis on comparison with peers and thrive better in structured educational settings. Older adolescents, by contrast, may have developed a strong sense of independence, have explored dating and interest in developing exclusive relationships, and have begun to identify unique skills, interests and vocations.

Most older adolescents still conform to peer values and behaviors although they are developing the ability to step outside of their peer group for the sake of their self-interest (SAMHSA, 2001). Given these developmental differences, the clinical professional will need to adapt his or her approach to address the client's needs more appropriately. Other factors that are specific to working with adolescents in treatment are gender differences, sexual identity issues (American Health Consultants, 2002), the higher prevalence of coexisting disorders (SAMHSA, 2001; Riggs, 2003), and family factors (Gabel, et al., 1998).
In approaching treatment for adolescents, one must reject the previously held treatment model of adolescent substance abuse clients. This model was largely based on the methods and models of adult substance abuse treatment. Due in large part to the scarcity of services for adolescents this method of treatment was devoid of developmentally appropriate models and held little opportunity for research into the effectiveness of adolescent treatment models (Rounds-Bryant, Kristiansen, & Hubbard, 1999).

**Treatment Modalities**

Treatment for substance abuse has traditionally been offered across a continuum of care ranging in intensity from long-term residential treatment to aftercare or continuing care in an outpatient setting. Individual, family and group therapy are components that are frequently utilized at the more intense levels of care.

**Residential Treatment**

Residential treatment involves, as the name implies, the client living on-site of the treatment facility for a period of time ranging from seven days to several months. Within the residential treatment setting, clients participate in individual and family therapy sessions, school or training, educational groups, therapy groups, relapse prevention groups and community groups as well as recreation. Many treatment facilities also incorporate participation in 12-step groups or community-based support groups as part of the residential treatment.
Clients referred to residential treatment are believed to be unable to succeed in their home environment. This may be due to the client’s level of dependence on the substance of abuse, family structure issues, emotional issues, social support or other issues. Emphasis in residential treatment is on developing relapse prevention skills, addressing factors such as impulsivity or anger management, peer support, and receiving therapy for emotional or behavioral issues underlying the substance issues (Wood, Drolet, Fetro, Synovitz, Wood, 2002).

Because of the intensity and length of time of most residential programs, adolescent clients need assistance in transition back to their home life. Typically, clients who have completed a residential program will participate in one or more levels of outpatient treatment after their discharge from a residential program. Community involvement and assistance from school counselors, court officers, and family members are important to maintaining the success of the client. This is an important area for school counselors to be involved in the treatment discharge and aftercare planning for the client (Wood, et al., 2002)

For adolescents who have abused methamphetamine, residential treatment may be necessary to assist with the long-term cognitive effects of the client’s substance use. Residential treatment may also be warranted for these clients in order to provide a safe, structured environment, especially given the violent and often chaotic lifestyle that has been noted to accompany methamphetamine use.
Outpatient Treatment

A client may be treated in an outpatient setting for substance use disorders. In most cases the client will participate in group counseling sessions, individual therapy, and/or family therapy. The level of group and therapy involvement ranges from eight to 10 hours of group per week for Intensive Outpatient to one to two hours of group therapy per week for Extended Outpatient. At the aftercare level of treatment, the client generally participates in individual and/or family sessions only.

The typical goals for outpatient treatment include assisting the client to develop skills for abstinence from substances, obtaining peer support, identifying positive social activities and learning about addiction and recovery. While some methamphetamine users may be able to succeed in outpatient treatment only, the nature of the drug and its addictive qualities suggest that success is less likely at this level of care.

Models for treatment

Muck, et al. (2001) studied the effectiveness of four adolescent treatment models. The four models which they studied were 12-step, behavioral or cognitive behavioral, family-based and therapeutic communities. Each of these models can be utilized within either of the above discussed treatment settings.
12-step Model

The 12-step model is based upon the tenets of Alcoholics Anonymous (AA) and Narcotics Anonymous (NA). This approach is the most widely used model in the treatment of adolescent substance abusers (Muck, et al., 2001). The AA/NA model is based upon a view of substance dependence as a disease that is managed similarly to other chronic diseases. The goal of the 12-step program is life-long abstinence from all substances.

The client completes each of the steps with a counselor or sponsor. In the first steps the client is encouraged to become more honest with him or herself. Clients must admit to being powerless over their disease and accept belief in a “Higher Power.” Typically, Steps one through five are the focus during the client’s treatment and six through 12 are the focus for aftercare and follow-up in the community (SAMHSA, 2001).

Programs that utilize the 12-step model typically focus more strongly on group therapy as the primary mode of treatment. These programs also include individual counseling, lectures, family involvement and/or counseling, and attendance at AA/NA meetings in the community (Muck, et al., 2001).

In reviewing the effectiveness of the 12-step model, Muck, et al. (2001) noted that the focus of study has been between people who have completed the program and those who did not complete. Data comparing participants in 12-step programs to other models of treatment are not available. The authors noted that
comparisons between clients who complete the program and those who do not, indicate higher rates of success within the first year post-completion. After two years, however, the rates of success between the two groups narrow considerably.

**Behavioral Treatment**

Behavioral treatment, for the purpose of this paper includes behavioral therapy, cognitive therapy and cognitive-behavioral therapy. In this model of treatment, the focus in on assisting the client to process his or her thoughts, environmental cues or triggers, and beliefs associated with substance using behaviors. This model views substance abuse as a learned behavior and the focus of treatment is to alter the thought and behavior patterns and learn new ways of thinking and acting that do not involve substance use (Muck, et al., 2001).

Behavioral treatment often focuses on the client developing a skill set to cope with his or her environment. This includes relapse prevention procedures and interventions that may include rehearsing responses to situations, role-playing, behavioral contracting, problem solving and relaxation techniques. From the approach of this model, the client’s substance use disorder is viewed as the interrelationships between his or her thoughts, emotions and his or her substance using behaviors. This model is distinct from the 12-step approach in that the behavioral approach places less emphasis on the concept of dependence as a disease and more on the behaviors that are problematic but can be modified.
In studies cited by Muck, et al. (2001), behavioral treatment models compared favorably to a supportive counseling program, interactional treatment—an insight-oriented approach, and a psychoeducational treatment program. This appears promising. However, in the long-term follow-up to each of the studies, the success of the clients in the behavioral modeled programs did not differ significantly from those in the other programs. This is a potential indication of the importance of continued reinforcement and support that is essential to long-term behavior modification.

**Family-based Treatment**

The importance of the influence of family structure and family maladaptive behaviors and communication has been noted above (Gabel, et al., 1998). In a family-based treatment model, substance use is viewed as the result of the health of the family system. As part of the treatment process in a family-based model, importance is placed on family roles, communication patterns, and boundaries (Muck, et al., 2001; SAMHSA, 2001).

In family-based treatment programs, the family is treated as a unit. As such, the adolescent's functioning is highlighted as a direct outgrowth of the family's functioning. The client operates his or her life as a component of one or more subsystems within the family system. Through family therapy techniques, the problematic behavior is reframed and relabeled in order to allow the family to gain new insights into their function (Muck, et al., 2001).
In their study of the effectiveness of family-based treatment, Muck, et al. (2001) found promising results with most clients. Clients who did not show as much success were those who were referred to treatment through a juvenile court or offenders program. This is a result that should be expected, given that these adolescents who are more heavily involved in criminal activity are also more likely to have family issues and are less likely to engage in the treatment process (Kraft, et al., 2001; Gabel, et al., 1998).

**Therapeutic Communities**

The basic model of therapeutic communities (TCs) is that of long-term residential treatment. The TC model of treatment is typically over a year in length and is most often reserved for people with the most severe substance dependence issues.

In a TC, clients live within the community and hold various responsibilities related to the life and maintenance of the community. The theory behind TCs is that substance dependence disorder is a disorder of the whole person. By learning responsibility, productivity, accountability and reliance on self and others, the client learns a new way of life. In a TC, clients progress through a series of levels of responsibility, up to and including that of management and coordination of the community (Muck, et al., 2001; SAMHSA, 2001).

The effectiveness of therapeutic communities has been demonstrated for those clients who are able to remain in the program past the halfway point. Muck, et al.
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(2001) reported studies that indicated significant reductions for methamphetamine use at six month follow-up for those who completed treatment. The primary drawback of this model, as reported by the above named authors is that only 44% of adolescents completed their treatment. Another drawback, as mentioned above, is the lack of insurance coverage for such long-term treatment so payment and access will make the TC model unavailable to most methamphetamine users.

Motivational Interviewing

Motivational interviewing is not so much a model of treatment as it is a counseling style that has been demonstrated to have promise within substance abuse treatment. According to Rollnick and Miller (1995), “Motivational interviewing is a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence” (¶ 3). In motivational interviewing, the counselor assists the client to come to his or her own understanding of his or her motivations and ambivalent feelings and thoughts about taking the action necessary for recovery. One of the underlying principles of motivational interviewing is that resistance on the part of the client is most likely related to the counselor trying to do too much on behalf of the client rather than assisting the client to come to his or her own exploration. Motivational interviewing also seeks to develop the client’s perception of the discrepancy between where he or she is and where he or she wants to be (“Motivational Interviewing Principles,” 2004).
The motivational interviewing approach views addiction as a problem of motivation. From this perspective, the client is seen as being willing to pay a price for their substance use that is seen by the general population as too high. The counselor will assist the client in understanding his or her willingness to pay this price and explore the limitations he or she may have in his or her ability to deter the negative behavior choices (Miller, 1998).

While motivational interviewing is described as directive, it differs from more traditional approaches to substance abuse treatment in that it is not confrontational. According to the theory, confrontation in treatment only sets the trap for the client to strengthen his or her level of denial. Since the motivation for change comes from the client, the counselor’s confrontation is viewed as a futile attempt to move the client in the direction the counselor believes is best, not where the client is ready and motivated to go (“Some MI ‘Traps,’” 2004).

The effectiveness of motivational interviewing in shortening the amount of time needed to gain client engagement has been demonstrated. However, the theoretical basis for its efficacy is still being developed (Miller, 1999). Barnett, Monti, and Wood (2001) outlined benefits of motivational interviewing as a technique to use with adolescents. They stated that because motivational interviewing is about resolving ambivalence, it does not assume the client’s interest or desire for change. As was noted earlier, adolescents may be less motivated for treatment. Motivational interviewing is designed to strengthen the
level of engagement for the client into the treatment process. In light of these strengths, motivational interviewing techniques do show much promise for use in treatment of methamphetamine using adolescents.

Conclusion

Findings

While there was no research found on effective treatment specifically for adolescents who are methamphetamine dependent, the above described modalities and methods offer hope for recovery for methamphetamine dependent adolescents. Through their study of adults, Cretzmeyer, et al. (2003) offer two implications for the effective treatment of methamphetamine dependent adolescents. First, methamphetamine dependent adult clients have been shown to respond in much the same way to treatment as do cocaine dependent clients. Second, as methamphetamine affects the brain chemistry and causes prolonged damage to the brain, effective compensation for this effect will require longer treatment programs for methamphetamine dependence (Cretzmeyer, et al., 2003).

One primary issue that remains is access to treatment. Since such a low proportion of client who need treatment actually are able to receive it, much study and work needs to be done to strengthen the treatment that is given. Additionally, long treatment is costly so a greater commitment on the part of insurance carriers, government programs and agencies to recognize the need for greater funds available for treatment of methamphetamine use in Iowa is needed. Also, with
greater numbers of adolescents needing longer term treatment, a problem of capacity is sure to arise. The net effect of this will be that adolescents who have been served through residential settings because of home, social or other environmental strain will be treated in outpatient settings. It stands to reason that adolescents who need treatment for dependence on other substances will also be referred to treatment in outpatient settings or be denied access to treatment altogether.

For Further Study

This study did not include substance use prevention. The spread of the use of methamphetamine and the need for treatment suggest the need for greater research into effective programs of prevention. The stated reasons for first use of methamphetamine mentioned above suggest a high need for education and prevention as well as healthy activities and opportunities for adolescents.

Further study is needed in how each of the above models and modalities function within the context of treating methamphetamine using adolescents. The research suggests that longer treatment is needed for methamphetamine dependence. Given this, further study is needed into the role of aftercare programs, community involvement in 12-step programs and follow-up is needed.

Methamphetamine has already changed much of the state of Iowa in the effect it has had on families and communities. What may be needed most is a comprehensive approach involving the whole community in the areas of healthy
adolescent development, substance use prevention, substance abuse treatment and law enforcement. It seems that in too many ways a myopic view has been taken toward one of the above to the exclusion of the others.

Implications for Counselors

As stated above, an estimated 4000 adolescents in the state of Iowa needed treatment for methamphetamine use in 2002 and the number continues to rise. This carries implications not only for those counselors working in substance abuse treatment, but also for school counselors and community agency counselors as well. For substance abuse counselors, the implications may be obvious. More and more of Iowa adolescents that are admitted to treatment will have methamphetamine use in their histories. Therefore, greater study needs to be made on the part of the substance abuse counselor on effective models and modalities for treatment of methamphetamine abuse and dependence.

For community agency and mental health counselors, one should make oneself aware of the side effects of methamphetamine use. As stated above, side effects of methamphetamine use and withdrawal include depression, anxiety and psychotic thoughts. In assessing clients for mental health services, it is important for the counselor to explore the client’s substance history thoroughly so as to avoid misdiagnosis.

With the great numbers of adolescents who have used methamphetamine, the impact will be felt by school counselors as well. School counselors will serve
themselves well to become familiar with the symptoms of methamphetamine use. Also, schools are a suitable place for early screening of adolescents for substance abuse. While it is not necessary for school counselors to have the training for comprehensive substance abuse assessment for placement, it will be necessary for school counselors to have training and understanding to screen students to determine the need for a comprehensive assessment. School counselors should make themselves aware of area agencies in their areas that assess and treat adolescents for substance abuse. School counselors should also familiarize themselves with the above described treatment models and modalities in order to provide education and prevention services to their students, parents, faculty and administration.
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