

Chapter 14

Effectiveness of Cognitive Behavioral Interventions for Youthful Offenders— Review of the Research

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Introduction	14-1
Changing Pro-Criminal Thoughts	14-2
Changing Antisocial Behavior Through Behavioral Interventions	14-4
Classical Conditioning	14-4
Operant Conditioning	14-4
Observational Learning	14-5
The Use of Cognitive Behavioral Interventions for Juvenile	
Delinquents	14-5
Criminogenic Needs and Cognitive Behavioral Programs	14-7
Effectiveness of Cognitive Behavioral Programs	14-8
Sexual Offender Programs	14-9
Substance Abuse Programs	14-11
Substance Abuse Prevention	14-11
Substance Abuse Treatment	14-12
Anger Management/Violence Reduction Programs	14-13
Current Status of Juvenile Rehabilitation Programs	14-16
Summary	14-17

INTRODUCTION

Changing offender behavior and reducing delinquent and criminal conduct remains one of the most challenging aspects of the juvenile justice system. In recent years, a body of research has emerged that provides empirical evidence that we can indeed have a significant impact on delinquent and criminal behavior. This research, known as the “what works research,” has provided direction for the field and has clearly shown that some interventions are more effective than others. Among the most promising of these approaches are cognitive behavioral treatment (CBT) interven-

tions. This chapter explores some of the issues surrounding the research and application of CBT as it applies to juvenile offenders.

Cognitive behavioral interventions come in all shapes and sizes. Some programs rely heavily on addressing cognition to reduce recidivism, while others focus on behavioral interventions. Historically, programs centered on either cognitions or behaviors, but not on both. Over the past three decades, however, programs have started to integrate both cognitive and behavioral approaches, resulting in improved interventions and greater reductions in recidivism. Ultimately, cognitive behavioral programs seek to alter the content of delinquents' thoughts, the process by which they think, and the actions they take. A great deal of research has demonstrated that cognitive behavioral approaches are the most effective at reducing recidivism for both adolescent and adult offenders.

Most cognitive behavioral programs operate from one of two models: cognitive restructuring or cognitive behavioral skills development (Spiegler & Guevremont, 1993). Cognitive restructuring helps offenders examine the thoughts, beliefs, and values that lead to criminal behavior. For example, if a youth smokes marijuana, his belief system may be that there is nothing wrong with smoking marijuana, that everyone does it, and he is not hurting anyone. This is an illustration of a belief that leads to smoking marijuana. Although most people have some thoughts that are procriminal (e.g., it is okay to speed), juvenile delinquents are found to have stronger and more pervasive procriminal beliefs than youth who do not engage in criminal behavior (Barriga, Landau, Stinson, Liau, & Gibbs, 2000). In contrast, cognitive behavioral skills development attempts to increase prosocial skills in order to help offenders manage their environment in more prosocial ways.

Thinking for a Change is a curriculum that helps young people build new skills while addressing inappropriate thought patterns (Bush, Glick, & Taymans, 1997). Through regularly scheduled groups, this curriculum is used to teach youth new, prosocial ways to think and behave. As youth increase prosocial thought patterns and develop more effective social skills, they are able to master their environment more effectively. For example, consider a 13-year-old girl who has not learned how to avoid trouble with others and starts dating a 14-year-old boy who engages in criminal behavior. Without effective avoidance skills, this girl becomes at risk for engaging in antisocial behavior. Learning avoidance skills would increase her ability to recognize high-risk situations and avoid using procriminal behavior. In addition, as the girl's thoughts about her boyfriend start to change, she begins to see that she does not need to employ the criminal behavior, deciding to avoid such antisocial behaviors entirely.

CHANGING PRO-CRIMINAL THOUGHTS

Both cognitive restructuring and cognitive behavioral skills development work to change antisocial thoughts. Antisocial thoughts are views, attitudes, and values that a person holds that are against societal norms and laws. Yochelson and Samenow (1976) developed a category of these antisocial thoughts, referring to them as cognitive distortions. They argue that people use these cognitive distortions or thinking errors to justify their criminal behavior. In other words, thinking errors allow individuals to interpret their environment in a manner that permits criminal behavior. The following

dialogue depicts a typical conversation between an offender and his parole officer. It becomes very clear that the offender blames the police for setting him up, society for not providing a job for him, and the drug users for creating a market but avoids taking any responsibility for committing the crime (see Lopez & Emmer, 2000):

OFFENDER: "Why do I need to be here?"

P.O.: "Because you committed a crime."

OFFENDER: It wasn't really my fault.

P.O.: "Whose fault was it then?"

OFFENDER: "I was just minding my own business, not really doing anything and this guy walks up to me."

P.O.: "Yeah."

OFFENDER: "Yeah, he walks up to me and asks me if I have any product."

P.O.: Product?

OFFENDER: "You know, dope. Well I told him that I could get him some, for him to come back in 10 minutes."

P.O.: "OK, so what happened next?"

OFFENDER: "He wanted more than I had on me so I had to go to the house and get more. So I went to the house, got some more dope and went back to make the transaction."

P.O.: "That's when you got arrested."

OFFENDER: "Yeah, can you believe it? The guy was undercover. He set me up. I was just standing around and he approached me. I think that is entrapment isn't it?"

P.O.: "Not sure."

OFFENDER: "Anyway, he arrests me for intent to sell. Don't the police have better things to do with their time. Did you know that there are two child molesters around the corner from my house? Why don't they go watch them? I am just trying to make a living just like them. It's not like I sell drugs to kids or anything like that. Those people come to me; I am just providing a needed service."

It is not just offenders who have thinking errors. Most prosocial people have an occasional thinking error to justify behavior that is against societal norms, but not to the degree that offenders use them. For example, most prosocial people will convince themselves that it is all right to speed because everyone else engages in the behavior or because they are in a hurry. Yet, many of these same individuals typically do not engage in other criminal behavior. In contrast, offenders consistently use thinking errors to interpret their environment. They see an unlocked car and think about an opportunity to steal it, an unattended purse as a means to extra money, and the police as out to get them.

CHANGING ANTISOCIAL BEHAVIOR THROUGH BEHAVIORAL INTERVENTIONS

Similar to cognitive therapies, behavioral interventions work to reduce criminal behaviors. Behavioral interventions are based on radical behavioral theory such as classical conditioning, operant conditioning, and social learning theory (Lester, Braswell, & Van Voorhis, 2000). This section provides a brief description of each.

Classical Conditioning

Classical conditioning works to change behavior by pairing a stimulus that elicits a response with a stimulus that is neutral. Classical conditioning is usually referred to as Pavlov's theory. Pavlov's dogs would salivate at the sight of food. He paired the delivery of food with a ringing bell and eventually got the dogs to salivate at the sound of the bell alone.

Classical conditioning with offenders works in a similar manner. In correctional programming, classical conditioning has been used to change numerous types of offending behavior, including sexual offending (Lester et al., 2000). For example, to reduce deviant sexual fantasies, pictures that elicit sexual thoughts are paired with a noxious smell. Each time the sexual offender is exposed to the sexual images, the noxious smell is introduced. As the smell and the pictures are paired together, the sexual offender begins to associate the pictures with the uncomfortable smell, resulting in a reduction of sexual thoughts. Eventually, the offender will associate the smell with the picture, and every time he sees the illicit sexual material, he will think about the noxious smell and avoid deviant sexual thoughts.

Operant Conditioning

While classical conditioning focuses on the stimulus that affects behaviors, operant conditioning uses rewards and punishers to change behavior. Rewards are associated with reinforcing desired behaviors. Reinforcements can be either positive or negative. A positive reinforcement is one in which something pleasurable is given to an individual so that he or she will continue to engage in the behavior. In contrast, a negative reinforcement is one in which something is removed that a person dislikes in order to reinforce the continuation of a desired behavior (Spiegler & Guevremont, 1993).

For example, a youth comes home from school and does his homework without being told. His parents give him a video game as a reward for this behavior. This is an example of a positive reinforcement. If instead of giving the youth a video game, his parents removed a chore from his usual routine, it would be an example of a negative reinforcement. Keep in mind that reinforcements are used in an effort to maintain wanted behaviors. Along with reinforcements, punishers are also used to extinguish or discourage unwanted behavior. Punishers work in a similar fashion as reinforcements. Punishers can operate by taking away something that is desired or applying something that is undesirable.

Using the foregoing example, a youth comes home from school and instead of completing his homework immediately, he decides to play a video game. His parents

come home from work to find that their son has not completed his homework. If they took away the video game, it would be an example of a negative punishment, as they are removing something their son enjoys. If instead of taking the video game away, they were to give him an extra homework assignment, it would be an example of a positive punisher.

Observational Learning

Social learning theory, also referred to by Bandura as social cognitive theory, focuses on the role cognitions play in learning new behaviors. Bandura (1986) combined the radical behavioral theories with cognitions and posited that behaviors were learned not only through classical and operant conditioning but also through observational learning. Prior to Bandura, radical behaviorists believed that behavior was either directly caused by stimulus or reinforced/extinguished by consequences. Bandura argued that behaviors can be learned not only through direct exposure but also through indirect exposure. In fact, Bandura believed that learning occurred through the observation and interpretation of direct and indirect exposure to both stimuli and consequences (Bandura, 1973).

THE USE OF COGNITIVE BEHAVIORAL INTERVENTIONS FOR JUVENILE DELINQUENTS

In the mid-1970s Martinson (1974) declared that "nothing worked" with regard to correctional rehabilitation. This pronouncement led to a widespread movement to abandon rehabilitation programs in favor of incapacitation and punishment. Many critics of rehabilitation used Martinson's work to argue that treatment programs were not effective in reducing recidivism and therefore should not be the goal of the correctional system. Martinson and his colleagues used a 'ballot-counting, black-box approach' to assess whether correctional programs were effective in reducing recidivism. He conducted a review of the literature, counted how many studies showed reductions in recidivism and how many did not, and concluded that when the effects of all correctional programs were examined together there was no consistent evidence that correctional programs reduce recidivism. Although critics of rehabilitation used Martinson's findings to dissuade the rehabilitative focus in corrections, Martinson's work was ultimately used to support programming as well.

Martinson actually found that some programs were effective in reducing recidivism, while others were not. This led to a closer examination of the characteristics of the treatment programs that was effective in reducing recidivism versus the characteristics of those that were not. Currently, correctional treatment research has taken the approach that not all types of treatment are effective for all types of offenders. In fact, multiple studies have shown that if treatment is matched to the appropriate offenders, it can decrease recidivism up to 40 percent (see Lipsey, 1999; also Lowenkamp & Latessa, 2004). Along with increasing individual studies, a relatively new technique—meta-analysis—has made it possible to combine multiple studies and provide an average effect across different types of programs.

The meta-analytic approach must first be discussed in order to understand the current approaches that measure the effectiveness of cognitive behavioral programs. A

meta-analysis is a research study of individual evaluation projects. Individual evaluation projects are completed on a program typically using a comparison group to determine whether the treatment being provided is effective (whether offenders who participate in the treatment group offend at lower rates than those in the comparison group who are not exposed to treatment). These evaluation projects usually provide some detail about the type of services the program delivers to offenders. With meta-analysis, all of the known studies that have been conducted on a particular subject are gathered, and provided they meet some criteria (such as having a comparison group), are included in the analysis. Researchers then code various aspects of the study, such as the type of treatment used, and then calculate effect sizes to determine if some intervention has had an effect. Although there are limitations to meta-analysis, overall, the technique has been very useful in reviewing large numbers of studies to determine if there are effects and, if so, the magnitude of those effects. In corrections, meta-analysis has been used to determine the amount of change in recidivism for a wide range of programs and interventions.

Over the past decade, many meta-analyses have found that cognitive behavioral interventions are among the most effective methods to reduce recidivism. Cognitive behavioral interventions, combined with the principles of effective intervention (Pealer & Latessa, 2004; see Antonowicz & Ross, 1994), provide the corrections community with the most effective combination of treatment to reduce juvenile delinquency. Lester and VanVoorhis (2000) offer five key reasons of why cognitive behavioral interventions are effective for offender populations.

First, cognitive behavioral interventions can address major criminogenic needs. Criminogenic needs are offender characteristics/traits that are highly correlated with criminal behavior and dynamic in nature (i.e., they can be changed). Examples of criminogenic needs include antisocial attitudes, antisocial peers, substance abuse, impulsivity, and lack of self-control. Second, cognitive behavioral interventions are relatively short term compared to many other therapies. Length of treatment is important due to the nature of the criminal justice system. Typically, juveniles are not placed on probation or in programs for long periods of time; therefore, any interventions used must be relatively brief and goal oriented. Third, cognitive behavioral interventions can be delivered in outpatient settings as well as institutional-based settings. Fourth, cognitive behavioral interventions can be easily applied to both individual and group settings. Given the current staffing patterns of correctional programs, group delivery is essential in maximizing resources while providing effective services. In addition, cognitive behavioral interventions can also be delivered using individual services. Finally, cognitive behavioral interventions are oriented to the here and now (Lester & VanVoorhis, 2000).

The here and now refers to addressing current issues in an individual's life versus past experiences and events. An example of an approach that deals with the past is the psychodynamic approach, which relies heavily on the impact of past experiences. Cognitive behavioral approaches on the other hand, would not deny that past traumas occur and that people are affected by them, but the approach would examine either the current stimuli that is affecting the person or the current thoughts about the situation. Thus, while psychodynamic approaches attempt to resolve current problems by focusing on past trauma and relationships, cognitive behavioral approaches attribute the current problems in functioning with how that person has learned to interpret his or

her environment. Given that the correlates of criminal behavior are based on present situations and that crime poses a current risk, approaches that are focused on the here and now have greater implications to reduce delinquent behavior (Spiegler & Guevremont, 1993).

CRIMINOGENIC NEEDS AND COGNITIVE BEHAVIORAL PROGRAMS

As discussed in the previous section, programs that target criminogenic needs of juveniles prove to be more effective in reducing recidivism. Some of the more significant criminogenic needs include the following:

1. Antisocial attitudes;
2. Antisocial peers;
3. Antisocial personality;
4. Substance abuse;
5. Lack of education; and
6. Family functioning.

Programs that target these needs are found to be more effective in reducing recidivism than programs that target noncriminogenic areas (Dowden & Andrews, 1999). They examined program effectiveness based on their development of the principles of effective intervention. Specifically, they completed a meta-analysis of human service, risk, need, and responsivity to determine whether programs that met these principles were more effective in reducing recidivism. They found that programs targeting criminogenic needs showed an effect size of .55 compared to programs targeting noncriminogenic needs (-.18). This means that the programs that targeted noncriminogenic needs actually increased the likelihood that an offender would reoffend.

In a more recent study, Lipsey and Landenberger (2003) conducted a meta-analytical study of cognitive behavioral treatment for offenders (both juveniles and adults). They found that programs targeting antisocial attitudes, aggression, impulsivity, and substance abuse were effective in reducing recidivism compared to programs that focused on noncriminogenic targets. They also found that programs that delivered cognitive behavioral interventions in higher doses (at least two sessions per week), for smaller groups, and that followed the treatment model were more successful in reducing recidivism.

Surprisingly, there are many programs across the United States that continue to focus on noncriminogenic needs as their primary targets for intervention. Common examples of noncriminogenic targets include low self-esteem and mental health conditions. Although these issues may be important, one cannot expect that treating them will result in a reduction of recidivism.

There are two main hypotheses as to why programs continue to focus on non-criminogenic targets. The first is that practitioners are not well informed about what factors are related to criminal behavior. Although there is much research on correlates

of delinquency, there continues to be a gap between research and practice. Researchers are accused of being aloof and impractical, while practitioners' experiences are discredited as trivial and anecdotal.

The second hypothesis is that practitioners are familiar with the research but do not know *how* to target criminogenic needs effectively. Many programs report that they use cognitive behavioral interventions and address criminogenic needs, but evaluation studies have found that many of these programs do not consistently target crime-producing factors. In one study, Matthews, Hubbard, and Latessa (2001) examined eighty-six programs using the Correctional Program Assessment Inventory² and found that 80 percent of the programs assessed scored "below satisfactory" on program characteristics. In a more recent study, Pealer and Latessa (2004) looked at 107 programs for juveniles and reported the average score in the area of program characteristics was less than 34 percent. Program characteristics include the use of rewards and punishments, type of treatment, treatment targets, and the methods to help offenders learn.

EFFECTIVENESS OF COGNITIVE BEHAVIORAL PROGRAMS

The previous section discussed which treatment targets are relevant to recidivism. This section examines the current research, reporting the effectiveness of cognitive behavioral interventions on reducing general recidivism, sexual offending, and substance abuse disorders.

Since the early 1980s, research on program effectiveness has increased dramatically. A major reason for this is the development of meta-analysis. Meta-analytic approaches are commonly used to summarize a vast amount of information in a relatively concise manner. One of the earlier meta-analyses completed on juveniles was Whitehead and Lab's (1989). They found that correctional programs showed no effect on recidivism. Whitehead and Lab (1989) used fifty published studies on juvenile correctional programs from 1975 to 1984. They examined overall reduction in recidivism across all programs and also the reduction of recidivism based on type of program (e.g., cognitive behavioral, sanction based). Whitehead and Lab found that even programs that reported delivering cognitive behavioral interventions showed no positive effects.

Palmer (1994) later identified two major limitations of Whitehead and Lab's study. First, Palmer (1994) pointed to the large effect sizes that Whitehead and Lab used to determine program effectiveness. Whitehead and Lab categorized programs to be effective only if they showed large reduction in recidivism (.20-.30 effect size). In addition to using high cutoff levels for program effectiveness, Palmer also cites Whitehead and Lab's inclusion of programs that provide services to low-risk delinquents. As reviewed previously, programming for low-risk offenders tends to have less success than programming for serious offenders because there is "less room for improvement on recidivism" (Palmer, 1994, p. 14).

Andrews, Bonta, and Hoge (1990) took forty-five of the fifty studies used in Whitehead and Lab's sample and combined them with another thirty-five studies conducted between 1950 and 1989. Andrews et al. (1990) found programs that provided appropriate correctional interventions, such as cognitive behavioral treatment, were

more effective in reducing recidivism than programs that did not follow the principles of effective interventions.

Pearson, Lipton, Cleland, and Yee (2002) also used a meta-analysis to study the effects of behavioral and cognitive behavioral programs on recidivism. They examined sixty-nine studies from 1968 to 1996 that either used behavioral approaches or cognitive behavioral approaches to reduce recidivism. Although they found that both types of interventions were more effective in reducing recidivism than their comparison groups, cognitive behavioral approaches showed greater effects on recidivism than programs that solely used behavioral approaches. Specifically, programs that focused on cognitive behavioral social skills development and cognitive skills programs were the most effective in reducing recidivism.

In addition to Andrews et al. (1990) and Pearson et al. (2002), several other researchers have found cognitive behavioral interventions to be appropriate for juvenile offenders. Table 14.1 provides a review of the major meta-analysis that focus on general recidivism of juveniles. Overall, the results of the meta-analyses show that cognitive behavioral interventions provide the greatest reduction in recidivism.

Cognitive behavioral interventions have also been used to address specific types of antisocial behavior. As noted in the previous section, cognitive behavioral interventions have been found to be effective in significantly reducing general recidivism for juvenile offenders. Sex offender programs, anger management/violence reduction, and substance abuse treatment are the most popular types of specialized treatment for juveniles. For that reason, this section primarily examines the ability of cognitive behavioral programs to reduce recidivism rates for these populations.

Sexual Offender Programs

Sexual offender programs have been found to provide broad types of treatment interventions, including cognitive behavioral, sex education, hormonal treatment, and general mental health counseling. Cognitive behavioral programs are based on similar types of interventions as addressed in the general recidivism section of this chapter. Cognitive behavioral programs that work with sexual offenders typically use cognitive restructuring to help reduce the amount and intensity of pro-sexual offending beliefs while increasing prosocial attitudes. There is also some evidence that programs begin to increase the development of prosocial skills with juvenile offenders (Lester & Hurst, 2000).

Programs based on sex education assume that juvenile offenders commit sexual offenses due to a lack of knowledge about sexual behaviors. In addition, they attempt to increase the knowledge that the juvenile sexual offenders possess about their bodies in reference to sexuality. Hormonal treatments are also used with juvenile offenders. Medication that reduces sexual drive is provided to the sexual offender to help reduce the amount of deviant sexual fantasies the youth experiences, which is believed to reduce the amount of offending behavior. Counseling is also used to diminish sexual offending and usually focuses on the victimization of the offender or general mental health issues stemming from environmental circumstances. In reviewing the current research, it appears that programs that used cognitive behavioral interventions proved more effective in reducing sexual offending than did other types of

Table 14.1
Research on Effectiveness of Treatment on General Recidivism

Researcher (Year Published)	Years of Studies	Number of Studies	Major Findings
Andrews, Bonta, & Hoge (1990)	1950-1989	80	Appropriate correctional treatment reduced recidivism; more effective if delivered to higher-risk offenders, targeted criminogenic needs, CBT, and responsive to offender's barriers; CBT .29 effect size compared to nonbehavioral .04
Izzo & Ross (1990)	1970-1985	46	Social competency skills and cognitive behavioral methods reduce recidivism
Lipsey, Chapman, & Landenberger (2001)	1968-1996	69	Cognitive behavioral social skills development and cognitive skills most effective in reducing recidivism
Lipsey (1992)		443	Treatment integrity, duration, research based and behavioral/skill based were more effective.
Lipsey (1999)	1950-1995	200	Type of treatment (effect size) Individual counseling (.46); Interpersonal skills (.44); Behavioral programs (.42); Restitution (.15); Deterrence programs (-.06)
Pearson, Lipton, Cleland, & Yee (2002)	1968-1996	69	Cognitive behavioral social skills and cognitive skills programming most effective in reducing recidivism.
Redonda, Sanchez-Meca, & Garrido (1999)	1980-1991	32	2 years follow-up for recidivism; global effect size of 12% reduction in recidivism; nonbehavioral (.19); educational (.08); behavioral (.23.1); cognitive behavioral (.226)
Whitehead & Lab (1989)	1975-1984	50	No difference between treatment and comparison groups; CBT not more effective than comparison group

Table 14.2
Studies on Effectiveness of Sexual Offender Treatment

Researcher (Year Published)	Number of Studies	Results
Alexander (1999)	79	(Juvenile only) Meta-analysis- Cognitive behavioral and relapse prevention programs rearrest rate 7% compared to 18% for nonprogram attendees; follow-up 1 to 5 years
Gallagher, Wilson, Hirschfield, Coggeshall, & MacKenzie (1999)	25	Found significant effects for cognitive-behavioral treatment No significant effects for hormonal treatments
Hall & Naggy (1995)	12	Cognitive behavioral programs were more effective than hormonal treatment (not statistically signifi- cant)
Hanson et al. (2002)	43	CBT most effective for adult offenders, systemic interventions most effective for adolescents
Polizzi, MacKenzie, & Hickman (1999)	13	(Adult offenders) Literature review: 8 residential, 5 outpatient; outpatient behavioral programs were effective; residential and outpatient combined- 6 effective with 4 cognitive behav- ioral

programs. Table 14.2 summarizes the current status of sexual offender program effectiveness.

Substance Abuse Programs

As with sexual offending, several methods have an impact on substance abuse issues, including self-help groups, cognitive behavioral approaches, medication, and nontraditional medical approaches (e.g., hypnosis). This section discusses the status of the research associated with substance abuse prevention services and treatment.

Substance Abuse Prevention. Substance abuse prevention (or primary treatment) programs were developed to intervene with young people before they begin using substances. Prevention programs are based on several models. The alcohol/drug education model attempts to enlighten young people regarding the negative effects of substances. Fear-based models are also used to "scare" young people by providing interventions that shock them into refraining from substance use. In addition to these models, prevention programs also use affective interventions,³ cognitive behavioral treatments, and social skills development.

Tobler (1993) examined prevention programs within two contexts: noninteractive and interactive programs. Noninteractive programs included values clarification and DARE (Drug Awareness Resistance Education Program), while interactive programs included cognitive skills development and teaching refusal skills. Tobler found that programs based on interactive models were more effective in reducing recidivism than those that were based on education alone. Specifically, Tobler (1993) found that interactive programs targeting drug abuse prevention showed effect sizes of .18 while noninteractive programs had a .07 effect size. That is, programs that engaged youth in activities, discussions, and skill practicing were almost three times more effective than programs that provided lecture or education only. In addition, Tobler found that programs delivered by mental health specialists in an interactive style showed an effect size of .39 compared to noninteractive-style programs (led by mental health specialists) with an effect size of .04. As the evidence demonstrates, programming that is interactive in nature where new skills can be learned by the participants prove to be more effective.

Substance Abuse Treatment. Several significant studies have been published on juvenile substance abuse and the effectiveness of treatment approaches. While recent studies have found that adolescent substance abuse rates have been on a general decline since the late 1980s, almost 11 percent of youth across the United States report regular marijuana use (Substance Abuse Mental Health Services Administration, 2003). In addition to marijuana use, Johnston, O'Malley, and Bachman (2003) found that nearly one-third of all twelfth graders consumed five or more drinks over a two-week period.

Given the broad exposure that adolescents have to substances and the collateral effects of substance use, researchers have begun to focus on the effectiveness of juvenile substance abuse programs. Juvenile treatment interventions range from outpatient services to long-term residential programs. The types of treatment provided by these programs are even more unique. Programs treat substance abuse with cognitive behavioral approaches, motivational interviewing, family education, family therapy, group psychoeducational approaches, individual counseling, and 12-Step-based models (Dennis et al., 2004).

Research has focused primarily on the treatment model used to address substance abuse and the forum by which treatment is provided (residential vs. outpatient). Most recently there has been an insurgence of research looking at the length of treatment (duration) and the costs of treatment compared to the benefits. Both of these issues are typically coupled together because the cost of treatment is directly affected by the duration. Dennis et al. (2004) examined both the duration and cost-effectiveness of five short-term outpatient interventions for adolescents with marijuana use disorders.

Dennis and his colleagues examined the effectiveness of motivational enhancement therapy, cognitive behavioral therapy, adolescent community reinforcement approach, and multidimensional family therapy. Motivational enhancement therapy works to increase the willingness of participants to attend treatment, examine risky behaviors, and contemplate change. Cognitive behavioral therapy, as noted previously, is used to change a person's thoughts that lead to inappropriate behavior as well as teach prosocial skills. Adolescent community reinforcement approach provided a

broader mix of interventions, including operant conditioning and skills training within a social system framework. The program focused on developing problem-solving skills, rating family satisfaction, and creating a functional analysis to determine the high-risk areas and consequences of substance use. Multidimensional family therapy uses a systems approach to increase the family's ability to problem-solve and examine problem areas within the context of the family system.

Dennis et al. (2004) found that all programs showed a reduction in number of days sober and recovery status. In fact, delivering these interventions in shorter doses proved to be as effective as longer-term treatment. Given that all five programs were effective in reducing recidivism, they found that a five-session combination of motivational enhancement/cognitive behavioral therapy program and the adolescent community reinforcement approach were the most cost-effective.

In addition to the motivational enhancement/cognitive behavioral study conducted by Dennis et al., several additional studies have examined cognitive behavioral and family therapy interventions. Table 14.3 illustrates the major findings of these studies. According to a meta-analysis by Vaughn and Howard (2004), multidimensional family therapy and cognitive behavioral group treatment were the most effective types of treatment for adolescents in reducing targeted behavior over a minimum one-year follow-up. Behavioral therapy, a combination of functional family and cognitive behavioral treatment, family systems therapy, and psychoeducation treatment were found to be effective in reducing targeted behavior with less than a one-year follow-up.

Vaughn and Howard (2004) also found that there were several models of treatment that showed no effect or undesired effects. Individual counseling, family education, and individual cognitive behavioral treatment were included in programs that showed no effect.

Research regarding substance abuse for juveniles is limited at best. Only a few studies used strong designs with a comparable control group. Multidimensional family therapy and cognitive behavioral group treatment have been shown to be effective with relatively strong research designs. Aside from these studies, the results of the much of the current evaluation research should be viewed with caution due to common limitations including small sample size, lack of replication, and poor generalizability.

Anger Management/Violence Reduction Programs

The need for anger management programs becomes evident when working with juvenile delinquents. Often, young people have not been taught the skills needed to effectively handle intense feelings of anger. Anger management and violence reduction programs attempt to reduce the negative consequences of aggressive outbursts by helping participants recognize physical cues toward anger, develop strategies for avoiding and handling high-risk situations, and create safety plans to use in angry times. Exhibit 14.1 provides one example of an effective aggression management technique. Aggression Replacement Training® (ART®) has been widely adopted throughout the world for use with delinquents.

Anger management curricula vary greatly based on the types of interventions, including cognitive, cognitive behavioral, and behavioral approaches. In addition, some curricula teach management strategies for angry feelings while others help par-

Table 14.3
Research on the Effectiveness of Substance Abuse Treatment for
Adolescents

Researcher	Sample	Type of Treatment (Comparison Group)	Findings
Azrin, Donohue, Besalel, Kogan, & Acierno (1994)	26 youth	Behavioral (supportive group counseling)	Reduction of illegal drug use significant
Battjes, Gordon, O'Grady, & Kinlock (2004)	194 youth	Social learning based treatment (no comparison group)	No significant for direct effects Time of follow-up significant (completion, 6 mo, 12 mo)
Dennis et al. (2004)	102 youth (MET/CBT5) 96 youth (M/C12) 102 youth (FSNM)	MET/CBT5 or MET/CBT12 or FSNM	— No significant difference between models — MET/CBT5 most cost-effective
Dennis et al. (2004)	100 youth	MET/CBT5 or ACRA or MDFT	— No significant difference — ACRA most cost-effective
Friedman, Terras, & Glassman (2002)	201 youth	Life skills and anti-violence program (not specified residential program)	— Significant reduction of drug use — No change in alcohol use
Henggeler & Cohen (1991)	144 youth	Multisystemic therapy (individual counseling)	— Significant reduction in alcohol and marijuana use — Small reduction in any criminal behavior
Henggeler, Clingempeel, Brondino, & Pickrel (2002)	118 youth	MST (nonspecified)	— Posttreatment • MST decreased self-report — 6-month follow-up • No significant difference — 4-year follow-up • Significant reduction in positive urinalysis
Kaminer & Burleson (1999)	32 youth	Cognitive-behavioral group (interactional group treatment)	3 months and 15 months CBT group showed significant reduction in substance use
Kaminer, Burleson, & Goldberger (2002)	88 youth	CBT skills group (psychoeducation)	CBT significant reduction in substance use at 3 months, but similar results at 9-month follow-up
Waldron, Slesnick, Brody, Turner, & Peterson (2001)	114 youth	Individual CBT, Individual CBT/ Functional Family Therapy, or FFT, group counseling	Cognitive behavioral individual sessions was not effective at posttreatment and follow-up for reduction in % days of marijuana use; 7-month follow-up CBT/FFT most effective

Exhibit 14.1 Aggression Replacement Training

Aggression Replacement Training® (ART®) is an anger management/violence reduction program that is based on a cognitive-behavioral model. It combines skillstreaming, anger control training, and moral reasoning training together in a multichannel multimodal approach in order to address aggressiveness in young people. The model works on the principles that changing aggressive behavior is difficult and that multiple avenues or channels must be employed to affect change.

Skillstreaming

A major dimension of ART is the development of prosocial skills. The assumption is that participants of ART® have had difficulty employing prosocial skills when needed to manage the environment. ART® works on teaching, practicing, and generalizing these skills to multiple daily arenas.

Anger Control Training

Anger control training works to decrease the frequency of anger outbursts and to provide young people with the ability to control anger once aroused.

Moral Reasoning Training

This section component addresses moral reasoning through addressing any cognitive delays a young person has and also works to change any persistent and pronounced cognitive distortions by providing neutral problem situations in which individuals learn to take different perspectives given moral dilemma situations. It provides participants with opportunities to view their world in a fairer and more equitable way.

Rearrest Outcomes for Delinquent Youth Plus Significant Others

	Months Following	Percent Recidivism	
		ART	No ART
Youth plus family ¹	4	15	43
Youth plus peers ² (gang intervention project)	8	13	52
Youth plus peers ³ (positive peer culture)	12	15	40

¹ Goldstein and Glick (1987); Goldstein, Glick, Reiner, Zimmerman, & Coultrey (1987).

² Goldstein & Glick (1994).

³ Leeman, Gibbs, & Fuller (1993).

* Adapted from Goldstein, Glick, & Gibbs (1998).

Participants gain insight into their angry feelings by exploring previous trauma. Similar to previous discussions regarding effective interventions, anger management interventions that include skills development and cognitive behavioral approaches are effective in reducing recidivism (see Stern, 1999; Beck & Fernandez, 1998). Table 14.4 reviews some of the studies that have been conducted on the effectiveness of anger management programs.

Table 14.4
Current Research on Anger Management Programs

Researcher (Year Published)	Type of Treatment	Findings
Beck & Fernandez (1998)	Cognitive behavioral	Meta-analysis; .70 weighted effect size for CBT (revised Tafrate)
Ireland (2004)	Cognitive behavioral	Reduction in self-report violent behavior and staff observation of aggressiveness
Leeman, Gibbs, & Fuller (1993)	Cognitive behavioral/equip program	Found reduction in aggressive behaviors for juveniles who attend CBT and Equip (approx. 33% reduction for 12-month follow-up)
Stern (1999)	Conflict resolution and family communication skills	Increase in family functioning; conflict resolution and family communication together most effective
Tafrate (1995)	Cognitive behavioral (adults)	Found CBT to be effective but strong limitations

CURRENT STATUS OF JUVENILE REHABILITATION PROGRAMS

Juvenile treatment programs have evolved since the 1970s when Martinson and his colleagues announced that there is no evidence to support rehabilitation. Criminologists, including Gendreau (Gendreau, Little, & Goggin, 1996), Andrews and Bonta (1998), and Cullen (2002), have supplied rehabilitation with consistent reminders that programs can be effective in reducing recidivism. Specifically, Gendreau (1996) provided correctional programs with the principles of effective intervention. According to the principles of effective intervention, correctional programs that base treatment on behavioral strategies, address criminogenic needs, use positive reinforcement, and vary by risk are found to be more effective in reducing recidivism.

Lispey (1999) found support for the principles of effective intervention with juveniles in his meta-analysis on rehabilitation programs. He found that juveniles who receive the entire treatment (intensity and duration) are less likely to reoffend than those who do not receive the full dose. In addition, he found that programs that were six months in duration or longer were more effective than those of shorter length. The third characteristic found to be related to effectiveness is the ability of a system to implement the program model effectively. He found that agencies that could imple-

ment the chosen treatment model closest to design were more effective than those that did not follow the original design.

Moreover, Dowden and Andrews (1999) found support for systems that vary services based on offender risk. Those jurisdictions that provided treatment services to higher-risk offenders showed the greatest effects. According to both Dowden and Andrews (1999) and Lowenkamp and Latessa (2004), agencies that provided intense services to low-risk offenders actually increased their recidivism rates.

SUMMARY

Juvenile treatment has advanced dramatically in the last thirty years. Current research has provided juvenile programs with an understanding that rehabilitation programs can be effective in reducing recidivism, but it is dependent on several key factors. First, treatment should be cognitive behavioral or systems based. Second, treatment is most effective with high-risk juveniles. Finally, treatment should target areas that lead to criminality, including antisocial attitudes, antisocial peers, antisocial personality, substance abuse, education, and family. As juvenile programs adhere to these evidence-based practices at higher rates, society will become safer and delinquent youth will have greater potential for healthy and productive lives.

Footnotes

- ¹ A black-box approach ignores the program's elements and focuses only on some outcome, such as recidivism.
- ² The Correctional Program Assessment Inventory is an evaluation tool designed to assess the degree to which a correctional program meets the principles of effective intervention. It has been used widely throughout North America in a wide range of correctional programs.
- ³ Affective interventions attempt to increase self-esteem, identification of feelings, personal insight, and self-awareness.

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